

October 2004/\$4

# AIR FORCE

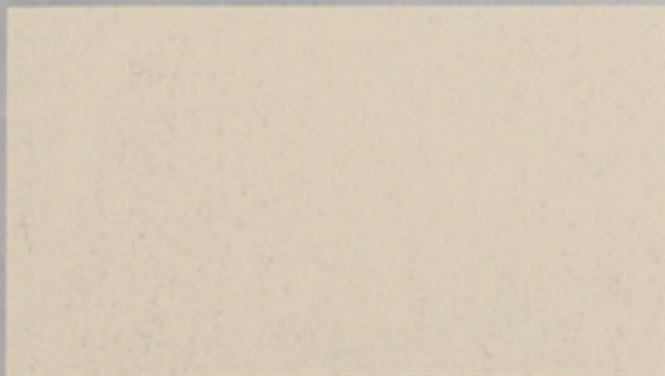
JOURNAL OF THE AIR FORCE ASSOCIATION

MAGAZINE



## The Airlift Gap

Operational Training  
Tricare on the Rise  
Into the Valley of Fire



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October 2004, Vol. 87, No. 10

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**About the cover:** C-17 Globemaster IIIs from the 437th Air Wing, Charleston AFB, S.C. See "The Airlift Gap," p. 34. USAF photo by TSgt. James E. Lotz.

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By Robert S. Dudney, Editor in Chief

## The Airman's Lessons

**D**EFENSE Secretary Donald H. Rumsfeld came to the Pentagon with a broad mandate to "transform" the armed forces. When he and others looked at the four services, what they saw was a glacially slow pace of military change.

Rumsfeld's view was only partly correct. He seemed unaware that one service—the US Air Force—had been transforming for years. This fact first came into view in the 1991 Gulf War, when USAF's laser guided weapons, stealth aircraft, and space power smashed Iraq's forces and shocked the world.

Next came an even more dramatic push for innovation. In the 1990s, USAF acquired all-weather precision arms and spread these systems across the combat fleet. On top of that, the force became lean and expeditionary, with superb battlespace awareness.

The nation's recent lopsided victories in Kosovo, Afghanistan, and Iraq can be ascribed, in large part, to the combat prowess of this force. It was not radically new or "revolutionary," but it had been continuously modernized and reshaped.

That, in itself, is a form of transformation, and, if the past is any guide, we will see more of it soon.

Hints can be found in "The First 600 Days of Combat," an unclassified Air Force look back at what could be called The War of 9/11—Operation Enduring Freedom (Afghanistan 2001-02), Operation Iraqi Freedom (Iraq, 2003), and Operation Noble Eagle (US airspace, 2001-today).

This report cannot be called a standard Air Force white paper on the war, but it comes as close as we are likely to get. At a minimum, it reveals what the Air Force is saying to itself, about itself.

The author of the 160-page study, Rebecca Grant, served as a member of a special Air Force review group—Task Force Enduring Look—and conducted many of its key interviews. According to Grant, "This war has set the Air Force on a new course."

Grant (also an *Air Force* Maga-

zine contributing editor) wrote that the review of recent combat operations has produced what she called "The Airman's Lessons." She suggested the future Air Force, whatever its specific form, will be shaped by six principles.

■ **Joint Force Integration.** Gen. John P. Jumper, Air Force Chief of Staff, contends that "joint warfare is the

### The future Air Force will be shaped by six principles.

imperative." He puts improvement in this category at the top of the list of critical factors. In Grant's view, teamwork between service components was "a driving force" in recent US successes, especially in Gulf War II. A continuing theme will be deeper and deeper integration.

■ **Superiority in Air and Space.** This, according to Grant, will continue to be "a top priority" for the Air Force. Indeed, the book called for maintaining "absolute" air superiority. It pointed out that, in Gulf War II, air dominance was achieved early, which permitted the coalition to bring some 700 fighter and attack aircraft to bear at will. Air and space capabilities were integrated more than in any earlier conflict.

■ **Expeditionary Organization.** In the recent wars, said Grant, the Air Expeditionary Force concept gave the Air Force a strong baseline of deployed capability and a reserve for wartime surges. (For example, one senior airman has noted, USAF forces that deployed in September 2001 were ready within a few days for war in Afghanistan.) However, Gulf War II exposed the fact that USAF needs to work hard at mastering the "art of expeditionary warfare"—from deployment to operations to support.

■ **Persistent Precision.** Precision weapons "dominated attack profiles," wrote Grant. They made air strikes more efficient and reduced collateral damage. "Just as important as precision," said Grant, "was

its partner—persistence." By that, she meant the presence of on-call aircraft loitering over a battle area, poised to react to a commander's needs. Prime examples were munitions-laden B-1B and B-52 bombers that were tasked en route to strike emerging targets.

■ **Mobility on Demand.** As Grant put it, "There would have been no precision or persistence in the battlespace without the mobility supplied by airlift and air refueling." The ability to supply air mobility for a large theater campaign was the Air Force's alone. Every combat sortie depended on tankers for refueling. Every aircraft transiting to the Middle East did so with refueling.

■ **High-Quality Airmen.** Because of their quality and competence, said the book, America's airmen time and again served as great force multipliers. Those who shape the future force should note that it was the airmen who brought air and space power to life, said Grant. Of all the truths about the war, this was "the most important." Of special note in this regard were the so-called "battlefield airmen," those who traveled with ground forces and directed precision attacks.

As Grant pointed out, the War of 9/11 was not the end of, but merely the first campaign in, a protracted global struggle with terrorists. She quoted Jumper as saying, "What we have to do is configure ourselves to be able to go wherever it [the war] is."

The Air Force does not have the final say about its own destiny. USAF's future size, shape, and capabilities will be debated in the next Quadrennial Defense Review, scheduled to get under way in 2005.

The QDR reviewers and others should take account of at least two key facts. First, USAF's record of successful innovation is long. Second, our current pre-eminence in military power stems mainly from our overwhelming lead in air and space power.

Those factors surely should weigh heavily in any deliberations about just how the Air Force should be compelled to transform in years ahead. ■





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## Views of the Vietnam War

In "The Guns of August 1964" column [*August*, p. 2], Mr. Dudney has struck a familiar chord—one that is very tired and even more untrue. "They, if not their political leadership, performed with courage, competence, and honor." For the men actually toting the rifles or sitting in the cockpit or cruising the brown waters, this is certainly a true statement, but when the same brush is used to paint the senior military leadership of the era, it is worse than just a lie. It is an attempt to rewrite history and misdirect guilt.

Many senior military leaders of the era have written about how horrible Vietnam was, how absurd were the rules of engagement and the targets and the tactics spewed forth by Johnson and McNamara. But if they were so bad, what did those same senior leaders do about it? Not one damn thing of any substance! Why? Because if given a choice between standing up for the men under their command or furthering their own careers, every single one chose the latter. Every single one made the decision that it was better to send young men to die for nothing than [it was to] stand up and say "NO," resign their position, then stand up again the next day in front of the cameras and tell the American public how the lives of its soldiers were being squandered.

How many more men would've come home, [and] how different would have been the outcome, if the entire Joint Chiefs of Staff would've had the courage and integrity to resign in protest? But what's a few thousand dogfaces or stick jockeys compared to their careers? One has to set priorities, right?

And it continues today. How many young men would be coming home on their feet instead of in a coffin if their leaders had the courage to say, "Sorry, sir, but I am unwilling to send my men into combat without armor protection and armored vehicles and if you force my hand on this you'll have my resignation." It's easier to hide behind "I did my duty" and be-

moan the bad politics later when the history is being written.

Lt. Col. Patrick Foley,  
Air National Guard  
Jim Thorpe, Penn.

We shouldn't pat ourselves on the back too hard for the military importance of the December 1972 Hanoi bombing. The Paris peace agreement was brokered in early 1972, around the time of Nixon's China visit. The rest of 1972 had little to do with the communists' willingness to sign.

The only holdout was South Vietnam's President, Nguyen Van Thieu, who preferred the status quo. If Thieu had gone along, the 1972 North Vietnamese offensive and December Hanoi bombing wouldn't have happened. He never did sign—but the Hanoi bombing gave us the "street cred" to sign without him.

Paul J. Madden  
Seatac, Wash.

## The Key Is Still People

People are the key to interoperability. [See "*Washington Watch*," *August*, p. 10.] All the gee-whiz interoperability gadgetry isn't worth a tinker's damn without experienced people to operate, maintain, and, most importantly, make decisions.

As an air battle manager, interface control officer, and instructor in both areas, I've seen data links grow from the 1980s as point-to-point and simple nets to multi-C4ISR [command, control, communications, computer, intelligence-surveillance-reconnaissance] systems. Then, as

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now, it took people to plan and run the data links. The question is, will there be trained personnel to act on the data?

Future plans calling for computers to perform duties (i.e., "order up the right combination of rescue forces") can result in less experienced personnel assigned to the combined air operations center trying to perform search and rescue. In the 1990s, my last unit, suffering from manning shortages, deployed partially trained personnel (called theater qualified) to Deny Flight in the belief that: 1) A warm body is better than no body at all; 2) the computer will do most of the work; and 3) a mission-ready person would be nearby.

I have seen many instances where inexperienced personnel failed to grasp data link fundamentals. For example, a joint task force commander in Florida once ordered fighter aircraft in Panama scrambled for an intercept that was beyond the aircraft's range. The commander made his decision based on a monitor display. After several calls, explaining the actual distances involved, he waited until the intercept was possible.

I commend General Moseley's efforts improving data link interoperability among all C2 platforms, but I do caution [against] placing too much faith on computers doing all or most of the work. It takes experienced people to perform the all-important "sanity check" on computer data.

For General Moseley's next "what if" exercise, he should disconnect the computers but maintain voice communications to determine people's ability to accomplish the mission using their experience. This will help uncover any training shortfalls, because inability to perform one's assigned duties does not improve with a computer.

Capt. Gregory D. Bova,  
USAF (Ret.)  
Tucson, Ariz.

## Lost in Space

In your "2004 Space Almanac" (*August*, p. 51), credit is given to my friend Brig. Gen. Charles Bolden, USMC (Ret.), for achievements that



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should have been credited to me, USAF Col. Frederick D. Gregory. I was the first African American to pilot a US spacecraft—space shuttle mission STS-51B (STS-17) April 29-May 6, 1985.

I would later be the first African American to command any space flight, commanding space shuttle mission STS-33, a DOD mission, Nov. 22-27, 1989. I also later commanded space shuttle mission STS-44, Nov. 24-Dec. 1, 1991, which successfully

deployed a Defense Support Program satellite.

Fred Gregory,  
Deputy Administrator, NASA  
Washington, D.C.

■ *Apologies to both Colonel Gregory and General Bolden. Colonel Gregory was pilot of STS-51B in 1985, while then-Colonel Bolden did not serve as pilot until 1986 for STS-61C. The online version of the "2004 Space Almanac" has been corrected.—THE EDITORS*



**Best Business Practices**

Hats off to John Tirpak for his excellent article about the restructuring under way at Air Force Materiel Command. [See "Operational Acquisition," August, p. 54.] From 1996-2001, I was a company grade officer assigned to an AFMC product center. An Air Force person from any other major command would have found the entire center unrecognizable as an Air Force organization, save for our blue uniforms. While I can only imagine what a huge undertaking this effort must be, General Martin should be commended for his fortitude.

Joel Hilden  
Edgewater, Md.

It was truly refreshing to see someone tell the truth about the excessive contract costs. I refer to the following statement attributed to General Martin: He said he makes the best allocation of personnel he can and, often, must hire contractors to fill gaps. Because "contractors cost about twice as much as government employees," ... the price goes up. This is very important because the current DOD

officials are contractor happy. Usually the people doing the work don't see these excessive costs in their pay checks. But the company officials with their million dollar wages and bonuses sure do. This is important because it drains away critical resources from critical Air Force needs.

Max K. Kennedy  
Layton, Utah

**Dien Bien Phu**

I wondered what happened to *Miss Carol!* Now I know that this particular B-26B went to Tourane (Da Nang), Vietnam, to be flown by the French Air Force. Thanks for including its picture with the story of the infamous battle. [See "Dien Bien Phu," August, p. 78.]

As a second lieutenant at K-9 (Pusan East AB, South Korea) in the spring of 1953 not too long out of flying school, a crew chief offered, if I would pay for the painting, to have my girl friend's "picture" painted on the aircraft he crewed. I gladly agreed and flew *Miss Carol* as a member of the 34th Bomb Squadron from 1952 until I completed the tour and [trans-

ferred] to Bolling AFB, D.C., in January 1954. Actually, the picture on which the painting was based was from *Esquire*—one of the so-called "Vargas Girls."

I can recall when the 17th Bomb Group was looking for volunteers to fly B-26s to an undisclosed destination. Pilots with more experience were selected for this mission, so I never really, except for rumors, knew where *Miss Carol* had gone. The "real" *Miss Carol* is still with me after 50 years of marriage.

Col. T.P. Williams,  
USAF (Ret.)  
Little Rock, Ark.

Rebecca Grant's article is superbly done and long overdue. We say the Korean War is the Forgotten War. America's involvement in the Vietnam War in the early 1950s was never known by most Americans. Now, at least, a few more will know about it. I wrote an article for the *Friends Journal*, summer 1995 issue, entitled "Secret Flight From Ashiya to Hanoi," [describing one flight to aid Dien Bien Phu.]

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ings when we [a 61st Troop Carrier Squadron C-119 and crew] arrived over the coast of Vietnam at 200 feet altitude in December 1953, we followed the coastline south hoping for the weather to clear up. We were almost out of fuel when our pilot and squadron commander, Lt. Col. George Miles, prepared us for ditching on the beach. Fortunately, the sun started appearing. We spotted an airfield off to our right, and Colonel Miles set the C-119 down without radio contact.

We could see there were World War II American fighters on the field, although they had French markings, as we did. We refueled there at Tourane (later known as Da Nang), then flew north to Haiphong, where our C-119 joined in the fight for Dien Bien Phu. As a side note, Wallace Buford, one of the CAT pilots who died when their C-119 was shot down, was a member of the 61st TCS before joining CAT.

Joe Noah  
Clarksville, Va.

In 1953, a year before the French loss at Dien Bien Phu, our B-26 wing from Laon AB, France, had the hurry-up job of training French pilots in the B-26. We instructors didn't speak French, and most of the pilots didn't speak English. We did our flying in French Morocco. The procedure was simple: The French student would be in the right seat of a B-26 on the first sortie. The second flight—in a B-26 with dual controls—had the student in the left seat and the instructor in the right seat. The third flying mission placed the student in the left seat and the instructor in the right seat in a B-26 with single controls. We had but one dual-control B-26. Therein lay the problem.

One instructor wanted flight after flight in the dual-control aircraft. We needed to get on. This was a rush project. Our operations officer queried the French liaison officer [about the student.] After a conversation with the ill-prepared student, the liaison officer declared, "It is simple. This student is not a pilot. He is a navigator. He thought our losses in Indochina were so bad that the French Air Force was retraining navigators into pilots."

All their students warned us instructors not to allow America to become involved in Indochina. They said it was a no-win situation. That was in 1953! They were right.

Lt. Col. Tony Weissgarber,  
USAF (Ret.)  
San Antonio

What a terrific story and coverage of that terrible period for the French

forces in Vietnam. However, the author missed one of the most important and amazing portions that should have been highlighted. No mention was ever made of the "Angel of Dien Bien Phu," [Genevieve de Galard-Terraube.] She was the French Army nurse who elected to stay with troops in their hopeless and disastrous situation. All other women had been evacuated to safety. She was held prisoner by General Giap along with the thousands captured.

Just thought I would point this out, since she was considered a true French hero and decorated as such. I am familiar with this since I had the pleasure of flying this lady on an official tour of the United States, while I was assigned to the Special Air Mission Group in Washington, D.C. She spoke to numerous groups about her experiences, both as a nurse and prisoner. She was very well received on every occasion.

Col. George M. Livers,  
USAF (Ret.)  
Memphis, Tenn.

### The Greatest Generation

The article "To Honor a Generation" [August, p. 86], about the World War II Memorial is genuinely appreciated. Many people are disappointed that a most important phrase—"So help us God"—is omitted from the quote of President Roosevelt. Only part of the quote appears on the memorial.

Charles P. Nicholson Jr.  
Concord, N.C.

### The Versatile Herk

I have about 3,000 hours in all models of the C-130 but the current one. Colonel Boyne forgot the JC-130B/H. [See "The Immortal Hercules," August, p. 90.] That model recovered capsules with pictures taken from space. We flew from 1960 until 1975. The program (called Discoverer, then Corona) was declassified in 1995. The capsules were launched from Vandenberg AFB, Calif., and recovered in Hawaii. I spent eight years in the program, including four years of testing at Edwards AFB, Calif.

Capt. Donald R. Curtin,  
USAF (Ret.)  
Palos Verdes Estates, Calif.

■ A photo of a JC-130 in flight appears in "The Secret at Complex J," July, p. 72.—THE EDITORS

I sincerely enjoyed your article on "The Immortal Hercules." However, in your article you made only a passing reference to the use of the C-130 as a drone launch aircraft (DC-130). As a

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member of the 100th Strategic Reconnaissance Wing and later the 432nd Tactical Drone Group, both at Davis-Monthan AFB, Ariz., in the mid-1970s, I was very involved in this use of the C-130 aircraft and the HH-3 helicopters as airborne drone catchers.

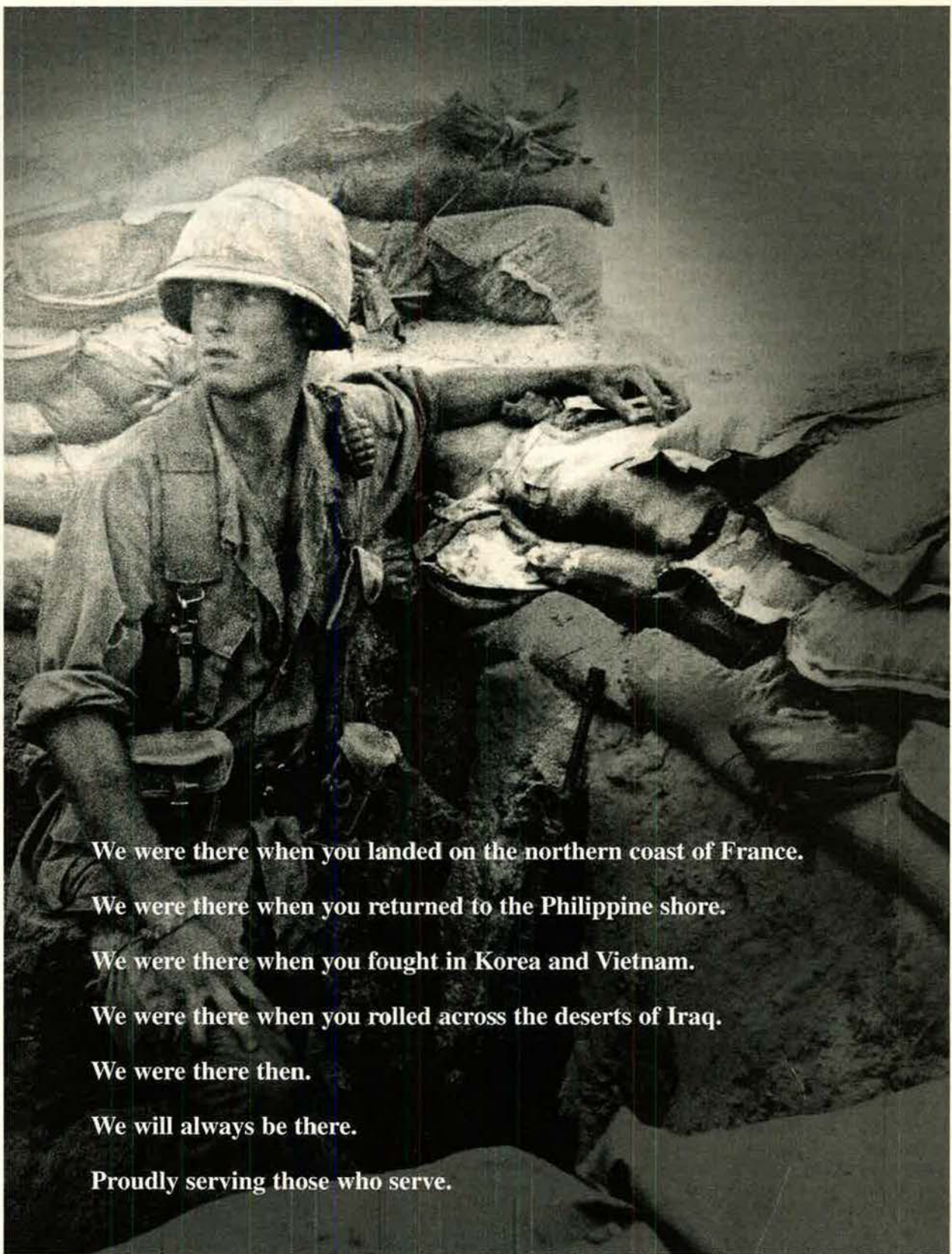
I think an article on the drone operations of these units would be very interesting to your readers, especially since AQM-34 drones of that era are the ancestors of the modern unmanned aerial vehicles that have been used so successfully in Afghanistan and Iraq.

Lt. Col. Francis W. Kearney,  
USAFR (Ret.)  
Plymouth, Mich.

I would like to commend Walter Boyne on his excellent and informative story on the C-130. The picture of the resupply drop on p. 94 is a ground proximity extraction system drop. There were two C-130A model crews that flew this mission at Khe Sanh. Maj. Kaye Jackson was the aircraft commander of one crew and Maj. Robert Christensen was the other. I was Chris' copilot.

The drop was accomplished by dragging an arm with a detachable hook over a cable on the runway (note the arm mechanism under the cargo door





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## Letters

in the photo). When the hook caught the cable, the load extracted very, very quickly. Our job was to hit the center of the cable and go full power as we passed over the cable. Worked like a champ! Loads were in the 15,000-pound to 20,000-pound range and the "Herk" leapt back into the air when relieved of the load!

Col. Johnny Johnson,  
USAF (Ret.)  
Bellevue, Neb.

### Not the First

The 173rd Fighter Wing, Kingsley Field, Ore., was the first Air National Guard unit to be equipped with F-15Cs, not the 131st Fighter Wing. [See "Aerospace World: Missouri ANG First To Fly F-15Cs," August, p. 12.] The 173rd Fighter Wing is the FTU [formal training unit] for F-15s in the Guard and has been flying a mix of F-15A, B, C, and D aircraft for several years. The 131st FW will be the first ANG unit to be entirely equipped with F-15Cs.

Col. Steven R. Blatt,  
19th Air Force  
Randolph AFB, Tex.

The 173rd Fighter Wing converted from the air defense version of the F-16 to the F-15 in 1998 and received its F-15C and F-15D aircraft in 1999. The 173rd FW has operated a fleet of 10 F-15Cs, two F-15Ds, and six F-15Bs since 1999.

The 173rd FW is the premier ANG formal training unit, training both ANG and active duty pilots to be the best air superiority pilots in the world. Kingsley Field has been an ANG FTU since the mid-1980s, first in the F-4C, then the air defense F-16, and now in the F-15.

Lt. Col. Mark Favetti,  
Commander, 173rd Maintenance Sq.,  
Kingsley Field, Ore.

■ Yes, the 173rd Fighter Wing received F-15Cs first.—THE EDITORS

### Rewarding Reservists

There is a way to speak both to Senator Corzine's desire to reward reservists for their service and to Senator Warner's concern about blurring the differences between reserve and active duty benefits. [See "Action in Congress: Reserve Retirement: Still at 60," August, p. 22.] The solution is to keep the baseline retirement age for reservists at age 60, but reduce the age of retirement eligibility month-for-month for time served in an active duty capacity.

For example, if a reservist is called up and serves for two years on active

duty, his or her retirement age would be reduced from 60 to 58. In the extreme case, if a reservist enlists at age 20, is called up immediately, and has active duty service of 20 years, he or she could retire at age 40 in the same manner as someone who started out and completed service as a career active duty member. In times of peace, a person forced out of the service before completing 20 years of service would have the option of enlisting in the reserve and earning a retirement that would take effect at a defined time before age 60.

Lt. Col. Mark O. Simmons,  
USAF (Ret.)  
Fort Wayne, Ind.

### Remembrance of Reagan

I was fortunate to attend a briefing at Strategic Air Command, Offutt AFB, Neb., in 1960 when Gen. Thomas Power and the top brass gave a symposium on world affairs and the Cold War in particular. [See "Letters: Reagan Remembered," August, p. 4.] At this briefing, General Power stated that it was the nation's policy to break the economic back of the Soviet Union by spending huge sums of money on different tactics. He stated that this policy was initiated at the beginning of the Cold War era and would continue until the Soviets were financially broken. Mr. Reagan's words as Mr. Kregel described are almost verbatim as the briefing in 1960.

James Marshall  
Barnesville, Ga.

### Where's the Advice?

Sen. John McCain's disappointing [comments] are loaded with platitudes but definitely empty of badly needed, sage advice. [See "Finishing the Job in Iraq," July, p. 68.] Certainly "we must succeed" but tell us how. To say that "our power ... is the greatest force for good on Earth today" is a truism only if it is correctly and prudently applied. Obviously, neither McCain nor President Bush have bothered to read the advice of Prof. Albert Einstein who said, "Peace cannot be kept by force. It can only be achieved by understanding."

Lt. Col. Louis J. Kaposta,  
USAF (Ret.)  
Southlake, Tex.

### Correction

In the September issue on p. 98, Charles F. O'Connell is the director of the Air Force Historical Research Agency.



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# Washington Watch

By John A. Tirpak, Executive Editor

## F/A-22 Sweeps Tests; Rising Interdependence; Searching for the Next Transport; Progress in Space ....

### Flying Colors for F/A-22

By all accounts, the F/A-22 fighter breezed through four-and-a-half months of exacting tests—its toughest yet. The Raptor demonstrated that it can handily beat today's best fighters flown by today's best crews.

The Air Force has classified the results of the F/A-22's initial operational test and evaluation (IOT&E), conducted at Nellis AFB, Nev., from late April through mid-September. However, USAF officials said nothing in the testing suggests the aircraft won't perform any way other than brilliantly in real-world combat.

Gen. John P. Jumper, Air Force Chief of Staff, told *Inside the Air Force* in August that the IOT&E phase was progressing "with fewer lumps and bumps than I ever thought it would." He added, "We're very, very pleased with what we've seen so far."

Air Force officials said the service probably would this fall provide an unclassified synopsis of the test results, after USAF completes all analysis.

The F/A-22 was required to prevail in five broad, live scenarios, each with a number of variations.

In the first, USAF measured the Raptor's ability to spot, shoot, and destroy an F-16 in a "first look, first kill" test. In the second, two F/A-22s had to destroy a "high-value airborne asset" such as an E-3 Airborne Warning and Control System aircraft defended by four F-15s or F-16s. In the third, two F/A-22s had to protect a B-2 bomber against four F-15s or F-16s. In the fourth, four Raptors had to defend a high-value platform such as an AWACS against eight attacking F-15s or F-16s. In the last, four F/A-22s had to protect four F-117s against eight attacking F-15s or F-16s. Supporting aircraft included the Navy's EA-6B Prowler airborne jamming aircraft.

Besides winning the engagements, the aircraft had to dodge ground-based air defenses. The Air Force said it flew 188 sorties with six F/A-22s during the evaluation.

The tests were run and "graded" by the Air Force Operational Test and Evaluation Center, headquartered at Kirtland AFB, N.M. The testing looked at not only how effectively the aircraft met its mission but also its reliability, ability to surge, sortie generation rate, mission capable rate, and the number of shots required to destroy an enemy.

Based on the performance of those six F/A-22s, AFOTEC developed models simulating how an entire squadron would fare, and it then measured this performance against requirements. An Air Force spokesman said that the modeling simulates large group flying operations "in sufficient detail to provide accurate estimates of suitability parameters."

In addition, AFOTEC interviewed pilots and maintainers, adding their views to the quantitative data. AFOTEC ultimately will decide whether the F/A-22 is suitable for Air Force use, the spokesman said.

"AFOTEC will determine if the aircraft met or did not



USAF photo by Ken Hackman

The F/A-22 passes its toughest test.

meet the criteria [that Air Combat Command] set forth, using these data," said the USAF spokesman.

The IOT&E tests did not look at the F/A-22's ground attack capabilities. That mission element will be tested later, as additional munitions are certified for F/A-22 use. However, the first deployed F/A-22s will have the capability to drop the 1,000-pound version of the Joint Direct Attack Munition. The main ground attack weapon for the F/A-22 is to be the 250-pound Small Diameter Bomb (SDB). Each Raptor would have the capability to drop six SDBs.

The F/A-22 is slated to achieve initial operational capability by the end of 2005. Air Force officials said they are confident the Raptor will reach that milestone on time, but they cautioned that they might still see some last-minute technical surprises.

### Transformation in a Time of War

Operational doctrine is being rewritten on the fly in Iraq and Afghanistan, and those operations are quickening the pace at which the US military evolves, according to the Pentagon's transformation chief.

Retired Vice Adm. Arthur K. Cebrowski, director of the DOD Force Transformation Office, told reporters that the ongoing conflicts are forcing the services to do something they should have done long ago—be willing to count on each other.

Specifically, Cebrowski said he sees the Army as having a "purposeful reliance on other people," notably the Air Force, and that the levels of "interdependency" among the services is rising sharply.

"There's no doubt in my mind" that the Army has come to rely on airpower as an enabling element of its functions, particularly in the way that Special Forces work collaboratively with aircraft for close air support, Cebrowski asserted.

Some have claimed that the transformation efforts un-





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der way just before the Sept. 11 terrorist attacks have been slowed or stopped by the need to concentrate on the war on terrorism. Cebrowski, however, said the reverse is true.

USAF photo by SSgt. Chenzira Mallory



The Army relies on USAF A-10s and friends.

"When people say the war is putting transformation on hold, that's wrong. It's actually accelerating transformation dramatically."

Cebrowski said officers and troops are going to service schools fresh from the field, full of anecdotes on how things *really* work as opposed to how doctrine says they *should* work. The doctrine is being rewritten almost constantly. Because of the accelerated pace of information sharing, doctrine is being rewritten "on the fly ... in the field," he said.

One big lesson of the war is that "a more complex force almost always prevails over a less complex force," said Cebrowski. By that he meant that the goal should be to obtain "overmatching complexity" rather than producing a more-massive force. He said this was at the heart of the Army's push to become modular and function in smaller units.

Cebrowski also said the concepts that have been proved in the war are high-speed systems, persistent fires, persistent surveillance, and highly interdependent systems.

"These are the things you'll see people continue to trumpet" in budget and force structure proposals, he said.

Cebrowski noted, too, that the three factors that drive today's systems—performance, cost, and time to field—will shift in priority, with cost and timeliness trumping performance. Performance will be worked in over time, he said.

The future will bring dramatically new technology, Cebrowski said, but the US could come up short in the race to capitalize on new developments. The problem, he said, is the disturbing shortage of Ph.D. candidates in the critical technology areas that likely will yield the most important future combat systems. These areas, according to Cebrowski, are "nanotechnology, biotechnology, robotics, and energetics."

Cebrowski also said the Pentagon is getting more interested in vertical takeoff systems, such as the short takeoff and landing version of the F-35, and "gyrocopters" that can lift large payloads and move them at more than 460 mph at an altitude of 35,000 feet. Vertical systems provide more distributed forces that don't rely on established

supply trains or airports, thereby reducing vulnerability and putting force directly where it's needed, he said.

### New Transports Taking Shape

Concepts for the next generation of airlifters already are taking shape, even as the Pentagon and the Air Force struggle to define the right numbers of C-17s, C-5s, and C-130Js to sustain the military airlift requirements for the midterm. (See "The Airlift Gap," p. 34.)

Afghanistan and Iraq have underscored the need for a new tactical transport that would fulfill a variety of airlift and special operations roles, Air Force officials reported. The new aircraft—dubbed Advanced Mobility Concept, or AMC-X—would have about the same cargo capacity as a C-130 but be able to fly higher and faster, while operating from 2,000-foot runways. Moreover, the AMC-X would be stealthy.

"We're talking about ... airliner speed," close to Mach 1, said Col. Marshall K. Sabol, Air Mobility Command's deputy director of plans and programs. The C-130's average speed is 345 mph.

AMC also wants an airplane that can fly at the altitudes used by airliners, with greater range and greater survivability, he said. Paramount for the new transport will be its ability to operate at austere locations and carry outsize cargo, said Sabol.

Moreover, the next tactical airlifter will have to be able to operate in blackout conditions at low level, perform paratrooper and equipment airdrop, operate in all weather, and be capable of accomplishing "autoland"—automatic,



Boeing photo

Boeing BWB. Is this the future of transport?

virtually hands-off landing, guided only by the runway and onboard navigation systems.

Such requirements are "not the future," said Sabol, adding, "it's where we operate" today.

AMC is also working with Air Force Research Labs and the Army to make sure that the tactical transport is compatible with the Army's new Stryker vehicle. The Stryker was designed to be transportable on C-130s, but the vehicle's weight has continued to grow.

Industry is being kept informed about the requirements for the AMC-X and has, in fact, begun developing some concepts. Boeing has a tilt-wing, tailless short takeoff aircraft, called the Super Frog, that can meet many of the notional requirements.

"We are ... working with industry and the labs so that if and when we decide to build this thing, the contractors



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will know exactly what our requirements are," Sabol said. He emphasized the participation of the Army, saying it's "not just the Air Force and AMC driving this." Proposals for the AMC-X have been briefed to the other services, which have expressed their support. Sabol said, "This one has wheels rolling in the right direction."

The AMC-X is not yet included in the current Future Years Defense Program—the Pentagon's six-year spending plan. However, Sabol, said it should be included within the next few years.

Further out will be two new strategic airlift aircraft: the C-X and the KC-X. The C-X is a notional next generation heavy-lift aircraft. AMC is discussing ideas with industry, Sabol said, and is especially interested in Boeing's blended wing body (BWB) aircraft. The BWB resembles a fattened B-2 bomber-style flying wing. According to Boeing, the design lends itself to modularity. It has a common body, with potential for many different services and uses.

In fact, Boeing has proposed the BWB as not only a large-volume airlifter but a strategic refueling platform as well, able to boom-refuel three or more aircraft at once. It might also incorporate larger or smaller wings and fuselages that could be swapped out, depending on the mission.

AMC officials see the C-X/KC-X entering development by 2014. That would make the first ones available when the C-5 reaches the absolute limit of its potential life span, around 2030. Of the new types, the AMC-X is "probably getting a little more concrete than the other two," Sabol said.

### Space Acquisition Progressing

Improvements instituted about a year ago to the nation's ailing space acquisition system are starting to have a positive effect, according to a blue-ribbon panel. It added that there is much left to do.

"We were quite pleased with the progress we observed," said A. Thomas Young, chairman of the Task Force on Acquisition of National Security Space Programs. However, he said, many areas "still need some attention." The task force in August released a "One Year Review" of its September 2003 study. (See "Washington Watch: The Problem With Space Programs," November 2003, p. 12.)

Young said there has been a concerted movement to correct problems that started hampering the military space program in the 1990s but that many of the systems that are now experiencing repeated cost overruns and delays may always be hobbled by the "congenital defect" of having been started in that era. Young spoke with Pentagon reporters at an August discussion hosted by Peter B. Teets, undersecretary of the Air Force and DOD's executive agent for space.

In the 1990s, Young said, cost replaced mission success as the driving force behind most space programs, and the military surrendered too much program oversight to contractors in an effort to save money. Optimistic projections about a booming commercial space market never materialized, and many programs were saddled with costs far higher than anticipated. Young said the troubles of the 1990s were "no one's fault" but simply the collision of market vagaries and ideas that everyone thought would work but didn't.

Young said the task force's top finding remains that space programs need to be given more "management reserve" funding to deal with unexpected problems as they crop up.

According to Teets, fixing that problem has been a

slow task because Congress is suspicious of authorizing funds for unspecified purposes. Young agreed, saying that lawmakers understand the issue, but have been reluctant to do anything to change the way business is done.

Teets also said that the process of reprogramming funds needs to change. "Reprogramming is a six-to-nine month process," he said. Sometimes, extra funds must



Boeing photo

*Space acquisition is improving, but problems remain.*

be found to correct a problem "by next week," he explained.

Young noted that the cost to postpone a solution is usually triple what it would have been if the reprogramming action had moved quickly. If the space executive were allowed to shuffle funds between programs doing well to those with problems, Young said, "the probability of getting the space portfolio right is pretty high."

"Space is different" from buying tanks or ships or airplanes, he explained, because of the limited number of items purchased, requirements that change to accommodate real-time needs, and the high-tech nature of the field. Space systems shouldn't follow the rules set out for those other things, Young said.

According to Young, the Pentagon has made good progress in restraining requirements growth within space programs. However, he said that serving the needs of both the intelligence world and military warfighters continues to feed mission creep—the addition of unplanned capabilities.

There still is no mechanism—other than direct intervention by the Secretary of Defense and Director of Central Intelligence—to solve differences between the military and civil entities of the Intelligence Community. Such conflict resolution has to be done "further down" the chain of command, Young said.

Rising cost is being held in check through independent cost and program reviews, he noted. The fact that "mission success has replaced cost" as a primary program driver is a step in the right direction, he said.

However, Young believes that the government's ability to manage space programs effectively remains seriously "eroded." Development of a space cadre to manage space programs effectively is also slow.

Young said that there are simply "not enough experienced people in space acquisition." In his view, when space programs fail, they do it in a catastrophic way, and it is almost always a human error that caused the problem. ■





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# Aerospace World

By Adam J. Hebert, Senior Editor

## Airman Killed in Iraq

A1C Carl L. Anderson Jr., of Georgetown, S.C., was killed Aug. 29 while on duty during Operation Iraqi Freedom.

Anderson, who joined the Air Force in December 2001, died when his supply convoy was struck by the explosion of a roadside bomb near Mosul in northern Iraq.

He was deployed with the 732nd Expeditionary Mission Support Group from the 3rd Logistics Readiness Squadron, Elmendorf AFB, Alaska.

## Airman Dies at Osan

SrA. Jeffrey T. Alfieri, 22, of Coral Springs, Fla., died Aug. 5 from an injury sustained while he was working on an electrical transformer at Osan AB, South Korea, according to *Pacific Stars and Stripes*.

Alfieri, who was assigned to the 51st Engineer Squadron at Osan, was attempting to restore power to a section of the base when the accident occurred.

Air Force officials are investigating his death.

## 1,000 Days of Enduring Freedom

July 3 marked the 1,000th day of Operation Enduring Freedom, the first overseas action by America in the Global War on Terror. In the 1,000 days since OEF began on Oct. 7, 2001, US Central Command Air Forces and its coalition partners have flown roughly 140,000 sorties into, out of, and over Afghanistan.

Of those sorties, more than 94,000 have been strike missions, according to Air Combat Command.

OEF coalition air forces continue to play an important role in the battle with al Qaeda and the Taliban, protecting Afghanistan's fledgling democracy as it heads toward elections this fall. The operation will continue as long as required, said Lt. Gen. Walter E.L. Buchanan III, CENTAF commander.

Airpower will help prevent "remnants of the Taliban regime and other terrorist elements" from interfering with elections and democracy in that country, Buchanan said. "A historic array of airpower options ... are avail-

*A USAF wing commander recently got a taste of the life of a firefighter in an up close and personal demonstration. Dressed in protective firefighting gear, Col. Michael Spencer, commander of the 355th Wing, Davis-Monthan AFB, Ariz., helped extinguish the flames during a simulated structural fire.*



USAF photo by Ann. Veronica Pierce

able now and for however long they're needed."

For more on OEF's first 1,000 days, see, "Airpower's Contribution to OEF," p. 19.

## Many in USAF Must Change Jobs

In its latest attempt to rebalance the force, USAF is offering 1,098 senior noncommissioned officers the opportunity to retrain for new specialties in 2005. The voluntary phase began Aug. 3.

The Air Force said it will resort to involuntary selection if the service does not receive enough volunteers. It has already identified those NCOs susceptible to involuntary retraining.

Unlike last year's program in which NCOs were selected based on seniority, the 2005 effort selected NCOs across all eligible year groups.

USAF has limited retraining primarily to staff sergeants and technical

sergeants with 16 or fewer years of service and master sergeants with 18 or fewer years of service. Some second-term senior airmen may volunteer for staff sergeant quotas. There are "limited" opportunities for senior master sergeants.

When it released the retraining-susceptible list, the service also began a drive to recruit airmen into nine enlisted aircrew specialties. It has 360 voluntary training slots for senior airmen through master sergeants.

Positions include in-flight refueling specialists, flight engineers, loadmasters, airborne communications and electronics specialists, airborne battle management systems specialists, airborne mission systems specialists, flight attendants, aerial gunners, and airborne cryptologic linguists. These positions offer monthly incentive pay based on the number of years of aviation service.



## Bush Outlines Overseas Basing Restructure

President Bush in August presented a rough outline of how the Defense Department will realign its overseas forces over the next 10 years. The plan would shift US military forces to a more expeditionary posture, abandoning outdated Cold War installations when possible.

Out of a total of 230 major US military bases, only 28 are on foreign soil. However, the US has "5,458 distinct and discrete military installations around the world," said a senior defense official during a background briefing at the Pentagon. He said those "little pieces of property" now are deemed unnecessary.

Bush set many changes in motion, though details are still to be worked out with host nations worldwide. Over the next decade, Washington would close "hundreds of US facilities overseas" and bring home roughly 65,000 military personnel, according to a White House fact sheet. Also headed back to the United States are approximately 100,000 family members and DOD civilians.

There are about 230,000 US troops stationed overseas, primarily in Germany and South Korea. Shortly before Bush's announcement, US and South Korean officials reached agreement on how to realign forces on the peninsula. (See "Korean Realignment Approved," p. 26.)

In announcing the restructure plan, Bush said, "We will deploy a more-agile and more-flexible force, which means that more of our troops will be stationed [in the US] and deployed from here at home."

That more-flexible force will make mobility assets "very important," said a defense official, who added, "We have to move to the fight," a requirement which will put a premium on strategic and tactical airlift and sealift.

Airpower in Europe may shift around somewhat. The Air

Force has two F-16 squadrons at Spangdahlem AB, Germany. The senior official said, "For the moment, that's where they're going to stay." He added that the US is continuing a dialogue with Turkey on "more-flexible use" of Incirlik AB, Turkey.

The Administration does plan to add more punch in the Pacific theater. "Advanced strike assets will be stationed in the Western Pacific," the White House fact sheet stated. Officials at Pacific Air Forces have been calling for permanent basing of strike aircraft on Guam for several years.

The most dramatic change will be a major reduction of Army tank units based in Germany. Under the plan, the Army's heavy forces designed for a land war in Europe will return to the US. They will be replaced by advanced, deployable capabilities, according to the fact sheet. In Germany, two of the Army's heavy divisions will be withdrawn and replaced by a lighter-weight Stryker brigade that is "more relevant" to the threats around Europe, said the defense official.

No major movements are expected before 2006, and no final decisions on which US bases will host the returning forces will be made until after next year's domestic base realignment and closure round is completed.

Defense officials at the briefing told reporters that the Pentagon is trying to get away from basing arrangements that were set up for reasons other than military capability. Policy in the past called for 100,000 troops in the Pacific and 100,000 troops in Europe. However, officials emphasized that bringing forces back to the United States is not a step toward a reduced force structure.

"It's not our view that this will result in a force structure reduction in any of the services," the official said. "That's not what this plan is about."

### McSally Heads Combat Unit

Lt. Col. Martha McSally this summer became the first woman to command an Air Force combat squadron. McSally, an A-10 pilot, took command of the 354th Fighter Squadron at Davis-Monthan AFB, Ariz., on July 19.

This is not McSally's first "first." In 1995, she became the first woman Air Force pilot to take a fighter into enemy territory, when she flew a no-fly-zone patrol over Iraq. (See "The Quiet Pioneers," December 2002, p. 34.)

In 2001, McSally was instrumental in overturning a Defense Department policy that required servicewomen serving in Saudi Arabia to wear a head-to-toe abaya while in public areas, among other restrictions.

McSally, a graduate of the US Air Force Academy and Harvard University, said she looks forward to a day when gender and serving are not issues and "we are just fighting side by side, and it's not a precedent."

### Martin Nominated To Head US Pacific Command

Gen. Gregory S. Martin on Aug. 19 was nominated to become commander of US Pacific Command, Camp Smith, Hawaii. If confirmed by the Senate, Martin would be the first officer from outside the Navy to lead PACOM. Martin is currently serving as commander of Air Force Materiel Command, Wright-Patterson AFB, Ohio.

The nomination follows a recent trend to break with tradition in naming new commanders. (See "Aerospace World: Rumsfeld Opts for Shifts at Two Key Spots," August, p. 13.)

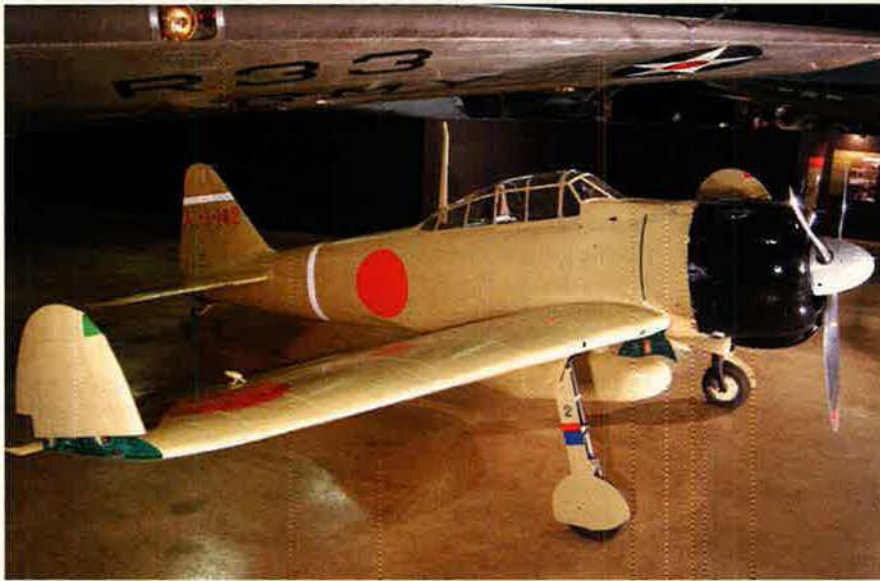
In June, Adm. Timothy J. Keating was named the new head of North American Aerospace Defense Command, ending what had been an Air Force monopoly on that position since NORAD's founding.

At the same time, Marine Corps Gen. James E. Cartwright was selected to head US Strategic Command. This is the first time STRATCOM has been led by someone other than an Air Force or Navy officer.

Also announced in August was the nomination of Gen. (sel.) Bruce A. Carlson to be Martin's successor as AFMC commander. Carlson is currently serving as head of 8th Air Force, Barksdale AFB, La.



USAF photo



*The United States Air Force Museum in Dayton, Ohio, now has its World War II Japanese Zero back after an extensive renovation performed by Century Aviation of Wenatchee, Wash. The Zero, which is on display under the wing of a US Army Air Forces B-18A, was the most famous of Japanese military aircraft. Museum officials said this Zero was abandoned in Kavieng, New Ireland, in the Bismarck Archipelago, during the war. It now carries markings of a section leader from the Japanese carrier Zuiho during the Battle of the Bismarck Sea in 1943.*

### Thule To Get Upgrades

The US on Aug. 6 signed new agreements with Denmark and Greenland that "pave the way for an upgrade of radar facilities" at Thule AB, Greenland, according to a State Department statement. The upgraded radar will support the US missile defense program.

One of the new documents amends the 1951 Agreement on the Defense of Greenland. The other two provide for economic, technical, and environmental cooperation.

Secretary of State Colin L. Powell, who was in Greenland for the signing ceremony, noted that the US, Denmark, and Greenland had fought together against fascism and communism. Now, he said, "we will also meet the security challenges of the 21st century, from missile defense to international terrorism."

Greenland has had a home-rule government since 1979, but Denmark continues to oversee foreign and defense issues. At the ceremony, Denmark's foreign minister, Per Stig Moeller, said that his country did not believe the proposed missile defense system would serve as a defense

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against "all sorts of terrorism, but that doesn't mean you should not defend yourself against some sort of terrorism."

Located 750 miles north of the Arctic Circle, Thule hosts a ballistic missile early warning site that can detect and track missiles launched at North America.

The United States plans to modernize facilities at Thule, beginning with \$21 million in upgrades in Fiscal 2005.

### Seven ROTC Units To Close

The Air Force will close seven low-enrollment Reserve Officer Training Corps (ROTC) detachments beginning next year. Although these particular programs have produced few officers over the last 10 years, officials noted that ROTC enrollment nationwide has actually increased by 30 percent since 2001.

In 2005, USAF will close ROTC units at the University of Akron, Ohio, and Grambling State University, La. In 2007, USAF will close units at the New Jersey Institute of Technology; University of Memphis; University of Cincinnati; University of Massachusetts-Amherst; and Wilkes University in Pennsylvania.

Air Force ROTC enrollment overall

## Airpower's Contribution to OEF

USAF still has more than 18,000 airmen deployed to Southwest Asia to assist with Operation Enduring Freedom in Afghanistan, an Air Combat Command news release in July noted. The launch of OEF on Oct. 7, 2001, marked the start of the overseas portion of the Global War on Terror.

In 1,000 days of operations (a milestone reached on July 3), US Central Command Air Forces (CENTAF) and its coalition partners have:

- Flown more than 94,000 strike sorties against preplanned targets or in close air support of ground forces in Afghanistan.
- Flown more than 30,000 airlift sorties, carrying troops and critical military supplies to a land-locked section of the world far removed from traditional US basing locations.
- Flown nearly 13,000 air refueling sorties, delivering more than 2.1 million pounds of fuel to coalition aircraft.
- Flown more than 3,000 intelligence-surveillance-reconnaissance (ISR) sorties.

CENTAF has been bolstered by aircraft of the Army, Navy, Air National Guard, and Air Force Reserve Command, as well as international members of the coalition team. In particular, ACC noted, the "now well-established joint and combined approach to ISR operations" has allowed the coalition to fuse data from multiple sensors and platforms into one picture, offering "more complete, precise, and timely" battlespace awareness.

ACC also said that, since the start of OEF, the way CENTAF fights has changed in ways that have enhanced airpower's "effect and flexibility." For example, CENTAF works more closely with ground commanders and intelligence agencies "to build a flexible air plan that meets the ground commander's requirement for on-call close air support and allows quick access to potential time-sensitive strike areas."

The "unsung heroes" of OEF, according to Lt. Gen. Walter E.L. Buchanan III, CENTAF commander, are mobility units. "Attention naturally gravitates to bombs dropped on target," he said, but "without the Herculean efforts of our mobility forces, we would not have the people or resources available to make that happen."



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**Phil Hyde (foreground) reaches to shut off a broken water line at Patrick AFB, Fla., following Hurricane Frances. Hyde, a plumber with the 45th Civil Engineer Squadron, was part of the initial recovery team.**

## Hurricane Frances Blasts Canaveral, Patrick Bases

Two Air Force facilities in the state of Florida were hit hard by Hurricane Frances during Labor Day weekend. Patrick Air Force Base and Cape Canaveral Air Force Station, both on Florida's Atlantic Coast, sustained damage from the Category 2 hurricane that came ashore Sept. 4.

The first officials to return to Patrick were members of the 45th Hurricane Recovery Team, which consists of airmen from the base's civil engineering and security forces squadrons. The hurricane team secured the base Sept. 7 and began removing debris so that normal air base operations could resume.

Brig. Gen. (sel.) Mark Owen, 45th Space Wing commander at Patrick, said the damage at the base "could reach into the tens of millions" of dollars. Exact figures require a comprehensive evaluation of the storm's effects.

Much of the damage at Patrick resulted from the collapse of an empty hangar. The aircraft normally held there belong to the 920th Rescue Wing. As Frances approached, the HH-60 Pave Hawk helicopters and a C-130 normally housed there were flown to Dobbins ARB, Ga., for protection.

At Cape Canaveral, scattered damage did not affect three rockets already in place on their launch pads, officials said. Three boosters—a Delta II, Delta IV, and Titan IV B—all "seem to have survived and weathered it just fine," Owen told reporters.

NASA's three space shuttles, meanwhile, were protected in hangars able to withstand 105 mph winds.

The Civil Air Patrol, USAF's official civilian auxiliary, assisted with the storm assessment efforts. According to an Air Force news release, CAP members were to "capture and transmit aerial photos of the affected sites" for use by emergency responders.

Digital cameras aboard CAP aircraft were to take high-resolution photos to "help emergency relief agencies plan and prioritize rescue, repair, and cleanup efforts," the release stated.

Financially, Frances is still expected to be the most destructive in Cape Canaveral's history. (In August, Hurricane Charley caused a record \$700,000 in damage to the air station.)

Airmen at Patrick and Cape Canaveral evacuated Sept. 2 as a precaution, because the storm was initially forecast to pack 145-mph winds. It was the first time officials had to evacuate Patrick since Hurricane Hugo hit in 1989.

The airmen were part of a larger evacuation of 2.5 million people from Florida's coastal area. Among other preparations, 13 F-15s from the Florida Air National Guard unit at Jacksonville relocated to Scott AFB, Ill. Some officials also relocated to MacDill AFB, Fla., which was farther along the storm's path.

By the time Frances came ashore, winds had declined, but the slow-moving hurricane still caused considerable wind and water damage.

has risen from 13,000 in 2001 to 18,500 today. More than half the growth, however, has come at only 17 percent of the existing detachments.

The service has created "cross-town" agreements for the units closing next summer to ensure affected students can remain in AFROTC en route to earning their commissions. The University of Akron has an agreement with Kent State University; Grambling will work with Louisiana Tech University.

### JEFX Weighs 15 Initiatives

The Air Force-led Joint Expeditionary Force Experiment 2004 this summer evaluated 15 technologies as candidates for possible accelerated fielding. Officials said the "focus areas" at JEFX '04 were improving network-centric infrastructures, predictive battlespace awareness, and effects-based operations.

Specific initiatives being evaluated included proposals such as network-centric collaborative targeting and machine-to-machine weather data transfer.

The \$53 million exercise included live sorties at Nellis AFB, Nev., featuring every type of Air Force command and control aircraft. Gen. (sel.) Bruce A. Carlson, who is 8th Air Force commander and was leader of the exercise, said prospective technologies will be evaluated and the most promising ones will be picked for accelerated fielding.

Carlson told reporters at the Pentagon that recommendations will be briefed to the Chief of Staff this fall and that findings will be finalized and published in November.

This is the fifth JEFX. In the past, USAF has selected about 40 percent of the initiatives for acceleration. The relatively low acceptance rate for JEFX experiments doesn't bother USAF officials, however, because they also learn from failures.

Twenty-seven of the 70 initiatives evaluated in earlier JEFXs were later pushed to the warfighter, according to Lt. Gen. William T. Hobbins, who led the 2002 experiment.

Seven of the 2002 JEFX initiatives subsequently were fielded for the wars in Afghanistan and Iraq, Hobbins added.

### Ogden Sets Record Repair Rate

The Ogden Air Logistics Center at Hill AFB, Utah, set a record by repairing 97 percent of all aircraft on or ahead of schedule this year, the center announced in August.

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WINNING TECHNOLOGY



USAF photo by S/A. Matt Schwartz



Members of the 193rd Special Operations Wing, Pennsylvania Air National Guard, on Aug. 26 complete a flight in a new EC-130J Commando Solo aircraft. Some critics are taking USAF to task over the new J model. (See below.)

rates have never before been seen in Air Force depot-level repair," said Col. Paul Davidson, chief of Ogden's aircraft division.

The goal for on-time deliveries at Air Force Materiel Command's three depots is 90 percent. Ogden beat that target in each of its aircraft repair branches. The A-10 and C-130 shops achieved 100 percent on-time repair records.

Over the past few years, Ogden has instituted "lean" repair procedures to make the depot's work more efficient. Perhaps the greatest improvement was in getting needed parts in advance instead of after a months-long delay that had been the norm. Another change reorganized the work area to put tools and supplies closer at hand.

#### Pilot Error Caused Fatal Crash

Air Force investigators concluded that pilot error was responsible for

## DOD, USAF Face Off Over C-130J

The Defense Department Inspector General this summer released a report harshly critical of the acquisition program and performance of the C-130J airlifter. Service officials dispute IG claims.

The IG said the newest Hercules is unable to operate in combat theaters and that contractor Lockheed Martin has little incentive to deliver improved aircraft.

The Air Force, which manages the program, disagreed with all of the IG's recommendations and findings. The service, in its response to the report, said that much of the report was based on outdated information. It did say that some facts were correct, but USAF added that the "findings and conclusions ascribed to these facts cannot be supported."

The C-130J is a commercially developed follow-on to Lockheed Martin's long-running C-130 line of airlifters. The Air Force, with endorsement from DOD and Congress, decided it would be cheaper to buy the C-130J "off-the-shelf" and then make necessary modifications to meet military requirements.

Congress has been a strong supporter of the program, increasing buys of the aircraft above what USAF had requested in recent budgets.

The Air Force began fielding the new airlifter in 1999 with the Air National Guard and Air Force Reserve Command. Overall, USAF plans to buy 168 and is purchasing another 33 on behalf of the Marine Corps.

Although the IG report said that "none" of the aircraft so far accepted by USAF had met "operational requirements," the Marine Corps in late April announced the C-130Js it had received were ready for operational use. By September, the Air Force had not released its

C-130Js for service outside the US; however, officials said they would do so by year's end.

"It doesn't have defensive systems, and it is not cleared for assault landing procedures from a software perspective," stated Gen. John W. Handy, commander of US Transportation Command and Air Mobility Command, during a breakfast meeting with reporters shortly after release of the IG report. Those were the reasons it was restricted from overseas operations. Handy said the software issues would be resolved by December. "Everything looks incredibly good," he added.

The C-130J is already being used in combat in Southwest Asia—by the Royal Air Force and the Australian Air Force. (The United Kingdom bought the new airlifter before the US.) It is also being used by the military forces of Italy.

ANG's 135th Airlift Group, Martin State Arpt., Md., the first Guard unit to receive the new aircraft, announced in May that it had surpassed the 10,000 flying hour mark in the C-130J.

The unit has been qualifying the service's initial cadre of pilots and aircrew for the new cargo aircraft, which, according to Handy, is a "very software-intense aircraft."

It is digital, where the earlier C-130s were analog. "There are going to be challenges," said Handy. He called it a "birthing process" that is seen with any new weapon system and called the C-130J a "dramatic improvement" over older C-130s.

"The trends are all positive," said Handy. "The timelines are being met. All the milestones are being met for a December deployment to the [Southwest Asia] theater."



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the crash of a T-6A Texan II April 3 at Savannah-Hilton Head Arpt., Ga. The crash killed the two pilots, Capt. Judson Brinson and Thomas Moore.

The board could not determine which pilot was flying at the time of the accident. Both were assigned to the 39th Fighter Training Squadron, Moody AFB, Ga.

The investigation report, released in late July, found that the aircraft stalled and rolled because the pilot flew beyond the maximum bank angle of 90 degrees and let the airspeed fall below the minimum of 161 mph. The pilot made no attempt to apply proper stall recovery actions, according to the report's findings.

The pilots were returning from a

training mission and had just taken off from Savannah to return to Moody when the crash occurred.

### Yeager Cleared for Promotion

A little-noticed provision in the House version of the Fiscal 2005 defense authorization bill would permit the President to promote Chuck Yeager, 20 years after his retirement. Yeager retired as a brigadier general in 1975.

House legislators stipulated in Section 563 that the President could appoint retired Brig. Gen. Charles E. Yeager to the rank of major general on the Air Force retired list.

Yeager is a World War II ace with 13 confirmed aerial victories, and, in 1947, he became the first human to

fly faster than the speed of sound when he piloted the Bell X-1 beyond Mach 1. Yeager was also the first to fly twice the speed of sound in level flight, when he took the Bell X-1A to Mach 2, in 1953.

### One Operator Flies Two UCAVs

In a first, a single pilot-operator on Aug. 1 flew two unmanned combat air vehicles (UCAVs) in coordinated flight.

Two Boeing X-45A aircraft took off in succession from Edwards AFB, Calif., joined up, then flew preset formations, making autonomous maneuvers to hold their relative positions, according to a company news release. A single pilot-operator was able to fly both aircraft because the

## News Notes

By Tamar A. Mehuron, Associate Editor

■ US Air Forces in Europe in August stood up the 38th Combat Support Center, Ramstein AB, Germany, to help prepare midlevel enlisted and officer personnel for expeditionary operations. Officials said the 38th was a USAF-unique initiative that comprises personnel from civil engineering, communications, logistics planning, personnel, services, security forces, supply, and transportation, who will provide classroom instruction and a field training exercise covering all phases of deployment.

■ Rockwell Collins in August received a \$3.6 billion contract spanning 10 years for technical and logistical support to Warner Robins Air Logistics Center, Robins AFB, Ga.

■ USAF test officials on July 8 conducted the first guided launch of the AIM-9X missile from an F-16. The test took place at China Lake Naval Air Weapons Center, Calif. The AIM-9X uses the Joint Helmet Mounted Cueing System, allowing the pilot to acquire and track targets beyond line of sight and strike a broader array of targets than its AIM-9 predecessors.

■ IBM of Fairfax, Va., in July received a \$500 million contract to streamline upgrades at the Oklahoma City Air Logistics Center, Tinker AFB, Okla. Work is to be completed July 2009. Electronic Systems Center, Hanscom AFB, Mass., awarded a \$490 million contract to a group of contractors to provide communications infrastructure for deployed forces that will

reduce airlift and footprint requirements and provide increased interoperability and capacity and user connections. The contractors are: Dell Marketing in Texas, General Dynamics in Arizona, Northrop Grumman in Maryland and Virginia, and Redcom Laboratories in New York. Work is scheduled to be completed by July 2009.

■ Ground testing of the first GE Rolls Royce F136 engine for the new F-35 Joint Strike Fighter began July 22 at the GE facility in Evendale, Ohio. Configured for the conventional takeoff and landing version (CTOL) of the F-35, the engine will undergo tests through December. USAF plans to purchase more than 1,700 F-35s in some mix of CTOL and short takeoff and landing variants.

■ Vought Aircraft of Texas will provide 128 wing-related components for C-5 airlifters under a \$471 million contract issued in July. The work is to be completed by January 2013.

■ Aeronautical Systems Center, Wright-Patterson AFB, Ohio, in July awarded Boeing a long-term, performance-based contract for C-17 fleet sustainment. The contract also stipulates that Boeing will make investment commitments of \$62 million in USAF's air logistics centers (ALCs), flowing to the ALCs work that was performed by commercial repair sources. The overall contract, which also supports foreign military sales to the UK, is valued at \$4.9 billion over eight years.

■ The Air Force this summer held its first Senior Noncommissioned Officer Symposium in the US Central Command theater of operations. Previously, master sergeant selectees could only attend such training at their home stations. The CENTOM area course is condensed to a day and a half, instead of the standard five days. However, officials said it provided the critical information that new senior NCOs need to understand their increased responsibilities.

■ Air Force Block 30 F-16s, used primarily by the Air National Guard, will soon add the 500-pound Joint Direct Attack Munition to their arsenal. Test officials at Edwards AFB, Calif., in July completed an accelerated testing schedule that required an "enormous amount of coordination" between USAF development, logistics, and test entities in Florida, Utah, and California, said Doug Pawlik, 412th Test Wing F-16 project manager at Edwards.

■ A USAF civilian pilot's fatal heart attack caused an Air Force Beechcraft transport to crash March 16, killing him and four contract workers aboard, concluded a USAF accident investigation report released July 30. The aircraft was en route to Tonopah Test Range northwest of Nellis AFB, Nev. (See "Aerospace World: Five Die in Nevada Crash," May, p. 21.) Pilot David D. Palay Sr. had not informed FAA flight physical examiners of his high blood pressure or the fact that he was on several medications.

■ A large black vulture ingested into an F-15E engine caused the engine to fail, leading the fighter to crash May 6 near Callaway, Va., determined an Air Force accident in-



X-45s flew the basic mission plan on their own.

TheUCAVs are technology demonstrators in the Joint Unmanned Combat Air System (J-UCAS) program managed by the Defense Advanced Research Projects Agency, Air Force, and Navy. J-UCAS is being evaluated for suppression of enemy air defenses, strike, electronic attack, and intelligence-surveillance-reconnaissance missions.

#### USAF Aids Russian Terror Victims

Airlift crews from US Air Forces in Europe sent two C-130s with emergency relief supplies to southern Russia Sept. 6.

The humanitarian aid was to help Russia respond to the horrific attack in Beslan. At least 335 women and children were killed there by terrorist

investigation. The pilot and weapons system officer ejected safely. The report, released Aug. 2, noted that contributing factors included damage to control and mechanical systems, which made the aircraft uncontrollable. Both aircraft and crew were assigned to 335th Fighter Squadron, Seymour Johnson AFB, N.C.

■ The remains of Air Force CMSgt. Luther L. Rose, missing in action since 1966 in the Vietnam War, were identified and returned to his family for burial. On June 23, 1966, Rose, a gunner on an AC-47 "Spooky" gunship, was on a nighttime reconnaissance mission over southern Laos. Witnesses reported seeing the aircraft on fire before it crashed into a heavily wooded area. They did not see any parachutes. No emergency beeper was heard. Specialists from the US and Laos found and excavated the suspected crash site in 1995, recovering human remains and identification of other crew members.

■ US officials announced July 28 that search operations would soon resume for remains of missing American troops in Vietnam's Central Highlands. Operations had been halted for three years due to local unrest in the area. Of 1,855 Americans missing from the Vietnam War, some 110 are thought to have been lost in the Central Highlands.

■ Students at Air University, Maxwell AFB, Ala., can now earn graduate degrees in airpower and art science, military operational art and science, and strategic studies, as a result of the school's recent accreditation by the Southern Association of Colleges and Schools.

■ A replica of the "Little Boy" atomic

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*Rin Tin, a military working dog at Eielson AFB, Alaska, awaits a command to enter the tube in front of him during training. This dog usually rises at 4 a.m. to begin his day, which includes running through the confidence course before beginning his normal patrol duties. The seven-year-old German Shepherd is assigned to the 354th Security Forces Squadron.*

bomb was returned to the Air Force Museum, Wright-Patterson AFB, Ohio, July 15, from Sandia National Laboratories, Albuquerque, N.M., after a year-long restoration project. Additional parts and fresh paint made the replica look more like the nuclear bomb dropped on Hiroshima on Aug. 6, 1945.

■ Airmen who participated in humanitarian missions for Operation Enduring Freedom from Oct. 7, 2001, to May 31, 2002, are now eligible to receive the Humanitarian Service Medal.

■ Gen. John P. Jumper, Air Force

Chief of Staff, on July 30 presented the Kolligian Trophy for air safety to Capt. Michael Matesick for saving his damaged F-16 while flying in Iraq in June 2003. Matesick, now assigned to Luke AFB, Ariz., saved his fighter after the single engine suffered a major malfunction en route to a nighttime close air support mission. He safely landed the aircraft, power off, on a narrow taxiway at Baghdad Airport. The award, which is named for 1st Lt. Koren Kolligian Jr., recognizes outstanding airmanship or resourcefulness in avoiding or minimizing aircraft accidents.

USAF photo by S/A Joshua Strang



## Korean Realignment Approved

US and South Korean officials in July approved a much-anticipated plan to realign US forces on the Korean peninsula. The Defense Department announced the agreement to "relocate all US forces from the Seoul metropolitan area to the Pyongtaek area," near Osan Air Base, about 50 miles south of Seoul.

Seoul is home to the headquarters for US Forces Korea and hosts roughly 8,000 US troops.

The US will return the Yongsan Garrison's territory in downtown Seoul to South Korean control. In return, South Korea will purchase new land and fund the construction of a new USFK headquarters, probably adjacent to Osan. According to the July 23 announcement, the relocation will be completed by the end of 2008.

Also finalized was an agreement to move the Army's 2nd Infantry Division out of its network of camps near the Demilitarized Zone to enduring facilities in the Pyongtaek area. The timetable for this move will be determined later, stated the announcement.

bombs and gunfire three days after the terrorists had attacked a school. Many others remained in critical condition days after the hostage situation ended.

The humanitarian aid included sheets and blankets, bandages and dressings, burn kits, medicine, and medical equipment, according to an Air Force news release.

Approximately 36,000 pounds of

supplies were delivered to Russia, officials said. The Russians were "very thankful" for the aid, said AFRC Lt. Col. Richard L. Galante, commander of the 38th Airlift Squadron, Ramstein AB, Germany.

"They said it was nice that our countries were in such community with one another ... in the midst of tragedy," added SSgt. Clayton E. Bronnee, a Russian linguist with

Ramstein's 426th Information Operations Squadron.

## USAF OKs First SBIRS Payload

Air Force officials in July confirmed that the first Space Based Infrared System High (SBIRS High) space payload was ready for delivery. In August, prime contractor Lockheed Martin turned over the payload for integration with a host satellite. The first SBIRS launch is slated for 2007.

This payload will be one of two to go into highly elliptical orbit (HEO). According to Lockheed, it demonstrated "unsurpassed sensing, pointing, and control performance" during testing by subcontractor Northrop Grumman.

The HEO payload's primary focus is to spot ballistic missile launches. In a secondary role, it will detect and report other militarily significant "infrared events," stated Lockheed.

Once operational, the full SBIRS High system will include the two HEO payloads, four satellites in geosynchronous orbit, and fixed and mobile ground-based assets. The first phase of the ground segment has been operational since 2001, processing data

## Senior Staff Changes

**RETIREMENTS:** Maj. Gen. Thomas A. **O'Riordan**, Lt. Gen. Thomas C. **Waskow**, Maj. Gen. Michael P. **Wiedemer**.

**NOMINATION:** To be **Lieutenant General:** Stephen G. **Wood**.

**CHANGES:** Brig. Gen. (sel.) Brooks L. **Bash**, from Spec. Asst. to Cmdr., 18th AF, AMC, Travis AFB, Calif., to Cmdr., 15th Expeditionary Mobility Task Force, AMC, Travis AFB, Calif. ... Lt. Gen. Carrol H. **Chandler**, from Cmdr., Alaskan Command, PACOM, Elmendorf AFB, Alaska, to DCS, Air & Space Ops., USAF, Pentagon ... Maj. Gen. Frank R. **Faykes**, from Dir., Financial Mgmt. & Comptroller, AFMC, Wright-Patterson AFB, Ohio, to Dep. Asst. Secy. for Budget, Asst. SECAF, Financial Mgmt. & Comptroller, Pentagon ... Maj. Gen. William M. **Fraser III**, from Dir., Ops., AETC, Randolph AFB, Tex., to Vice Cmdr., ACC, Langley AFB, Va. ... Maj. Gen. (sel.) Stephen M. **Goldfein**, from Dir., Operational Capability Rqmts., DCS, Air & Space Ops., USAF, Pentagon, to Cmdr., Air Warfare Center, ACC, Nellis AFB, Nev. ... Maj. Gen. Stanley **Gorenc**, from Cmdr., Air Forces Europe, USAFE, Ramstein AB, Germany, to Dir., Operational Capability Rqmts., DCS, Air & Space Ops., USAF, Pentagon ... Maj. Gen. James A. **Hawkins**, from Vice Cmdr., 18th AF, AMC, Scott AFB, Ill., to Cmdr., Tanker Airlift Control Center, AMC, Scott AFB, Ill. ... Maj. Gen. (sel.) Gilmory M. **Hostage III**, from Dir., P&P, AETC, Randolph AFB, Tex., to Dir., Ops., AETC, Randolph AFB, Tex. ... Lt. Gen. Ronald E. **Keys**, from DCS, Air & Space Ops., USAF, Pentagon, to Cmdr., ACC, Langley AFB, Va. ... Maj. Gen. Dennis R. **Larsen**, from Cmdr., 13th AF, PACAF, Andersen AFB, Guam, to Vice Cmdr., AETC, Randolph AFB, Tex. ... Maj. Gen. Stephen R. **Lorenz**, from Dep. Asst. Secy. for Budget, Asst. SECAF, Financial Mgmt. & Comptroller, Pentagon, to Cmdr., Alaskan Command, PACOM, Elmendorf AFB, Alaska ... Brig. Gen. Richard E. **Perraut Jr.**, from Cmdr., 15th EMTF, AMC, Travis AFB, Calif., to Dir., P&P, AETC, Randolph AFB, Tex. ... Maj. Gen. Quentin L. **Peterson**, from Spec. Asst. to

Cmdr., 18th AF, AMC, Scott AFB, Ill., to Vice Cmdr., 18th AF, AMC, Scott AFB, Ill. ... Maj. Gen. (sel.) Edward A. **Rice Jr.**, from C/S, Office of the Representative and Executive Dir. for Coalition Provisional Authority, OSD, Pentagon, to Cmdr., 13th AF, PACAF, Andersen AFB, Guam ... Brig. Gen. Paul J. **Selva**, from Cmdr., Tanker Airlift Control Center, AMC, Scott AFB, Ill., to Dir., Ops. & Log., TRANSCOM, Scott AFB, Ill. ... Lt. Gen. (sel.) Stephen G. **Wood**, from Cmdr., Air Warfare Center, ACC, Nellis AFB, Nev., to DCS, P&P, USAF, Pentagon ... Lt. Gen. Bruce A. **Wright**, from Vice Cmdr., ACC, Langley AFB, Va., to Cmdr., US Forces Japan, PACOM, Yokota AB, Japan.

**COMMAND CHIEF MASTER SERGEANT RETIREMENTS:** CMSgt. Valerie D. **Benton**, CMSgt. Vickie C. **Mauldin**.

**CCMS CHANGES:** CMSgt. Jonathan **Hake**, to CCMS, AFMC, Wright-Patterson AFB, Ohio ... CMSgt. Lewis E. **Monroe III**, to CCMS, 11th Wg., Bolling AFB, D.C. ... CMSgt. Richard A. **Smith**, to CCMS, NGB, Arlington, Va.

**SENIOR EXECUTIVE SERVICE RETIREMENTS:** Albert F. **Lowas Jr.**, Susan A. **O'Neal**, James R. **Speer**, J. Daniel **Stewart**.

**SES CHANGES:** Robert E. **Dawes**, to Auditor General, OSAF, Pentagon ... Theodore G. **Fecke**, to Technical Advisor, Propulsion, ASC, AFMC, Wright-Patterson AFB, Ohio ... Gerald R. **Hust**, to Dir., Intl. Tng. & Education, AETC, Randolph AFB, Tex. ... William A. **Kelly**, to Dir., Human Resource Svcs., General Svcs. Administration, Washington, D.C. ... James W. **Salter Jr.**, to Asst. Auditor General (Spt. & Personnel Audits), AFAA, Brooks AFB, Tex. ... John **Vonglis**, to Principal Dep. Asst. Secy. (Financial Mgmt.), Asst. SECAF (Financial Mgmt. Comptroller), Pentagon ... Frank P. **Weber**, to Dir., Ops. Spt. Wg., ESC, AFMC, Hanscom AFB, Mass. ... Patricia J. **Zarodkiewicz**, to Dir., Financial Mgmt. & Comptroller, AFMC, Wright-Patterson AFB, Ohio. ■



*SrA. Kenneth Gordon, assigned to the 386th Expeditionary Security Forces Squadron's fly-away security team, walks his "beat" around a USAF C-130 at Baghdad Airport in Iraq. In the background, 58 Iraqi police cadets wait to board the airlifter.*



USAF photo by SSgt. Martin Jackson

## The Iraq Story Continues

### Casualties

As of Aug. 31, a total of 978 Americans—975 troops and three DOD civilian employees—had died while officially supporting Operation Iraqi Freedom. Of those casualties, 732 were killed by hostile actions, while the other 246 died in noncombat incidents, such as accidents.

Since the end of major combat operations on May 1, 2003, 837 troops have died in Iraq. Of those, 620 were in combat and 217 in nonhostile accidents. The three civilians were killed in the line of duty in two attacks earlier this year.

### Combat, Air Strikes Consume Najaf

Intense fighting, both on the ground and through air strikes, engulfed the city of Najaf for much of the month of August. An uprising led by militant strongman Muqtada al-Sadr began Aug. 5, and combat with Marines and coalition airpower was still ongoing two weeks later.

On Aug. 17, US aircraft attacked a target in Najaf's sprawling cemetery, where many of al-Sadr's supporters had holed up. Wire reports quoted Marine Lt. Col. Thomas V. Johnson saying the aircraft fired "one precision guided missile on a building in the cemetery" from which militiamen with rocket-propelled grenades had been firing on US troops.

A week earlier, officials had warned that the cemetery would not be a safe haven. "We will not allow [insurgents] to continue to desecrate this sacred site" by using it as an operating base, said Marine Col. Anthony Haslem, commander of the 11th Marine Expeditionary Unit. "There will be no sanctuary for thugs and criminals in Najaf."

### DOD Develops New "Captivity Curriculum"

The Defense Department plans to revamp its training to help troops avoid capture and know what to do if they do become prisoners. The Joint Personnel Recovery Agency, Ft. Belvoir, Va., is expected to produce a new "core captivity curriculum" this year.

According to Air Force Col. Mark Bracich, JPRA's director of policy, doctrine, and training, the new curriculum is being developed jointly by the services. Each will incorporate it into its service-specific survival, evasion, resistance, and escape schools.

Traditionally, aircrews were at high risk of capture if they were shot down over enemy territory. Today, however, more personnel are at high risk in the modern, asymmetric battlespace, said Bracich. The new training applies to personnel on peacekeeping, humanitarian, and noncombat support missions. Troops are as likely to be taken hostage by a splinter group as they are by a recognized enemy army.

The first prisoners of war of Operation Iraqi Freedom weren't pilots or infantry soldiers—they were combat-support troops.

from Defense Support Program satellites, due to be replaced by SBIRS High satellites.

### Lockheed Wins ACS

Lockheed Martin beat out rival Northrop Grumman to win an \$879 million Army contract to begin developing the Aerial Common Sensor (ACS) for the Army and Navy. The ACS is a next generation airborne intelligence-surveillance-reconnaissance and target identification system.

The initial contract calls for five aircraft with mission-ready airborne ISR systems to be available for testing in 2006. Follow-on contracts for additional systems could raise the value of the program to more than \$7 billion over 20 years.

The ACS, which is slated to replace the Army's Guardrail and Airborne Reconnaissance Low aircraft and the Navy's EP-3E, will be derived from the Brazilian Embraer business jet.

According to Lockheed Martin, ACS will offer "unprecedented sensor-computer integration that will pinpoint threats in real time." It will also "provide instantaneous access to decision-quality intelligence" from various ISR systems, including USAF's Joint STARS ground surveillance aircraft, U-2 reconnaissance aircraft, and Global Hawk unmanned aerial vehicle.

### Three Airmen Make Olympics

Three of the 24 military personnel representing the US in the 2004 Summer Olympics in Athens, Greece, were Air Force officers. They competed in race walking, hammer throwing, and fencing.

Capt. Kevin Eastler, 26, a missile



combat crew commander at F.E. Warren AFB, Wyo., and a 1999 Air Force Academy graduate, finished 21st in the men's 20-kilometer race walk, held Aug. 20. Two other Americans were among the 48 walkers. Eastler finished a few seconds off the fastest time posted by any American in the event in Olympic history.

First Lt. James Parker, 28, a services officer at Malmstrom AFB, Mont., competed in the track and field hammer throw. He finished 21st out of a field of 33 in his qualifying round and did not make the finals. His first-place throw in the US Olympic trials was 254 feet, 6 inches.

Second Lt. Weston Kelsey, 22, who graduated from the academy last year, finished 19th out of 37 in the men's individual epee fencing competition. Kelsey is a two-time national champion, who took World Cup bronze medals in 2002 and 2003.

**Former Official Faces Jail**

A federal judge in August accepted a "no contest" plea from Scott A. Ferguson, the former collections chief at the Air Force Museum, on two counts in the theft of a "Peacekeeper" armored car from the museum at Wright-Patterson AFB, Ohio.

US District Judge Walter H. Rice set Oct. 29 for sentencing.

Ferguson became collections chief, the third highest position at the museum, in March 1995. In July 1996 he told his superiors that the museum's 1980 two-door Cadillac-Gage Peacekeeper armored car had been requested by another military museum. He hid the vehicle in Ohio, taking it out to conventions in Tennessee and Pennsylvania, and, in 1999, sold it for \$18,000.

Ferguson was indicted by a federal grand jury in 2003 and charged with transporting a stolen vehicle across state lines and selling a stolen vehicle. Each count carries a maximum punishment of 10 years in prison.

Last year, the Air Force formed a group to review operational procedures at the museum. (See "Aerospace World: USAF Reviews Museum Policies," November 2003, p. 14.) Among its recommendations, the group said USAF should clarify the museum's chain of command and the responsibilities within that body, and it said USAF should replace the current board of advisors with a board of directors. The group also recommended a stronger security program. (See "Aerospace World: Museum Needs More Oversight," January, p. 13.) ■

**Did Berger Smuggle Papers in his Pants?**

Former National Security Advisor Samuel L. Berger was under investigation by the Justice Department for possible improper handling of classified documents during the 9/11 Commission's investigation. Reportedly, National Archives staff members saw Berger stuffing documents into his jacket, pants, and socks.

Berger, who was advisor during the Clinton Administration, allegedly removed classified documents and notes from the archives while he was preparing for testimony before the commission. The investigation began after archive employees reported his actions.

Berger's lawyer, Lanny Davis, denied the pants-stuffing allegation.

The *Wall Street Journal* on July 30 reported that archive officials had determined that no original materials were missing and nothing Berger reviewed was withheld from the commission.

General counsel for the commission, Daniel Marcus, told *WSJ* that the Justice Department was "satisfied that we've [the commission] seen everything." As of late August, the case was apparently still active.

**Foglesong Calls for Action To Cut Mishaps**

A recent rash of mishaps at US Air Forces in Europe facilities prompted Gen. Robert H. Foglesong, USAFE commander, to demand greater attention to detail.

"Several mishaps within the past two months could have been averted if individuals had paid more attention to detail in their activity at hand," the general wrote in a July 27 statement.

The surge in mishaps is a "disturbing trend that must be stopped before we lose an aircraft or, worse, a life," he wrote.

The incidents included ingestion of a plastic cover by an F-16 engine, aircrew-caused damage to a KC-135 tanker's multipoint refueling system, and a C-130 propeller unit on a forklift dropped in transit.

"In each case, there appears to have been an opportunity for the individuals involved to pay closer attention to the task at hand," Foglesong wrote.

"We cannot afford to lose combat capability by destroying an aircraft, aircraft parts, or other resources," he wrote. And USAFE cannot replace an airman's skills "if he or she is injured or killed in a preventable mishap."

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# Action in Congress

By Tom Philpott, Contributing Editor

## Postelection DOD Authorization?; Stalled Personnel Measures; GI Bill Benefits for Reservists ....

### Postponing the Defense Bill?

In the 2005 defense authorization bill, important military personnel initiatives are at stake, but some predict that a House-Senate conference will not finish ironing out their differences until after the November elections. The biggest obstacle, say Congressional sources, is reaching agreement on the base closure issue.

In its version of the defense bill, the House passed an initiative to delay until 2007 the next round of base realignment and closure (BRAC) action, set to begin next spring. The Senate turned down a similar proposal, but the vote on the measure was close.

Influential lawmakers from states and districts with at-risk bases are expected to fight hard during conference negotiations for the two-year delay. However, President Bush has threatened to veto any defense bill that changes the current BRAC schedule.

The conventional thinking in Congress, said a House staff member, is that conferees will put off a final deal until after the Nov. 2 election, when lawmakers have less to lose politically.

Proponents of delay gained ground in mid-August when President Bush announced Pentagon plans to withdraw up to 70,000 US troops from Western Europe and South Korea over the next 10 years. (See "Aerospace World: Bush Outlines Overseas Basing Restructure," p. 17.) Anti-BRAC forces say the plan raises fresh questions. One concerns whether troop reallocation to Stateside bases should precede any domestic base closure action.

After the President announced the overseas troop reduction, Rep. Ike Skelton (Mo.), ranking Democrat on the House Armed Services Committee, immediately asked Chairman Duncan Hunter (R-Calif.) to hold hearings this fall on the troop shift.

### Initiatives Left Hanging

Key personnel initiatives that conferees must reconcile include:

■ **Force Strength.** The House would direct DOD to increase the Army's active duty strength by 30,000 soldiers over a three-year period and the Marine Corps by 9,000. The Senate would mandate a 20,000 increase in soldiers and no increase for the Marines.

■ **SBP Reform.** Both the House and Senate have agreed to phase out a sharp drop in Survivor Benefit Plan payments that occurs at age 62 for most beneficiaries. (See "Action in Congress: SBP Reform Alternatives," September, p. 31.) However, conferees must decide on the length of the phase-out period. Moreover, they have to determine whether to allow retirees who declined coverage to sign up for SBP without facing a significant late-enrollment penalty.

The House voted to phase out the offset by April 2008 and would set only a modest penalty on premiums for retirees who elect to enroll in the improved SBP program. The Senate bill calls for a 10-year phaseout of the offset and open enrollment only for retirees willing to pay all missed premiums since their retirement, plus interest.

■ **Accelerated Concurrent Receipt.** The Senate bill would restore on Jan. 1, 2005, full concurrent receipt of both retired pay and disability compensation to 30,000 retirees rated 100 percent disabled. The House bill contains no such provision, leaving in place the 10-year phase in of concurrent retirement and disability payment that is scheduled for all retirees with disabilities of 50 percent or more.

■ **Reserve Health Care.** The Senate bill would open Tricare to all drilling reservists and their families. To use Tricare, they would pay premiums equal to 28 percent of program costs, roughly \$530 a year for individuals or \$1,860 for family coverage. Those who opt to keep employer-provided health insurance would get help from the government in paying their premiums during periods of mobilization.

The House bill calls for a three-year test that would offer Tricare only

to drilling reservists who lack employer-provided health care.

■ **Income Replacement.** The House bill would provide National Guardsmen and Reservists who are mobilized involuntarily extra pay to replace lost income resulting from their call to service. The extra pay, ranging from \$50 to \$3,000 a month, would start after reserve component members had served 12 continuous months on active duty or 18 months' active duty over five years.

### Raising Reserve GI Bill

President Bush on Aug. 18 said he would ask Congress to increase educational benefits for mobilized Guardsmen and Reservists who, since Sept. 11, 2001, have served continuously on active duty for longer than 90 days.

The current Montgomery GI Bill (MGIB) educational benefit rate—\$282 per month—for reservists was set before lawmakers envisioned reserve component personnel routinely serving long involuntary tours on active duty. Bush would increase the monthly benefit, making it \$402 to \$803 a month, depending upon the length of continuous active duty service.

Active duty members contribute \$100 a month during their first year in service to qualify for MGIB benefits of \$800 per month for two years served or \$985 a month for three or more years served. When reservists are mobilized, they are not expected to pay the \$1,200 contribution to gain MGIB benefits, but reserve benefits also have been significantly lower. Active duty benefits have been raised in recent years.

The White House expects the expanded benefits to be paid for with existing funds. Many Democrats are skeptical and have asked for more details. Pentagon officials have been opposed to previous increases in entitlements for either reserve or active duty members, if they could not show a link to readiness.

### DIC Deadline

The open-season deadline is approaching for certain surviving spouses of deceased veterans to restore en-



## Action in Congress

itlement to Dependency and Indemnity Compensation (DIC) benefits and related home loan and education benefits. The Department of Veterans Affairs has said some spouses may be left out.

DIC is payable to surviving spouses of veterans who die while on active duty or from service-related causes. Payments typically stop when a surviving spouse remarries. However, last December, Congress changed the law to allow surviving spouses who remarry on or after attaining age 57 to keep their DIC. If they earlier lost DIC, they can apply for reinstatement.

They must do so no later than Dec. 16.

VA officials don't know what surviving spouses are in these groups, and remain concerned that some eligibles will not get the word in time to restore their benefits.

For more information on restoration of DIC, call VA's toll-free number at 1-800-827-1000, or visit the

nearest VA regional office, or go to the VA Web site: [www.va.gov](http://www.va.gov).

### Up In Smoke

The Government Accountability Office told lawmakers earlier this summer that it has little confidence in the computer modeling program used to estimate exposure of Gulf War I veterans to plumes of deadly chemical weapons.

The plume models used by DOD and the CIA, said GAO, are faulty and should not be used either to link veterans to illnesses or to dismiss claims of exposure during the 1991 Gulf War. Assumptions made regarding quantity and purity of the chemical agents released were uncertain and incomplete, and thus must be deemed inaccurate, according to GAO. For one thing, said the Congressional watchdog agency, plume heights and the size of hazard areas were underestimated.

DOD countered that, although modeling the possible chemical re-

leases during Gulf War I was "extremely difficult" because of a scarcity of measured data, "the use of state-of-the-art, validated computer modeling techniques is the most feasible option to determine what might have happened." Defense officials maintain that the existence of uncertainty does not mean the model is flawed.

In 2000, based on the computer models, officials estimated that more than 100,000 of 700,000 US service members who served in Operation Desert Storm were exposed to chemical warfare agents released during bombings of Iraqi weapon storage sites. Troops under the paths of the plume model were classified as exposed, while those not under the paths were characterized as not exposed.

GAO recommended that DOD and the VA stop using plume modeling to support epidemiological studies from the 1991 Gulf War. However, it backed off saying they should not use such models in the future. ■

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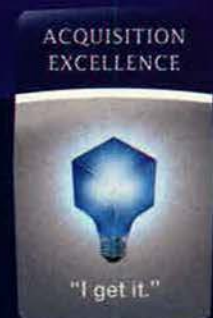
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# Verbatim

By John T. Correll, Contributing Editor

## In Space, Our Lead Narrows

"I believe the seeming invincibility of the United States in space will not last much longer."—**Air Force Maj. Gen. William L. Shelton, director of policy, resources, and requirements at US Strategic Command, Inside the Air Force newsletter, July 23.**

## Tanker Holes

"I'm not some muscle man, but I've stuck my finger through significant pieces of metal because there wasn't anything there. I've just been able to poke a hole in corroded areas of that airplane."—**Gen. John W. Handy, commander, Air Mobility Command, on deterioration of KC-135 tanker fleet, Defense Writers Group, July 28.**

## Opinion From a Real Expert

"The case on corrosion is cut out of whole cloth."—**"Key Senate staffer," disputing deterioration of KC-135s, US News & World Report, Aug. 9.**

## Heavy User

"There isn't anyone who I've talked to who doesn't recognize that the principal user of intelligence is the Department of Defense. It's not an accident that the principal intelligence collectors are there. I don't think anybody would suggest that an arrangement be fashioned that would in any way reduce the ability of a warfighter to have access to the information that they've got to have to be successful."—**Secretary of Defense Donald H. Rumsfeld, Chicago Tribune, Aug. 7.**

## The Non-Needy

"I just have a hard time going back to South Carolina and telling people who are losing their jobs that we need to give \$20 billion of their money to the Iraqi people who are sitting on a sea of oil."—**Sen. Lindsey O. Graham (R-S.C.), Washington Post, July 25.**

## F/A-22 Hard To Catch

"I had the opportunity to fly against the F-22. The only way I could catch it in my F-15, even in full afterburner,

was in a turn. The F-22 is an amazingly capable fighter that is going to insure America's air superiority in the years ahead."—**Rep. Randy Cunningham (R-Calif.), Navy ace in the Vietnam War, Pittsburgh Post-Gazette, July 13.**

## Clear and Present Danger

"America faces its gravest threat in a generation: An organized global movement—assisted by rogue regimes—has adopted mass terror as a weapon to achieve political goals. And the prospect that this deadly collusion will involve weapons of mass murder is at hand. When faced with a clear and present danger, Americans have always set aside partisan politics to secure this nation and to affirm our common values. The war on terrorism requires no less."—**Sen. Joe Lieberman (D-Conn.) and Sen. John Kyl (R-Ariz.), announcing the reconstitution from the 1950s and 1970s of the bipartisan Committee on the Present Danger, Washington Post newspaper ad, July 21.**

## Strength in the Knees

"Democracy is hard. Democracy is dangerous. And this is the time for us to be steadfast, not get weak in the knees. We must not allow insurgents, those who will use bombs and kidnappings and beheadings, to triumph."—**Secretary of State Colin Powell on Hungarian television, about nations dropping out of the war on terrorism because of terrorist threats, Washington Post, July 28.**

## Slim Chance

"There's no likelihood of there being a draft. There's no indication whatsoever, not even a hint, not even a clue."—**Dan Amon, spokesman for the Selective Service system, St. Louis Post-Dispatch, July 19.**

## Decision Wouldn't Change

"Even though we did not find the stockpiles that we thought we would find, Saddam Hussein had the capability to make weapons of mass destruction, and he could have passed

that capability on to the enemy, to the terrorists. It is not a risk, after September the 11th, that we could afford to take. Knowing what I know today, I would have taken the same action."—**President Bush, speech at VFW Convention, Aug. 16.**

## Tooting for Victory

"I knew there was a shortage over there. I didn't know there was a shortage of musicians."—**Sen. John McCain (R-Ariz.), on news that 15 musicians, including four clarinet players and one electric bass player, would be recalled from the Individual Ready Reserve as critical to the war on terrorism, USA Today, July 22.**

## Pariah

"Donald Rumsfeld has gone from being the most popular spokesperson for the Bush Administration policies to something of a pariah. Whereas before the White House was happy to see him speaking in public whenever he chose, now it kind of cringes for fear of what the results might be."—**Loren B. Thompson, Lexington Institute, washingtonpost.com, July 15.**

## Don't Hurry Back

"Put it another way. If things are too tough, if standards are too rigorous, then leave. And don't let the door hit you in the rump."—**George P. Nanos, director of Los Alamos National Laboratory, on complaints that his remarks about security were "insulting" after the latest episode in a series of losses of classified material at the lab, New York Times, July 22.**

## Get On With BRAC

"Delay is tantamount to appeal. Let's get it over with. Let's figure out what's right for the taxpayer. Let's figure out what's right for the military."—**Raymond F. DuBois, deputy undersecretary of defense for installations and environment, opposing Congressional efforts to delay the next base realignment and closure round, Newark Star-Ledger, July 28.**



## Too few aircraft. Lots of old ones. High cost. Breakneck pace. Trouble.

**T**HE airlift operation that has supported US forces in Southwest Asia over the past three years now ranks among the most extensive in history. Taken together, the efforts in Operation Enduring Freedom and Operation Iraqi Freedom can be put in the same general class as US airlifts to Berlin (1948-49), Israel (1973), and the Persian Gulf (1990-91). And Air Mobility Command leaders expect no letup for at least another 18 months.

At the same time, the Air Force faces an acute airlift shortfall. The capability of the fleet used in the 2003 Iraq War was well short of requirement; the gap was at least 10 million ton miles per day. Today, AMC leaders say, the gap is wider—at least 15 MTM/D, perhaps 22 MTM/D.

we were pretty busy, and, for that time, we *were* busy.”

Now, Handy noted, “we have doubled what we thought was a significant mission load. As I look to the near term, I don’t see that [requirement] changing dramatically. I think the airlift situation is going to be under considerable strain. ... It’s not going to get any better.”

Handy gave a candid and detailed assessment of today’s mobility status first in an interview with *Air Force Magazine* and then later in a larger discussion with military reporters in Washington, D.C.

He said that Air Force mobility forces, even as they carry out the resupply of forces in Afghanistan and Iraq, continue to support other theater combatant commanders who have

# The Airlift

A series of analyses and inspections now being performed will help set the nation’s true airlift requirement and possibly pave the way for what may have to be a large new investment in transports.

“Our folks, across the mobility fleet and AMC, have been at an incredibly high, record-setting pace,” said Gen. John W. Handy, the commander of both AMC and US Transportation Command. “We’ve never seen the sorties that we’re generating right now.”

In July, Handy reported that AMC was mounting between 450 and 500 sorties a day, as compared to what had been a post-Sept. 11 level of about 400 missions a day. And that, in itself, marked a major spike in operations.

### That Was Then ...

“If you go back 12 years, when I was a one-star, ... 250 missions a day was average,” said Handy, who has spent most of his 38 active duty years in the airlift business. “We thought

their own exercises, redeployments, and contingencies to cope with.

It all adds up to an airlift fleet that is too small to carry the load and personnel who cannot maintain a breakneck pace forever.

Handy said that “morale is good” in his command, but “it doesn’t mean there aren’t problems.” He went on, “I worry about members and their families, perhaps more for the families.” Unlike aircraft, whose stress and strain can be quantified, there is no direct way to measure the strain on people. And, while airplanes can be fixed, that is not true of overstressed people, said Handy.

The Air Force relies on commercial passenger and cargo aircraft to handle surge periods—such as when large numbers of Army troops rotate out of theater and are replaced by US-based units—but even the commercial carriers “have been in an incredibly high optempo,” Handy said.

The command has also made exhaustive use of the Air Force’s reserve components and is struggling



# Gap

By John A. Tirpak, Executive Editor

*Air Mobility Command went into the war on terror already about 10 million ton miles per day short of the airlift it needs to fulfill national strategy, and requirements have expanded since then. C-17s (shown here) have proved to be reliable and well-suited to operations in forward areas, but there are never enough to go around.*



to find ways to meet Defense Department instructions to pare down the use of Guard and Reserve people and equipment.

Moreover, Handy said his command is constantly engaged in negotiations with field commanders, asking if they can accept a delay of one or two weeks in receiving certain cargo, and also trying to differentiate between genuine needs and nice-to-have, nonessential items.

It is "a day-to-day ... minute-by-minute dialogue with the supported commanders," he reported.

It was in 2000 that the Pentagon carried out its latest major assessment of US airlift capability. Mobility Requirements Study 2005 attempted to look five years out and determine what level of lift the nation would require at that time.

It concluded that the fulfillment of US military needs required a fleet that could generate 54.5 million ton miles per day of airlift. (A ton mile is a basic unit of measurement that equals movement of one cargo ton a distance of one mile.) At the time, the Air Force had only about 44 MTM/D of capability, or about 18 percent short of the need.

### Quick Look

The situation has only gotten worse. This year, Congress tasked AMC to perform a "quick-look" comparison of the MRS-05 projection with actual experience in Afghanistan and Iraq. The quick-look study found that AMC

is pulling aircraft away from other important missions to support the effort in Southwest Asia, according to David Merrell, chief of AMC's studies and analysis division.

"Day in and day out, we have set aside more 'withhold' missions to support ... combatant commanders, in other theaters," Merrell said.

Merrell went on to note that, after the Air Force recalculated its needs based on the way forces now fight and need to be supported, the 54.5 MTM/D standard became obsolete. The latest estimate is approaching 60 MTM/D, Merrell said.

That conclusion certainly doesn't surprise Handy. The AMC commander, in his session with reporters in Washington, pointed out that MRS-05 initially determined that the nation needed an airlift capability of 67 MTM/D—far more than what the Pentagon finally proposed. "I believe it [the final figure] was negotiated down for affordability reasons," Handy declared.

Now, the Joint Staff has embarked on a new, full-scale "Mobility Capability Study," with the result to be unveiled next spring or summer. However, the quick-look review will help Congress make key judgments this year about how much money is needed for airlift.

Handy has testified to Congress that, even using the outdated 54.7 MTM/D figure, the Air Force requires a minimum of 222 C-17 strategic airlifters. USAF at present has only 180 under

contract. If the Mobility Capability Study does indeed raise the bar to 60 MTM/D, as many expect, then the actual C-17 requirement will go up. It will be "more closely aligned to the 300 mark than it is to the 200 mark," Handy asserted.

The general said he is confident that the Fiscal 2006 Air Force budget will provide funds to extend the C-17 line. Under the present contract, the line will close in 2008. Without more money, the shut-down procedure would begin in 2006.

Handy noted that House and Senate members, in their Fiscal 2005 defense budget language, have encouraged the Air Force to go beyond 180 C-17s.

Handy also supports the idea of selling some commercial versions of the C-17, as a way to pad the assembly line and keep it running at an efficient 15 airplanes a year. However, Handy said, he'll have to see whether AMC can afford to give up those places on the assembly line to a commercial version—to be called the BC-X—because C-17 military airplanes are urgently needed in the force. At a minimum, Handy said, any commercial C-17s would have to be available for the Civil Reserve Air Fleet.

Handy said he is eager to see the results of the Joint Staff study. He's hoping it won't have "some of the miraculous assumptions" that were inserted into MRS-05.

### C-5s Needed

The MRS-05 study had determined that the Air Force, even with 222 C-17s, would have to continue to operate a significant number of C-5 Galaxys. That has become problematic in recent years, as the C-5 fleet's poor reliability record has compelled the Air Force to contemplate expensive upgrades.

The Air Force has two C-5 upgrades in mind: an avionics modernization program, or AMP, and a reliability enhancement and re-engining program, or RERP. The two programs would replace the aircraft's dated electronics with digital equipment, reinforce some structures, and provide new engines and pylons. The goal is to raise the C-5's mission capable rate from an average of 65 percent to 75 percent—the AMC fleet standard.

To upgrade a fleet of 112 C-5As

USAF photo by TSgt. Jim Varhegyi



The C-141B is in its last few years of service, but it continues to play an important role. The C-141s are evacuating wounded personnel from Afghanistan and Iraq back to bases in the US and Germany.



and C-5Bs, the two projects combined would cost about \$8 billion.

The Air Force's new Fleet Viability Board conducted an 11-month review of the older C-5A fleet to see whether it made fiscal sense to go ahead with the upgrades. The panel released its conclusion in July, stating the giant airlifter could last until 2029 if it receives both the AMP and the RERP—and another avionics refit around 2020. (See "Washington Watch: USAF: C-5As Could Be Upgraded," September, p 12.)

Handy was buoyed by the news that there was no apparent problem that dooms the C-5A to an early retirement.

"The report essentially says that there's nothing dramatic that's been found yet, and that's good news," Handy said. "I need that to be good news, because we really need the C-5 fleet. I don't need a crisis."

However, he was not happy with the way the board expressed the viability of the C-5A.

"To me, the determination of viability is to take a baseline weapon system and [determine] its viability over time, *without* modifications," Handy said, and provide that baseline cost vs. the cost of upgrading the fleet. "You can sustain almost anything over time if you spend enough money to keep it viable," he observed.

The board also said that, even with the AMP and RERP, the C-5A is not likely to achieve the 75 percent MC rate that AMC desires. The panel noted, though, that the C-5 is an enormous airplane with a huge inventory of parts, and its appetite for maintenance and replacements is not "out of line" with that of other very large aircraft.

Handy worries that sufficient funding for the AMP and RERP upgrades—and an additional avionics mod after that—may not be forthcoming, which would leave his successors with a high-cost, low-availability fleet that is not upgraded. In this, said Handy, he is not "pessimistic, but ... realistic."

"If the price is reasonable and it meets the metric of common sense and support to the warfighter, then we ought to do it," Handy said of the C-5 upgrade. "But if we find, in the final analysis, that you just cannot make an airplane ... viable, by the most simple definitions, then we'll have to make the decision—as we



USAF photo by SSgt. Corey Clements

*The C-5 remains America's largest airlifter, and AMC would like to upgrade the fleet to extend it into the 2020s. Big questions loom, however, about whether the oldest C-5s can be upgraded in an economical way.*

have for at least 10 of them—to retire them."

### Tanker Trouble

Another question mark is USAF's tankers. The Fleet Viability Board is due to report in November on the long-term viability of the KC-135 fleet. Defense Secretary Donald H. Rumsfeld has postponed until November any decisions about whether to go forward with the lease/purchase of 100 Boeing KC-767s to begin replacing the KC-135s.

The Defense Science Board reported earlier this year that the KC-135 fleet is probably not as badly off as had been reported earlier and still has some life left in it. Handy, however, said that this view is the "bumper sticker" that opponents of the Boeing tanker deal have distilled from the DSB report, and it is not accurate.

The oldest KC-135s—E model tankers—are now seriously threatened by corrosion and airframe fatigue, Handy said, and should be considered separately from the R model, which has had numerous improvements, to include new skins and engines. It is the 133 E model aircraft the tanker replacement debate should be focused on, Handy said. The Air Force wants to retire 100 of them and replace them in the Guard and Reserve with the less-geriatric KC-135R model—a move that would save about \$1.2 billion, he said.

Congress has ordered the Air Force not to retire KC-135Es for now, pend-

ing the results of the MCS, corrosion investigations, and other factors. However, Handy said time has essentially run out on the Eisenhower vintage KC-135Es, which are the oldest airplanes in the Air Force.

Air Force Materiel Command informed Handy in mid-July that 30 E models have such bad corrosion on their engine pylons that they will no longer be safe to fly after this month unless they receive an expensive stop-gap fix.

"There is a temporary modification available," Handy said. It would wrap the corroded areas with new metal, but it costs \$400,000 per airplane and would be effective only for about five years. At that point, a more extensive upgrade would be needed to fix the problem, at a cost of \$2 million per airplane. Handy has no funds to perform either modification.

"Do I try to find \$400,000, times 30, and temporarily fix them, or do I continue with the plan and just retire them?" Handy asked. "Well, the [Congressional] language says I can't retire them." He said it's likely that AMC will "ground those aircraft and just let them sit while we try to figure out what to do."

That's "just not right," he said. The issue is emblematic of age-related problems that continue to crop up and raise the price of keeping the oldest tankers flying.

He also said it's regrettable that the Air Force is "essentially re-





**The first active duty C-130Js arrive at Little Rock AFB, Ark. While externally similar to the older Hercules, the new model offers better performance. Gen. John Handy wants them in Southwest Asia by December.**

manufacturing” the KC-135s, which are nearing 50 years old. This requires substantial cost and expense, since many of the parts have to be obtained from machine shops near the operating bases and Oklahoma City Air Logistics Center at Tinker AFB, Okla. Tinker performs depot maintenance on the aircraft. Many of the needed parts have been out of production for decades.

### Herks Under Stress

Another pressing problem is with the C-130 fleet. The demand for the C-130 in the Southwest Asian theater is high, because the aircraft—which can operate on small, austere fields close to areas of operation—sometimes offer the only way to rapidly resupply the troops.

“We know there’s a finite end to the ability to mobilize our C-130 force structure,” Handy noted. “We’re looking at December 2005.”

In that month, AMC will have exhausted the number of Guard, Reserve, and active units it can call on to provide C-130s for operations in Iraq and Afghanistan without breaking the rules on times between call-ups. The Air Force relies on its reserve components for most of its tactical airlift capability.

Workarounds are being explored, but many have already been used. The C-130s belonging to US Pacific Command and US European Command, as well as the additional capability that will accrue as more C-17s

are delivered, plus the usage of commercial L-100s, which are commercial variants of the C-130, are all being tapped.

“Just about every idea you can think of, we have rolled into the equation,” Handy said.

Getting new C-17s and C-130Js “would minimize the impact, would extend that date, to a point we have yet to determine,” Handy reported. His commands are also scrutinizing the true needs for C-130s in various locations around the world other than the SWA theater.

The requirement for Southwest

Asia alone is 86 C-130s, vs. an Air Force inventory of 311 aircraft, ranging from early model C-130Es and Hs to brand-new C-130Js.

Handy said that he wants to deploy the new C-130Js into the theater not later than December of this year.

“That’s my current line in the sand with the test community and Lockheed,” which builds the transport, Handy asserted. He set that date because, up until now, “we didn’t have a defined milestone that would be a goal for operational deployment of the aircraft.”

A recent Government Accountability Office report claimed that the aircraft are troublesome to maintain and not meeting requirements.

Handy acknowledged that “if you look at any new weapon system, when you’re trying to create breakthrough technology, there are challenges.” However, he said the problems cited on the C-130J are really not germane to the aircraft’s prime mission of combat air delivery. A radar problem cited in the GAO report only affects those aircraft used as hurricane chasers, not the combat freighters. Also, the size of the C-130J fleet is still quite small, so any problems will be magnified.

### Velcro and Superglue

As for a complaint that the C-130Js lack sufficient armor, Handy asserted that this issue can be fixed with “Velcro and superglue.”



**Airlift crews take fire every day. This remarkable photo shows the aftermath of a commercial DHL cargo aircraft being hit by a man-portable missile in Iraq. The crew was able to land safely, but the threat remains high.**



Handy said, "I am very optimistic" about the C-130J. "I have no reason to think ... it will miss any of these timelines."

The partnership with members of the Civil Reserve Air Fleet is in excellent shape, Handy said.

"We're incredibly well-supported by our commercial partners," he said. The members of CRAF have actually supplied more aircraft and moved more cargo and passengers than if they had been activated by the President to a Stage 1 mobilization.

However, Handy said it may be time to re-examine the CRAF program, not because it isn't working, but simply because "it's been a long time since the rules of CRAF were really scrubbed and looked at." With the experience of the last three years, "our partners have sort of an optimum chance to [make] an input" that could better refine the program, Handy said.

"I'm very proud of it, but I'm never so proud that I would say we can't improve," he added, noting that there may be some better "consideration" the Air Force can offer its commercial partners.

A key lift change that took place just one year ago was the designation of TRANSCOM to be the distribution process owner for all aspects of US military logistics, Handy noted. This designation gave TRANSCOM the ability to scrutinize all aspects of moving people, equipment, and supplies, with the goal of shifting away from a "port to port" mentality to one of "factory to foxhole."

It means that there is now a "TRANSCOM-like organization" in the area of operations, that reports to the combatant commander. The organization is 35 to 40 people, "with Ph.D.s in logistics," who can see what's needed in the theater and can call for it even before the individual units do. They can also eliminate the seams in transportation and distribution, Handy explained.

The impact, he said, is "if I have that kind of visibility" into what's in each container, aircraft, ship, or train, "I can seamlessly coordinate the arrival of strategic stuff ... to link up with the intratheater assets: C-130s, C-17s, or truck convoys."

He said, "We have seen that our ports are cleaned out more efficiently because we know what the user needs."

This process improvement has reduced the need for aircraft and other



USAF photo by TSgt. Mike Buytas

**Given the scope and magnitude of the US military's global operations, it is clear that more airlifters will be needed. The Joint Staff is conducting a mobility study to determine the mobility requirements.**

modes of transportation by eliminating the movement of unneeded gear and supplies to only those things that are really required.

"I hate to use the term, 'just in time,' " management, Handy said, but the effect is about the same. Great care is taken to ensure that large stockpiles of materiel are not built up in places where they won't be needed. Not only would missions be wasted bringing the materiel in, but also when it's time to bring the stuff home.

The attention to process and flow is driven by the desire not to have more capability than is required, Handy said.

"I don't want one more or one less C-17 or modified C-5 or tanker than the nation needs or can afford," he asserted.

Although many may not think of the airlift fleet as a weapon system, the crews and personnel involved in supporting the troops abroad are in constant peril, Handy noted.

"We are routinely shot at," Handy said. On his morning status report of overnight events and missions under way, he said it's rare not to see "surface-to-air firings that happened in the last 24 hours."

Three enemy shots have connected: man-portable missiles hit a C-17 last December, a C-5B in February, and a commercial DHL transport last November. The two AMC aircraft were put back in service in 35 and 55 days, respectively.

Nevertheless, enemies on the ground continue to take potshots at US aircraft using anti-aircraft artillery, man-portable surface-to-air missiles, rocket-propelled grenades, and small arms.

All AMC aircraft that operate in the warzone—C-5Bs, C-17s, C-130s, and C-141Bs—have a suite of defensive equipment such as chaff and flares for a limited defense against ground fire. The C-5A fleet is not so equipped and does not deploy to the theater. Crews assigned to the most dangerous places have received training in defensive tactics.

"The threat is out there, and we have dealt with it," Handy said.

Still, Handy said the US has been lucky so far in not losing any of its precious airlift assets. The loss of even a single large aircraft would affect the nation's ability to provide the airlift demanded by regional commanders.

Handy believes the airlift fleet is in good shape, provided that the issues of obsolescence and capacity are addressed in a timely manner.

"Are we about to break? No," he said. "We're not in a constant surge, deploying and redeploying assets. Right now, we're on a more methodical, well-planned path."

However, Handy warned, the stresses on the airlift fleet "are still very high," and, "as I look to the near term, ... I think the airlift situation is still going to be under considerable strain." ■



# Full-Contact Train

By Adam J. Hebert, Senior Editor

**I**T WAS in February that a group of six F-15C fighters deployed from Elmendorf AFB, Alaska, to India to participate in a series of live-fly training exercises. The Air Force has not declassified many of the details of what happened at Exercise Cope India, but this much is abundantly clear: The action at Gwalior Air Force Station was an eye-opener.

The Indian Air Force was, at a minimum, highly competitive with USAF's F-15 unit. The Indian crews, flying Russian-built Su-30, MiG-21, MiG-27, and MiG-29 aircraft proved much tougher to handle than anyone expected.

During "nearly all" simulated combat sorties, USAF's F-15s defended ground targets against "advancing Indian aircraft," the Air Force announced during the exercise. The "attacking" Indian aircraft evidently dominated the air superiority F-15s flying in the defensive role.

The Eagles were outnumbered, operating in the "enemy's" own backyard, and constrained by India's rules of engagement. Even so, the Air Force made no excuses for getting thumped.

"We have to learn a lot of things" from Cope India, noted Gen. Hal M. Hornburg, commander of USAF's Air Combat Command at Langley AFB, Va. Hornburg added, "We need to pay closer attention to every air force that could possibly be a competitor at some point."

Air forces worldwide are "becoming better and better as each year



passes," Hornburg said. "That just means that we need to do the same thing."

Air Force officials believe that Cope India only affirms the importance of conducting international exercises (to prevent technological surprise) and of working hard to constantly improve the service's operational training procedures.

The Air Force has always prided itself on having the best pilots in the world, but service leaders realize USAF won't stay at the top without making a conscious effort to do so. Exercises such as Cope India underline the seriousness of the effort.

## Narrow Gap

Maj. Gen. David A. Deptula, the operations director for Pacific Air Forces at Hickam AFB, Hawaii, emphasized this fact in a recent interview. "Our pilots were really impressed by the Indian Air Force," he noted. Deptula went on to say Cope India "makes us realize how narrow the capability gap is" between the US and the other air forces of the world.

Cope India "revalidates concerns" about the threat posed by "compe-



# ing

## Using new concepts and systems, USAF's forces learn to give and take a punch.



At Gwalior AFS, India, an Indian Mirage 2000 waits to taxi, as a USAF F-15C takes off. The surprising results of a recent exercise in India have lent impetus to the Air Force's efforts to improve the training its pilots receive.



A pair of F-15s fly alongside two Indian MiG-27s during Cope India. USAF Eagles got "shot down" the majority of the time by Indian Air Force fighters. It was a reminder that air superiority must be re-earned periodically.

tent folks flying competent aircraft," Deptula said.

India is a democracy and, while not a formal US ally, enjoys generally friendly relations with Washington these days. That is not the case with many other nations whose air forces are equipped with advanced Russian-built fighters.

Moreover, other air forces have gotten better at the game over the years. As Hornburg noted, "Pilots from other air forces have learned from our guys. They study us very closely."

Col. Greg Neubeck, US exercise commander for Cope India, said in a February news release that the Indian pilots "are as aggressive as our pilots. They are excellent aviators."

Neubeck later told *Inside the Air Force* that USAF's F-15 pilots faced a combination of superior numbers, skilled pilots, and smart tactics. "That combination was tough for us to overcome," he said.

The experience has implications for training. As Neubeck told the newsletter, the Air Force may need to "take off the handcuffs that we put on our red air training aids and allow them to be more aggressive."

Those steps presumably would make training operations against red air forces flying as antagonists tougher than they have been in the past.

Already, there are signs that this is happening. In June, Elmendorf hosted Northern Edge '04, an exercise in which more than 160 aircraft participated. In this year's edition, the red air role was handed to a crack group of F-15s from the 390th Fighter Squadron at Mountain Home AFB, Idaho.

"We have to think like the enemy," said Lt. Col. Rick Hedgpeth,

operations officer for the 390th FS, in a news release. "We have to challenge them ... [and] be the best 'bad guys' we can," he said.

"I pretty much have free reign with my use of tactics in the air," added Maj. John Binder, another red air pilot. "How I choose to attack my 'enemy' is up to me," he said.

### Transforming Training

The Air Force has long striven to train as it fights. Maj. Gen. Teresa Marné Peterson, director of operations and training on the Air Staff in





*The results of Cope India may have been surprising, but the Air Force does not consider them a disappointment. The exercise was the first time USAF got to fly against Su-30s, such as this one, also available to potential adversaries.*

Washington, D.C., said the US offers its pilots and aircrews training “not available anywhere else in the world.”

For combat pilots, the Red Flag exercises are considered the gold standard, and numerous other programs pattern themselves after Red Flag. These include Eagle Flag (for establishing austere bases in an expeditionary setting) and Black Demon (for setting up defenses of computer networks).

The factor common to all of these exercises, said Peterson, is “intense training capabilities at the tactical level.” Practicing wartime operations can make handling the stress and unpredictability of combat seem like second nature.

Even Air Force mobility forces, which do not take the lead on any Red Flag-style exercises, have opportunities to refine tactics and improve training with realistic activities. In a fact sheet, Peterson’s office notes that mobility force participation in Army exercises provides an “arena for aircrews to improve combat tactics.” Meanwhile, the Air Mobility Warfare Center at McGuire AFB, N.J., hosts an annual tactics conference “to discuss emerging threats and cutting-edge tactical developments.”

Long before the surprises at Cope India, the Air Force had been engaged in a search for ways to improve its training protocols. The recent wars in Afghanistan and Iraq

supplied numerous lessons to apply to training, and major improvements are in store.

Distributed mission operations (DMO) are the wave of the future, Peterson said, and the Air Force is just scratching the surface of distributed training.

The concept is simple: The ser-

vice will use advanced simulators, linked together, to allow units at various locations to train together, realistically, in real time.

For example, fighter pilots from South Carolina and Arizona can train with E-3 Airborne Warning and Control System aircraft mission operators in Oklahoma, without anyone having to leave a home station. DMO exercises are available “at a fraction of the cost of getting everyone together at the same range,” Peterson noted.

The ability to bring units together virtually is critical. “DMO will be the only realistic way we can get C2ISR and shooters hooked up,” to test and train for modern tactics such as time sensitive targeting, said Gen. John P. Jumper, Chief of Staff. Advanced training “requires real-time interface among platforms that are too stressed by [operational demands] to train together in peacetime.”

The key is for the training to be realistic. There are distributed training naysayers, Peterson said, but “only until they actually participate in a DMO event.”

She argued that the fidelity of the exercises has become so high,

### The Benefits of Multinational Training

The Indian Air Force may have gotten the best of the six F-15Cs that participated in Exercise Cope India this winter, but Air Force officials don’t see the experience as a failure. One of the points of multinational combat exercises is to hone skills against the unfamiliar aircraft and procedures of opponents.

International exercises bring the Air Force up to date on other nations’ tactics, capabilities, and equipment. Ultimately, this could reduce the likelihood of an unpleasant surprise in the future. Cope India, for example, was the first time the Air Force had the opportunity to fly against the Su-30 Flanker.

While Cope India was the first event of its kind between the US and India in more than 40 years, USAF got another crack at India this summer, when six Indian Air Force GR-1 Jaguars came to Alaska to participate in Cooperative Cope Thunder. This was the first time India had ever sent fighters to the United States.

Maj. Gen. David A. Deptula, Pacific Air Forces operations director, said these multinational training events pay significant dividends. Many of them have been “under the budget ax,” in recent years, however.

The results from Cope India, he said, “highlight the importance” of maintaining robust international exercise programs. Among other benefits, they allow the Air Force to “better understand what’s out there.”

Another officer noted that there will always be foreign air forces that are better than the US expects them to be, so USAF must continue to push to improve itself.

The Air Force is keeping up a full slate of joint and international exercises. Officials note that Red Flag has three annual iterations, two of which feature international participation. Allied air forces bring 20 percent of the aircraft to Red Flag.

Canadian-led Maple Flag is a NATO-style exercise with 128 aircraft, which is actually larger than the average Red Flag. The US brings 35 percent of the total airframes to Maple Flag, almost all from USAF.

And India was just one of many international participants in Cooperative Cope Thunder, for which the Air Force only contributes 55 percent of the total aircraft. For CCT, Japan brought its F-15J fighters to North America, for the first time, to participate in defensive counterair missions.



and operational tempo benefits so clear, that the Air Force has begun diverting flying-hour dollars (money reserved for fuel, parts, and other flight-related expenses) directly to increases in DMO-type capabilities.

For example, a key DMO “enabler” for the future is a Distributed Mission Operations Center. Once the necessary infrastructure is in place, the Air Force is looking to create flag-level DMO exercises. A “Virtual Flag” exercise has been identified as a future need. Virtual, distributed training will also make it easier to include joint and international participants in the events and to prepare for joint operations.

### Pushing “Jointness”

Recent operations have reminded everyone that modern air warfare is a collaborative affair and that today’s air operations frequently involve Army, Navy, Marine Corps, and allied aviation personnel and assets. Training as the Air Force fights means including these partners in its exercises.

US Joint Forces Command, located at Norfolk, Va., oversees the effort to get the military services to prepare together to fight together. A Joint National Training Capability (JNTC) program is creating a “permanently installed global communications network” designed to facilitate joint training, the command announced.

JNTC will seamlessly link “select ranges and simulation centers throughout the world,” said a recent statement. This will allow training operations to become broader, deeper, and more inclusive. JNTC is scheduled to reach initial operational capability in October.

“When at full operational capacity in 2009, the network will provide immediate access to a global communications training, experimentation, testing, and education network,” JFCOM stated.

JFCOM pointed out that Operation Enduring Freedom in Afghanistan and Operation Iraqi Freedom in Iraq featured combat by a highly integrated American fighting force. However, force coordination frequently has been carried out at the last minute, meaning “jointness” is not as smooth or efficient as it could be.

Recent operations brought service



USAF photo by SSGT. Michelle Michaud

*International training exercises allow the Air Force to fly against the best from other nations. This year, Israeli F-15Is came to Red Flag at Nellis AFB, Nev., while Japanese F-15Js visited Alaska for their first-ever sojourn to the US.*

elements together at the “point of contact,” noted Army Col. Bryan Stephens, chief of training for JFCOM’s Joint Warfighting Center in Suffolk, Va. Rather than “deconflict” forces at the last minute, he said, the services will now work to train ahead of time, so that forces experience a “seamless integration” when they come together on the battlefield or in an operations center.

JFCOM, therefore, is trying to help the services to develop forces that have been integrated from “the beginning of the process, instead of the end,” said David J. Ozolek, JFCOM assistant director of joint experimentation. One aspect of this is the push to create standing joint force headquarters in various locations. (See “Toward Standing Joint Force Headquarters,” p. 44.)

Ozolek reports that Joint Forces Command has no intention of doing away with current methods of training. Instead, it will seek to improve and coordinate them. The military services each bring to the table certain training skills that have repeatedly shown merit, he said.

JFCOM has a series of events under way to bring JNTC to operational status. Stephens noted that the intent is to increase capability without increasing personnel tempo, so existing exercises and wargames are being leveraged whenever possible.

In June, JFCOM hosted Operation Blinding Storm, billed as JNTC’s first “integration event.” The exer-

cise drew in an estimated 28,000 US and foreign military personnel, 60 ships, and hundreds of aircraft. It featured simulations of an opposed night amphibious landing, live-fire exercises, and complex command and control operations.

Blinding Storm took place along the Atlantic coast and at some 20 other sites distributed around the country, some as far away as Nevada.

### Real World

Command officials note that the exercise addressed several training priorities. It integrated US and foreign military forces, and it closely replicated the kinds of real operational challenges that forces routinely encounter around the world.

In August, the command hosted its first large-scale “vertical event,” designed to evaluate integrated forces and how they performed “from the company level up to the [joint task force] commander,” Stephens said.

JFCOM says Joint National Training Capability will seamlessly link “select ranges and simulation centers throughout the world,” making distributed mission operations much more practical.

The Air Force has already grasped the potential of distributed training. PACAF’s Deptula said recent advances allow for greater realism, better tracking of events, and better analysis of what happened in the training exercises. The planned ex-





*The goal of distributed mission operations is to bring far-flung units together for realistic training. In the past, it has proved difficult to get high-demand aircraft, such as this B-2 stealth bomber, into the mix.*

pansion of DMO will offer “an awesome capability,” he said.

DMO, in Deptula’s view, is not simply an incremental improvement over old flight-simulator-based training. When live flying was the only way to get top-notch training, airmen could count on attending a large-scale training exercise “at best, once a year,” Deptula said. While live-flying exercises are certainly not going away (they are the only way for crew chiefs, for example, to turn aircraft in a realistic combat environment), with DMO crews will soon have increased access to the best training. Distributed mission operations have gotten so good, Deptula added, that no one calls the equipment “simulators” any more.

Planning for future training requires an understanding of future threats. The experiences from recent wars and continuing war-on-terror operations are playing a major role in making this a reality.

The Pentagon traditionally has divided the world into discrete packages—Europe, the Pacific, Southwest Asia, and so on. This arrangement fails, for example, in the face of threats that can cross boundaries and exist in different regions.

“Adversaries don’t stick to theaters,” so DOD needs to “come up with a broader way” of looking at threats, said Grover Myers, an official in JFCOM’s concept development directorate. “Gaps” like this

## Toward Standing Joint Force Headquarters

US Joint Forces Command is working with the military services to ensure they train together and prepare for combat in a coherent manner, which means preparing for joint operations. To that end, JFCOM is constantly on the lookout for new tactics, techniques, and procedures.

JFCOM uses its input into exercises and operations to identify improvements that can be quickly developed and fielded.

One example is the standing joint force headquarters (SJFHQ). The Chairman of the Joint Chiefs of Staff is pushing to create an SJFHQ for each unified command.

When operational, these SJFHQs will ensure the combatant commanders have experts, fully trained and in place, ready to take the lead in contingency operations. They will be ready to assume command and control functions, with a built-in understanding of the threats, saving time by eliminating the learning curve.

The SJFHQs will minimize the “ad hoc nature of today’s joint task force headquarters,” a JFCOM fact sheet states.

To be effective, an SJFHQ must incorporate “extensive training for and knowledge of joint operations, as well as an ongoing understanding of the combatant commander’s theater perspective,” according to JFCOM.

The plan is for each unified combatant command to have a standing joint force headquarters in place by the end of Fiscal 2005.

are among the issues Joint Forces Command seeks to resolve.

The key to good warfighting is “continuous exposure to the new concepts,” Myers said.

Within the Air Force, lessons from recent operations have quickly been added to USAF’s training curriculum, both to address immediate combat needs and as solutions to longer-term problems.

The war in Iraq has forced several training changes, not only in the air but also on the ground.

For example, Air Force convoy drivers now have a course to prepare them for the threat posed by insurgents taking potshots at mili-

tary vehicles and placing improvised explosive devices along vehicle routes. The Air Staff’s Peterson noted that it’s not good enough to assume airmen headed to a dangerous situation know how to deal with the threats. They need formal training.

In addition, the Air Force recently tested a prototype combat weapons and tactics course for security personnel. The objective was to prepare them for the perils of operating in an urban environment such as Baghdad.

Mobility airmen are receiving new training in several areas. First is in the use of night vision goggles. According to Peterson, the Air Force found that “very few crews and backenders were qualified” to use NVGs, which are critical for operations in Iraq. The Air Force quickly

established an intensive course for mobility crews.

Moreover, the Air Force has refined its crew training for taking off and landing in combat zones.

Gen. John W. Handy, commander of Air Mobility Command, recently told defense reporters that “hardly a day goes by” that he doesn’t receive a report of ground fire directed at one of his aircraft. “The threat is out there, and we’ve dealt with it,” Handy said, referring to installation of defensive systems and development of new tactics and training procedures.

The Air Force needs to stay aware of enemy techniques, “including those of insurgents,” Deptula said. ■





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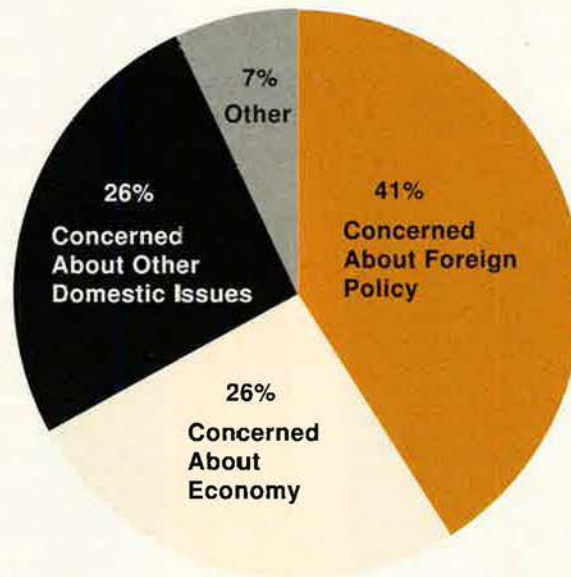
By Tamar A. Mehuron, Associate Editor

## Foreign Policy Is Again the Key Issue

From 1976 to 2000, Americans had the economy on their minds when they went to the Presidential polls. In 2004, however, foreign policy has replaced the wallet as America's most important Presidential election issue. According to a July poll by the Pew Research Center, in conjunction with the Council on Foreign Relations, Americans are more concerned about foreign policy than the economy by a margin of nearly two to one.

The poll notes that it is the first election since the Vietnam War that foreign policy reigns as the dominant issue. After the end of the war in Vietnam, jobs, inflation, and interest rates took over as the key issues, reigning supreme through the 2000 Presidential elections. The terrorist attacks of Sept. 11, 2001, followed by the wars in Afghanistan and Iraq have sent the election pendulum swinging in the other direction.

The Top Issue in 2004



The Economy vs. Foreign Policy: The Election Pendulum Swing

Elect'ion Year	Ratio
2000	4:1
1996	8:1
1992	18:1
1988	4:1
1984	2:1
1980	5:1
1976	9:1
1972	1:2
1968	1:9
1964	1:3
1960	1:4
1956	1:2
1952	1:2
1948	1:5

Source: The Pew Research Center For The People and The Press, "Foreign Policy Attitudes Now Driven by 9/11 and Iraq," Aug. 18, 2004.





JSTARS



F-15



F-16



F/A-22



F-35



C-17



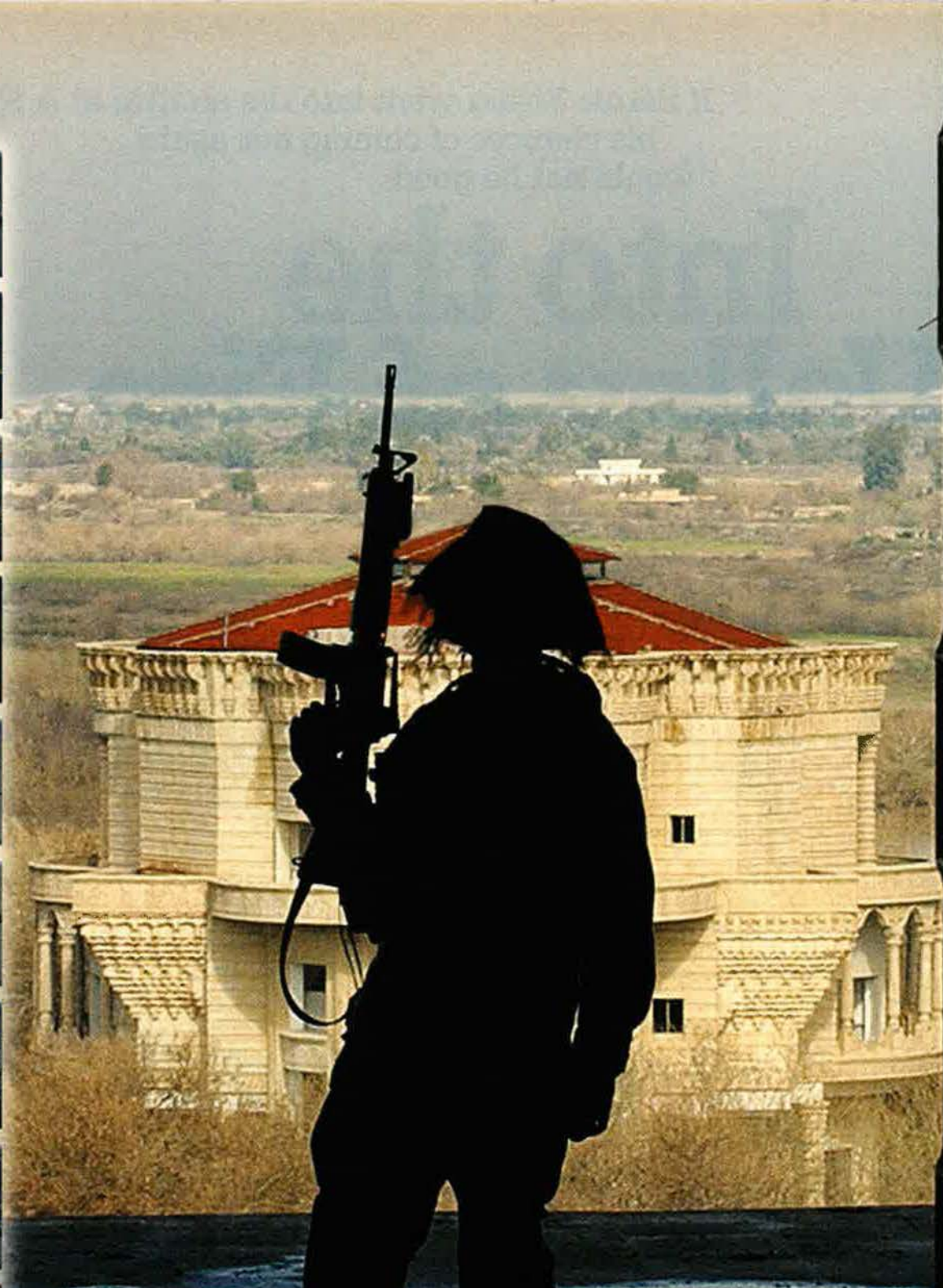
767



EA-6B



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If Bernie Fisher went into the airstrip at A Shau, his chances of coming out again would not be good.

# Into the Valley of Fire

**T**

HE US Special Forces had established their camp in 1964 at the lower end of the A Shau Valley in Vietnam. It was some two miles from Laos and was a constant problem for the North Vietnamese.

From this camp, the Green Berets could observe and impede traffic on the Ho Chi Minh Trail on the other side of the border. They were also astride the infiltration route toward Hue and Da Nang.

In February 1966, the North Vietnamese Army decided to put the camp out of business and moved a fresh regiment down the trail to join the 325th NVA Division, which was already operating in the vicinity of Hue.

The Special Forces camp was in a remote corner of the Central Highlands and extraordinarily reliant on airpower.

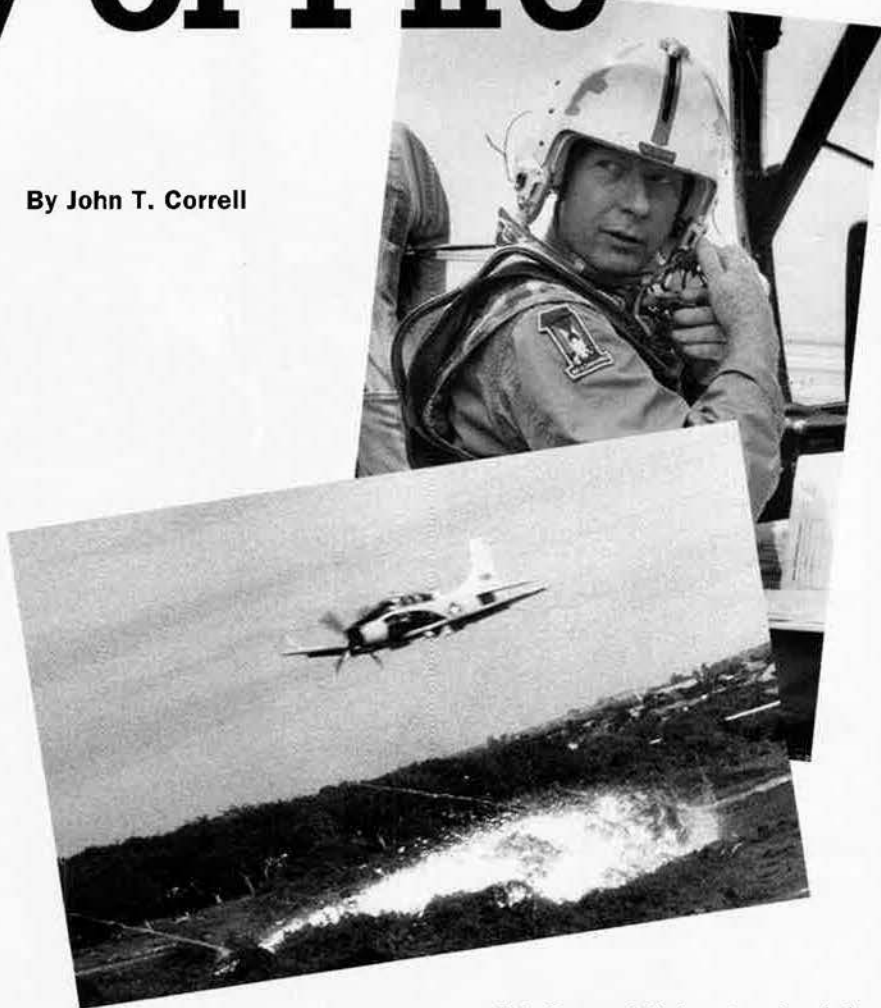
Material to build the camp had been flown in by Air Force C-123s. Everything, including food and ammunition, came by air. The valley lay beyond the range of US artillery, so its only real defense was air support.

The camp consisted of some barracks buildings, a triangular fort, and an airstrip made of pierced steel planking. The fort had a mortar bunker at each corner. The walls consisted of steel plate and sandbags. The airstrip was east of the camp, just outside the barbed wire perimeter.

The A Shau Valley was six miles long and one mile wide. Hills rose up on both sides, ascending 1,500 feet above the valley floor. The valley was called "the tube" by the pilots who had to fly there.

Mountain peaks in that part of the

By John T. Correll



*Maj. Bernard Fisher, top, fresh from flying interceptors Stateside, strapped on an A-1E Spad (bottom) in Vietnam. At right, Fisher is shown with his friend, Maj. Dafford "Jump" Myers. A daring, no-hope rescue of Myers led to Fisher's receiving the Medal of Honor.*

highlands reached an elevation of 7,000 feet. The ocean was only 30 miles to the east, and the mountain valleys were often hidden by clouds and low-lying fog. The North Vietnamese were counting on such cloud cover to limit air support.

## The NVA Attacks

On March 5, two NVA defectors walked into the camp at A Shau and warned that an attack was coming on





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March 11 or 12. They said the 325th Division was about seven kilometers east of the valley. US aircraft promptly struck that location.

On March 7, Air Force C-123s brought in reinforcements, increasing the strength of the camp to 17 Green Berets and 368 South Vietnamese irregulars and Chinese Nung mercenaries.

The attack came sooner than expected. About 2 a.m. on March 9, enemy bombardment began, emanating from the surrounding hills. Mortars, artillery, and rocket-propelled grenades pounded the camp, killing two Americans and wounding 30. The barrage set the buildings and the supply dump afire.

The artillery barrage stopped at dawn. Some 2,000 NVA regulars were situated to take the fort unless air support drove them away. Until the clouds lifted—they were hanging as low as 200 feet in places—air strikes were not feasible.

The NVA force prepared to rush the fort, but visibility was improving. At 11:20 a.m., with the cloud ceiling at 400 feet, an Air Force AC-47 gunship got through the clouds and flew up the valley at treetop level, strafing the attackers.

On the gunship's second pass, it was hit hard by ground fire. The right engine was torn from its mounts. Seconds later, the other engine was knocked out, too. The bullet-riddled AC-47 crash-landed on a mountain slope, five miles farther up the valley.



*Adapted from the Navy's World War II-era Douglas AD-5, the unglamorous A-1E was ideal for use in Vietnam. The Spad could carry lots of weapons, could stay aloft for hours, and even had room for passengers.*

With the gunship gone, two A-1Es from Pleiku were diverted from other targets and sent to the aid of the fort at A Chau.

#### **Fisher and the Spads**

Leading the A-1E flight was Air Force Maj. Bernard F. Fisher, a 39-year-old fighter pilot from Kuna, Idaho. Fisher had flown jet aircraft in Air Defense Command before coming to Vietnam, and, when he buckled into the propeller-driven A-1E, he still wore his helmet with the silhouette of an F-104 painted on the side.

There weren't many jets in Vietnam in the early part of the war, so Fisher had volunteered to fly the A-1E, which was in use both by the South Vietnamese Air Force and by US Air Commandos. Fisher was initially sent to Bien Hoa, where he trained South Vietnamese pilots to fly combat in the A-1E. He then transferred to the 1st Air Commando Squadron at Pleiku.

Fisher, a devout Mormon, did not drink, smoke, or use strong language, but, as a later description of him said, he was held in high esteem in a squadron of men who did all three. He had been in the Air Force for 15 years.

The single-engine A-1E Skyraider—called the “Spad” in Vietnam—was undeniably an old airplane, but it was well-suited to a number of missions. It was adapted from the Douglas AD-5 dive fighter-bomber that the Navy had flown in World War II and Korea. It mounted four 20 mm machine guns and carried an assortment of bombs and rockets. Cruising speed was 240 mph, but it had exceptional endurance and could stay airborne for six to eight hours. It could fly for long periods of time at low altitude, making it ideal for counterinsurgency and close air support.

There was also an A-1H, “Sandy,” a single-seat version of the airplane, which flew escort for search and rescue missions.

The A-1E Spads had two seats, side by side. There was enough space to fit 10 persons in the aft part of the cabin,



*Officially called the Skyraider, the A-1 was used for low-level strikes against concealed targets and for close air support of ground units. It was the airplane of choice to keep the enemy at bay during rescues of downed airmen.*

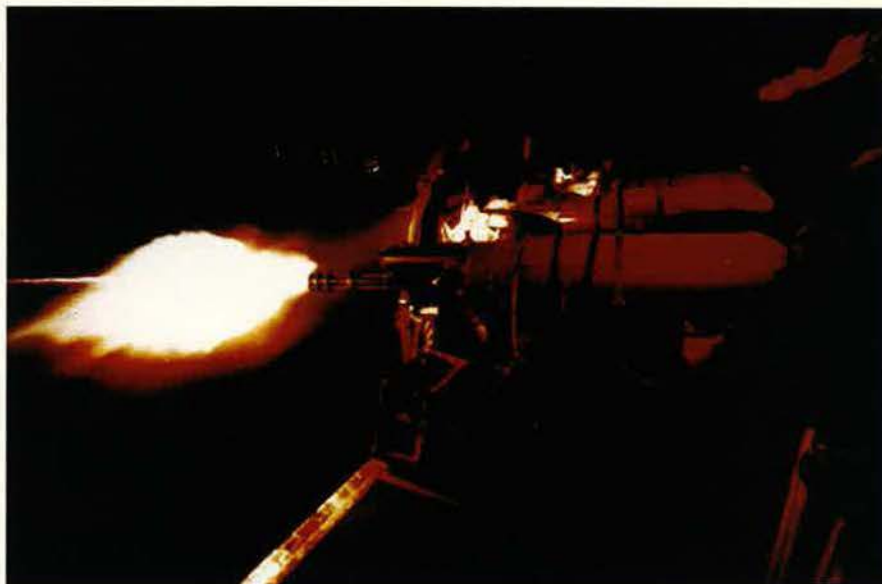


which was called the “blue room” because of the color tint on the canopy.

### Silver Star Mission

Diverted to A Shau after the gunship crashed on March 9, Fisher and his wingman, Bruce Wallace, found the mountains blanketed by clouds. Upon arrival, Fisher began probing to find the canyon in which the camp lay.

On his third attempt, he emerged from the overcast and barely missed colliding with a helicopter that had just come from A Shau with wounded aboard. The helicopter pilot directed Fisher toward a saddle in the mountains, where he found an opening in the clouds about five miles northwest of the camp. He and Wallace went through the hole and flew down the valley at very low level. The enemy AAA was intense.



*An AC-47 gunship tried to help the beleaguered Green Berets hold out against the North Vietnamese attack on their firebase. Flying at treetop level, the “Spooky” met its end. Rescue of its crew was a story unto itself.*

### The Crashed Gunship

The first aircraft coming to the rescue of the camp on March 9 was an AC-47 gunship. It made one firing pass down the valley at treetop level, then came around for a second pass. This time, the anti-aircraft gunners were primed and knocked out both of the aircraft’s engines.

The pilot, Capt. Willard M. Collins, was able to crash-land on a mountain slope five miles up the valley. The aircraft was intact, and it slid down to the base of the slope. Among the crew of six, the only one injured seriously was one of the gunners, SSgt. R.E. Foster, whose legs were broken.

Moving to a better defensive position would have meant leaving Foster behind, so Collins and the co-pilot, 1st Lt. Delbert R. Peterson, organized a defense at the crash site. They repulsed the first NVA attack, but Collins and Foster were killed in the second attack. That left four people to defend a 360-degree perimeter.

As the NVA gathered to rush them again, a rescue helicopter approached. A .50-caliber machine gun was firing from the undergrowth. Peterson, now in command, knew that it was likely to shoot down the helicopter.

Armed with an M-16 carbine and a .38-caliber handgun, Peterson charged the machine gun, which fell silent as the helicopter dropped down to pick up the other three crewmen. Under intense ground fire, the helicopter pulled away.

Collins and Peterson were posthumously awarded the Air Force Cross.

A C-130 airborne command post told Fisher to destroy the AC-47 before the NVA captured the three 7.62 mm Gatling guns, which could fire 6,000 rounds per minute and which were still in working order. Fisher assigned that task to Wallace—who dropped six bombs on the wreckage and obliterated it—while Fisher went to the direct assistance of the fort.

For the next several hours, Fisher and Wallace collected arriving aircraft above the clouds and led them down into the valley. Fisher guided a CH-3C helicopter that came to evacuate the badly wounded. He also led A-1Es in a strike to break up a force that was massing to attack the fort.

Fisher went up again to bring down two Air Force C-123s. The mountains were tight on all sides, and forward visibility was less than half a mile. They began taking fire seven miles north of the camp. Fisher suppressed the ground fire as the transports air-dropped supplies for the fort from an altitude of 50 feet.

Low on fuel, Fisher went through the clouds one more time to help a forward air controller lead two B-57 bombers down the valley. In all, Fisher spent about two hours under the clouds. He made an emergency landing at Da Nang, 20 minutes away, with almost no fuel left in his tank.

Allied aircraft flew 29 sorties in

support of the fort on March 9. Of these, the Air Force flew 17, the Marine Corps 10, and the South Vietnamese Air Force two.

Fisher would be awarded the Silver Star for his role as on-scene commander on March 9, and Wallace would receive the Distinguished Flying Cross. However, Fisher had not yet seen the last of the A Shau Valley.

### The Second Day

On March 10, the attack resumed at 2 a.m. The NVA shelled the camp relentlessly, and, shortly before 4 a.m., it launched an assault on the southern side. Before daylight, the attack broke through the barbed wire perimeter and breached the south wall. The defenders were pushed into the northern part of the fort, and the NVA dug in between the airstrip and the camp.

Two C-123s and an AC-47 dropped flares throughout the night. Radar bombing of enemy positions by Marine Corps A-4s began just after 5 a.m. Fire support was continuous from Air Force and Marine aircraft.

About 11 a.m., the defenders reported that they could hold out for no more than another hour and that airdrops to resupply them with ammunition should stop, since they could not retrieve the bundles.

Bernie Fisher and his wingman that day, Capt. Francisco “Paco” Vazquez, were en route to provide air support to Army forces near Kontum when they got an emergency radio call to divert

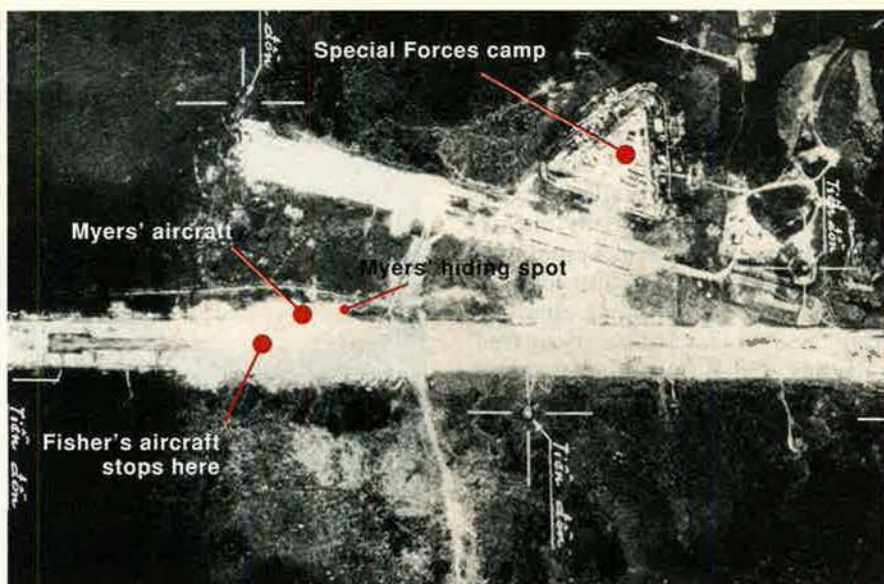


to A Shau. Fisher's call sign was "Hobo 51," and Vazquez was "Hobo 52."

By 11:15, Hobo flight had joined numerous other aircraft that were stacked and circling at 8,000 feet and higher above the valley. They had not yet gone to the aid of the fort because of the danger of running into mountain peaks hidden by the cloud cover.

One of the other A-1 flights in the stack was led by Maj. Dafford W. "Jump" Myers from the 602nd Fighter Squadron at Qui Nhon. Myers was "Surf 41," and his wingman, Capt. Hubert King, was "Surf 42."

Myers was an old friend. Fisher had known him back in Air Defense Command. He had been nicknamed "Jump" when he was a soda jerk in high school. Myers was a hard-bit-



**Myers was forced to land his crippled ship on the strip near the Green Berets' triangular firebase. The metal-plate airfield was torn up by mortar fire and pocked with craters. Fisher had to steer around chunks of Myers' A-1 (bottom photo).**

ten chain-smoker who once made his living running a billiard parlor.

Myers suggested that there might be an opening to the west. Fisher went to see, found a hole, and called on Myers and King to follow him and Vazquez into the valley.

Fisher told the other A-1 flight to stay in orbit above the clouds. There was not enough room in the valley for six airplanes to operate, so Capt. Jon T. "Luke" Lucas ("Hobo 27") and Capt. Dennis B. Hague ("Hobo 28") continued to circle.

Fisher, Vazquez, Myers, and King flew down the valley in trail formation. It was too tight to go in side by side.

The cloud ceiling in the valley was at 800 feet—better than the previous day—but the visibility also helped the enemy gunners, who were shooting down on the aircraft from the 1,500-foot hillsides.

### Myers Down

The defenders had fallen back into a bunker at the northwest corner of the fort. The NVA was making a ground attack, so the A-1s flew three strafing runs, which killed between 300 and 500 of the attackers.

On the first run, King's aircraft was hit in the cockpit canopy, shattering the plexiglass. He had to break off and go to the nearest base, which

was Da Nang. On the second pass, Myers' airplane was hit by shells of a heavy caliber. His engine conked out and the cockpit filled with smoke. At 400 feet, he was too low to use a parachute.

"I've been hit and hit hard," Myers radioed.

"You're on fire and burning clear back past your tail," Fisher replied.

"Rog," Myers said. "I'll have to put her down on the strip."

Myers' cockpit was filled with smoke. He couldn't see, so Fisher talked him down. At the same time, Fisher laid down suppressive fire in front of Myers and gave battle instructions to the other aircraft.

Myers was going too fast to land on the short runway, so he would have to belly slide in. He jettisoned his bombs and retracted his landing gear, but his attempt to release the center line fuel tank failed. The fuel tank exploded on contact with ground.

Surf 41 skidded about 800 feet, trailing fire, then veered off the runway on the west side and exploded. Incredibly, Myers survived. Fisher saw him clamber out of the airplane and run to a ditch between the airstrip and the fort, where he was screened by a clump of weeds.

Fisher called in Hague and Lucas. Hague: "It was like flying inside Yankee Stadium with the people in the bleachers firing at you with machine guns," Hague said.

Vazquez, meanwhile, was operating with a dead radio.

The A-1s put down saturated fire, driving back the NVA troops who



were trying to get to Myers. The Green Berets later said the attack wiped out a company of the North Vietnamese and took pressure off the fort.

### Fisher Goes In

As the A-1Es continued their strikes, Fisher called for a rescue helicopter. Ten minutes later, the command post said the helicopter was at least 20 minutes out. Fisher figured that this was probably a guess. Anyway, it wouldn't be much longer before the NVA closed in on Myers and killed him.

Fisher thought about going to get Myers. The runway looked short. He called the command post and asked the length. It was 3,500 feet, he was told. That would be long enough.

"Even in the best of conditions, however, it was almost suicidal to land an aircraft as large and slow as the A-1E while exposed to direct enemy fire," Fisher said in his 2004 book, *Beyond the Call of Duty* (co-authored by Jerry Borrowman). "A helicopter crew can fire their weapons from the side doors to hold the enemy at bay while executing a rescue, but I'd be defenseless while sitting on the ground.

"It made no logical sense, but I felt a strong impression that I should do this. Jump was one of the family—one of the fellows we flew with—and I couldn't stand by and watch him get murdered without at least trying to rescue him."

"I'm going in," Fisher radioed.

The odds of coming out again were not good. He would be landing in a crossfire from 20 anti-aircraft gun positions that lined the valley. The enemy also had hundreds of automatic weapons. The runway was a major hazard. The pierced steel planking was slick, and shards of it—torn by the mortars and bombs—were sticking up and could rip airplane tires to shreds. The runway was cratered and littered with shell casings, pieces of Myers' aircraft, barrels, pieces of tin and metal, and other debris.

Fisher counted on the other A-1s to provide him fire support. He approached the airstrip from the north, which would give him the advantage of landing into the wind, helping him to slow down. Unfortunately, the wind was also blowing thick smoke from fires ignited by the bombs and napalm in his direction,

obscuring his vision. When he broke out of the smoke, he saw that he was over the runway but too far along it to stop the airplane in the distance remaining. As he passed by at low level, he caught a glimpse of Myers.

He powered up, holding the aircraft a few feet above the ground to avoid ground fire, made an S-turn, and approached the runway from the opposite direction of his first attempt.

The other three A-1s continued to strafe to cover Fisher as he went in. Vazquez went "winchester" (out of ammo) on the first pass. After three more passes, the others ran out of ammunition, too.

"I'm winchester," Hague declared.

"So am I," said Lucas. "Let's keep making passes, though. Maybe they don't know it."

Fisher touched down at the very end of the field, stood on the brakes, and skidded down the runway. His brakes began fading from heat at 2,000 feet.

"The second landing attempt was successful although violent braking and rudder action was not always successful in avoiding debris on the battle-torn runway," Lt. Gen. Joseph H. Moore, 2nd Air Division commander, said in nominating Fisher for the Medal of Honor. "Major Fisher utilized all his flying skill to miss mortar craters, shell casings, and pieces of the A-1E which now littered the runway as a result of the fuel tank explosion."

Also, Fisher had been told wrong

about the length of the runway. It was 2,500 feet, not 3,500. It was too short for an A-1 under any circumstances.

He overran the runway onto some grass and crossed a small embankment, which slowed him down a little. As he swung the aircraft around, he slid into a fuel storage area. His wings passed over the tops of some 55-gallon drums, although he hit several of them with the tail of the airplane.

### Two Beady Eyes

Fisher taxied 1,800 feet back along the runway in full view of the enemy. He saw Myers waving his arms as he passed by. It took Fisher about 100 feet to stop. He couldn't see Myers, who was running behind the airplane, off to the right side, with bullets following him along. Myers later said it was the fastest dash an old man of 46 ever made. Fisher expected Myers to climb into the cockpit momentarily. When he didn't, Fisher figured Myers must have been hit. He unbuckled and set the brake to go looking for him.

As Fisher climbed out on the right side of the airplane, he "saw two little red beady eyes trying to crawl up the back of the wing." It was Myers, his clothes burned and muddy and his eyes reddened by smoke.

Fisher had left the engine running fairly fast, ready for a quick getaway, and the airflow from the big four-bladed propeller was blowing



Photo via Martin Winter

As Fisher's Spad idled, he pulled Myers into the cockpit head first. Myers berated Fisher for a foolhardy rescue attempt that neither of them would likely survive. The rescue A-1 is now at the Air Force Museum in Dayton, Ohio.





*From left to right: A-1 pilots Myers, Fisher, Capt. Jon Lucas, Dennis Hague (looking at paper), and Francisco Vazquez, who helped buy the Green Berets time to escape A Shau, relax after the battle. All survived the war.*

Myers back as he tried to reach the cockpit. Fisher cut power to idle, risking a stall. As bullets continued to strike the aircraft, he pulled Myers into the cockpit head first.

Myers' first words were: "You dumb son of a bitch, now neither of us will get out of here." He drank some water from Fisher's canteen and asked for a cigarette. Fisher did not have any.

As Fisher pulled Myers aboard, Lucas—who had taken a severe hit in his hydraulic system—led Hague and Vazquez in a dry pass over the camp. The three Spads went hurtling by at low level. It was enough to hold the NVA back momentarily.

"Turning his aircraft around, Major Fisher saw that he had less than two-thirds of an already too short airstrip ahead of him," Moore said in the Medal of Honor write-up. "Calling on all his skill, he applied power and worked his way through wreckage and debris, gaining enough speed to lift off at the overrun. Flying just above the ground at insufficient air-speed to climb, he gradually built up speed, still under intense hostile fire, and began a climb into the 800-foot overcast above the valley."

According to one report, the defenders in the fort cheered as Fisher's A-1 roared down the strip and rose into the air.

Fisher and Myers flew to Pleiku, where the medics met them at the flight line. Myers was not badly hurt, although he was singed and covered

in soot and "smelled awful," according to Fisher.

Fisher's airplane had 19 holes in it. There were 23 in Vazquez's.

#### **Fate of the Fort**

The Special Forces camp in the A Shau Valley fell to the NVA late that afternoon. Air strikes suppressed the attack long enough for rescue helicopters to pick up survivors.

The Green Berets took 100 percent casualties: five killed, 12 wounded. Only 172 of the South Vietnamese irregulars and Chinese mercenaries were evacuated, although many of the others turned up later.

"I only wish we could have done more to help them," Fisher said.

The NVA paid a heavy price for its victory. It lost 500 troops to air strikes and another 300 to ground fire.

In all, 201 air strikes were flown in support of the fort on March 10. Of these, 103 were by the Marine Corps, 67 by the Air Force, 19 by the Navy, and 12 by the South Vietnamese Air Force. Including Myers' A-1E and the gunship, six Air Force, Navy, and Marine Corps aircraft were shot down in the effort.

As 7th Air Force Historian Kenneth Sams said in his report, without airpower, there would have been no survivors. One of the Special Forces

defenders, Capt. Tennis Carter, said, "Without the air support you provided, we wouldn't have lasted one day."

It was two years before allied forces retook the valley. The NVA established its own camp at A Shau, ringed the valley with anti-aircraft batteries and used it as a staging area and a supply dump. In January 1968, the Tet attacks on the northern provinces were launched from A Shau.

#### **Medal of Honor**

Myers wanted to buy Fisher a year's worth of whiskey, but Fisher didn't even drink coffee. Instead, Myers gave him a Nikon camera engraved, "A Shau, March 10, 1966."

Fisher was awarded the Medal of Honor, the first airman in the Vietnam War to receive it. It was presented by President Johnson at the White House, Jan. 19, 1967. His wife, Realla, and their five sons were present for the ceremony.

Myers and Lucas were awarded the Silver Star. Hague and Vazquez received the Distinguished Flying Cross.

The aircraft Fisher flew in the A Shau Valley later crashed and burned at Pleiku as it was returning from a mission. However, it was recovered and restored. In 1967, it was flown by none other than Jump Myers from California to the Air Force Museum in Dayton, Ohio, where it can be seen today.

Bernie Fisher stayed in the Air Force, retiring as a colonel in 1974. Myers died in 1992, but Fisher kept in touch with the others. At a presentation in the Pentagon honoring Fisher in 1999, the attendees included Paco Vazquez, Denny Hague, and Luke Lucas, as well as Gene Deatrick, who was commander of the 1st Air Commando Squadron at Pleiku.

Interest in the mission continues. Fisher is called upon often to tell the story. Over the years, he has made about 500 speeches.

After retirement, he went back to Idaho and became a farmer, raising seed corn, sugar beets, wheat, and alfalfa. He still lives on the farm, but rents most of it out to another farmer. ■

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*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 Vietnam Almanac," appeared in the September issue.*



# The Keeper File

## The “Military-Industrial Complex” Myth

*President Dwight D. Eisenhower would be amazed at the way in which his term “military-industrial complex” has been abused. For example, Bill Moyers recently contended on his PBS show that the military-industrial complex was made up of those who “call for war ... and then turn around and feed on the corpse of war.”*

*Ike coined the term in his 1961 farewell address to the nation, but with a very different purpose. He warned about the potential influence of a large complex, but his larger point—elaborated below—was that America was “compelled” to maintain an extensive, effective standing armaments industry. Critics forget that part.*

*The address was short—only 1,900 words—but Eisenhower made two explicit points: The Cold War was caused by communist aggression, not the greed of US defense contractors, and the existence of the military-industrial complex was vital, not insidious.*

**A** vital element in keeping the peace is our military establishment. Our arms must be mighty, ready for instant action, so that no potential aggressor may be tempted to risk his own destruction.

Our military organization today bears little relation to that known by any of my predecessors in peacetime, or indeed by the fighting men of World War II or Korea.

Until the latest of our world conflicts, the United States had no armaments industry. American makers of plowshares could, with time and as required, make swords as well. But now we can no longer risk emergency improvisation of national defense; we have been compelled to create a permanent armaments industry of vast proportions. Added to this, three-and-a-half million men and women are directly engaged in the defense establishment. We annually spend on military security more than the net income of all United States corporations.

This conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence—economic, political, even spiritual—is felt in every city, every statehouse, every office of the federal government. We recognize the imperative need for this development. Yet we must not fail to comprehend its grave implications. Our toil, resources, and livelihood are all involved; so is the very structure of our society.

In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.

We must never let the weight of this combination endanger our liberties or democratic processes. We should take nothing for granted. Only an alert and knowledgeable citizenry can compel the proper meshing of the huge industrial and military machinery of defense with our

### “Farewell to the American People”

President Dwight D. Eisenhower  
Address to the nation, Washington, D.C.  
Jan. 17, 1961

Find the full text on the  
Air Force Association Web site  
[www.afa.org](http://www.afa.org)  
Air Force Magazine  
“The Keeper File”

peaceful methods and goals, so that security and liberty may prosper together.

Akin to, and largely responsible for, the sweeping changes in our industrial-military posture has been the technological revolution during recent decades.

In this revolution, research has become central; it also becomes more formalized, complex, and costly. A steadily increasing share is conducted for, by, or at the direction of the federal government.

Today, the solitary inventor, tinkering in his shop, has been overshadowed by task forces of scientists in laboratories and testing fields. In the same fashion, the free university, historically the fountainhead of free ideas and scientific discovery, has experienced a revolution in the conduct of research. Partly because of the huge costs involved, a government contract becomes virtually a substitute for intellectual curiosity. For every old blackboard there are now hundreds of new electronic computers.

The prospect of domination of the nation's scholars by federal employment, project allocations, and the power of money is ever present—and is gravely to be regarded.

Yet, in holding scientific research and discovery in respect, as we should, we must also be alert to the equal and opposite danger that public policy could itself become the captive of a scientific-technological elite.

It is the task of statesmanship to mold, to balance, and to integrate these and other forces, new and old, within the principles of our democratic system—ever aiming toward the supreme goals of our free society.





*Air National Guard F-15s sit alongside Polish MiG-29s in Poland. The two types flew together in the alliance's largest-ever air exercise.*

# Shaking Up the Alliance

**The Warsaw Pact is dead. With some luck, NATO will avoid the same fate.**

**By George Cahlink**

**I**N FALL 2003, NATO held its largest-ever air exercise, one requiring the host nation to close two-thirds of its national airspace. More than 100 airplanes and hundreds of airmen from 15 nations spent two weeks practicing a range of missions, from defense suppression to air-to-air combat.

It is not unusual for NATO's forces to train for war. It was unusual that the site was Poland—late of the old Warsaw Pact.

Gen. Robert H. Foglesong, commander of US Air Forces in Europe, observed that it seemed only a short while ago that the pact disintegrated. "So here we are several years later," Foglesong said, "and I'm attending the largest NATO airmen [exercise] ever—in Poland."

As events in Poland demonstrate, the pace of change within NATO leaves many shaking their heads in astonishment. New ways of doing business are sweeping through the venerable 55-year-old military alliance.

At the heart of the change is a single requirement, which was summed up by Marine Corps Gen. James L. Jones, NATO's Supreme Allied Commander Europe, in this way: "Today's multi-





faceted world requires operational capabilities that are more agile, mobile, responsive, and expeditionary.”

### The Response Force

Nowhere is the change more evident than in NATO’s pursuit of a new kind of integrated, expeditionary military force.

For a half-century, NATO restricted military activity to self-defense within the defined treaty area—the soil of member countries. So-called “out-of-area” operations were rejected, as was any notion of building forces suited to carry them out.

Now, however, under prodding from Washington, NATO is creating an integrated, rotational “spearhead,” known as the NATO Response Force, to take action in world hotspots if and when needed. It would comprise top military personnel equipped with cutting-edge weapons and other systems.

NATO endorsed the concept of the Response Force at the 2002 summit in Prague, after it had been broached by US Secretary of Defense Donald H. Rumsfeld. Rumsfeld had warned, “If NATO does not have a force that is quick and agile, which can deploy in days or weeks instead of months or

years, then it will not have much to offer the world in the 21st century.”

Member nations are to provide the military assets. Plans call for the NRF to be able to deploy within five days of a “go” order and sustain itself for up to 30 days. The mission could range from major combat all the way down to peacekeeping or humanitarian action.

As currently envisioned, the new force would ultimately comprise 21,000 troops and be able to conduct air, land, or sea operations. It is to have its own logistics, communications, and intelligence-gathering capabilities. Its leadership would rotate among NATO commands in Europe.

Military planners hope to have the full, brigade-sized joint force ready for action no later than October 2006.

According to Foglesong, the NRF’s air component will be able to generate up to 200 combat, lift, and support sorties per day. He explained that NATO will set a force goal for a particular NRF rotation and that allied nations will be asked to contribute forces to meet the goal.

Contributions will differ, obviously. Some countries might offer fighters, others transports, still others support aircraft. Once the nations make offers, evaluation teams will certify whether the forces are ready to take part in an NRF.

The NRF will not be a permanent standing force. It will be rotational, having a six-month period of unit training followed by a six-month “on call” period.

USAF Gen. Charles F. Wald, deputy commander of US European Command, believes the NRF will be a very different undertaking for the allies.

“The nations that provide the force are actually going to have to give that force to NATO for that period of time,” Wald explained. “It is not going to just be on the books. It is not going to be just on paper. It will actually be under the command of NATO, a common commander. They will actually train together. ... This force will actually move; it could move out of theater for training.”

Jones said the alliance is making progress on the NRF project. However, he added, the effort cannot succeed unless the allies are able to overcome what surely will be major command and control problems.

As the alliance military chief warned at a recent Berlin conference: “We have got to get beyond the point where commanders spend most of the time trying to work out what they cannot do instead of what they can do.”

The NATO Response Force is the clear vehicle for NATO transformation in the 21st century, Jones went on to say at an alliance conference in Europe last fall.

Earlier this year, Jones explained that the NRF had become “a reality.” It is in its third rotation and growing in terms of capability and quality. It has grown to be an integrated force of 17,000 troops—comprising air, land, sea, and special operations forces.

“For the first time in NATO’s



**Marine Gen. James Jones, Supreme Allied Commander Europe, inspects members of the new NATO Response Force during the inaugural ceremony in Brunssum, Netherlands.**

AP photo by Dusan Vranic





**In a first for NATO, the alliance sent several of its E-3 AWACS aircraft to the US to help patrol US skies shortly after 9/11, while USAF E-3s headed to Southwest Asia. Here, a USAF E-3 takes on fuel from a USAF KC-135R.**

history,” he said, the allies will be “able to deploy and operate as an expeditionary force ... on a global scale.”

With the NRF on hand, the NATO writ could run quite far.

According to Royal Navy Adm. Ian Garnett, chief of staff at Supreme Headquarters Allied Powers Europe: “We have one NATO area of responsibility (AOR). That is clearly defined. ... I would also say that NATO has what I term an area of interest, which actually, through the Partnership for Peace program, goes all the way to the Chinese border and well into North Africa.”

Rumsfeld, addressing NATO defense ministers in June in Istanbul, declared the NRF to be ready for its first mission. “Now the task is to use it,” the Pentagon chief said. “There’s no use having it unless you use it.”

### Going “Out of Area”

Almost as unusual as the Response Force effort is NATO’s willingness to actually take action beyond NATO boundaries.

In the 1990s, the alliance began inching away from its self-imposed ban on out-of-area operations. US-led NATO forces in 1995 conducted a brief air campaign in Bosnia and another, bigger air war over Serbia. Both operations, while not in defense of NATO territory, nonetheless remained within Europe.

Now, however, NATO has for the

first time conducted a military operation beyond European borders—in Afghanistan.

NATO’s primary contribution has been heading a 6,500-troop International Security Assistance Force (ISAF) composed of NATO forces and those of other, non-NATO allied nations. The mission is sanctioned by the United Nations. NATO started by providing ground troops to enhance security in the capital of Kabul.

Last fall, the UN voted to move ISAF beyond the relatively safe confines of Kabul and provide security throughout the nation. NATO has aided

that expansion by taking over some US-led reconstruction operations.

Rebuilding operations are being carried out by provincial reconstruction teams (PRTs). Each such unit has as many as 150 troops deployed to provinces throughout Afghanistan to manage reconstruction. PRTs conduct presence patrols in local villages, hire local contractors to rebuild infrastructure, oversee the creation of health care, legal, and banking systems, and respond to sudden humanitarian crises.

NATO forces led by Germany took over a PRT in the town of Kunduz. Four other PRTs in northern Afghanistan were expected to come under NATO’s command over the next several months.

“It’s a way of having the effects of the transitional government and Karzai Administration felt and reflected outside the capital city—and that’s a good thing,” Rumsfeld said during one visit to Afghanistan.

The NATO force in Afghanistan has been largely cobbled together from whatever troops members could provide. The force is not involved in combat; at present, some 13,500 US troops handle antiterrorist operations in Afghanistan. Moreover, USAFE has played a supporting role by providing airlift. Ramstein AB, Germany, has served as a main logistics hub for moving troops and supplies into the region. Since war began in October 2001, the Air Force has flown 30,000 airlift missions into Afghanistan,



**NATO leads a 6,500-member International Security Assistance Force that is deployed throughout Afghanistan to help secure stability. Pictured are German ISAF troops, aiding an Afghan man wounded in a building collapse.**



transporting 418,000 passengers and 489,000 tons of supplies. "We are the big dog when it comes to strategic lift," said Foglesong.

Rumsfeld had hoped that NATO might eventually take over some security operations. According to Julianne Smith of the Center for Strategic and International Studies in Washington, D.C., it won't be easy to convince NATO to take a combat role.

"There's still a great deal of discomfort in NATO with being a player outside of Europe," Smith said.

That discomfort was fully on display at NATO's summit last June in Istanbul, an event which showed NATO's commitment was starting to flag badly. The NATO Secretary General, Jaap de Hoop Scheffer, appealed to alliance member states to provide more forces to help secure Afghanistan in the run-up elections. After weeks of pleading, he got commitments for only a few helicopters.

### More—and Different—Members

The goals and actions of the Western alliance also have been strongly affected by changes in its own composition.

NATO membership has expanded from 16 members in 1998 to 26 today, with the growth coming from the accession of East European nations that once were within the orbit of the Soviet Union.

United States Air Force units and other NATO airmen now regularly train with former Warsaw Pact nations. This is viewed as a growth area for the US Air Force.

Foglesong's travel itinerary this past spring says a lot about the attraction of Eastern Europe for American planners. In March, he was in Ukraine (not a NATO member) discussing increased cooperation. In April, Foglesong traveled to Slovakia to welcome it into the alliance. In May, he was back in Poland to observe Poland's testing of its newly acquired F-16 fighters.

"We're looking south and east," he said. "That makes sense."

The Defense Department sees Eastern Europe and other formerly Soviet dominated areas as potential sites for an austere network of standby installations that could be used for rapid projection of US power. The "lily pad"



Many of NATO's newest members used to belong to the rival Warsaw Pact. Here, USAF Capt. Brett Rurka from Aviano AB, Italy, shows an F-16 cockpit to a Polish pilot. Poland has purchased 48 F-16s.

bases would have caretaker crews and pre-positioned equipment that a larger force could use in a crisis. Forces would regularly rotate through the bases for training exercises.

Foglesong said the new Eastern NATO allies offer fewer restrictions on use of airspace and fewer environmental barriers.

According to the USAFE commander, the US will still have "enduring bases" in Western Europe—for example, Ramstein and Spangdahlem Air Bases in Germany. "You wouldn't want to get to the point in Europe where you only had one hub," he said.

Foglesong also emphasized that the new bases would likely require significant investment to accommodate US forces.

### Decline of the West?

Inevitably, however, the transformation of NATO—and the relationship of the US to Europe—will have an impact on force deployments there.

President George W. Bush announced recently that the US would move thousands of troops out of traditional cantonments in Europe even as it establishes new air bases farther east and south.

Within the decade, Washington will withdraw roughly 65,000 soldiers, sailors, airmen, and Marines from both Europe and Asia and move them home

to US bases. The US currently has 100,000 troops in Europe, including two heavy divisions in Germany, and about 100,000 troops in Asia, among them nearly 40,000 troops in Korea.

The Army will recall the two divisions from Germany and return them to the United States.

The realignment, which begins in late 2006, will unfold over most of a decade. Bush said the new global force structure would allow troops to deploy more rapidly to meet new threats.

In the President's words: "America's current force posture was designed ... to protect us and our allies from Soviet aggression. The threat no longer exists."

USAFE, headquartered at Ramstein, won't be radically affected by the change in force deployment. The command began its transformation long ago—in the early 1990s, after the fall of the Soviet Union.

By the end of the decade, USAFE's former complement of 60,000 airmen had been cut to 30,000, its former fleet of 850 aircraft had been chopped to 220, and its once sprawling base structure had been reduced to five major facilities. At present it has only 2.5 fighter wing equivalents.

NATO, formed in 1949, is the most successful military alliance in history. The statesmen who created it long ago would not recognize today's version. If NATO continues on its current course, today's version soon will be gone, too. ■

*George Cahlink is a military correspondent with Government Executive Magazine in Washington, D.C. His most recent article for Air Force Magazine, "Better 'Blue Force' Tracking," appeared in the June issue.*



**USAF's science and engineering community has regained some strength, but it has a way to go yet.**

# So Far, So Good

■ **By Tamar A. Mehuron, Associate Editor**

**F**OUR years ago, the Air Force launched a concerted, high-profile campaign to alleviate severe shortages in the Air Force's science and engineering career field. Now, that workforce shows signs it is beginning to recover from a decade of problems and neglect.

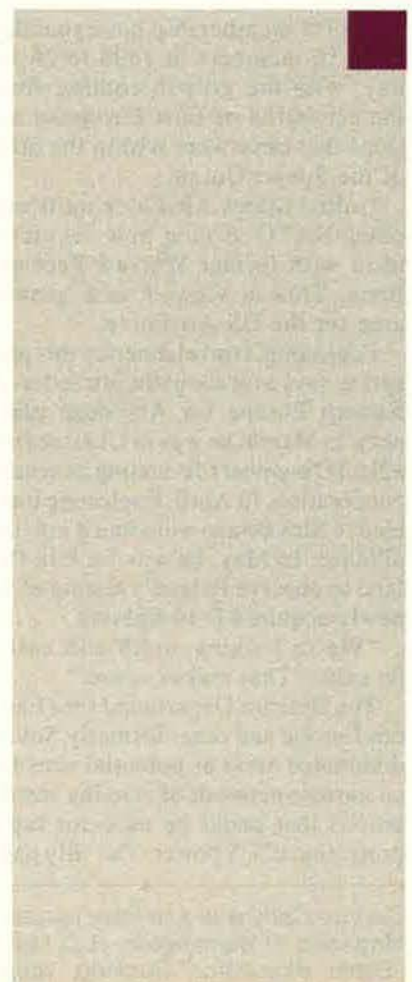
The S&E community is having some success recruiting and retaining talent in an extremely tight and competitive labor market, officials say. As a result, staffing in the Air Force's S&E field has improved from 85 percent of authorized strength to close to 95 percent today.

USAF must maintain a robust S&E community if it is to hold its warfighting edge and bring on the next generation of military technologies. Air Force labs have been the sources of many breakthroughs—navigation and timing systems, stealth technology, and airborne warning systems, to name a few. All got their start decades ago in USAF labs.

The S&E community, comprising 9,254 civilians and 3,885 uniformed personnel, still faces serious challenges. Chief among them is the danger of mass civilian retirements over the next decade as baby boomers leave the workforce.

Compounding the problem is a difficulty in finding new blood. Fewer and fewer American students are choosing careers in science and engineering.

Officials at the Air Force Research Laboratory (headquartered at Wright-Patterson AFB, Ohio) worry that its S&E force could suffer a catastrophic setback, numerically speaking, noted James Engle, deputy assistant secretary of the Air Force for science, technology, and engineering. Retired Maj. Gen. Paul D. Nielsen, who commanded AFRL until this summer, said that retire-





ments have held steady in recent years but that 45 percent of the civilian S&E workforce is eligible to retire in the next five years.

### Multiple Alarms

Many studies, starting in the 1980s and continuing through the 2002 Aerospace Commission report, have raised an alarm about shortages in the nation's scientific and technical workforce. In 2000, the Air Force Association released a special report on USAF research and development, cautioning that shortchanging the labs could cost the United States its next generation of military breakthroughs.

In the late 1990s, AFRL was not only losing authorizations but also losing budget, Nielsen said. He added that, even though scientists are optimists by nature, "it was hard for some of the people inside the lab and people looking for jobs to be optimistic about government service at the time."

As the scale of the problem became widely known, USAF began to take action. In 2000, top leaders held the first of two four-star summits dedicated to S&E manning problems.

It continued in 2001, as incoming Secretary of the Air Force James G. Roche brought with him from industry an understanding of the "importance of a technical workforce and a technical organization," said Engle.

The Air Force initially focused its attention on retention problems among uniformed military engineers. This was Roche's idea, Engle said. The Secretary had witnessed similar recruitment and retention woes while he was a top executive at Northrop Grumman.

His idea was to "re-recruit" each military engineer, Engle said, meaning that USAF officials would "talk to every one of them and ask, 'What's on your mind? What's bothering you?'"

The Air Force sought an understanding of the engineers' thinking and would ask what could be done to keep them happy, why were they planning to leave, and how they could be persuaded to stick with the Air Force.

"When we did that, we re-recruited a number that were on the bubble and thinking about leaving," Engle recounted in an interview. "So, it was an effective effort." It also yielded a huge amount of useful information as to what made the military engineers happy and unhappy.

The re-recruitment effort will probably be repeated, he noted.

Engle added that retaining uniformed personnel has been "the really hard part" of the staffing problem. "At one point we were as low as 85 percent manned on the military engineer workforce," said Engle, but staffing has since recovered to between 90 and 95 percent.

Among military engineers with seven to 13 years of experience, undermanning was a particularly serious problem, with no quick and easy solution.

"We have a retention problem on the military side," Engle said. "I can't hire an eight-year captain engineer. I have to hire a lieutenant and grow him into that position."

### Mass Retirement?

In the Air Force's civilian S&E community, the big problem is not recruitment. Engle noted that, on the

civilian side, USAF can hire "across the whole demographic spectrum," meaning that a position requiring 10 years of experience can be filled by recruiting an industry engineer with 10 years of experience. The problem, rather, is the danger of mass retirements that could gut the system.

Many civilians who are eligible for retirement are not retiring. Delayed retirements are certainly helpful in allowing the Air Force to meet its civilian S&E man-

**“Whether they leave when they’re 58 or leave when they are 62 or 65, they’ll leave.”**

ning requirements, but they do not actually solve the problem. Engle noted that keeping an old workforce a while longer merely "kicks the can" down the road.

"Whether they leave when they're 58 or leave when they are 62 or 65, they'll leave," Engle said.

Much of the hanging on is due to the state of the economy, he added, and Air Force S&E retention could turn down again when the economy turns hot. "We're trying to get ready for that," Engle said.

Steps taken by the service leadership have strengthened the Air Force's prospects for meeting the future challenge, officials say. The 2000 and 2001 Air Force summits produced a concept of operations to bolster the S&E workforce. Also ordered up were a manning requirements review and a host of initiatives aimed at boosting retention and recruitment of scientists and engineers.

The manning requirement order asked, "How many [scientists and engineers] do you need?" and, "How many will you need in the future?" Engle said.

The resulting CONOPS emphasized the need for a strong in-house military and civilian S&E community with a specific distribution between military, civilian, and contractor personnel.

"We believe that ... a certain number of our general officers need to be technically competent [and] we need to grow them out of this [S&E] cadre, ... because we are a technical force and we're going to become more so," said Engle.

A year-long review showed that the S&E career field in 2000 was "the most stressed career field in the Air Force," Engle said.

Using those data, officials designed a series of initiatives to bring manning up to 100 percent of requirement. Initiatives ranged from retention and recruitment bonuses to new programs for S&E career development.

At the second summit, proposed changes and initiatives were presented for approval by the senior leader-



ship. The package would require \$360 million to bring the S&E force up to full strength.

### Heartburn

When Engle and his staff presented that tab, there was some heartburn, Engle said, but “the Chief and the Secretary got that money for us [and] funded every one of the initiatives.”

The funding boost first appeared in the Fiscal 2003 budget in the form of retention bonuses and “group retention” allowances. This year, full funding of the initiatives is in place.

The result? The Air Force is now 90 to 95 percent manned in these areas. Regarding staffing, said Engle, USAF still is “not where we wanted to be, but it’s a lot better than where we were. It’s working.”

Officials say it is difficult to forecast the shape of the future S&E workforce. A 20-year-long war on terrorism will drive a certain set of requirements at the Air Force labs. A focus on a “near-peer competitor,” Engle said, would produce a different set.

If the long-term enemy is terrorism, the Air Force is likely to seek larger numbers of electrical engineers and computer experts, Engle explained. Taking on a near-peer competitor might force USAF to focus on directed energy weapons and high-speed hypersonics programs. This would require a different set of experts.

Officials have intensively studied both scenarios and produced two different staffing requirements. “We’re shaping our force as we speak,” Engle said. “We’re reshaping as we speak.”

Increased funding has yielded benefits in other areas. Roughly 80 percent of the Air Force’s science and engineering program is executed by industry and academic institutions outside of USAF’s direct control.

Over the past five years, Nielsen said, the Air Force’s overall science and technology program—including funding from the Defense Advanced Research Projects Agency or USAF product centers—has grown from about \$2.4 billion to \$3.4 billion annually.

The funding boost has spurred more cooperation with universities. “Having the overall workforce, including the contracted workforce, out there doing things [has] made the whole defense science and technology community more robust than it was in the past,” Nielsen said.

Nielsen noted the S&E community has enjoyed several years of funding stability and consistent personnel authorizations.

“In our authorizations now, we’ve been steady for about four or five years,” Nielsen explained, and so, as people retire, “we have headroom” to hire replacements.

### Pay for Performance

New optimism has been generated by a successful, seven-year-old personnel program called the “Lab Demo.” It is a compensation system that rewards scientists and engineers for their contributions rather than their longevity. The lab’s scientists and engineers—about 60 percent of the AFRL workforce—participate in Lab Demo.

In contrast to the traditional civil service system, Lab Demo evaluates “contributions over the year, in the

## AFRL and the National Security Personnel System

**Air Force Research Laboratory** is pursuing a number of initiatives to improve recruiting and retention of its science and engineering workforce.

These initiatives are taking place in the context of the Pentagon’s move to a new National Security Personnel System. NSPS could replicate, but alter, many of AFRL’s in-house programs. (NSPS is being designed for the entire DOD civilian workforce.)

The proposed new personnel system will probably contain a form of flexible, “pay banding” compensation. Pay banding is needed to bring military science and engineering salaries within competitive range of the private sector.

AFRL personnel manager Polly Sweet told *Air Force Magazine* that AFRL was one of nine DOD entities specifically excluded from NSPS until 2008.

Sweet said this arrangement allows AFRL to “continue to implement new, cutting-edge” personnel arrangements to address the Air Force’s S&E workforce concerns.

What happens after 2008 is unclear, but moving AFRL into the NSPS model would not necessarily hamper the labs, said Sweet.

context of the goals of the lab,” Nielsen said. Performance determines “what kind of raises they will get and [what] promotions.”

The system has only four broad pay bands, compared to the multiple steps and grades of the traditional civil service system. Technical experts can move up to a higher band by performing well.

Lab Demo has been “really successful” in two directly opposed ways, Nielsen said. First, top workers can be rapidly rewarded through raises or increased responsibility. Conversely, poor performers can suffer pay cuts. AFRL has found it necessary to do this “a few times,” Nielsen said.

Polly Sweet, AFRL human resource management director, said that Lab Demo is now “pretty much institutionalized” within AFRL. This offers two benefits. First, as a retention tool, Lab Demo gives managers flexibility to set pay appropriately for a worker’s performance, which allows them to compete with private industry. Second, as a recruitment tool, it promises that hard work will be recognized and rewarded.

AFRL can offer a bonus of \$10,000, immediately, to key engineers who might otherwise leave government service.

Engle noted that the Air Force is also “looking hard” at knowledge transfer, to ensure that expertise from senior civilian scientists and engineers gets passed down to the next generation.

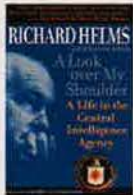
“We’d like to hire about 120 additional people, put them in a very specific location, as an apprentice under a master, let them work with that person for the last three years of [the senior official’s] career,” Engle said. That way, the Air Force will have at least “post-doc’d” a replacement when the mentor retires. ■



# Books

Compiled by Chequita Wood, Editorial Associate

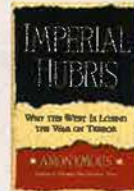
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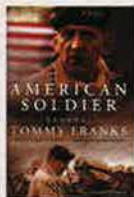


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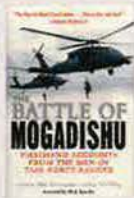


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An aerial photograph of a city, likely Dresden, showing extensive destruction and rubble. In the foreground, a dark silhouette of a person's head and shoulders is visible, looking towards the city. The background is a hazy, overcast sky.

To antiwar activists, the 1945 attack was a war crime. The real story was very different.

# The Dresden Legend

By Rebecca Grant

**W**HEN US airpower struck targets in Baghdad during the first days of Gulf War II, the media brought up the name of a historic European city almost as often as they mentioned the Iraqi capital itself. That city was Dresden.

It was a potent symbolic reference, intended to suggest cruelty, horror, and unjustifiable overkill. On Feb. 13-14, 1945, two waves of Royal Air Force firebomb attacks and a follow-up US Army Air Forces raid all but obliterated Dresden, an old and graceful German city on the Elbe River. Huge incendiary assaults created a firestorm that consumed everything in its path.

Germany surrendered three months later, but by then the world had already begun to hear a "legend" of Dresden, one formed and promoted by Nazi propagandists. According to this legend, the destruction of Dresden was not a valid military operation at all but was at best a vicious attack of questionable value and, at worst, a war crime against defenseless civilians.

The legend grew in postwar years. Dresden was in Soviet-occupied East Germany, and Moscow put the 1945 event fully in the service of anti-American and anti-British propaganda. Many western writers did their part, too. In the 1960s, Kurt Vonnegut's best-selling novel, *Slaughterhouse 5*, delivered a memorable fictional rendering of Dresden's blazing streets and burned bodies.

Critics persistently raised questions about why this "Florence of the Elbe" had evidently been singled out for such a ferocious attack, and so near the end of the war, when it had been hit only a few times before February 1945.

## Hiroshima, Nagasaki, and ... Dresden

This legend of Dresden was part history, part propaganda, and part outright myth. Other cities such as Berlin and Hamburg suffered far worse attacks. Still, Dresden has surpassed them



in the public mind as a symbol of brutal conventional bombing and morally questionable target selection. Only Hiroshima and Nagasaki have higher revulsion quotients.

Thus, Dresden is a well-established reference point, guaranteed to prompt debate on city bombing, civilian casualties, and the morality of Allied operations.

Which brings us to Baghdad. In early 2003, the ghost of Dresden was an ever-present touchstone for anti-war forces.

■ “Recently, a debate over whether the Allied bombing of Dresden was a war crime has preoccupied the German press,” observed columnist Anne Applebaum.

■ “Dresden 1945. Baghdad 2003: The Same Crime,” read a placard in a Berlin protest spotted by a *New York Times* reporter after the start of Gulf War II.

■ After the bombing of Baghdad, “Some excited TV commentators likened the scene to the devastation caused by the extensive bombing of Dresden and other cities during World War II,” observed a *New York Times* editorial.

■ It was also a marker for the coalition—a “don’t go there.” “Baghdad will not be like Dresden,” vowed an Air Force colonel conducting a Pentagon background briefing on airpower just before Operation Iraqi Freedom began.

What makes Dresden stand out is the sense that the Allied attack was disproportionate. In the laws of war, proportionality is key. Claims that Dresden was not a legitimate military target, that the attack came too late in the war to make a difference, and that the firebombing tactics were cruel and unusual are at the center of the debate.

Ernest W. Lefever, a senior fellow of the Ethics and Public Policy Center in Washington, D.C., summed up the case against the Allies with this charge: “Hitler’s barbarity didn’t justify the fiery obliteration of beautiful Dresden.”

Dresden also provides a major count in the indictment of RAF Bomber Command’s doctrine of nighttime area bombing.

Denouncers of the Dresden attack come from different points on the political spectrum. For instance, neo-Nazi groups promote the legend of Dresden via Internet postings in order to show that non-Jewish Germans suffered in the war.

**The Price.** Dresden paid a price for Nazi Germany’s sins. As Soviet forces closed in from the east, the city’s fate was determined by its strategic location along rail and road lines of communication that could facilitate a German counterattack. In this famous photo taken from Dresden’s Townhall Tower, a sculpture titled “The Goodness” appears to be surveying the wreckage.



What, exactly, happened at Dresden in 1945? And why has it remained a powerful symbol nearly 60 years later?

When World War II began, Dresden was the seventh largest city in Germany. Official statistics put Dresden’s population at 642,143. It had been a popular tourist destination because of its marvelous cathedral, synagogue, palaces, gardens, and avenues radiating out from the medieval city center.

For all of its charm, however, Dresden had an ugly side. Its leaders and public generally welcomed the Nazis’ rise to power.

“Dresden is a pearl, and National Socialism will give it a new setting,” Adolf Hitler boasted in 1934. Most resistance to the Nazis in Dresden was stamped out by 1935, according to historian Frederick Taylor in his comprehensive 2004 book, *Dresden: Tuesday, February 13, 1945*.

Even while Dresden was being converted to a Reich stronghold, observers outside Germany paid attention only to its cultural beauty and luxury industries. This was true despite contrary evidence. In fact, said Taylor, an official 1942 guide described the German city as “one of the foremost industrial locations of the Reich.”

Dresden shifted to a wartime foot-

ing, with the large Zeiss-Ikon camera factory converted to make fuses and bombsight optics. The United States Strategic Bombing Survey listed at least 110 factories and industries in Dresden. Some 50,000 people worked in munitions and armaments production.

### Too Far East

Still, Dresden was not a target of Allied air attack until 1944. It was too far to the east. In the early years of the war, RAF Bomber Command and the US Army Air Forces had their hands full attacking Nazi-held France, Holland, and western Germany. Then came concentrated attacks on major industrial targets and the all-important preparations for the Normandy invasion.

In those early years, bombers that found themselves over Dresden generally were strays from raids on Berlin. Dresden recorded just 12 air raid warnings in all of 1940, seven in 1941, and four in 1942. Most came to nothing. Dresden took its first air raid casualties only in August 1944, when some bombs from a raid on the nearby town of Freital fell in its outskirts.

According to official Air Force reports, Dresden was not targeted de-





**Decision.** Gen. Arthur Harris, head of RAF's Bomber Command, got the "go" order Jan. 27, 1945. Harris viewed Dresden as "a mass of munitions works, an intact government center, and a key transportation center."

liberately until 30 B-24s of Eighth Air Force on Oct. 7, 1944, struck the rail marshaling yards with more than 70 tons of high-explosive bombs—a comparatively light raid. Eighth Air Force returned to Dresden's marshaling yards with 133 bombers on Jan. 16, 1945, dropping 279 tons of high explosives with 41 tons of incendiaries in the mix.

As the war closed in, it was the strategic location of Dresden along rail and road lines of communication that would determine its fate.

By January 1945, one of the most important elements in the Allies' strategic calculus was the new Russian ground offensive. Gen. Dwight D. Eisenhower, the Supreme Allied Commander, had the Battle of the Bulge under control and Allied forces in the west were ready to move into Germany itself. To end the war by summer 1945, the Allies would have to coordinate the eastern and western drives as never before.

Russia's winter offensive began from Poland on Jan. 12, 1945, and made "remarkable progress," as Eisenhower said in his memoirs, reaching German soil a week later.

Though the ring was tightening on Germany, Berlin had a compensating benefit: shorter internal lines of communication. The smaller battle area meant that the German Army could redeploy its forces from one front to another rapidly. According to historian Matthew Cooper, Hitler immediately began shifting his forces,

but significant Panzer forces remained in areas like Hungary.

### Soviet Jeopardy

By Feb. 2, 1945, the Russians were near Frankfurt, but Moscow's drive now formed a bulge 400 miles long at its base with northern and southern flanks over 100 miles deep. Even this juggernaut was vulnerable to flank attacks from areas still held by the German Army. Dresden was a major rail junction controlling German movement on that front.

A big question was how best to use Bomber Command and Eighth Air Force to support the Russian effort.

Britain's Joint Intelligence Committee had a detailed answer to that question. Composed of representatives from military intelligence service, counterintelligence, naval intelligence, the Air Ministry, and the Ministry of Economic Warfare, this powerful committee tracked the status of German forces and produced papers on the likely outcome of courses of action. According to Taylor, the JIC's Jan. 21, 1945, report put it bluntly: Germany might be able to reinforce the Eastern Front with up to 42 divisions pulled from France, Norway, Italy, Latvia, and elsewhere.

Thus, it was a race between Russian offensive operations and the arrival of German reinforcements. Half a million men pouring eastward was the last thing the Allies wanted. More

alarming, the JIC laid out a timetable predicting the Germans could complete the reinforcements by March 1945. The JIC's research was backed up by supersecret Enigma-code intercepts.

The JIC had no doubt that the success of the Russian offensive would have "a decisive effect" on the length of the war. Then came the recommendation: "We consider, therefore, that the assistance which might be given to the Russians during the next few weeks by the British and American strategic bomber forces justifies an urgent review of their employment to this end."

It got more than a review. On Jan. 27, 1945, Gen. Arthur T. Harris, head of Bomber Command, got his orders from his RAF boss. The chief of the Air Staff would allow one big attack on Berlin, but he also ordered related attacks "on Dresden, Leipzig, Chemnitz, or any other cities where a severe blitz will not only cause confusion in the evacuation from the east but will also hamper the movement of troops from the west."

The idea of US and British air support for the Russian campaign was hardly new. Eisenhower himself used exactly the same technique to support his own Normandy landings in 1944. He was counting on airpower again in 1945 to "prevent the enemy from switching forces back and forth at will" against attackers.

What was good for the Western Front also was good for the Eastern Front. In December 1944, the US ambassador to Russia, W. Averill Harriman, had talked over the idea with Soviet dictator Joseph Stalin. Stalin got the same message in a mid-January 1945 meeting in Moscow with Eisenhower's deputy, British Air Marshal Arthur W. Tedder. Tedder briefed him on "application of the Allied air effort with particular reference to strategic bombing of communications as represented by oil targets, railroads, and waterways," and they also discussed how to bring airpower into the fight as Germany began to shuffle forces.

### Call for Help

At Yalta on Feb. 4, 1945, Gen. Alexei Antonov, Red Army chief of staff, briefed Stalin, Roosevelt, and Churchill on the Russian offensive and asked for US and British help. He wanted them to speed up the ad-



vance in the west, crush the Ardennes salient once and for all, and weaken German ability to shift reserves east.

The Russians wanted to begin a new phase of advance in February. To do so, Antonov wanted air forces to pin down German forces in Italy and to paralyze junctions in eastern Germany. That meant Leipzig, Berlin, and Dresden.

The Allies were now committed to an attack on Dresden designed to choke off transport through the city. How would they achieve those effects?

The answer lay partially in the history of the air war to date, starting with the Nov. 14, 1940, German bomber attack on Coventry, England.

Coventry, like Dresden, was a major manufacturing center built on a medieval city grid with small workshops and factories interspersed through the city. More than 500 German bombers attacked with loads of incendiaries. As the fires combined,

they sucked oxygen from street level so that many of Coventry's 538 victims died of asphyxiation.

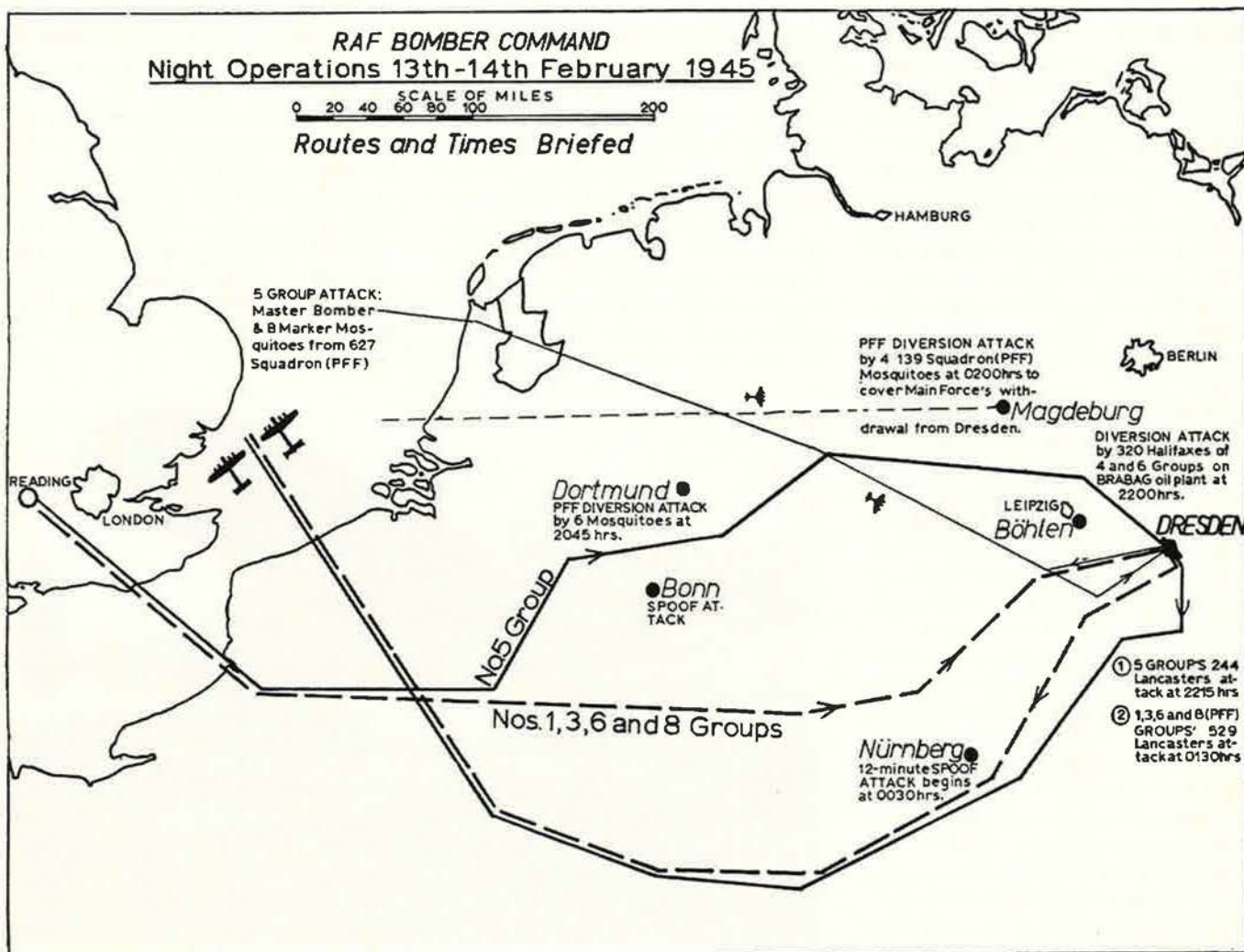
The main damage to Coventry's economy came from the combined effects of burned houses, factories, and city infrastructure. Instead of counting on the near-impossible task of precision bombing of industrial sites, the Luftwaffe had brought war work to a halt by destroying all the secondary mechanisms that fed the life of the city. "This was a new level of annihilation," commented historian Taylor.

Bomber Command soon figured out how to create firestorms of its own. The attack on Hamburg that began on July 27, 1943, provided a weapons-effectiveness model for Dresden. Nearly 800 bombers headed for Hamburg and masked their approach with one of the first operational uses of Window, Britain's new chaff strips that fuzzed German ra-

dar at ground stations and in night fighters. The firestorm killed about 40,000 and compelled even Hitler's war production chief, Albert Speer, to admit that more attacks like Hamburg would derail German war production.

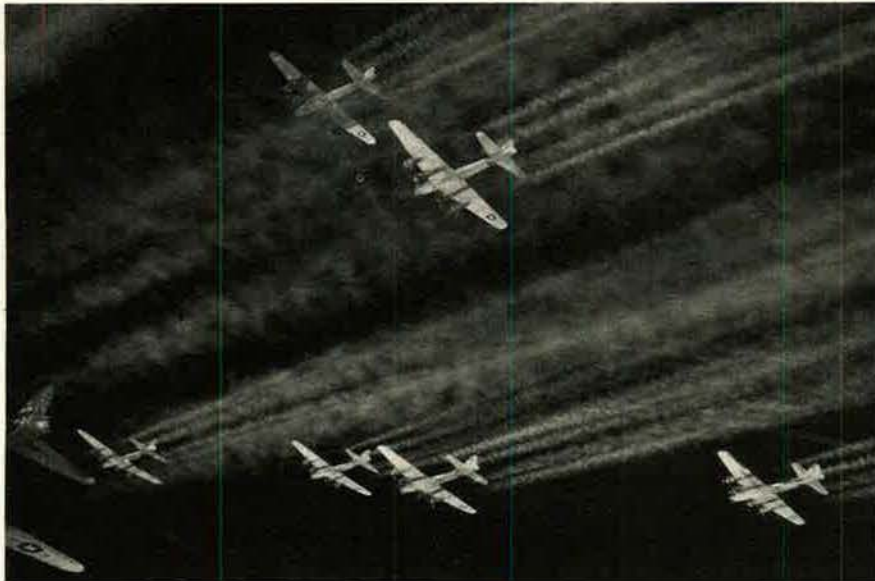
This was the same method chosen by Bomber Command for the Dresden attack. Less than two weeks after Yalta, Bomber Command and Eighth Air Force got the weather they needed for the Dresden attack. The Russians were notified a day in advance via the US military mission in Moscow.

In England, 722 bombers formed up to attack in two main waves. Leading the first wave was Bomber Command's veteran 5 Group, once commanded by Harris himself. Their primary aircraft was the newer, faster Lancaster bomber. Light wood-frame Mosquito pathfinder aircraft led the formations using a radar beacon system to locate city targets with far



**The Route.** This mission map published in David Irving's famous 1965 book, *The Destruction of Dresden*, shows the route flown by two waves of RAF bombers on the night of Feb. 13-14, 1945.





**Round 3.** The day after the RAF's nighttime attacks, 316 bombers of the US Eighth Air Force attacked Dresden's marshaling yards outside the city center. Taking part were B-17 Flying Fortresses.

greater precision than in the early years of the war.

### Grim News

Many of the 5 Group veterans preparing to fly that evening had just heard grim news: Their initial tours of duty were being extended from 30 missions to 40 missions. "We shan't make it," commented one aircrew member cited by Taylor. Their pessimism was well-founded, for as late as 1944, official Bomber Command statistics forecast that less than 25 of 100 bomber crews would complete even 30 missions without being shot down. Losses from 1939-45 averaged 60 killed out of every 100 aircrew members in Bomber Command.

Flying so deep into Germany also got the attention of Bomber Command's crews. As one bombardier from 5 Group later recalled, "They said the reason for the raid [on Dresden] was chiefly ... 'blocking the supply to the Russian front,' ... and we were out to knock it out."

Still, conditions favored Bomber Command that night. German air raid warnings went off shortly after 9 p.m. Pathfinders dropping flares from 800 feet marked the targets accurately. RAF 5 Group hit the city at about 10:15 p.m. Ten minutes later, the blaze began. As the old buildings burned, the firestorm spread and created the howling street-level winds that depleted oxygen from the atmosphere. Those who survived escaped the heat with wet blankets and clothing wrapped

around them, running through burning streets and reaching either the river or high ground away from the flames.

Now Bomber Command's second wave was on its way. The second wave released weapons from 1:21 a.m. to 1:45 a.m. All told, Bomber Command dropped 1,477 tons of high-explosive bombs and 1,181 tons of incendiaries on Dresden that night.

Although this was Dresden's first heavy attack, the tonnage was not high by Bomber Command standards. For example, Cologne, Hamburg, and Frankfurt-am-Main had all been bombed with mixes including 3,800

to 4,100 tons of incendiaries, more than triple Dresden's totals. The total of 7,100 tons of bombs of all types dropped on Dresden during the war hardly compared to the 67,000 tons of bombs that fell on Berlin or the 44,000 tons on Cologne.

The next day, Feb. 14, 1945, 316 bombers from Eighth Air Force attacked Dresden's marshaling yards outside the city center. The mix was 487 tons of high-explosives and 294 tons of incendiaries. Another 200 bombers of Eighth Air Force returned to hit the same target the next day.

"Dresden still burning from the night attacks," noted Kay Summersby, Eisenhower's British driver, who also kept an official headquarters diary.

### Gruesome Result

The human toll was high. POWs were detailed to excavate the bodies, giving Vonnegut, who was a prisoner there, the subject of his novel. Accounts of groups of 10 to 20 people found untouched, but dead of carbon monoxide poisoning in basement shelters, helped to give the Dresden raid its gruesome reputation.

Casualty estimates became a source of ongoing debate. At the time, the British estimated the firestorm killed up to 16,000. One 1948 estimate by two German generals went as high as 250,000. Some British historians in the 1950s and 1960s settled on numbers near 100,000 by adding together known casualties plus estimates of people missing.



**Workhorse.** The heart of the RAF long-range bomber force was the fast-flying Lancaster (shown here). The Lancaster was the RAF analogue to the USAAF B-17 and B-24 bombers. It saw heavy action over Dresden.

© Hulton-Deutsch Collection/CORBIS



However, the true number was probably closer to the 25,000 to 30,000, now cited in official Air Force historical statistics. Taylor backed the number, too. He cited records recovered from the Dresden archives in 1993, listing the number of people buried after the attack in municipal cemeteries at 21,271. All sources agreed on one fact: A contributing factor in the number of casualties was that Dresden lacked proper air raid shelters for civilians.

Harris was unapologetic. Dresden, he said at the time, "was a mass of munitions works, an intact government center, and a key transportation center." He added, "It is now none of those things."

The attack on Dresden achieved its goal of unHINGING the city as a rail transport and communications center. Official USAF figures show that 23 percent of Dresden's industrial buildings were destroyed or severely damaged, along with more than 50 percent of its houses. In total, 80 percent of the buildings in Dresden suffered some form of damage.

The war continued, with Bomber Command recording its heaviest totals of munitions dropped in the entire war during the month of March 1945. The bloody Russian advance went forward, too, and Russian troops actually entered Dresden on the last day of the war in Europe: May 8, 1945.

The distortion of the Dresden raid began almost immediately, and it came from two sources. The first was an ill-advised Feb. 18, 1945, release by Supreme Headquarters Allied Expeditionary Force (SHAEF). It trumpeted the effect of terror bombings. SHAEF tried to recall the statements, and, at Gen. Henry H. "Hap" Arnold's direction, the Air Staff in Washington launched an immediate investigation—but not before the Dresden terror raid story made the front page of newspapers around the world.

The furor led no less a figure than Army Chief of Staff Gen. George C. Marshall to issue a definitive statement on Dresden's significance in early March 1945. When Dresden was bombed, the Russian salient was only



AP photo

**Aftermath.** Dresden was a scene of devastation after the raids. Within days, Nazi propaganda chief Joseph Goebbels had launched the "legend." It was, said one historian, "Goebbels' final, dark masterpiece."

70 miles from the city, he said. Russian positions were still vulnerable to German counterattack, and, indeed, counterattacks elsewhere on the Eastern Front cost the Russians very heavy casualties. There was no way the Allies could let the Dresden rail and communications nodes open the gates for German reinforcements. According to a memo signed by Marshall, he concluded that communications through Dresden were made impossible by the Allied bombings, and the Russian salient was thereby protected.

### Goebbels Strikes

The second source was Nazi Germany's propaganda chief, Joseph Goebbels. The foreign news service and the state-run *Das Reich* newspaper started bumping casualty estimates from around 25,000 to around 200,000 and emphasizing Dresden as a lost cultural treasure. "A city skyline of perfected harmony has been wiped from the European heavens," *Das Reich* said in early March 1945.

Goebbels did his job well. Soon, Dresden was under Russian control, and it became impossible for decades to sort out the facts. In 2004, Taylor came to a conclusion: "[The] ripple of international outrage that

followed the Dresden bombing represents, at least in part, Goebbels' final, dark masterpiece."

No doubt the view of Dresden as overture to Hiroshima and Nagasaki also played its part. So did the nuclear balance of terror during the Cold War, where the destruction of Dresden stood as a graphic warning of what nuclear war might do to Europe. Yet even after the Cold War ended, Dresden was held by some to be a black mark against airpower. The strategic and tactical setting of the raid in support of the Russian offensive was long since lost.

In the 1990s, Britain took a special interest in Dresden, by then a part of unified Germany. In 2000, London goldsmiths donated a replica orb and cross as part of the reconstruction of the Frauenkirche cathedral.

The true surprise is that the Dresden legend has lived on and has been used to prompt comparisons between that long-ago operation and present-day American- and British-led air operations. No incendiary raids devastated Baghdad in the Gulf War of 1991. In 2003, it took neither firestorm nor 300-bomber raids on railroads to stop effective maneuver of the Republican Guard around Baghdad. That was the work of truly modern airpower: precise, discriminate, and employed with maximum care to avoid collateral damage.

Dresden will never be forgotten, but its place in the record of airpower belongs only in the past. ■

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The 9/11 Commission Report clears up some misperceptions about that awful day.

# SEPT. 11, MINUTE BY MINUTE

By Adam J. Hebert, Senior Editor

**T**HE National Commission on Terrorist Attacks Upon the United States, popularly known as “The 9/11 Commission,” was created to conduct an independent, non-partisan investigation into the deadliest-ever foreign attack on US soil. Panel members had wide access to key participants, documents, and classified information. Their final report was released in July.

Confusion surrounding the events of Sept. 11, 2001, resulted in major misperceptions and inaccuracies in the public record. What follows is the commission’s accounting of how Osama bin Laden’s killers did their work and how US air defenses responded.

On Sept. 11, 2001, US government personnel first learned that something

*At 8:46 a.m., two air defense fighters were ordered to get airborne. Only seconds later, at 8:47 a.m., American Flight 11 crashed into the World Trade Center North Tower. Here, a Vermont ANG F-16 soars above Ground Zero in New York City.*



USAF photo by Lt. Col. Terry Moultrap



was wrong at about 8:25 a.m. A terrorist aboard hijacked American Airlines Flight 11 (soon to slam into the North Tower of the World Trade Center) inadvertently broadcast news of the aircraft seizure over an air traffic control frequency, heard by personnel in the Northeast.

Within the hour, the US would learn that 19 hijackers flying on four airliners that morning had, in the words of the commission's report, "defeated all of the security layers that America's civil aviation security system then had in place to prevent a hijacking."

The attackers then exploited gaps in the emergency response procedures of the Federal Aviation Administration and North American Aerospace Defense Command.

The FAA and NORAD did not have effective means of communicating with each other, did not expect that hijackers would turn off the aircraft transponders in an "attempt to disappear" in the skies, and did not anticipate the possibility that airliners would be turned into piloted missiles aimed at US targets. The report observed that, on 9/11, existing defense protocols were "unsuited in every respect for what was about to happen."

### Withered Defense

Created to help shield North America's airspace from fast-approaching Soviet bombers, NORAD defined its job as "defending against external threats." Following the demise of the Soviet Union, the Pentagon dramatically scaled back the number of NORAD alert sites with fighters ready for takeoff. In fact, said the report, "Some within the Pentagon argued in the 1990s that the alert sites should be eliminated entirely."

On Sept. 11, just seven alert sites were operational—none in the immediate New York or Washington, D.C., areas.

The withering away of the US air defense network led some to worry—long before the attacks—that NORAD could not protect the United States, Air Force Gen. Richard B. Myers, the Chairman of the Joint Chiefs of Staff, told the commission. Myers served as NORAD commander from August 1998 to February 2000.

NORAD officers themselves first learned of a problem at 8:38 a.m., when the FAA's Boston Center called



USAF photo by Lt. Col. William Ramsay

*At 9:13 a.m., two Massachusetts ANG F-15s (such as this Eagle) left a holding pattern off Long Island and flew 115 miles to Manhattan at 575 mph. They arrived in 12 minutes and established a combat air patrol.*

NORAD's Northeast Air Defense Sector (NEADS), located in Rome, N.Y.

According to the final report, "This was the first notification received by the military—at any level—that American 11 had been hijacked." The FAA center also tried to contact a former alert site in Atlantic City, N.J., "unaware it had been phased out."

Officials at NEADS sprang into action, ordering two Air National Guard F-15 fighters at Otis AFB, Mass., to battle stations. "The air defense of America began with this call," said the report.

Col. Robert Marr, the NEADS battle commander, called Maj. Gen. Larry K. Arnold, head of NORAD's continental air defense region, seeking instruction. Arnold told Marr to scramble the F-15s and "get authorities later." At 8:46 a.m., the F-15 pilots were ordered to get airborne.

Only seconds later, at 8:47 a.m., American Flight 11 crashed into the North Tower. Unfortunately, "that nine-minute notice" between first warning and impact "was the most the military would receive of any of the four hijackings," the commission said.

At 8:52 a.m., a flight attendant aboard United Airlines Flight 175 called United's offices. He reported that the flight had been hijacked, "both pilots had been killed, a flight attendant had been stabbed, and the hijackers were probably flying the plane."

At 8:53 a.m., the F-15s from Otis

got airborne. However, no one knew where to send them, and they were put into a holding pattern off Long Island.

By 9:00 a.m., the FAA and the airlines faced "the staggering realization" that the nation was in the grip of multiple aircraft hijackings. At the time, the military had no such realization, according to the report.

United Flight 175 struck the WTC South Tower at 9:03 a.m. At almost exactly the same moment, NORAD officials were notified that the flight had been hijacked.

The terrorists struck a third time, against American Airlines Flight 77. The FAA learned of this event at 9:05. However, "NORAD had no indication that any other plane had been hijacked," the panel reported.

### Langley's Fighters

Concerned about the developing situation and unsure how much gas the Otis F-15s had left, NEADS called the alert site at Langley AFB, Va., for backup. "Langley fighters were placed on battle stations at 9:09," said the report, but they were not immediately ordered to launch.

At 9:13 a.m., the Otis fighters left their holding pattern and flew 115 miles to Manhattan at 575 mph. They arrived in 12 minutes and established a combat air patrol (CAP) over the city.

At 9:21 a.m., NEADS got another call from FAA's Boston Center and received new information "about a



plane that no longer existed: American 11.” It had already crashed into the North Tower.

“NEADS: OK, American 11 is still in the air?”

“FAA: Yes. ...”

“NEADS: He—American 11 is a hijack?”

“FAA: Yes.”

“NEADS: And he’s heading into Washington?”

“FAA: Yes. This could be a third aircraft.”

Based on this erroneous report, the NEADS mission crew commander decided to launch the fighters at Langley.

Meanwhile, a United dispatcher began transmitting warnings to flights that he was monitoring. At 9:24 a.m., he sent this message: “Beware any cockpit intrusion—two [aircraft] hit World Trade Center.” His transmission was received on United Flight 93. Three minutes later—9:27 a.m.—Flight 93’s pilot “responded with a note of puzzlement.” At 9:28, the hijackers seized his airplane.

The Langley F-16 fighters, meanwhile, got airborne at 9:30. They were ordered to Baltimore in a misguided effort to intercept the already-destroyed American Flight 11.

At FAA, “concerns over the safety of other aircraft began to mount,” the report states. American Flight 77 was by that time a known hijacking, but the airplane had “vanished” and “traveled undetected for 36 minutes on a course heading due east for



USAF photo by SSgt. Greg L. Davis

**At 9:30 a.m., two F-16s from Langley AFB, Va., got airborne but were sent to Baltimore in a misguided intercept effort. The F-16s, part of a detachment of the North Dakota ANG’s 119th FW, never got actual authority to shoot.**

Washington, D.C.” At 9:32 a.m., air traffic controllers finally located it—approaching Washington.

Air traffic controllers in Washington “vectored an unarmed National Guard C-130H cargo aircraft, which had just taken off en route to Minnesota, to identify and follow the suspicious aircraft. The C-130H pilot spotted it ... [and] attempted to follow its path,” the report stated.

At 9:33 a.m., a supervisor at Reagan National Airport called the Secret Service to say “an aircraft [is] coming at you and not talking with us.”

### First Word

Still unaware of this threat to Washington, NEADS contacted another FAA center to get more information about American Flight 11. At 9:34, FAA told NORAD that American Flight 77 was also missing. This was the first official notice to the military that American 77 was missing, and “it had come by chance,” the report noted.

“This startling news prompted the mission crew commander at NEADS to take immediate control of the airspace to clear a flight path for the Langley fighters,” the report stated. “He then discovered, to his surprise, that the Langley fighters were not headed north toward the Baltimore area as instructed, but east over the ocean.” The Langley F-16s had not been given a specific destination and followed a “generic” flight path designed to take them away from populated areas as quickly as possible.

“I don’t care how many windows you break,” the NEADS commander said, ordering the fighters to race north.

At 9:37, American Flight 77 crashed into the Pentagon. The C-130 was on the scene only seconds later. The fighters from Langley were still 150 miles away.

By this time, said the report, “another aircraft was heading toward Washington, an aircraft about which NORAD had heard nothing.” It was United Flight 93.



US Navy Photo by PH1 Dewitt D. Roseborough III

**At 9:32 a.m., air traffic controllers rediscovered American Flight 77 (which had vanished) flying in Washington, D.C., airspace. At 9:37, the hijacked airliner crashed into the Pentagon. Langley F-16s were 150 miles away.**



Even if it had been available, military intervention was not needed to stop Flight 93, because a passenger revolt began at 9:57 a.m. Several passengers "terminated phone calls with loved ones in order to join the revolt," the report noted. One ended her call, "Everyone's running up to first class. I've got to go. Bye."

The attack against the hijackers went on for six minutes. At the end, "the hijackers remained at the controls but must have judged that the passengers were only seconds from overcoming them."

At 10:02 a.m., officials in the White House shelter, which now housed Vice President Dick Cheney, received word that Flight 93 was inbound toward Washington.

At 10:03, Flight 93 plunged into a field near Shanksville, Pa., south-east of Pittsburgh. "The nation owes a debt to the passengers of United 93," the commissioners wrote. "Their actions saved the lives of countless others and may have saved either the Capitol or the White House from destruction."

The same C-130 that saw Flight 77 crash into the Pentagon was also first to the United 93 crash site. The airlifter had "resumed its flight to Minnesota and saw the smoke from the crash ... less than two minutes after the plane went down."

No one from FAA had requested military assistance for dealing with Flight 93. "The flight had already crashed by the time [NORAD] learned it was hijacked," the report noted.

### Cheney's Order

In the chaos of the morning, there was a misperception that Flight 93 was continuing toward Washington long after it actually had crashed. Around 10:12 a.m., Cheney gave an order for orbiting fighters to "take out" the incoming airliner.

Cheney would repeat this order three times by 10:30, but word never reached the F-16s flying CAP from Langley.

By 10:38 a.m., however, D.C. Air National Guard F-16 fighters were airborne with "entirely different rules of engagement," the report stated.

Maj. Gen. David F. Wherley, then commander of the 113th Wing at Andrews AFB, Md., sent up F-16s after contacting the Secret Service, having heard secondhand reports that



AP photo/Tribune-Review, Scott Spangler

*At 9:28 a.m., hijackers seized United Flight 93 and headed toward Washington, D.C. A passenger revolt began at 9:57 a.m. and, at 10:03, Flight 93 plunged into a field in Pennsylvania. The F-16s still had not gotten the "shoot" order.*

fighters were needed over the nation's capital.

"While the fighter pilots under NORAD direction ... out of Langley never received any type of engagement order, the Andrews pilots were operating weapons free," the report reads.

There is no evidence that Bush, Cheney, NORAD, or the top leaders at the Pentagon knew the Andrews fighters were airborne that morning.

NORAD had essentially no chance of stopping the hijacked aircraft that morning. Air defenders had nine minutes' notice of the first hijacked airplane before it crashed and "no advance notice" for any of the other three.

Inaccurate statements in the wake of the attacks created impressions that the military could have stopped some of the aircraft, the report stated. NORAD officials have said they scrambled the Langley fighters to intercept Flight 77, Flight 93, or both. "These statements were incorrect," the commission asserted.

All evidence shows "the fighters were scrambled because of the report that American 11 was heading south. ... This response to a phantom aircraft was not recounted in a single public timeline or statement" issued by DOD, the report reads.

"NEADS never received notice that American 77 was hijacked," and did not have 14 minutes to respond, as previous statements held.

"Nor did the military have 47 min-

utes to respond to United 93, as would be implied by the account that it received notice ... at 9:16," the report stated. NORAD learned of Flight 93's hijacking four minutes after the airliner crashed in Pennsylvania.

It is impossible to know what would have happened if Flight 93 had not been brought down by its passengers. Timelines show the only fighters over Washington at Flight 93's expected arrival time were the Langley F-16s.

"At that point in time, the Langley pilots did not know the threat they were facing ... and did not have shoot-down authorization," the report reads.

"I reverted to the Russian threat. ... I'm thinking cruise missile threat from the sea," explained the lead pilot from Langley that morning. He looked down to "see the Pentagon burning" and "thought the bastards snuck one by us," he said. "No one told us anything."

The events of Sept. 11 do not cast dishonor on "the operational personnel at NEADS or FAA," the report stated. "NEADS commanders and officers actively sought out information, and they made the best judgments they could on the basis of what they knew."

Military personnel "struggled, under difficult circumstances, to improvise a homeland defense against an unprecedented challenge they had never before encountered and had never trained to meet," the commission concluded. ■



Those who use the Pentagon's managed health care system say its biggest problems are in the past.

# Tricare on the Rise

By Bruce D. Callander

**L**AST spring, many older Americans found themselves struggling to make sense out of a new Medicare benefit designed to pay at least part of the cost of their medications. They were expected to choose among a number of complex options, none of which were easy to understand.

At the same time, military retirees were enjoying a number of recent improvements in their medical program. Today, it not only provides pharmacy benefits but also makes health care cheaper than it is for most civilians.

Col. Charles Wolak is chief of the Health Benefits Division in the Office of the Air Force Surgeon General. Asked to comment on the changes in the services' Tricare system in the past few years, he replied, "Probably the most significant change was extension of the medical benefits to our senior population with our Tricare for Life program ... also, the Tricare senior pharmacy benefit."

The new retiree coverage, which began in October 2001, is only one of several improvements made in recent years in the benefits and administration of the military health care system. Wolak said that other changes have been made in response to experiences with previous con-

tracts and input from the health care industry best-practices rules.

"Under the next generation of Tricare contracts," said Wolak, "we have moved from very prescriptive, requirements-based contracts to performance- or outcome-based contracts. This allows the contractor to use the industry's best practices to improve the Tricare program while leaving the basic benefits structure—Tricare Prime, Extra, and Standard—unchanged."

Additionally, Tricare has added contractor incentives for superior and measurable performance in customer service, quality of care, and access to care. There are quarterly awards fees based on input from beneficiaries, commanders, and regional directors.

### Simplification

In another move to make health care more accessible, Wolak said, Tricare has simplified its structure from 12 regions to just three—the North, South, and West. Rather than having seven Tricare contracts, DOD has gone down to three. This makes the benefit more portable and reduces administrative and overhead fees. "So I think it is a major improvement," said Wolak.

Yet another change relieves the



strain on major contractors by passing some chores to others. Wolak explained that DOD has carved out several of the contracts from the big managed care contract so that the managed care support contracts can focus on their core competencies.

"One such carve-out is dual-eligible fiscal intermediate contract," he said. "This [group] does claims processing and customer service for beneficiaries who also are eligible for Medicare."

Then there are two pharmacy contracts. The first provides a national mail order service that replaces the old mail order contract. The second integrates all the retail pharmacies under one contract, which should solve many of the portability problems seen under the old contract. It should also reduce administrative costs.

"Another carve-out is the marketing and education contract," Wolak continued. "This is to create a national suite of Tricare marketing and education products that will provide a uniform message and reinforce the fact that Tricare is a single, portable benefit."

The final carve-out covers local support contracts. This is where commanders of military treatment facilities (MTFs) will be able to contract for services. They will have more control over utilization, management, and resource-sharing agreements.

Despite the changes in administration, the basic Tricare options remain much the same.

Tricare Standard is the modern version of the original military health care program known as CHAMPUS. It allows beneficiaries to see the providers of their choice. This is a good deal for people pleased with the coverage they get from their current civilian providers. Those covered also may be treated at military treatment facilities if space is available after Tricare Prime patients have been served.

Under Standard, the individual pays a deductible, co-payments, and the balance of the bill if it exceeds allowable charges and the provider does not participate in the program. The beneficiary also may have to file his or her own claims.

### **Nonavailability Statements**

In a change made in 2003, most Standard beneficiaries no longer need to obtain nonavailability statements.

The change was approved in the 2002 National Defense Authorization Act.

Until that change, families covered by Standard could not receive care from civilian providers until they received statements from their MTFs saying that they could not be treated there. Nonavailability statements still are required, however, for nonemergency inpatient mental health care.

Even though nonavailability statements are not required, officials urge beneficiaries to check with their nearby MTFs to compare services and answer any questions. Although an MTF was unable to provide services in the past, it may be able to do so now.

Tricare Prime resembles the civilian world's health maintenance organizations, in which enrollees are assigned to primary care managers (PCMs) who coordinate their care. Beneficiaries receive most of their care from military treatment facilities augmented by the contractor network.

There is no enrollment fee for active duty family members, but retirees under age 65 must pay \$230 annually for individual coverage, or \$460 for a family. The PCM manages all the person's care, which means the choice of providers is limited and specialty care is by referral only.

Tricare Extra allows beneficiaries to pick the doctors, hospitals, and other medical providers of their choice from those listed in the Tricare Provider Directory. Beneficiaries must be CHAMPUS eligible, which means that active duty members do not qualify.

There is no enrollment fee for this option and no deductible for using the retail pharmacy network. However, the patient pays deductibles for other services and is responsible for co-payments.

Members may switch from one plan to another where they are eligible, but they may not want to do so.

"If you wanted to use Tricare Standard or Tricare Extra," said Wolak, "the only advantage would be that you would have your choice of physicians. If you wanted to go to a particular physician without a referral or anything, you could do that. The downside of that is that it would cost a lot more."

Under Tricare Prime, one is assigned to a primary care manager and he or she takes care of all health care needs such as referral to a specialist.

"Of course, we try to tell people that the most cost-effective system is Tricare Prime," said Wolak, "because there are no co-pays for active duty folks, and it is the least expensive of all the options."

Unlike some civilian health care plans, Tricare apparently now has little trouble getting health care providers to work with the programs.

Wolak said, "The participation rate by providers has really improved over the years. We have queried the Tricare management activities and the overall provider participation rate is currently at 97 percent. All the specialty services are at 97 percent except surgery, and that is at 96 percent. It's pretty high and we think participation now is generally static with the rates similar to last year, on the average, although there was a slight increase in participation rates of one percent overall from last year."

### **Maintaining a Network**

According to the Air Force, most of the Tricare contracts have reached maturity, although there still may be small upward increases. More important, however, is the percentage of beneficiaries receiving specialty care referrals within the Congressionally mandated access standards. Today, it is rare that these standards are not met. The contractors are required to maintain a network of participating providers in sufficient numbers to meet these standards.

"That's working out very well," said Wolak.

Wolak conceded that, in the past, there had been some dissatisfaction about the health care system, but attitudes toward the program have improved.

"For instance," he said, "at the annual Tricare conference last January, there was a panel discussion with some of the Congressional staffers and legislative assistance personnel. These are the folks who have the pulse of their constituencies. They are the health care experts. The consensus of the panel was that the Tricare complaints were no longer a big issue. Generally, the beneficiaries were very satisfied with the pro-



gram. So, we were very glad to hear that.”

That was not the case early in the program, years in which the very system seemed flawed.

Wolak said, “Complaints within the last two years have generally focused on individual problems rather than the kind of systemic issues we encountered when Tricare first began.”

For more than a year, Tricare has processed 99.9 percent of clean claims within 30 days and responded to more than 99.9 percent of correspondence within 30 days. It is meeting or exceeding its own self-imposed standards. This is significant and impressive when you consider that Tricare processes more than 100 million claims annually.

As the Tricare program has grown, satisfaction rates of providers and beneficiaries have held at over 95 percent.

Wolak credits the combination of incentives and penalties for improvements such as reductions in wait times for care. He said, “That’s improved quite a bit, and I think it is due largely to the incentives for superior customer service and access to care. The contractors are actually motivated to provide high-quality customer service.”

“Also, we have standards for wait time and so forth, and, if the providers do not meet those standards, there are penalties. So, there is incentive and there are penalties.”

The standards also require con-

tractors to maintain enough health care providers. Wolak said that the contractor within the region has to have a very robust network of providers. If it does not meet those standards, they are penalized.

### **The Cost Issue**

Despite the improvements, the services have not escaped the cost increases in medical care generally.

Wolak said that the military health system, like any other health care system in the United States, continues to experience significant growth in care costs. The good news is that the cost to the beneficiary—particularly the active duty members and their families—actually has gotten less because Tricare has dropped all co-pays.

“The Tricare for Life program is one of the strongest health care plans in the nation,” Wolak claimed. “The costs [of enrollees] have gone down dramatically when you look at the amount of money that some of them were paying for these Medicare supplement plans. They were quite high. Now, they no longer need those because the Tricare for Life plan covers everything.”

“They have to enroll in Medicare Part B,” said Wolak, “but Tricare then is the second payer to Medicare. So, where they used to buy these insurance plans to cover whatever Medicare didn’t cover, now Tricare covers that, and they no longer have to pay these high premiums for those supplemental Medicare plans.”

Not all changes have worked so well. For example, problems plagued the new pharmacy coverage when it was first adopted.

“Unfortunately, we did have some issues,” Wolak said. “The new contractors apparently didn’t anticipate the number of claims they were going to receive, and they were inundated with claims. They were unable to keep up with that and the phone lines became saturated with calls from both patients and pharmacies during the transition, for about the first 72 hours.”

Problems continued intermittently until early June, but most now have been solved and prescription claims are being processed in record numbers, said Wolak. More than 3.5 million prescriptions were filled in June. The government has been monitoring call wait times, which now fall below 30 seconds.

Under the Prime, Extra, and Standard options, students also may be covered until they turn 21. After that, they must be enrolled full-time in an accredited educational institution and their sponsors must be providing more than half their financial support. They also may be covered by either the Tricare Dental Program or the Tricare Retiree Dental Program, depending on the sponsor’s status.

For college students, the best Tricare choice depends on availability in their school areas.

Like all dependents, college students must be registered in the Defense Enrollment Eligibility Reporting System (DEERS). Eligible categories of people include active duty and retired service members from any of the uniformed services, their spouses, and unmarried children (including stepchildren).

Enrolling in DEERS is not handled by Tricare or medical officials, however.

“It’s a personnel matter,” said Wolak, “so you have to go to your base personnel shop. You put in your proof, such as your birth certificate, to show that you are related to the ... sponsor and they will register you into DEERS, which allows you to get the health care that you need.”

### **For the Reservists**

A few years ago, Tricare coverage was limited to the families of members on extended active duty. With the increased use of reserve forces in

**“The Tricare for Life program is one of the strongest health care plans in the nation.”**

**—Wolak**



the war effort, however, participating reservists have been authorized benefits.

Wolak noted that one recent provision temporarily authorizes Tricare medical and dental coverage for the reserve components if the sponsors are activated for more than 30 days. They just have to show orders that they are activated for more than 30 days and then both they and their family members become eligible.

A second provision extends eligibility for Tricare benefits to 180 days under the transitional assistance program. This is for reserve-component sponsors who separated or will separate from active duty in the period Nov. 6, 2003, through Dec. 31, 2004.

A third provision extends eligibility for Tricare benefits for reserve-component sponsors who are either unemployed or are employed but not eligible for employer-sponsored health coverage.

When retired reservists reach retirement eligibility (usually at age 60), they and their families also become eligible for Tricare. Later, when they qualify for Medicare, they come under the Tricare for Life program.

In early 2001, the Defense Department launched a new Tricare dental care program combining the plans for active duty and reserve members. A separate plan for retirees remained in effect.

Enrollment in the plan is voluntary and portable. As with health care, eligible beneficiaries must enroll in DEERS and, in the case of dental care, pay monthly fees for participation. The rate for a single enrollment is \$9.07 per month and family premiums are \$22.66 a month.

Under another recent change, Tricare Prime enrollees moving from one region to another now take their enrollment with them. The new rules allow two changes a year for Prime enrollees other than active duty family members, as long as the second transfer is back to the original region. Active duty family members have no limit on the number of times they may transfer.

Officials advise such enrollees to stay enrolled in the region from which

## When retired reservists reach retirement eligibility, they and their families also become eligible for Tricare.

they are departing, and, after making the move, ask the Tricare Service Center to transfer the enrollment.

While Tricare beneficiaries still must pay for part of their care, there are limits to how much they must pay in serious or long-term treatments. The maximum for an active duty family, for example, is \$1,000 per fiscal year. Tricare pays the rest.

Retirees and their family members and survivors may pay up to \$7,500 per fiscal year but those in Tricare Prime have a cap of \$3,000 per 12-month enrollment period.

In emergencies that threaten life, limb, or sight, and require immediate treatment, beneficiaries can go directly to an emergency room at the nearest hospital. For less serious conditions or long-term care, they must contact their primary care managers.

Like most military programs these days, the health program has its own Website.

On July 20, the Tricare Smart Website was improved to give customers quicker and easier access to medical information. It allows them to see, print, e-mail, and download available Tricare brochures, booklets, handbooks, and other materials. Users also may subscribe to receive e-mail alerts when programs are changed.

Organizations that need printed Tricare materials can order from the site once they have registered. The site's address is: [www.tricare.osd.mil/tricaresmart/](http://www.tricare.osd.mil/tricaresmart/).

Besides the more routine care, medical beneficiaries are eligible for a number of special programs.

Baby care, for example, is paid as part of maternity care for the first three days. After that, the baby begins separate cost sharing as an individual at the normal rate. For the first 120 days, the baby is automatically covered if the family is in Tricare Prime. After 120 days the baby will convert to Tricare Standard unless specifically registered in DEERS and enrolled in Prime.

Under recent changes in Standard and Extra programs, eligible children under six years now receive well-child care from authorized civilian providers. This already was the case under Tricare Prime. Tricare also will share costs for immunizations up to midnight of the day before the child turns six years old.

Chiropractic care also is available but only to a limited degree. Active duty members may receive it at a few MTFs (Offutt AFB, Neb., Scott AFB, Ill., and Wilford Hall Medical Center in San Antonio). Their family members may be referred to the traditional health care services in the military health system (physical therapy, family practice, or orthopedics), but if they want chiropractic care in the local community they have to pay for it. ■

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*Bruce D. Callander is a contributing editor of Air Force Magazine. He served tours of active duty during World War II and the Korean War and was editor of Air Force Times from 1972 to 1986. His most recent article for Air Force Magazine, "Force Shaping," appeared in the July issue.*



The 1935 crash of Boeing's sleek, four-engine bomber set back airpower for years.

# When the Fortress W

By Phillip S. Meilinger

**T**HE B-10 was a beautiful airplane. It was the Army Air Corps' first all-metal monoplane bomber to be produced in quantity, and it had enclosed cockpits, a manually operated gun turret in the nose, retractable landing gear, and an internal bomb bay. When it entered the Air Corps inventory in 1934, it was faster than most pursuit airplanes and could carry a ton of bombs over 1,200 miles.

Even then, though, the Corps was looking beyond the B-10.

Realizing that America's insular and isolationist stance would have to change, Air Corps officers began contemplating truly long-range aircraft. Maj. Gen. Benjamin D. Foulois was the Air Corps Chief at the time, and he realized that selling such aircraft to the War Department was a tough proposition.

In his memoirs, Foulois noted that his planners complained that all of their proposals for long-range bombers were being kicked back by the ground-dominated War Department staff. Foulois remembered telling them: "Stress defense, not offense, and stress

re-enforcement of the Hawaiian islands; maybe that will work."

Foulois continued, "As I saw it, if we could get bombers that could carry bigger bomb loads and fly greater distances this way, what difference did it make what words we used?"

It was a clever idea, but events would prove that the ground officers weren't so gullible.

In the summer of 1934, the Air Corps circulated a proposal for a new long-range bomber to replace the B-10. Prospective builders were instructed to have "multi-engined" aircraft ready for a flying competition in October 1935. The candidate



*Faster, higher-flying, and sleeker than its rivals, the four-engine Boeing 299—forerunner of the B-17—was the shape of things to come.*



# ent Down



aircraft were to be capable of flying at least 1,020 miles and preferably 2,200. It had to be able to carry a 2,000-pound bomb load. Also, it had to be able to reach a speed of at least 200 mph, though 250 mph was considered desirable.

## Boeing Goes for Broke

Boeing was then producing one of the first of the modern airliners, the Model 247. This was a sleek and fast aircraft, but Boeing designers decided to propose something radically different.

They realized that any design with two engines would offer only

marginally better performance over the B-10 it was supposed to replace. Some successful civilian designs at the time (the Fokker and Ford trimotors) incorporated three engines—with one in the nose of the aircraft as well as one under each wing. However, the need for defensive armament and a bombardier in the nose of the aircraft made this option infeasible. Boeing designers therefore wondered if the multi-engine reference in the Air Corps specification could mean *four* engines. Discreetly, they asked Air Corps officials for an interpretation and were told that a four-en-

gine bomber was indeed acceptable if it met all performance criteria.

Given the competitive nature of the aircraft industry, Boeing engineers worked on what they termed “Model 299” in total secrecy. By late July 1935, the new aircraft was ready for its maiden flight. All went smoothly. When the test pilot, Leslie R. Tower, was asked how the big airplane handled, he replied dryly: “Just like a little ship, only a little bigger.”

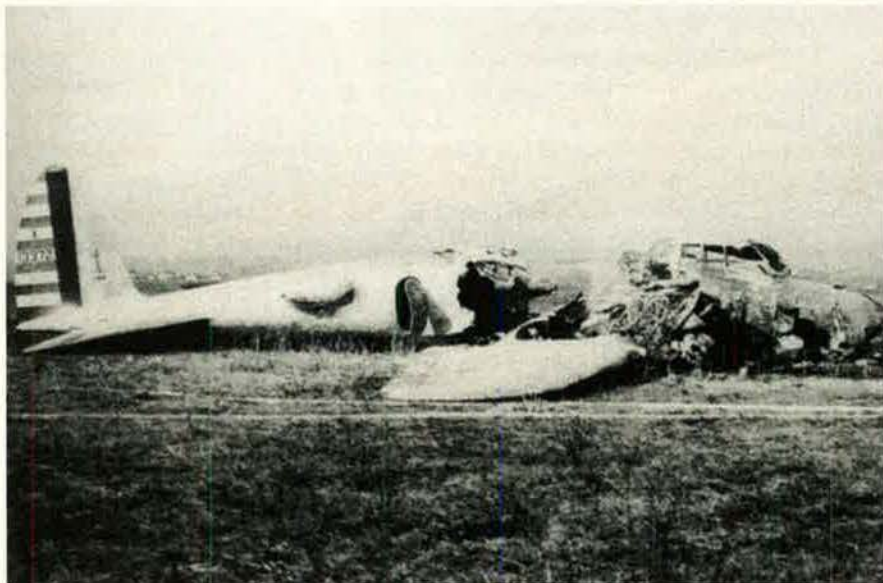
The Model 299 was made of an aluminum alloy. Like other designs of the time, it had enclosed



pits, cowled engines, and retractable landing gear. It also had wing flaps for better performance at slow airspeeds, electric trim tabs on its control surfaces for improved handling characteristics, a hydraulically operated constant-speed propeller, and “blister” positions on the fuselage for defensive machine-gun posts.

When Seattle newspaperman Richard L. Williams caught sight of the Model 299, he promptly dubbed it “flying fortress.” The name stuck.

After a short period of testing at the factory in Seattle, the 299 was readied for delivery to Wright Field, Ohio, for the competition. On Aug. 20, 1935, the 299, powered by four 750 horsepower Pratt & Whitney



***In 1935, just as it was about to win a big Army contract, the Model 299 crashed. The design was faultless—lack of a checklist doomed the airplane and some of the crew—but Boeing lost the contract, and the B-17 faced a five-year setback.***

“Hornet” engines, made the nonstop flight from Seattle to Dayton—2,100 miles—in nine hours and three minutes. That worked out to an average airspeed of 232 mph, remarkable for the time. Upon landing in Dayton, the pilot, Tower, was surprised to find no Air Corps officials greeting them. The reason: No one expected them to arrive for at least another hour.

This performance, coupled with the 299’s size, weight, armament, design, and four-engine safety, created a sensation, and Air Corps officials looked on the aircraft with awe.

Gen. Henry H. “Hap” Arnold would

later comment that this was “airpower that you could put your hand on.”

There were other competitors at Wright Field that day. The Martin design was little more than an upgraded B-10. Douglas had modified its highly successful commercial airliner, the DC-2, and converted it into a bomber, the DB-1.

The Martin and Douglas entries were good designs, but Boeing’s 299 Flying Fortress was in a class by itself. It could carry some five tons of bombs depending on the fuel load, far more than its two-engine competitors, and the 299 carried its load higher, faster, and nearly twice as far. It appeared

that the flying competition was over before it had even begun.

### **The Crash**

On Oct. 30, 1935, the Fortress prototype taxied out for takeoff at Wright Field. A crowd gathered to watch. At the controls was the Air Corps’ chief test pilot, Maj. Ployer P. Hill. His copilot was 1st Lt. Donald L. Putt. Also aboard were John B. Cutting, an engineer, Mark H. Koogler, a mechanic—both were in the rear—and Tower, who was standing in the spacious cockpit behind the two pilots.

The aircraft roared down the runway and took off. It then climbed very steeply—too steeply. It rose to an altitude of about 300 feet, where it stalled, rolled to the side, crashed back onto the airfield, and exploded.

Putt and Tower stumbled out of the wreckage dazed and bleeding. The two mechanics, Cutting and Koogler, went out the back, largely unscathed.

Hill was unconscious and trapped in the cockpit. First Lt. Robert K. Giovannoli, who had seen the crash, grabbed one of his civilian co-workers, and the two rushed out to the flaming wreckage. Giovannoli climbed through the copilot’s window and found Hill unconscious in his seat; when trying to move him, he discovered that Hill’s foot was caught in the rudder pedals. At the same time, another civilian, Jake Harman, had come in through the crew entrance door with a coat over his head to protect himself from the fire. Brav-



ing the increasing flames, he and Giovannoli cut Hill's shoe off with a pocketknife to free his foot, and then lifted him out of the seat and passed him through the cockpit window. Both rescuers then got out themselves, though they were seriously burned.

Unfortunately, their bravery was for naught: Hill never regained consciousness and died the next day.

Tower, who had been standing behind the pilots as an observer, blamed himself for the accident. Though he did not seem to be seriously injured, he died not long afterward.

Investigators determined that the Fortress had crashed because the elevator and rudder controls were locked—the pilot could not lower the nose, so the aircraft quickly stalled. Ironically, the elevator locks had only been recently installed as a safety feature, to protect the control surfaces from moving about on the ground and being damaged during high winds.

The locking mechanism was controlled from inside the cockpit, but no one remembered to disengage it before takeoff. Tower apparently noticed that the control lock was still engaged as the aircraft moved up to stall, but was unable to get to it in time to prevent a crash. More familiar with the 299 than anyone else, this oversight on his part is why he blamed himself for the disaster.

### Second Best

The crash was doubly devastating for the Army Air Corps. Because the Boeing prototype had crashed, the Corps declared the winner to be the Douglas DB-1—later designated the B-18 Bolo.

Air Corps leaders tried to place an order for 65 of the revolutionary Fortresses, but they met only refusal from the War Department General Staff, which controlled the Air Corps purse strings. The General Staff advanced the view that, because the Boeing airplane had crashed, it must have been too complex for anyone to handle safely. Moreover, it would cost nearly \$200,000 per copy, whereas the smaller B-18 would cost less than \$100,000. Acting on the misguided principle that quantity was more important than quality, the Army promptly ordered 133 of the new Bolos.



Photo by Fred Bamberger Jr. via Robert F. Dorr

**After the 299 crashed, the Army deal went to Douglas for its B-18, derived from the company's successful DC-2 airliner. Air Corps leaders knew the B-17 design was better, though, and they managed to keep it alive.**

Boeing was in dire straits, and it seemed perilously close to folding. Fortunately, a legal loophole allowed the Air Corps to buy a small number of test aircraft—13 to be precise—which was enough to equip one squadron.

These airplanes, soon designated YB-17s, were to prove of enormous importance.

In February 1937, Maj. Barney M. Giles took a crew up to Seattle to bring back the first YB-17. It was powered by four new engines (Wright radials had replaced the Pratt & Whitney power plants) and carried a crew of nine instead of the prototype's eight. It had an automatic pilot, cruised at a top speed of more than 250 mph, could ascend beyond 30,000 feet, and fly for some 2,500 miles.

Giles delivered the airplane to the 2nd Bombardment Group, Langley Field, Va.—the same air base from which Billy Mitchell's open cockpit biplane bombers had flown out to sea to sink *Ostfriesland* in 1921. By August 1937, the Air Corps had its baker's dozen of the new bombers. It wasn't much, but it was the beginning.

Over the next few years, Air Corps pilots would log more than 9,200 flying hours on their YB-17s without experiencing even a single major accident.

During that time, the Flying Fortresses seemed to be everywhere. In August 1937, a group of them "bombed" USS *Utah* in exercises

off the West Coast. In the following February, some flew to Buenos Aires, Argentina, to celebrate a Presidential inauguration in that nation. For this long-distance flight over largely uncharted territory, the 2nd Bombardment Group earned the Mackay Trophy.

In August 1938, the YB-17s went back to South America, traveling to Colombia on a goodwill flight and afterward visiting Chile to deliver medical supplies.

### Finding Rex

The sleek bombers showed up at air shows, aerial demonstrations, and military exercises across the country, but of greater significance was the May 1938 flight of Fortresses led by Col. Robert Olds (father of fighter ace retired Brig. Gen. Robin Olds). The aircraft flew more than 600 miles out over the Atlantic, where they carried out a mock "interception" of the Italian luxury liner *Rex*, en route to New York.

The Navy was extremely cross about the *Rex* interception, seeing it as an incursion into their domain. Indeed, the thought was raised in the minds of many that airpower could now become the nation's first line of defense. The officer who served as lead navigator on that flight was Lt. Curtis E. LeMay, later head of Strategic Air Command and Chief of Staff of the Air Force.

Maj. Gen. Frank M. Andrews, commander of General Headquarters Air





**The YB-17 was kept in the public eye by an array of stunts that annoyed the War Department. Here, YB-17s make a mock intercept of the Italian liner Rex 600 miles off the coast of the US in 1938.**

Force at Langley, was largely responsible for employing the new bombers. He asked Army leaders to buy more B-17s; he was adamantly opposed to buying the Bolos.

Andrews' superiors, Army ground officers, were not receptive. Instead, they continued to order more B-18s. (When war did come, the B-18 quickly proved inadequate for combat. The 350 aircraft that had been purchased were relegated to coastal patrols and navigator training.)

The essence of the Army's opposition was captured by the official history of the Army Air Forces: "Concentration on the big bomber, an offensive weapon, was inconsistent with national policy and threatened unnecessary duplication of function with the Navy."

Andrews did not stop his agitation for more bombers. With war hanging over Europe, the Roosevelt Administration began to see the importance of long-range bombers as a deterrent to an attack on the United States. B-17 production began slowly—very slowly.

When World War II broke out in Europe in September 1939, the Army Air Corps had barely two dozen of the new B-17s. In September 1940, the number was up to only 49 bombers. Secretary of War Henry L. Stimson noted in his diary how President Roosevelt reacted when he was told the bad news. "The President's head went back as if someone had hit him in the chest," said Stimson.



**There were only 200 B-17s at the time Japan attacked Pearl Harbor. Eventually, 12,732 Flying Fortresses would be built. Of those, 4,735 perished in combat.**

Clearly, the US needed to step up production, but things still moved at a relatively glacial pace. At the time of Japan's attack on Pearl Harbor on Dec. 7, 1941, the Air Corps had fewer than 200 B-17s in the inventory. Not until early 1944 would the US military have enough Fortresses on hand to have a decisive impact on the bombing campaign against Germany.

History never reveals its alternatives, but it is possible that, had the prototype not crashed, the Army hierarchy would have been forced into buying more B-17s at an earlier date.

The 1935 crash did produce one notable benefit. Airmen realized that aircraft were becoming too complex to fly safely without standardized procedures. Moreover, these procedures were too numerous and complicated to commit entirely to memory. "Checklists" were now developed that spelled out specific tasks that were to be accomplished by each crew member at various times throughout the flight and also while on the ground. Such a checklist, performed while taxiing out for takeoff, would no doubt have revealed that the 299's elevator locks

were still engaged. Today, such detailed checklists are mandatory for all aircraft.

Oct. 30, 1935, was a sunny day that began with high hopes for American airmen. By day's end, those dreams had gone up in smoke. American airpower suffered a mighty blow that day, but in time struggled back on its feet and into the air. ■

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# Industrial Associates



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Nov. 19, 2004**

## The AFA Symposium

The Air Force continues to excel in its role as DOD's executive agent for space. USAF space forces support the entire joint force, including Army, Navy, Marine, and Coast Guard units. During Operations Enduring Freedom and Iraqi Freedom, space assets were at the tip of the spear in concentrating precision strike on enemy forces and providing surveillance, secure, jam-resistant communications, navigation, warning, and weather forecasting. Satellites that saw through blinding sandstorms during the initial phase of OIF continue to lift the fog of war in Iraq and Afghanistan, providing a clear view of the situation on the battlefield.

At the 2004 Los Angeles National Symposium and Ball, top military and commercial leaders will address the contributions of space to the combat environment and current challenges affecting the military, civilian, and commercial space partnership.

## Registration

The fee for the symposium is \$425, which includes a continental breakfast, coffee breaks, and lunch. (The fee is \$500 for nonmembers.) To register, call (800) 727-3337, ext. 5838, or visit [www.afa.org](http://www.afa.org)

## The Air Force Ball

The 33rd Annual Air Force Ball will also be held this year at the Beverly Hilton Hotel on Friday evening, Nov. 19. For additional information on the ball and to reserve tickets and/or a table, please call Henry Sanders at (310) 645-3982. E-mail: [hsanders@afa.org](mailto:hsanders@afa.org).

## Beverly Hilton Hotel

If you plan to stay at the Beverly Hilton Hotel, please call to make reservations as soon as possible (310-274-7777 or 1-800-HILTONS). Mention the AFA symposium to receive the special symposium rate of \$175 for single or \$190 for double, plus 14.05 percent tax. The deadline to receive these rates is Oct. 15, 2004.

## Invited Speakers

**James G. Roche**, Secretary of the Air Force

**Gen. John P. Jumper**, Air Force Chief of Staff

**Gen. Gregory S. Martin**, Commander, Air Force Materiel Command

**Gen. Lance W. Lord**, Commander, Air Force Space Command

## Panel Discussion

There will also be a panel discussion with aerospace industry leaders, moderated by Lt. Gen. Brian A. Arnold, Commander, Space and Missile Systems Center, Los Angeles.

**Visit our web site at [www.afa.org](http://www.afa.org) to register**



By Frances McKenney, Assistant Managing Editor

## AFA in Anchorage

Air Force Association National President Stephen P. "Pat" Condon was in Alaska in August to receive an orientation to Eielson and Elmendorf Air Force Bases. He met with **Fairbanks Midnight Sun Chapter** and **Edward J. Monaghan Chapter** members and several AFA leaders in the 49th State.

At Eielson, Brig. Gen. Marke F. Gibson, the new commander for the 354th Fighter Wing, briefed Condon on the wing's missions and on exercise Cope Thunder.

Condon also addressed a Greater Fairbanks Chamber of Commerce luncheon attended by 90 local business leaders and AFA members.

Lt. Gen. Carrol H. Chandler hosted the visit to Elmendorf. He gave his guests a mission briefing on his areas of responsibility as commander of Alaskan Command, Alaskan NORAD Region, and of 11th Air Force. Chandler has since been selected for reassignment as USAF deputy chief of staff for air and space operations.

Col. James P. Sturch, vice commander of 3rd Wing at Elmendorf, escorted Condon on a tour of facilities, so Condon could gather information on quality of life issues affecting airmen serving in Alaska. He looked at new dormitories, privatized housing, and other base facilities, and he had a chance to speak with several groups of airmen, at one point having breakfast with company grade officers in the Iditarod Dining Facility.

Condon also helped dedicate a memorial to 11th Air Force, an event covered in the local *Anchorage Daily News*.

Accompanying Condon for many of these activities were O. Thomas Hansen, Northwest Region President from the **McChord Chapter (Wash.)**, and Alaska's AFA officials: Gary A. Hoff, state president; Karen S. Washburn, state vice president; James V. Drew, president, and Steven R. Lundgren, vice president for Community Partners, both from the Fairbanks Chapter; and Jacqueline S. Burdette and Capt. Jonathan Powell, Monaghan Chapter's president and VP.



*John Politi (far right), then AFA Board Chairman, presented SSgt. James Garrett of the Air Force News Agency, Lackland AFB, Tex., with the AFA Texas Airman of the Year award at the Texas State Convention. At left is Edward Garland, state president. The Fort Worth Chapter hosted the July convention.*

## Wind Power

A grant from the **William A. Jones III Chapter (Va.)** and matching funds from the Aerospace Education Foundation will bring windmill power to a classroom at Blue Ridge School in St. George, Va.

Mark Martin, science department chairman at the private high school for boys, had already been using solar panels to power a few items in his classroom, but he figured a windmill could run that equipment—and more—when a stretch of cloudy days limited the sunshine. He turned to the AFA chapter in Charlottesville for help on funding. The chapter began seeking such educational projects to underwrite in 2003 and for this round of grants had received more than 30 proposals. Chapter members Joseph Clark, Wayne Jefferson, and Sam Freilich reviewed the applications.

Martin was awarded a \$500 Teacher Grant, presented by James K. Lavin, chapter president, and John Macdonald, chapter vice president. In the

works is an AEF matching grant. The money will pay for two batteries and a device to measure wind speed. This fall, students in Martin's classes will use the wind-speed device to determine where to place the windmill for maximum efficiency.

The chapter awarded another Teacher Grant to Tim Peterson, an earth science teacher at Appomattox County High School. His winning proposal was to teach students science, math, and technology through the study of rocketry.

## Focus on ANG

At its annual awards program, the **Diamond State Chapter** named four airmen from the 166th Airlift Wing (ANG), New Castle Arpt., as Delaware's Air National Guardsmen of the Year.

Called "Focus on Aviation," the evening event at Wilmington College in New Castle, honored MSgt. Paul G. Shavack, MSgt. Curtis F. Kimmel, SSgt. Cassandra L. Stevens, and SrA. Charles M. Perry Jr.



The 166th AW is headed by ANG Col. Ernest Talbert, who attended the awards dinner with CMSgt. Dan Young, the state ANG command chief, and CMSgt. John Jaskewich, the 166th's command chief and also a chapter member.

AFA officials on hand included Richard Bundy, Delaware state president, and Harry E. Van Den Heuvel, chapter president.

Among others receiving awards at the dinner were chapter members David A. Moffitt, recognized for community service, and Robert L. Vawter, for Civil Air Patrol achievements.

Chapter member G. Robert Veazey Sr. served as guest speaker for this year's program. A Korean War veteran, Veazey worked at All American Engineering Co., leading design improvements in the equipment used for stopping aircraft landing on carriers. He spoke to the Focus on Aviation audience about his role in developing techniques for midair recovery of satellites.

**Glacier Girl in Indiana**

A slide show about the recovery and restoration of a P-38 that spent 50 years embedded in a Greenland glacier was the highlight of a state-level AFA meeting in Indianapolis in August.

Bob Cardin, who managed the retrieval and restoration of the World War II warbird, was invited to address the gathering by Indiana State President William Grider, host of the meeting and a member of the **Grisson Memorial Chapter**.

The fighter aircraft now nicknamed *Glacier Girl* had been part of a group of six new P-38s and two B-17s that were en route from Maine to Britain in July 1942. The aircraft went off course and were forced to set down in Greenland, where they were abandoned. The 25 crew members stuck on an icecap were called "The Lost Squadron." Five Army Air Corps volunteers from weather station Task Force Bluie East 2 rescued them several days later.

*Glacier Girl* was extracted from the ice and restored in a 10-year effort that culminated with a flight in October 2002 at the Lost Squadron Museum in Middlesboro, Ky. Cardin is manager of the museum.

Hoosier State residents have a special interest in this story because the rescue party included the then-20-year-old O. Earl Toole, who was a member of the **Southern Indiana Chapter** until his death last year. Southern Indiana Chapter President Marcus Oliphant escorted Toole's wife, Marge, to the state meeting and introduced her to the audience.

**Dinner in Sumter**

On July 22, the **Swamp Fox Chapter (S.C.)** and the Greater Sumter Chamber of Commerce co-hosted their annual dinner.

The guest speaker was Gen. T. Michael Moseley, USAF vice chief of staff, who spoke on global terrorism.

VIPs at the Sunset Country Club dinner included Lt. Gen. Walter E. Buchanan III and Brig. Gen. Allen G. Peck, commander and vice commander, respectively, of 9th Air Force at Shaw AFB, S.C., and US Central Command Air Forces; Col. Philip M. Ruhlman, commander of the 20th Fighter Wing at Shaw; Robert E. Largent, AFA's Southeast Region president; and several civic leaders.

At this seventh annual dinner, the Swamp Fox Chapter also recognized Hugh Hill as the State Teacher of the Year. Hill teaches science at Wilson Hall School in Sumter.

Chapter and State President David T. Hanson was the master of ceremonies and co-host for the evening.

**More AFA/AEF News**

■ The **Birmingham Chapter** hosted the Alabama State Convention in July, with Maj. Gen. Bentley B. Rayburn, commander of the Air Force Doctrine Center at Maxwell AFB, Ala., as guest speaker. The convention took place

**Air Force Association Balance Sheet**

	Dec. 31, 2003			Dec. 31, 2002		
	General Fund	Life Membership Fund	Total	General Fund	Life Membership Fund	Total
<b>Assets</b>						
Cash and Investments	3,338,233	12,973,583	16,311,816	3,533,519	11,352,489	14,886,008
Accounts Receivable	1,516,712	197,792	1,714,504	1,422,863	230,568	1,653,431
Prepaid Expenses	147,636		147,636	178,347		178,347
Inventory	95,054		95,054	97,585		97,585
Property and Equipment (net of depreciation)	10,324,175		10,324,175	9,998,920		9,998,920
Prepaid Pension	5,213,092		5,213,092	5,466,559		5,466,559
Other Assets	1,470,714		1,470,714	1,478,117		1,478,117
<b>Total Assets</b>	<b>22,105,616</b>	<b>13,171,375</b>	<b>35,276,991</b>	<b>22,175,910</b>	<b>11,583,057</b>	<b>33,758,967</b>
<b>Liabilities and Net Assets</b>						
<i>Liabilities</i>						
Accounts Payable	1,021,732		1,021,732	836,068		836,068
Premium Refund Payable	334,995		334,995	383,364		383,364
Accrued Expenses	488,559		488,559	471,025		471,025
Deferred Revenue	998,186		998,186	1,467,828		1,467,828
Note Payable	940,000		940,000	1,060,000		1,060,000
<b>Total Liabilities</b>	<b>3,773,472</b>	<b>0</b>	<b>3,773,472</b>	<b>4,218,285</b>	<b>0</b>	<b>4,218,285</b>
<i>Net Assets-Unrestricted</i>						
Undesignated	16,553,446		16,553,446	16,158,927		16,158,927
Designated	1,798,698	13,171,375	14,970,073	1,798,698	11,583,057	13,381,755
<b>Total Net Assets</b>	<b>18,332,144</b>	<b>13,171,375</b>	<b>31,503,519</b>	<b>17,957,625</b>	<b>11,583,057</b>	<b>29,540,682</b>
<b>Total Liabilities and Net Assets</b>	<b>22,105,616</b>	<b>13,171,375</b>	<b>35,276,991</b>	<b>22,175,910</b>	<b>11,583,057</b>	<b>33,758,967</b>



at the Southern Museum of Flight. AFA officials at the convention included Albert A. Allenback Jr., Alabama state president; Austin Landry, Birmingham Chapter president; and John T. Wigington, president of the Tennessee Valley Chapter.

■ At a recent chapter meeting, the **Monterey Bay Area Chapter (Calif.)** presented a Stanley J. Hryn Trophy to the man for whom it is named. The actual trophy is awarded annually to the outstanding Air Force student at the Defense Language Institute at Presidio of Monterey, Calif., but Chapter President Paul Rush gave Hryn a personal version of the trophy as a memento of Hryn's years of AFA leadership at the chapter and state levels. Hryn was the chapter's first president and a founding member. The larger perpetual trophy lists names of previous recipients and remains on display at the DLI's 311th Training Squadron.

■ A teacher nominated by the **Danville Chapter** was named Teacher of the Year for the state of Virginia. Larry G. Aaron, who teaches earth science, biology, human anatomy, and physiology at Chatham High School, received the award at the state convention in June in Reston, Va. On hand to congratulate Aaron, who is also chairman of his school's Science Department, was Mary Anne Thompson, AEF president; Mason Botts, Virginia state president; Gerald Hovatter, Danville Chapter president; and Paul Tucker, chapter secretary.

■ Members of the **Pasadena Area Chapter** learned some California history at their June meeting, when amateur historian Norman S. Marshall spoke to the group about topics he'd recently researched, among them, the life of a local World War I Medal of Honor recipient, Sgt. Ludovicus "Louis" M.M. Van Iersel Sr. A resident of Sierra Madre, Calif., Van Iersel was a Dutch-born US Army soldier. He received a Medal of Honor for actions in November 1918, when he led a reconnaissance patrol through heavy fire to investigate how the enemy was defending a bridge at Mouzon, France. He went on to serve in World War II in the Marine Corps. Van Iersel died in 1987 and is buried in Arlington National Cemetery. ■

#### 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-aef@afa.org.

## Air Force Association Comparative Statement of Revenues and Expenses

	Year Ended	
	Dec. 31, 2003	Dec. 31, 2002
<b>General Fund</b>		
<b>Revenue</b>		
Aerospace Technology Exposition	1,488,587	1,354,950
Building Operations	1,064,055	918,592
Convention	570,552	440,919
Industrial Associates	99,600	88,550
Insurance Programs	2,189,600	2,148,528
Investments	141,321	30,558
Magazine	1,375,340	1,420,248
Membership	3,961,401	4,008,640
Patrons	290,790	287,994
Other	509,171	399,405
<b>Total Revenue</b>	<b>11,690,417</b>	<b>11,098,384</b>
<b>Expenses</b>		
<i>Program Services:</i>		
Aerospace Technology Exposition	732,105	666,880
Convention	1,243,971	1,057,307
Industrial Associates	132,850	129,563
Insurance Programs	2,424,377	2,390,018
Magazine	1,251,311	1,168,702
Patrons	299,310	285,120
<b>Total Program Service Expenses</b>	<b>6,083,922</b>	<b>5,697,590</b>
<i>Supporting Services:</i>		
Building	635,028	535,923
Membership	4,596,948	4,485,922
<b>Total Supporting Services Expenses</b>	<b>5,231,976</b>	<b>5,021,845</b>
<b>Total Expenses</b>	<b>11,315,898</b>	<b>10,719,435</b>
<b>Changes in Net Assets General Fund</b>	<b>374,519</b>	<b>378,949</b>
<b>Life Membership Fund</b>		
Life memberships granted	300,318	309,743
Revenue from investments	2,575,420	(670,279)
Less: Transfer to General Fund for equivalent annual dues and other costs	(1,287,420)	(1,297,709)
<b>Changes in Net Assets Life Membership Fund</b>	<b>1,588,318</b>	<b>(1,658,245)</b>

Treasurer's Note: The figures presented herein have been extracted from audited financial statements submitted previously to the Board of Directors of the Air Force Association. Expenses include chapter commissions, state commissions, and other direct support for field units totaling \$455,392 in 2003 and \$462,641 in 2002.

## Reunions

reunions@afa.org

**41st Military Airlift Sq.** March 30-April 5, 2005, in Charleston, SC. **Contact:** Scotty White (843-763-6516 or 843-367-9510).

**77th FS (WWII-present).** Jan. 14-16, 2005, at Shaw AFB, SC. **Contact:** Lt. Col. Dave Stilwell (803-895-1328 or 803-895-3502) (stillyf16@earthlink.net).

**Military Training Instructors Assn.** Oct. 18-22 at Lackland AFB, TX. **Contact:** John Pavey (478-952-3676) (j.pavey@mchsi.com).

**Pilot Training Class 55-E.** Dec. 1-5 in San Antonio. **Contact:** Ernest Anthony, 102 Da Gama, Universal City, TX 78148 (210-658-5176) (enanthony@aol.com).

**Pilot Training Class 57-R.** Oct. 12-15, 2005, in San Antonio. **Contact:** Robert Cinalli, 5 Avon Rd., Pine Beach, NJ. 08741 (732-244-1348) (bjcinalli@earthlink.net). ■

Mail unit reunion notices four months ahead of the event to "Unit Reunions," *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Please designate the unit holding the reunion, time, location, and a contact for more information. We reserve the right to condense notices.



# Pieces of History

Photography by Paul Kennedy

## Patches



*The Fairchild C-123 Provider served as a short-range tactical transport from the mid-1950s through the Vietnam War. Derived from a design for an assault glider, the C-123 primarily flew airlift missions to short or unimproved airstrips. The first production version, C-123B, flew with two piston engines. Between 1966 and 1969, 184 of the Providers became C-123Ks when they*

*were retrofitted with jet engines, just outboard from the propellers. The C-123K aircraft on display at the Air Force Museum earned its nickname, "Patches," by surviving more than 1,000 bullet and shrapnel hits during the Vietnam War. These were subsequently covered with metal plates. Patches is also adorned with a tongue-in-cheek bull's-eye on its nose and seven*

*Purple Hearts, the number that was earned by its aircrew.*





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