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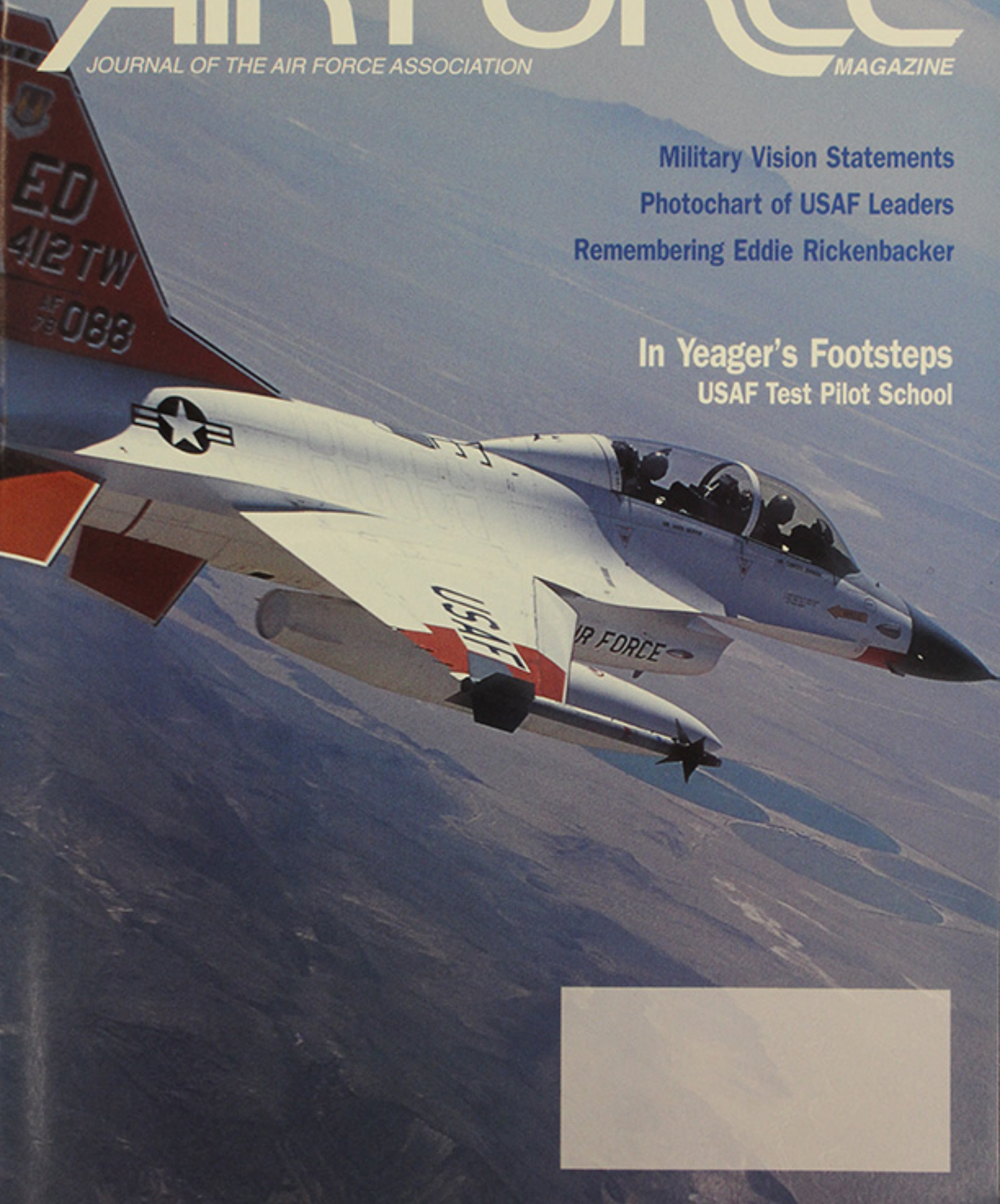
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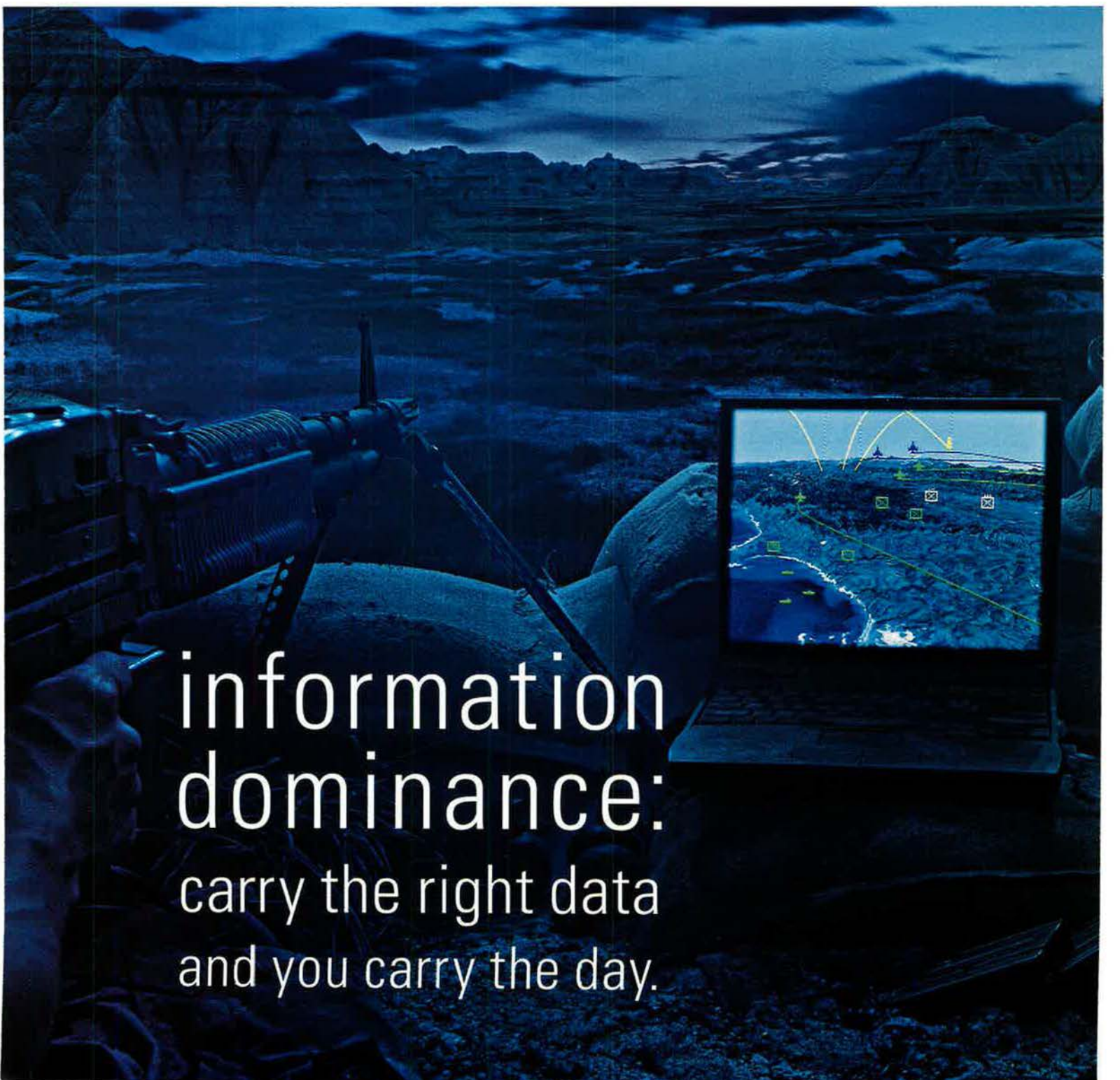
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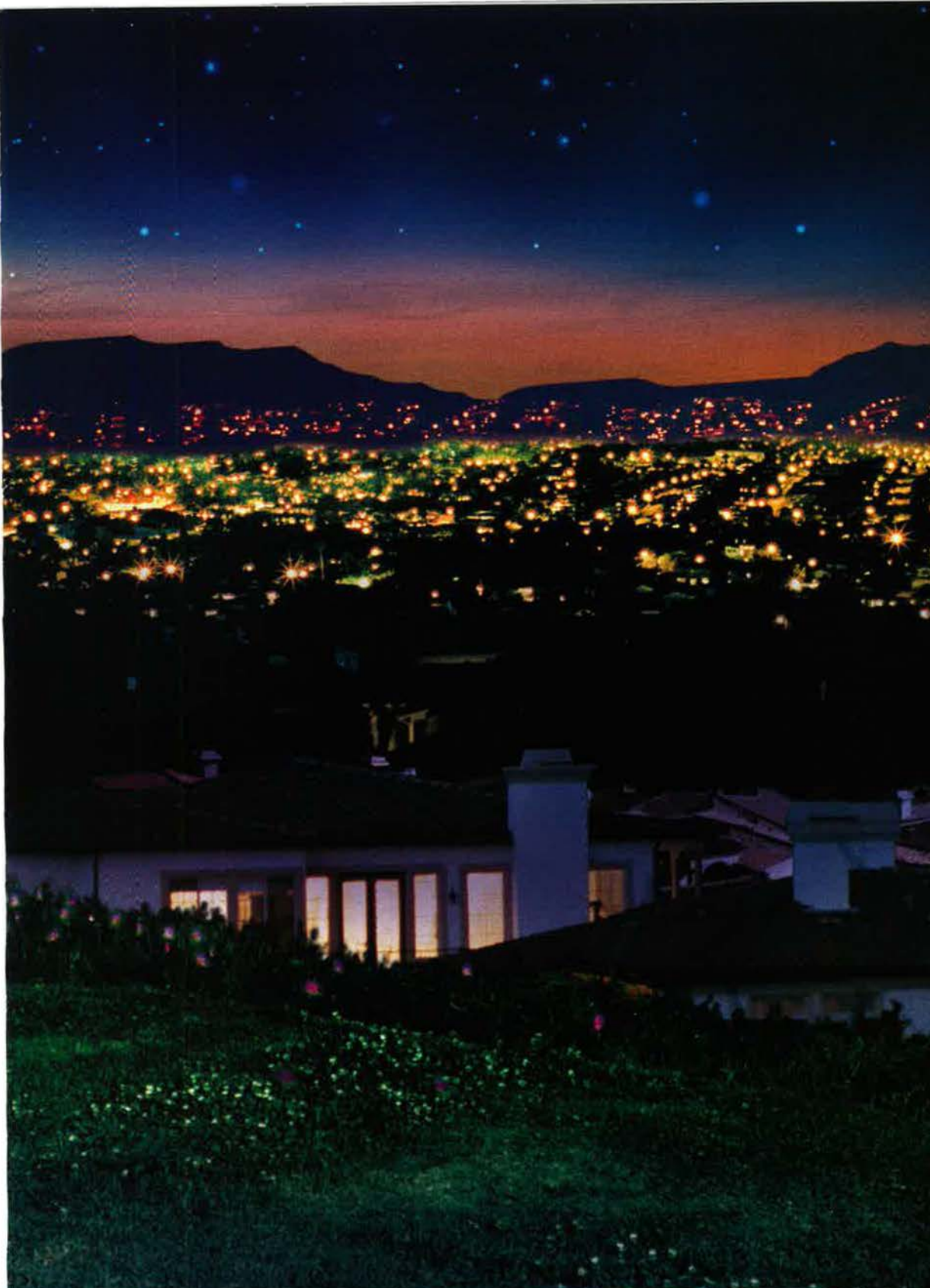
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Letters

that acknowledged the RB-50 contribution.

The participating aircraft were RB-50G. Boeing modified about 29 RB-50s to various reconnaissance versions as RB-50E–RB-50G. [There were] about 12 RB-50Gs assigned to the 343rd Strategic Reconnaissance Squadron (Medium) Electronic. The 343rd was stationed at Ramey AFB, Puerto Rico. The B-50's bomb bays were modified into [electronic countermeasure] compartments. RB-50Gs were always on [temporary duty]. Two at a time were detached to the 91st Reconnaissance Squadron stationed at Yokota AB, Japan.

The RB-50G shot down by the Russians on July 29, 1953, was another 343rd aircraft. I was angry when I learned of this incident as it happened two days after the Korean armistice went into effect.

J.M. Slade
Memphis, Tenn.

In his narrative about the North American F-82 Twin Mustang, the first aircraft to operate over Korea, he said they were powered by two 1,600-hp Allison engines. Hardly! The airplane would have been lucky to get off the ground with those engines. Even the vaunted Rolls Royce Merlin power plant could not satisfy its requirements.

These Twin Mustangs were powered by the huge 2,200-hp Allisons originally intended for the P-51H. These engines, with their right- and left-handed props, made this airplane a dream to fly. Please give this grand lady back her power.

Col. John F. Sharp,
USAF (Ret.)
Sacramento, Calif.

■ *The engines were two 1,600-hp Allisons per numerous sources, including Encyclopedia of US Air Force Aircraft and Missile Systems, Vol. 1, published by the Office of Air Force History in 1978.—THE EDITORS*

I was amazed by what I had read: RB-36s flew recon missions during the Korean War! I was an RB-36 crew member flying out of Ellsworth AFB, S.D., from 1952 to 1956 and never [was] aware that RB-36s were engaged in the Korean War.

Al Hains
Marina del Rey, Calif.

I was assigned to the 23rd [Strategic Reconnaissance Squadron] on Okinawa and to the 91st SRS at Yokota from August 1949 to August

1952, and I never saw an RB-36 in the squadron during that time. We operated RB- and EB-29s.

R.C. Brunson
Hot Springs Village, Ark.

■ *A primary source for the article was Air Wars and Aircraft by Victor Flinham, who lists the RB-36A as being flown out of Yokota, where it was hosted by the 91st SRS. An Association of Old Crows history says an RB-36 was operated from Okinawa during the Korean War.—THE EDITORS*

The article gives only incidental coverage of the RB-26s. There is only one last sentence under the B-26 write-up. Under Reconnaissance/Observation, it is only included with a list of other reconnaissance aircraft. The RB-26 flew thousands of hours on solo night missions over Korea, identifying enemy activity. My flight made the first sighting of the massive Chinese crossing of the Yalu [River] to invade Korea. Fifth Air Force did not consider my report of this as incidental.

Lt. Col. John D. Crawford Jr.,
USAF (Ret.)
Newport, R.I.

The author could have added that the Korean War was also the first time aircraft were refueled in-flight during combat conditions. On July 6, 1951, a KB-29M hose-type tanker of the 43rd Air Refueling Squadron, Davis–Monthan AFB, Ariz., flying from Yokota AB, Japan, refueled four RF-80s flying a reconnaissance mission over North Korea.

Eight days later, the first KB-29P flying boom refueling took place over enemy territory when an RB-45C was refueled over North Korea. On Sept. 28, 1951, two KB-29Ms of the 43rd ARS refueled an RF-80 six times over Korea. This mission established a flight-endurance record for jet aircraft of 14 hours and 15 minutes. One month later, on Oct. 29, the first midair refueling of F-84s during combat conditions occurred when three KB-29Ms, temporarily deployed to Taegu, [South] Korea, refueled eight Thunderjets.

The tankers also helped rescue a downed pilot in the water near Wonsan Harbor on Nov. 3, 1951. The Strategic Air Command KB-29Ms were supporting F-84s on a bombing mission. By providing additional refuelings, the tankers kept the F-84s airborne long enough to provide air cover until the pilot was rescued.

Lt. Col. David W. Harvey
USAF (Ret.)
Naperville, Ill.



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Under Thunderjet, it states the RF-84s were used for reconnaissance. I question this statement, as there were production problems with the J65 engine used in the F-84F and RF-84F, and my Form 5 shows my first flight in an F-84F was in February 1954 after the Korean War was over. When the 71st Strategic Reconnaissance Wing was formed at Larson AFB, Wash., in 1955 many of the new pilots were returnees from Korea, and I believe they were still flying RF-80s.

Donald D. Watt Sr.
Hampton, Va.

■ *We erred. F-84 fighter-bombers, not RF-84s, were used for day and, later, night reconnaissance missions, in addition to their primary role. The RF-84F never made it to Korea, per several sources.*—THE EDITORS

The first F-51 was not a Mustang; it was an Apache made for the RAF with four 20 mm cannons wing-mounted. A-36 was the Apache frame with dive brakes, bomb system, and six .50-caliber machine guns. I flew this aircraft, fired at the enemy, and dropped bombs. Then came the B and C [models] with six wing-mounted 50s, then the D model with a bubble canopy. I flew these in Korea—58 missions including the last Mustang combat mission of my squadron, 12th Fighter-Bomber Squadron, 18th Wing.

What is seldom recalled is that the first Medal of Honor [in the Korean War] went to [F-51 pilot] Maj. Louis Sebille, 67th FBS, posthumously. The 18th, plus the assigned and controlled South African "Cheetah" Squadron, pounded the North Koreans all over the peninsula, not just [providing] frontline support.

Ask any frontline soldier what he most liked to see—and most likely he'll say, "Four Mustangs with bombs, rockets, and napalm." You just can't say we only did frontline support—it ain't so. These are the aircraft that bore the burden: F-51, F-80, F-84, B-26, F-82, AT-6, B-29, and C-47. The rest were all right, but those actually fighting were those noted above.

Capt. John A. Hutchison,
USAF (Ret.)
Dublin, Ohio

[There is a] lack of any information given [about] the 31st Strategic Reconnaissance Squadron in your story about aircraft used in the Korean War. Yes, you did mention the 91st SRS, but the true history is the fact it was the 31st there at Johnson AB, Japan, for approximately six months, from July 1950 until January 1951.

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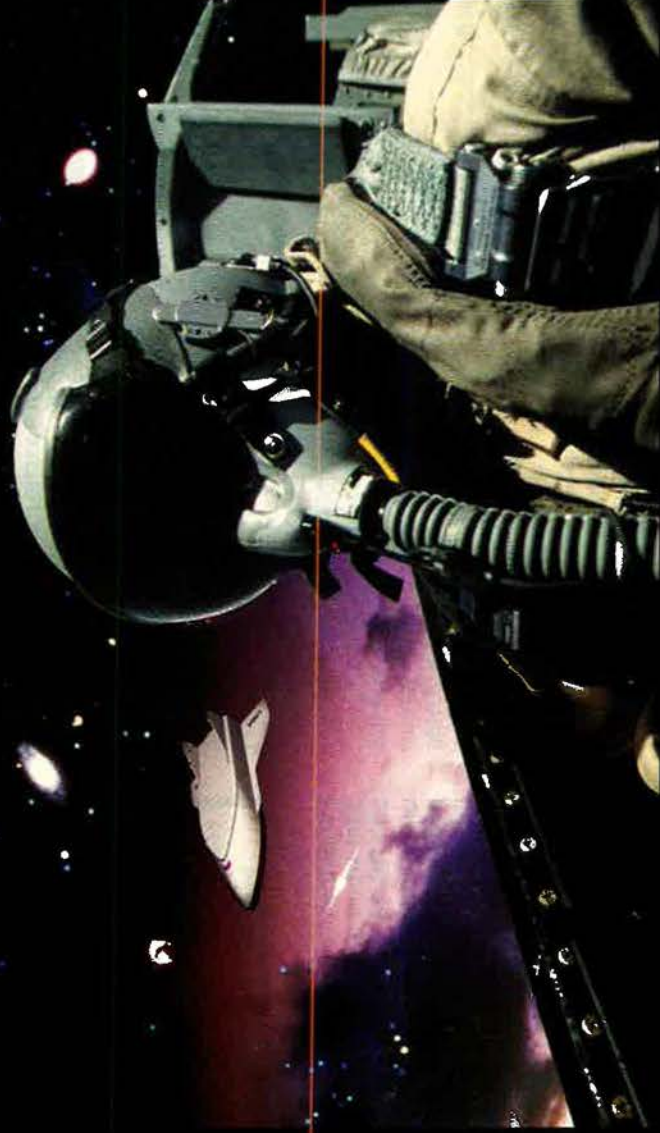
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At the beginning of 1951 the number of the 31st became the 91st. The 31st while at Johnson, flew at least one RB-29 every day over North Korea, averaging at least six hours per mission, doing recon and surveillance missions. On two occasions, photomapping the Inchon area prior to Gen. [Douglas] MacArthur's invasion there and then on Oct. 2, 1950, I and my aircrew photomapped the entire North Korean country, so that our UN forces could have accurate maps as they drove north to the Yalu River.

The 31st SRS was beefed-up by four additional aircrews, including mine, from the 23rd SRS, Fairfield-Suisun AFB, Calif., along with our aircraft (August 1950–February 1951). It was for a not-less-than-90-day TDY, which quickly turned into a six-month effort. Each [of the] four aircrews flew approximately 20 recon-type missions during our TDY in Japan. I and my aircrew flew 19 combat missions. I also want to mention [that] we flew for six hours over North Korea—each sortie without any friendly fighter cover. Our sortie averaged 10 hours in length, counting the two hours flying time over and back.

Col. William H. Cox,
USAF (Ret.)
Vacaville, Calif.

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What a thrill it was to see "Air Force Aircraft of the Korean War." I was an air traffic controller at Langley AFB, Va., from June 1949 until October 1952.

The 4th Fighter Group and 334th, 335th, and 336th squadrons were based there. The Texas and Arkansas ANG arrived with about 90 P-51s. The Combat Crew Training Squadron was flying the B-26. We also had a few P(F)-80 and the F-84s. Sometime around the spring of 1951, the 84th and 85th Bomb Group arrived with their B-45s.

Needless to say, Langley was a very busy facility about this time.

Archie G. Fincher
Monroe, N.C.

I put in two years fighting the Chinese from June 1950 to April 1952 as an air [evacuation] technician with the 1453rd Medical Air Evac Squadron stationed at Hickam AFB, Hawaii, with a TDY squadron at Haneda AB, Japan. I was a staff sergeant and [noncommissioned officer in charge], flying the wounded from Korea to San Francisco in two days. The C-54 was used primarily to transport the wounded back to the US for hospitalization and ultimately release from the service.

The C-54 was the Air Force workhorse and did a fantastic job in all kinds of weather. We put the C-54 through every kind of work imaginable, and she was without a doubt fantastic. I do not understand why air evac does not receive the write-ups it deserves for the job it did in the Korean War.

James M. Rochelle
Tamarac, Fla.

Food Stamps

Maybe I'm missing something in the food stamp debate. [See "Aerospace World: Cohen Seeks Food Stamp Equity," July, p. 11.] Seems that DoD is trying to figure out who should be eligible for food stamps when the fact is no one in the military should be eligible—period!

As I recall, when Congress ended the draft in 1973 a major component of the all-volunteer force was comparable pay. That was the deal: reasonable pay and benefits for those [who] volunteered. The political hot potato—the draft—was off the table; all Congress had to do was pass reasonable pay raises for the military.

That obviously didn't happen if some members of the all-volunteer force are now eligible for food stamps. As for the Pentagon bean counters

who are going to reduce the number of members on food stamps by counting housing allowance as income, I have only one thing to say—it's disposable income, stupid! Unless things have changed dramatically, I never had a housing allowance that came close to covering my housing expenses.

On-base living was always cheaper; therefore there was more money for basics. It's time Congress kept its part of the all-volunteer force bargain. We should never ask young men and women to volunteer to serve their country, only to then find themselves relying on food stamps to get by.

Bill Gorton
Park City, Utah

WASPs

I was pleased to see the [Women Airforce Service Pilot], in uniform, by the P-47 in your "Pieces of History" photo [July, p. 88]. Maybe, after 55 years, more people will learn of our part in World War II military aviation history.

I served as a WASP (Class 43-7) with 2nd Air Force, 207th Air-to-Ground Tow Target Squadron, Biggs AAF, Tex. I flew 13 different types of airplanes during my service time. My two favorites were the B-25 Billy Mitchell twin-engine bomber and the P-47 Thunderbolt.

There are still over 600 living WASPs. We have a very active organization, meeting several times each year in various locations around the country. Our biannual reunion will be held in October 2000 at Sweetwater, Tex., where Avenger Field is located. This was the only all-woman Army Air Corps pilot training field in the US during World War II. It will be a nostalgic return to our beginning for those of us who are now in our upper 70s to mid-80s. And still going strong!

Kaddy Landry Steele
Gainesville, Fla.

Not Still Air Force

Two statements caught my eye as being inaccurate in the item "Gary Powers Honored" ["AFA/AEF National Report," July, p. 82]. [You state] "Francis Gary Powers, the Air Force pilot downed May 1, 1960, ... (At the time, Powers was assigned to the Central Intelligence Agency.)"

Prior to his service with the CIA, Powers had resigned his commission. Powers was not assigned (or detailed) to the CIA but, in fact, was a civilian employee of the CIA.

When Powers appeared before the Senate Committee on Armed Services in open session on March 6, 1962, he stated he was still an employee of the CIA. Having participated in the CIA review, including personally interviewing Powers upon his return, I believe the honors bestowed on him are richly deserved.

John S. Warner
Former general counsel
Central Intelligence Agency
Tucson, Ariz.

■ *Mr. Warner is right. Powers was told he had to resign his commission but, upon completing his CIA assignment, he could return to the Air Force with no lost time and at a rank corresponding to his contemporaries. That didn't happen.—THE EDITORS*

What's the Real Need, Part 2

Phil Weissburg decries AFA's "irrelevant comparison between military spending as a share of Gross Domestic Product" and then concludes, "Until American children are no longer going to school in trailer classrooms ... let's cap military spending." [See "Letters: What's the Real Need?" August, p. 12, and June, p. 4.]

Speaking of irrelevant comparisons, public education infrastructure in the US is primarily funded at the local level and suffers or thrives based upon the individual community's ability and willingness to pay. (Drive over to Salinas, Calif., and view their modest public schools, then cruise back through Carmel and note the striking differences.)

In other words, the US could drive defense spending down to zero without materially affecting the quality of the schools in [a] neighborhood.

The right way to size the defense budget is to base it upon known and anticipated mission requirements.

If the American people want the military establishment to keep an eye on Russia and China, keep a lid on North Korea and Iraq, keep the peace in Bosnia and Kosovo, keep the narcotics traffickers and terrorists in Latin America in check, keep productively engaging countries from Thailand to Tanzania (and a hundred places in between), and keep their fighting skills sharp enough to fight and win a couple major theater wars at the same time, it's going to be expensive.

Very expensive.

Tim Kregel
Ramstein AB, Germany

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Aerospace World

By Peter Grier

Airpower Called Decisive in Kosovo

The Air Force general in charge of analyzing Operation Allied Force said his study showed NATO airpower dealt a decisive blow to Yugoslav forces.

Brig. Gen. John Corley, USAF's director of studies and analysis, described NATO's action as "an unqualified success" and "clear victory." The 1999 Kosovo war was an exclusive airpower show. No NATO ground forces were required.

"This was a great victory," said Corley, "achieved in concert with our NATO allies. We were able to take on [President Slobodan] Milosevic and vanquish him ... through the hard leverage of aerospace power."

Corley was quoted Aug. 2 by USAF News Service. The general was interviewed by the service's reporter, TSgt. Joe Bela, as Corley was wrapping up work on the classified 10,000-page "Air War Over Serbia." The Air Force had not determined when—or in what form—the report might be made public.

A key element of the study concerned the effectiveness of air strikes against mobile Serbian targets in Kosovo. Skeptics in the press and US Army claimed airpower had been ineffective against tanks, armored personnel carriers, and the like.

The facts showed otherwise. "We revealed in detail, category by category, the effectiveness of our air strikes on tanks, [armored personnel carriers], self-propelled weapons, mortars, and artillery," said Corley.

The final report said NATO air had destroyed 93 tanks, a significant chunk of the Serb contingent deployed in Kosovo.

Corley said his 200-person assessment team had exploited every means available to gather relevant data, from U-2 film and pilot mission reports to evidence of burned out military vehicles on the ground and eyewitness interviews.

After the war, and with allied support, military and civilian experts combed Kosovo, searching for ground evidence of any allied airstrike.



A1C Jerrod Roe (left) and SSgt. Ronalto Mactal, both from the 820th RED HORSE Squadron, Nellis AFB, Nev., work on the roof of a community center in Grenada in July. The squadron and a Marine battalion were supporting a US Southern Command humanitarian exercise, New Horizons 2000.

DoD Slows Anthrax Program

On July 10, the Pentagon announced that it would significantly reduce the scope of its anthrax inoculation program due to a looming shortage of vaccine.

For now, only personnel who serve in the high threat areas of South Korea and the Persian Gulf will receive shots, said Secretary of Defense William S. Cohen.

The program will resume full operations when the Food and Drug Administration approves a new vaccine production facility. That action may not be forthcoming until the end of this year.

"As soon as a sufficient and safe supply of vaccine is available, we will expand the program, ultimately vaccinating all members of the active and reserve force," said Cohen.

In late 1997 Cohen ordered all 2.4 million active and reserve military personnel to be vaccinated against the biological agent anthrax by 2003. The rising threat of biowar and bioterrorism required the action, said Pentagon officials.

Since then 455,378 people have

started the 18-month-long vaccination process, receiving a total of 1.8 million doses. Some 56,725 have received all six shots the process requires.

The program was running at a rate of about 75,000 vaccinations a month. The slowdown will reduce that rate to about 14,000 vaccinations a month.

At that rate "we have enough vaccine to last us from six to 10 months," said Marine Corps Maj. Gen. Randall L. West, senior advisor to the Deputy Secretary of Defense for Chemical and Biological Protection.

Pentagon officials disputed the notion that those who have received some anti-anthrax shots but have not yet completed the full program will now have to start over.

"You do not need to restart the whole series. Rather, you just pick up where you were," said Dr. J. Jarrett Clinton, first assistant to the Assistant Secretary of Defense (Health Affairs).

Current records show that 163 personnel have missed at least one day of work due to adverse reactions from anthrax inoculations. For 38 people



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the reactions were severe enough to require hospitalization.

"We've had 351 people that have refused to take the shot and have remained adamant enough about that to receive disciplinary action or be discharged or released from service," said West.

New Vaccine Maker Is Sought

The struggles of BioPort Corp.—the sole US source of anthrax vaccine—were well-known and the vaccine shortage could have been foreseen months ago, said Rep. Walter B. Jones (R-N.C.).

The supply gap is simply the latest glitch in a problem-filled vaccination effort, said Jones, a long-standing critic of the Clinton Administration's inoculation program.

"Even if the vaccine is ultimately found to be safe and effective, these supply problems jeopardize whatever protective value the Department of Defense intended to provide our military personnel," he said.

BioPort's Lansing, Mich., plant was formerly owned by the state of Michigan. Last December its manufacture of the anthrax vaccine was halted after the FDA found 30 violations of safety, consistency, record-keeping, and sterility.

The Pentagon has pumped more than \$100 million into BioPort in a so far futile attempt to regain FDA certification, admitted West. BioPort has now waived its patent rights to allow the Defense Department to advertise for a second vaccine source, he said.

The July 3 *Commerce Business Daily* contained an official request

for prospective manufacturers to send in their proposals.

"BioPort will cooperate with whoever gets that second-source contract, and the FDA tells us that they can probably have that company certified within two to four years," said West.

First CV-22 Tiltrotor Rolls Out

The Defense Department on July 25 rolled out the first Air Force CV-22 tilt-rotor aircraft, the special operations-modified version of the V-22 Osprey.

Finally, USAF Hits Recruiting Mark

After several years of reverses, the Air Force has begun to win the recruiting war, the Pentagon announced.

A July 27 DoD statement said USAF's recruiters already had met their numerical goal of 34,000 new enlistments in Fiscal 2000, which does not end until Sept. 30. And they are now hard at work identifying prospects for next year.

The Air Force fell short of enlistment goals in Fiscal 1999, the first time the service had experienced this problem since the Carter presidency two decades ago. The Air Force was much larger then—with about 570,000 officers and airmen, compared to today's force of about 360,000.

"We made recruiting a top priority this year," said Secretary of the Air Force F. Whitten Peters, "and are pleased to see the initial fruits of our labor."

Spurred by its recent difficulties, the Air Force deployed more recruiters, made liberal use of targeted enlistment bonuses, and launched its first paid television advertising campaign. All contributed to this year's success, claimed DoD.

The Pentagon noted specifically that the number of "on-the-street" USAF recruiters had risen in one year from less than 900 to 1,300.

For their part, the new recruits cite the opportunity to further their education as the top reason for enlisting, reports a recent survey. All new recruits are automatically enrolled in the Community College of the Air Force.

Even with 34,000 sign-ups in hand, recruiters aren't slacking off. They have to fill roughly the same number over the next 12 months. "We really don't yet have the time to stop and celebrate," said Brig. Gen. Duane Deal, Air Force Recruiting Service commander. "This is an indicator of how hard our recruiters are working, but we still have a daunting challenge ahead of us."

The unveiling took place in a ceremony at Bell Helicopter Textron's Fort Worth, Tex., plant. The CV-22 is the newest aircraft in the special operations inventory. The tilt-rotor aircraft can transition from conventional flight to hover and back to conventional flight.

The family of V-22 aircraft is jointly produced by the Bell-Boeing Textron consortium.

The Pentagon said the CV-22 fills a long-standing Special Operations Forces requirement to conduct long-range infiltration in darkness or adverse weather.

The special operations version differs from the Marine Corps MV-22 variant in its special avionics and communications equipment.

Plans call for procurement of 50 CV-22s at a projected cost of \$43 million each. They will replace aging fixed- and rotary-wing aircraft in use by both Army and Air Force Special Operations Forces.

All CV-22s will be operated by Air Force Special Operations Command, which will receive its first operational model in 2004.

F-22 Fires AIM-9 Sidewinder

The F-22 test program met a major test milestone July 25 when one of the new fighters successfully launched an AIM-9 air-to-air missile.

The test occurred over ranges at NAS China Lake, Calif. The F-22 flew at 20,000 feet.

The test was designed to evaluate the next-generation fighter's ability



A rollout ceremony at Bell Helicopter Textron's Fort Worth, Tex., plant on July 25 gave visitors a look at the first test and operational CV-22 tilt-rotor. A modified version of the V-22 Osprey, the aircraft will now undergo two years of operational test and evaluation at Edwards AFB, Calif.

USAF photo by TSgt. Lono Kollars

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USAF's Holland To Command All SOF

Defense Secretary William S. Cohen on July 26 announced the nomination of Air Force Lt. Gen. Charles R. Holland to be commander in chief, US Special Operations Command, MacDill AFB, Fla.

He would be the first Air Force officer to command all US Special Operations Forces.

Holland's most recent assignment was as vice commander, US Air Forces in Europe, Ramstein AB, Germany. He has commanded two Air Force wings and Special Operations Command Pacific and served as deputy commanding general of the Joint Special Operations Command. Prior to his USAF assignment, he was commander of the Air Force Special Operations Command at Hurlburt Field, Fla.

Holland flew 79 combat missions in an AC-130 gunship in Southeast Asia.

The nomination, subject to Senate confirmation, includes promotion to four-star general. Until now, the SOF job had been the exclusive property of Army officers.

to successfully fire an air-to-air missile from an internal weapons bay.

The assessment is the partial completion of a major milestone the F-22 Combined Test Force is tasked with meeting this year. An AIM-120 missile firing is scheduled this fall.

The F-22 has flown approximately 650 hours and completed some 5,000 test points.

Congress Halts Space-Based Radar

The final Congressional defense money bill terminates the Pentagon's Discoverer II space-based radar program.

A statement issued by the Senate Appropriations Committee said House and Senate negotiators had approved "defunding" of the program, except for funding of sensor research.

Discover II, an effort to deploy Joint STARS-type radar on a spacecraft, had strong backing from uniformed and civilian defense officials but was opposed by the House Appropriations Defense Subcommittee.

The House panel members believed the costs of the project could not be controlled short of cancellation, and they managed to persuade counterparts in the Senate to go along.

The Pentagon had sought \$130 million in 2001 for the DII program. The House eliminated money for the program in its version of the bill, while the Senate fully funded it, making the program a major conference issue.

Congress acted despite a late rescue effort by the commander in chief of US Space Command, Gen. Ralph E. Eberhart.

F. Whitten Peters, Secretary of the Air Force, lamented the Congressional action, which he said was a setback to Air Force efforts to determine whether the service could build cheaper satellites.

"I'm disappointed," Peters told *Defense Daily* shortly after the vote. "I think the program made sense."

DoD Reaffirms Bronze Star Awards

The Air Force and Navy were not wrong to award Bronze Stars to service personnel who participated in last year's airstrikes on Yugoslavia—but from sites far removed from the combat zone.

That is the conclusion of Bernard D. Rostker, undersecretary of defense for personnel and readiness, who reviewed the awards and found that they met regulations and followed historical precedents.

"We're obviously pleased and grateful to have such strong and definitive confirmation that our airmen deserve the medals they were awarded," said Secretary of the Air Force Peters.

The issue arose after the publication *Stars and Stripes* reviewed 185 Air Force Bronze Star citations for

Operation Allied Force and determined that only 6 percent went to personnel who actually served in the combat zone.

Some awards went to officers who served as far away from the Balkans as Whiteman AFB, Mo., from which B-2 bombers were launched.

The regulations concerning the Bronze Star stipulate that it can be awarded to anyone engaged in non-flight operations involving conflict with an adversary foreign force. Beyond that, there are no geographic restrictions as to who can receive the medal, said Rostker in short memos to the Air Force and Navy Secretaries.

At least nine officers received Bronze Stars while serving on Okinawa and Guam during the Vietnam War. Two others received the award while serving on Guam during the Korean War.

"We have determined that there was a precedent set for the awarding of the Bronze Star Medal under similar conditions," wrote Rostker.

F-22 Testing On Track, for Now

It was a near-run thing, but Air Force officials now believe they will meet all Congressionally mandated F-22 test requirements for the year.

The two toughest criteria to meet were the requirement that Block 3.0 of the F-22's avionics fly aboard Raptor 4004, and that Raptor 4006 make its first flight. Both these events are now scheduled to occur in December, Air Force acquisition executive Lawrence J. Delaney said June 28 at a media event hosted by F-22 subcontractor Northrop Grumman.

The Air Force believes it will get in by the deadline, said Delaney, but it is looking at what kind of a transition or bridge might be required should it

Iran Missile Test Worries Pentagon

Iran's successful July 15 test of its Shahab-3 missile raised Pentagon fears that the Iranian military will press ahead and develop intercontinental-range weapons.

"We're worried about more than just this missile," said Pentagon spokesman Kenneth Bacon in the wake of the test of the Shahab, a medium-range system. "We're worried about longer-range missiles that they apparently have on their drawing boards right now. That would be the Shahab-4 and Shahab-5."

The Shahab-3 has range of upward of 800 miles. It would be theoretically capable of striking US forces and other targets in the Middle East.

The missile's first test, two years ago, ended in failure, according to US analysts.

US intelligence officials have told Congress that a North Korean sale of 12 missile engines to Iran could bolster the Shahab capability. Some analysts believe that Iran might be able to test a missile capable of hitting US territory by sometime later this decade.

"There isn't any conceivable reason why Iran needs a missile of intercontinental range if it's worried about regional security issues," said Bacon.

not make the December deadline. Skipping Raptor 4006's final finishing—a largely cosmetic step—might get it in the air sooner, for instance.

Longer-term test challenges remain. The current schedule is about 100 hours short of getting in enough flying time by November 2002 to meet Defense Acquisition Board requirements.

Meeting the DAB goal is crucial to entry into low-rate initial production.

Delaney said that the Air Force is "working very closely" with Pentagon testing director Philip E. Coyle III to overcome this hurdle and recover from a test-hour deficit induced by such delays as cracked canopies.

The Air Force acquisition chief also repeated his assertion that the F-22 program is on track to meet both engineering and manufacturing development and production cost caps established by Congress. Some critics outside the Pentagon, such as the GAO, are skeptical that the aircraft will come in on budget.

Cohen: NMD Test Not Fatal

Failure of a key July 8 National Missile Defense test was a disappointment but not a catastrophic setback, according to Secretary of De-



USAF photo by TSgt. Lono Kollars

A C-130 from the 115th Airlift Squadron, Port Hueneme, Calif., waits for a fresh charge of fire retardant during firefighting efforts in northern California in July. The 115th is one of four military organizations that the Department of Agriculture and the US Forest Service call on to help suppress large wildfires.

fense William S. Cohen. Cohen said he could still urge President Clinton to proceed with NMD deployment, despite the fact that he had hoped the Pentagon would be able to achieve

two missile intercepts before making his recommendation.

So far, the NMD program has hit its target once in three tries. The next test is not scheduled until October.



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Cohen Briefs Senate on National Missile Defense

Pentagon chief William Cohen told Congress on July 25 that a limited National Missile Defense system would prevent nuclear blackmail against the United States and could "enhance deterrence and improve stability."

In remarks to the Senate Armed Services Committee, Cohen said the US faces a rising challenge from proliferation of long-range ballistic missiles and weapons of mass destruction.

"Our goal," he said, "is to provide protection to the American people against irresponsible nations, to prevent them from putting the United States in a position of being blackmailed and precluding us from taking action to defend our own national security interests."

He said Iran, Iraq, and Libya are working on building a long-range capability.

"It would have been helpful to have this test succeed," Cohen admitted to reporters July 10.

The frustration among Pentagon officials was palpable.

"The failure here [was] not the failure of the most sophisticated elements of it," said Cohen. "That's something that is not fatal to the program."

If nothing else, the test failure may give the Clinton Administration the political cover it needs to simply hand off a deployment decision to the next President.

Lawmakers from both parties have begun urging such a move. They point out that any decision now would be preliminary, at best.

"I've always thought the major decisions ought to be made by the next Administration," Sen. John McCain (R-Ariz.) told *Defense Daily* July 10.

The failure may also boost the stock of sea-based NMD, which would rely on upgraded Aegis destroyers and cruisers. "We ought to continue to let a thousand flowers bloom in sea-based systems," said McCain.

Why Did NMD System Fail?

The latest \$100 million NMD experiment went awry only seconds after the launch at 12:40 a.m. on July 8 of an interceptor missile from Kwajalein Atoll in the Pacific.

When the interceptor's booster began a corkscrew movement designed to cut speed and keep the rocket within the test range, the "kill vehicle" did not separate from the second stage, as planned.

Still encased in its payload capsule atop the booster, the kill vehicle interceptor splashed harmlessly into the ocean. It never received an electronic "go" signal that tells it to separate from the booster.

The target warhead, launched 20 minutes earlier from Vandenberg AFB, Calif., streaked untouched across the Pacific night sky.

Such payload separation is basic rocket science. The kill vehicle's ability to steer itself toward its intended tar-

get—a crucial aspect of NMD capability—never even became a test issue.

Other parts of the NMD system worked perfectly during the test. A prototype of the high-powered X-band radar that will help steer the kill vehicle, and the communications link that feeds the kill vehicle targeting information, both operated fine.

In fact, the X-band radar was able to determine that a decoy balloon accompanying the target warhead failed to inflate as planned.

"Others have said how easy it is to put up decoys, by the way. This is the proof that one decoy we were trying to put up didn't go up," said Jacques S. Gansler, undersecretary of defense for acquisition, technology, and logistics, at an after-action appearance with reporters.

The booster that failed was not even the type planned for the operational NMD system, pointed out Lt. Gen. Ronald T. Kadish, director of the Ballistic Missile Defense Organization. It

was a surrogate, a second stage culled from an old Minuteman booster.

The planned booster, which is being manufactured by Alliant Technologies and United Technologies, is now running about eight months behind schedule. Its first use is not expected to occur until the third quarter of next year, according to Gansler and Kadish.

Defense Money Bill Advances

On July 13 House and Senate conferees approved a final \$288 billion spending bill to fund the Department of Defense for Fiscal 2001.

The bill represents a nearly \$20 billion increase over the Fiscal 2000 defense appropriation and is about \$4 billion larger than the Clinton Administration's budget request.

"It is a good bill that shows strong support for our military and provides the necessary funding to address the severe strains the Department of Defense is facing, regarding maintenance and quality-of-life issues," said Sen. Ted Stevens (R-Alaska), chairman of the Senate Appropriations Committee.

The legislation includes a nearly \$1 billion increase for military health care, noted lawmakers.

"This legislation will pay for a roadmap for future implementation of permanent health care for retirees and restores pharmacy access for most of those former service members," said Rep. Jerry Lewis (R-Calif.), chairman of the House Appropriations Defense Subcommittee.

The bill fully funds the F-22 program and accepts House language



The remains of American soldiers reported as missing during the Korean War are carried from a C-17 by a joint honor guard at Hickam AFB, Hawaii, in July. The remains of an estimated 12 soldiers were repatriated at the ceremony and will undergo identification at the Central Identification Laboratory at Hickam.

USAF photo by TSgt. Paul Holcomb

requiring the Air Force to meet Congressional testing requirements next year before beginning Raptor production.

The legislation cuts funds for the Joint Strike Fighter program by \$150 million—a move that will effectively delay the program's entry into the engineering, manufacturing, and development phase by three months.

It includes money for five F-15s and four F-16s.

It creates a National Defense Airlift Fund, pays for 12 C-17s, and expands future airlift procurement.

Is USAF Shortchanging Depots?

The Air Force is struggling to comply with a Congressional mandate that at least 50 percent of its maintenance work be performed in-house at Pentagon-owned depots.

Earlier this year Air Force Secretary Peters promised legislators that the service would do its utmost to comply with the so-called 50/50 rule this year—despite the fact that he had waived Air Force compliance with the law in January.

But meeting the 50 percent guideline would require the transfer of roughly \$115 million in Fiscal 2000 maintenance work from private con-

tractors to Air Force or other public depots, according to a service memo obtained by *Inside the Air Force*. That is a difficult—some would say near-impossible—task.

To meet the guidelines next year would require movement of \$145 million in work.

"We do not believe it is feasible to meet the 50/50 requirement in FY00 and FY01 through the movement of numerous small dollar workloads," wrote Air Force acquisition chief Lawrence J. Delaney and Air Force Materiel Command chief Gen. Lester L. Lyles earlier this year in an undated memo reviewing the problem.

Poll: Public Yawns at Missile Defense

Missile defense is not a burning issue in the minds of US voters, according to the results of a recent *USA Today/CNN/Gallup* Poll.

Fifty-six percent of survey respondents said they have not closely followed the issue whether to develop a nationwide shield against limited nuclear missile attack.

Only 11 percent said they have followed the issue closely.

As to whether such a defense should be built, the answer was yes, by a narrow majority. Fifty-three percent supported construction of a ground-based interceptor system such as called for in current Pentagon plans.

Forty-eight percent of respondents said they had more confidence in Texas Gov. George W. Bush to decide the plan's fate. Thirty-seven percent said they trusted Vice President Al Gore more on the missile defense issue.

"As a result, we request each organization review their programs and identify one or more large volume/high dollar workloads to shift from contract to organic."

Congress passed the 50/50 law in the first place to protect jobs at big public military depots. Critics call the requirement classic pork-barreling, while lawmakers retort that it was a necessary move to counter the desire of services to outsource more and more of their maintenance work.

When Peters waived the requirement, as he is allowed to do under the law, he cited the stresses of Operation Allied Force and a rough transfer of work from two closing depots to open counterparts as reasons why the Air Force would outsource more than half of its maintenance work.

But lawmakers feel that the Air Force should have left itself room to maneuver in case of such emergencies. They complain that Pentagon procurement czar Jacques Gansler is encouraging outsourcing, regardless of its effect on depot management laws.

"We have seen no movement toward resolving this [Air Force] matter," said Rep. James V. Hansen (R-Utah) at a June 27 hearing on the issue.

Congress Says "No" to Base Closures

The Senate in early June killed an amendment to the Fiscal 2001 defense authorization bill that would have authorized two new rounds of base closures in 2003 and 2005.

Senators voted 63-35 against the provision, despite pleas from sponsors Sens. John McCain and Carl M. Levin (D-Mich.) that the Pentagon needs to save money for modernization and quality-of-life initiatives.

Savings from past base closure rounds will grow to \$7 billion annually by next year, said McCain.

"That is an important statistic because so many of the opponents of a

DoD Rolls Out New Anti-Harassment Guidelines

The Pentagon unveiled a new set of anti-harassment guidelines July 21. Officials said the aim of the 13-point action plan is to eliminate all forms of harassment in the military, including the harassment of those perceived as homosexual.

"Treatment of all individuals with dignity and respect is essential to good order and discipline," said Undersecretary of the Air Force Carol DiBattiste, chairman of the working group that produced the guidelines. The action plan further states, "Mistreatment, harassment, and inappropriate comments or gestures undermine this principle and have no place in our armed forces."

The central feature of the new plan is its point that military leaders should be told that information regarding sexual orientation is never necessary for a harassment complaint to be taken seriously.

Persons who receive such complaints must not ask about sexual orientation and persons who report harassment ought not disclose such information, according to the new guidelines.

Other main thrusts of the plan call for improved training to clear up misconceptions about the Pentagon's "don't ask, don't tell" policy; improved ways to measure the effectiveness of that training; and for making sure commanders know they are responsible for correct implementation of the policy.

The group that drew up the new policy was originally created by Defense Secretary William S. Cohen to review the Defense Department Inspector General's report on the harassment of perceived homosexuals. That report concluded that such harassment is widespread, and widely tolerated, in the US military.

Eighty percent of respondents to the IG survey said they had heard offensive speech or remarks about homosexuals within the last year. Eighty-five percent said they believed such remarks were, to a certain extent, tolerated.

Thirty-seven percent of respondents said they had witnessed an action toward a service member that they believed to be harassment due to perceived sexual orientation.

Ninety-seven percent of respondents to the IG office said they believed they had at least some understanding of the homosexual conduct policy. However, 57 percent said they had had no training on the policy.

base-closing round argue that money is not only saved but spent because of the cleanup costs that are associated with base closings," he said.

Opponents said they did not want to foreclose options for future administrations, which may have different priorities.

"Certainly, I would be willing to talk about this after the next Administration comes in. It wouldn't make any difference anyway because the first round wouldn't be until 2003," said Sen. James Inhofe (R-Okla.), who voted against the provision. He noted that savings from a new round wouldn't start to kick in until 2008 at the earliest.

Should DoD and VA Buy Drugs Together?

The US government could save up to \$300 million a year if the Departments of Defense and Veterans Affairs merged their massive prescription drug buying programs, according to a new audit by the Congressional General Accounting Office.

Last year DoD and the VA spent a total of \$2.4 billion to fill 140 million prescriptions. Those figures add up to a lot of leverage with drug companies, figure GAO auditors.

DoD and the VA have cooperated



USAF photo by MSGJ. Keith Reed

CMSAF Jim Finch talks with SrA. Chara Pina, from the US Air Forces in Europe Mission Support Squadron at Stuttgart, Germany, during a visit in July. The Air Force's top enlisted leader, Finch spent 10 days meeting with airmen in the UK, Belgium, Netherlands, Turkey, and Italy. He discussed quality-of-life issues, promotion rates, retention, pay, and the Expeditionary Aerospace Force concept.

on individual drug purchases in the past, and when they did, the savings were substantial, according to GAO. Combined, they were able to buy the blood-pressure medicine Capoten at \$1.17 for 100 tablets, as opposed

to the average wholesale price of \$90.84. For the ulcer-fighting drug Ranitidine, the negotiated price was \$13.57 per 500 tablets, as opposed to the standard wholesale of \$740. But only 2 percent of their pur-

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chases were joint. For the most part the agencies' "differing missions and cultures have created rivalries that make it difficult for them to act together."

Agency health officials disputed GAO's findings, saying that prospective savings were overstated.

In addition, they said it would be difficult to merge the two drug-buying systems, considering such differences as the VA's relatively limited choice of drugs and the Defense Department's greater emphasis on choice.

Officer Faces Charges in Fatal Accident

Capt. Darron A. Haughn of the 463rd Airlift Group, Little Rock AFB, Ark., faces charges of dereliction of duty and negligent homicide for his role in the C-130E accident that killed three airmen at Ahmed Al Jaber AB, Kuwait, last Dec. 10.

Brig. Gen. Richard J. Casey, 43rd Airlift Wing commander, brought the charges against Haughn following his review of the investigation results from the mishap. An accident board determined that the cause of the incident was crew complacency and failure to follow governing directives.

McGuire, Aldrin Enter Hall of Fame

Maj. Thomas B. McGuire Jr. and Col. Buzz Aldrin—both former Air Force pilots—were enshrined in the National Aviation Hall of Fame at a July 15 ceremony in Dayton, Ohio.

The hall of fame was made a national entity by an act of Congress in 1964. Its previous inductees include such pioneers of flight as Orville and Wilbur Wright, Jimmy Doolittle, Billy Mitchell, Curtis LeMay, Charles Lindbergh, and Chuck Yeager.

McGuire, a native of Ridgewood, N.J., ranks second on the list of leading Air Force combat aces of all wars. While flying P-38s for the 475th Fighter Group in the Pacific during World War II, McGuire downed 38 enemy aircraft. That number was exceeded only by fellow 475th pilot Maj. Richard I. Bong, with 40 victories.

McGuire was killed in combat in January 1945. He was posthumously awarded the Medal of Honor. McGuire AFB, N.J., was named after him in 1949.

Aldrin is a native of Montclair, N.J. After graduating from West Point, he entered the Air Force and earned his pilot wings in 1952. As an F-86 Sabre pilot in Korea, he flew 66 combat missions and destroyed two MiG-15 aircraft. He later served as an aerial gunner instructor at Nellis AFB, Nev., and with an F-100 squadron in Germany.

Though he had a distinguished Air Force career, Aldrin is best known for his contributions to the US space program.

He was named an astronaut in 1963. In 1966, he performed a record 5.5-hour space walk outside his Gemini 12 spacecraft. He also flew on Apollo 11 with Neil Armstrong and Michael Collins. He was the second man to set foot on the moon.

Aldrin returned to active Air Force duty in 1971 and was assigned to Edwards AFB, Calif., as commander of the Test Pilot School. He retired as a colonel in 1972.

The Air Force announced July 24 that a special court-martial convening authority, Brig. Gen. Paul J.

Fletcher, 314th Airlift Wing commander, has decided that an Article 32 hearing, similar to a civilian grand

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An F-16 is mounted on a display pole at Shaw AFB, S.C. It will be the centerpiece in a memorial park at the base. The aircraft has the tail number of the F-16C that crashed at an air show in March, killing Maj. Brison Phillips.

jury, and investigation are warranted. A specific date for the hearing has not been set.

F-16 Air Show Accident Report Released

Insufficient altitude and excessive airspeed led to the March 19 fatal F-16 crash during an air show at NAS Kingsville, Tex., according to a recently released Air Force accident report.

Investigators concluded that the pilot of the F-16, Maj. Brison B. Phillips of the 78th Fighter Squadron, Shaw AFB, S.C., focused too much on ground references just prior to the crash. He then began a split-S maneuver too close to the ground. Phillips was killed in the accident, which occurred six minutes into the demonstration.

Strong winds and an unfamiliar ground environment likely contributed to the accident, concluded the board. The show line at Kingsville, which has multiple and crossing runways, may have been difficult for Phillips to determine, leading him to begin the split-S from an unsafe altitude.

Phillips was a highly experienced pilot with more than 1,800 F-16 flying hours and 339 hours of combat time.

Air Force, CAP Sign Pact

The relationship between the Air Force and the Civil Air Patrol entered a new era July 12 with the signing of a cooperative agreement providing the service with more control over its volunteer civilian auxiliary.

Months of negotiations led up to the pact.

"The big winners should be CAP cadets and leaders in the field," said

Secretary of the Air Force F. Whitten Peters.

The agreement covers, among other things, enforcement and termination procedures; program management; financial responsibilities; claims resolution procedures; performance reporting; and certifications and assurances.

In February, CAP's national board approved the creation of a new board of governors that will include representatives from the Air Force, Congress, industry, and CAP.

The new board and the new agreement will result in a closer working relationship, according to Brig. Gen. James C. Bobick, CAP national commander.

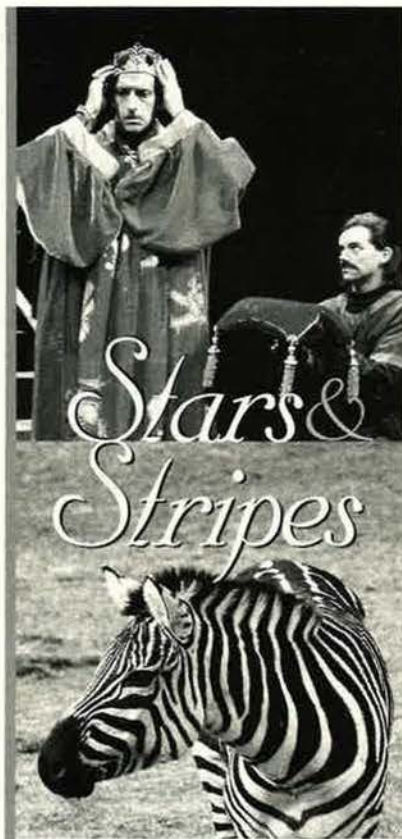
"We look forward to a long future of carrying out noncombat missions of our nation's foremost military service," said Bobick.

AFIT Service Commitments In Error

The discovery of widespread errors is leading the Air Force to review the active duty service commitments of officers who are attending or have attended the Air Force Institute of Technology, Wright-Patterson AFB, Ohio, since 1991.

Everyone who enrolled at a degree program though AFIT will have their record scrutinized. That includes officers whose course work was done through civilian colleges and universities.

So far, a review of the records of 1,200 officers has found a variety of errors. They include active duty service commitments that are too long, commitments that are too short, and



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Chinese Military: Red Star Rising?

House Armed Services Committee Chairman Floyd Spence (R-S.C.) declared July 19 that China is undertaking an "impressive" modernization of its armed forces.

The Chinese military has deployed hundreds of short-range ballistic missiles at sites opposite Taiwan, according to a recent HASC report. China is also developing two new intercontinental ballistic missiles, the DF-31 and the DF-41.

"China's military threats against Taiwan—and its buildup of ballistic missiles arrayed against Taiwan—should be taken seriously," said Spence.

China is also obtaining new fighter aircraft and missiles from Russia, noted the report. Russia is selling China at least two Sovremenny-class destroyers outfitted with SS-N-22 anti-ship missiles.

commitments that have not been written down in any official record.

All affected officers will have a chance to appeal the correction of their records to the Air Force Personnel Center, Randolph AFB, Tex. AFPC commander Maj. Gen. Richard E. Brown III will personally review each correction.

"We, the Air Force, made these mistakes and it's up to us to get this fixed. ... The first step in this process is to send personal letters to each of the more than 1,200 officers with missing, inaccurate, or otherwise flawed active duty service commitments to explain how AFPC will rectify the situation," said Brown.

Navy Bolsters Aviator Bonus

The Navy on July 12 announced it is sweetening its Aviation Career Continuation Pay program for Fiscal 2000 to increase pilot and flight officer retention.

Such a mid-year adjustment in incentives is proof that the service is eager to do all it can to convince separation-eligible aviators to stay in uniform, said officials.

"Senior naval and civilian leadership have recognized the very real retention challenges facing naval aviation today and for the foreseeable future by unanimously endorsing this robust bonus plan," said Vice Adm. Norbert R. Ryan Jr., chief of naval personnel.

The new plan allows eligible naval aviators to earn up to \$245,000 in bonuses for serving 25 years.

Under the plan, aviators who are bonus-eligible for the first time this year can sign a five-year contract that provides \$25,000 a year for pilots and \$15,000 a year for flight officers. Signees can opt for half the total bonus in a lump sum at time of agreement.

Shorter-term contracts that pay up to \$15,000 a year are also available.

The Navy moved now in part because there are more than 100 junior aviators who are either awaiting separation or have not yet declared their intentions for the year.

"This program is designed to help these aviators, in [whom] the Navy has invested so much, to decide to stay Navy," said Ryan.

Brown has the power to grant relief in cases where the Air Force made a mistake and enforcing the correct active duty service commitment would create an injustice.

"It's unfortunate that we made so many mistakes in active duty service commitments under the old regulation and enforcement system," said Air Force Secretary Peters.

The Air Force Instruction that was in force when the affected officers attended AFIT was confusing and difficult to interpret, according to Peters. It has since been simplified, he said.

News Notes

■ Air Force Gen. Hal M. Hornburg took command of Air Education and Training Command at a June 22 ceremony at Randolph AFB, Tex. He succeeds Gen. Lloyd W. Newton.

■ Secretary of Defense William S. Cohen has approved the wearing of the NATO Medal by US service personnel and civilians for operations related to Kosovo, beginning Oct. 13, 1998. The termination date is still open. Criteria include 30 days of continuous or accumulated service in the area of operations, among other things.

■ SMSgt. Lawrence Gray was recently named the SSgt. Henry E. "Red" Erwin Outstanding Enlisted Crew Member of the Year. Gray is a flight engineer with the 4th Special Operations Squadron, Hurlburt Field, Fla.

■ TSgt. Michael A. Windows has won the 2000 Pitsenbarger Award for bravery for saving four neighbors whose house caught fire after a propane tank explosion. Windows is assigned to the 436th Supply Squadron, Dover AFB, Del.

■ Air Force MSgt. David C. Anderson, Aiea, Hawaii, and Air Force MSgt. Rowena Reitan, San Antonio, were among the 12 US military Recruiters of the Year lauded by Deputy Defense Secretary Rudy de Leon at a June 29 ceremony. Recruiting is "one of the most challenging missions in the armed forces today," noted de Leon.

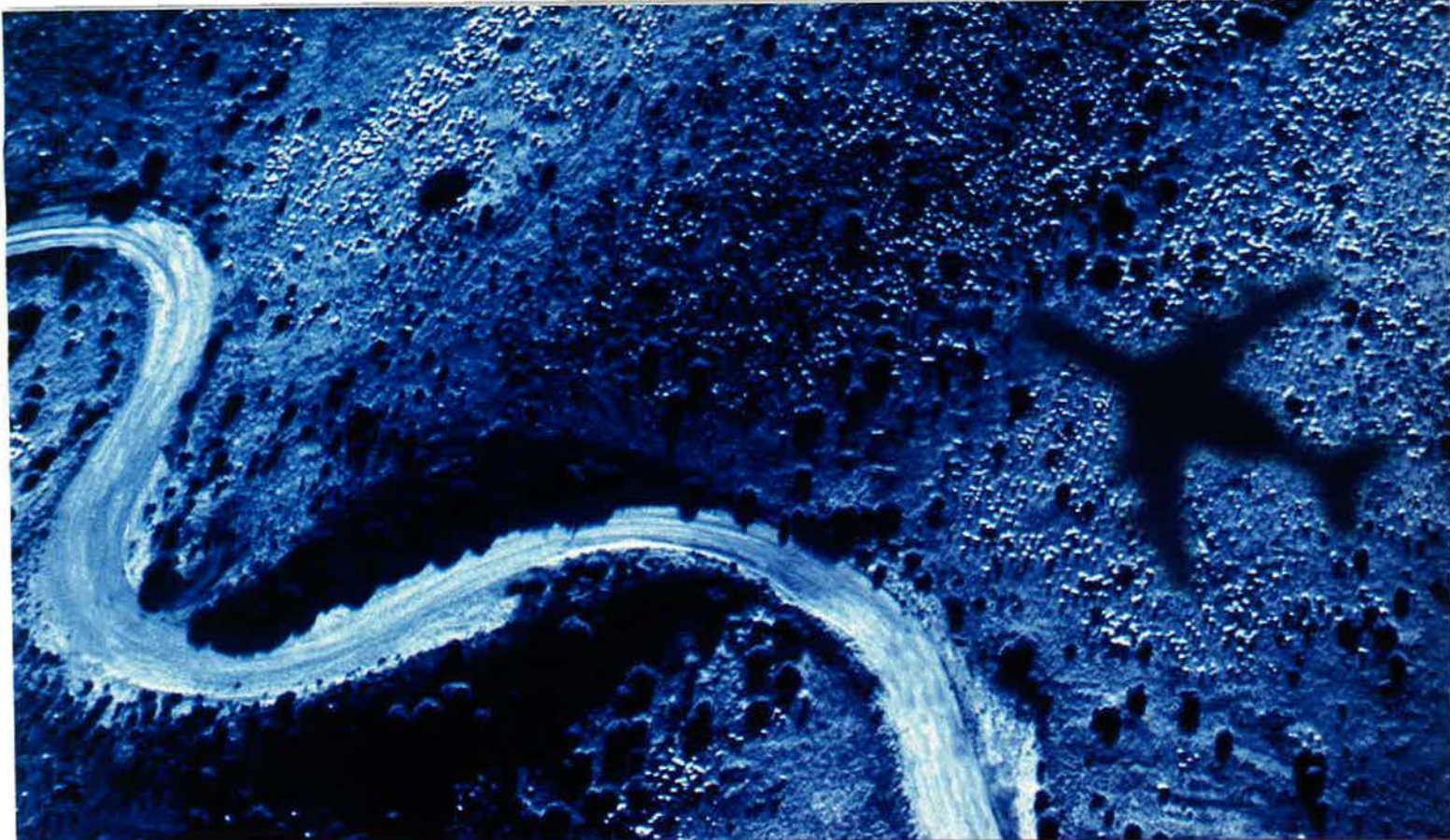
■ An aircrew from the 67th Special Operations Squadron has been named winner of the 1999 Brig. Gen. Ross G. Hoyt Award, which is presented annually by Air Mobility Command for the most outstanding air refueling effort. The crew was recognized for an 11-hour mission during Operation Allied Force that aided in the rescue of a downed F-117 pilot. Those honored were: Lt. Cols. James

Senior Staff Changes

RETIREMENTS: Charles R. Henderson, William J. Lake, Fred P. Lewis, David R. Love, Earl W. Mabry II, Maj. Gen. Thomas H. Neary, Susan L. Pamerleau.

NOMINATIONS: To be **General:** Charles R. Holland. To be **Lieutenant General:** Glen W. Moorhead III.

CHANGES: Lt. Gen. Thomas R. Case, from Cmdr., 11th AF, PACAF, Elmendorf AFB, Alaska, to Dep. CINC and C/S, PACOM, Camp H.M. Smith, Hawaii ... Gen. (sel.) Charles R. Holland, from Vice Cmdr., USAFE, Ramstein AB, Germany, to CINC, SOCOM, MacDill AFB, Fla. ... Lt. Gen. (sel.) John D. Hopper Jr., from Cmdr., 21st AF, AMC, McGuire AFB, N.J., to Vice Cmdr., AETC, Randolph AFB, Tex. ... Lt. Gen. (sel.) Glen W. Moorhead III, from Asst. Dep. C/S, Air & Space Ops., USAF, Pentagon, to Vice Cmdr., USAFE, Ramstein AB, Germany ... Lt. Gen. Norton A. Schwartz, from Dep. CINC, SOCOM, MacDill AFB, Fla., to Cmdr., 11th AF, PACAF, Elmendorf AFB, Alaska. ■



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Pankau and Ross Victor, Maj. Matthew Brand and John F. McGuire, Capt. Gregory Ervin and Eric Zimmerman, MSgts. Bruce Kingsbury, Michael Moran, and Robert Wood, and SSgts. Lonnie Allen, Gary Martin, and Billy Wilkins.

■ Brig. Gen. Robert D. Bishop Jr., former commander of the 437th Airlift Wing at Charleston AFB, S.C., and his wife, Mary, have been named the winners of the 2000 Gen. and Mrs. Jerome F. O'Malley Award. The award is presented annually to recognize the best wing commander and spouse team in the Air Force.

■ TSgt. Dave Noblin, 635th Air Mobility Support Squadron, Hickam AFB, Hawaii, has been named the Air Force Transportation Noncommissioned Officer of the Year for 1999. Among Noblin's accomplishments was the construction of a superior quality assurance evaluator program for \$50 million airlift contracts.

■ The staff sergeant promotion list released July 19 reflected an overall 51 percent selection rate for the 00E5 cycle—an all-time record setting percentage. The Air Force selected 19,605 of 38,654 eligible senior airmen for promotion to staff sergeant.

■ An electrical flight chief with the 77th Civil Engineer Division, McClellan AFB, Calif., has been awarded the Air Force Civilian Award for Valor. Kenneth L. Davis was honored for the quick action he took to save a colleague who had been set on fire by the explosion of an electrical panel.

■ Boeing began assembly of the

Scrapbook For Gulf War Veterans

They're among *Air Force Magazine's* most popular features—the "World War II Scrapbook" (September 1995), the "Korean War Scrapbook" (July 1996), and the "Vietnam War Scrapbook" (October 1996).

Now, we're gearing up for the "Gulf War Scrapbook," a candid look back at that conflict of a decade ago.

As with those earlier scrapbooks, the magazine seeks personal snapshots (not official photos) from current AFA members who are veterans of the Gulf War. We will cheerfully accept pictures from all members—you must be a current AFA member to qualify—but we're especially interested in those of enlisted personnel and junior officers. The pictures will be copied and originals returned promptly.

Please mail photos and detailed descriptions by Nov. 15 to *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Include a telephone number/e-mail where we can reach you. Envelopes should be clearly marked "Gulf War Scrapbook."

first C-17 Globemaster III for lease to the United Kingdom Royal Air Force on June 28. In May the UK announced its intention to lease four C-17s to meet its near-term strategic mobility requirements.

■ KIDZ PLUS, a music and dance recreational program for special-needs children run by Families United at McGuire AFB, N.J., was among the winners of Newman's Own Awards for Excellent Military Community Service honored in a June 16 ceremony at Andrews AFB, Md. The \$5,000 grant accompanying the award will allow the program to continue operations. It had closed due to lack of funds.

■ On July 14 the 60th Supply Squadron, Travis AFB, Calif., was awarded the 1999 Maj. Gen. Warren R. Carter Daedalian Supply Effectiveness Award. The Daedalian is the highest honor

the Air Force bestows on any supply squadron.

■ Space Command's Y2K public affairs program has been recognized by the Public Relations Society of America with a Silver Anvil Award of Excellence for crisis communications. The joint effort by NORAD, US Space Command, and Air Force Space Command was designed to reassure the public that all command mission-critical systems were Y2K compliant.

Obituaries

Gen. James Ferguson, who was commander of Air Force Systems Command at his retirement in 1970 died July 13 in Venice, Fla. He was 86.

Retired Maj. Gen. Edwin R. Chess, 87, died June 13 in San Antonio. He was chief of the Air Force Chaplain Service, 1966-70. ■

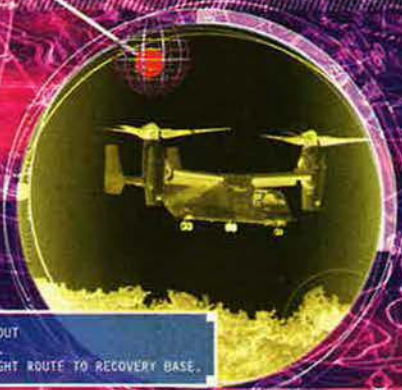
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Behind the placid surface of the vision statements, several fires are burning briskly.

Visions

By John T. Correll, Editor in Chief

UNTIL the past decade or so, nobody had even heard of vision statements.

They grew out of the Total Quality Management movement of the 1980s and have become an inextricable part of corporate culture. Every large organization has one. So do the Joint Chiefs of Staff and each of the armed services.

Vision statements express a sense of identity, purpose, and direction. And since top management tends to take a personal interest in them, they are often a good indication of an organization's innermost beliefs and intentions.

In May, the Joint Chiefs published "Joint Vision 2020," updating their previous statement from 1996. Both the Air Force and the Army have put out new vision statements as well in the past year, and a revised Navy vision is circulating in draft form.

In theory, the visions of the individual services are derived from the joint vision and fit together like a matched set. In actuality, what they do, mostly, is coexist.

Beneath the placid surface, several fires are burning briskly.

1. Joint Vision 2020

In the inspirational style of vision statements, Joint Vision 2020 calls for “full spectrum dominance” and a joint force that will be “persuasive in peace, decisive in war, and pre-eminent in any form of conflict.”

That is standard stuff, built essentially on the assumptions four years ago in “Joint Vision 2010” that the United States would not only keep but also expand its technological advantage.

What’s new this time around is that information operations are elevated to the same level of importance as dominant maneuver and precision engagement.

On this point, the new joint vision pulls out all the stops.

“Operations within the information domain will become as important as those conducted in the domains of sea, land, air, and space,” it says, adding that “information operations may evolve into a separate mission area requiring the services to maintain appropriately designed organizations and trained specialists.”

Even so, the vision warns that information superiority is “transitory in nature” and is not an end in itself. Superior information must be converted to superior knowledge to achieve “decision superiority”—better decisions “arrived at and implemented faster than an opponent can react.”

There is also a puzzling omission in the new document.

A leading point in Joint Vision 2010 in 1996, repeated in the follow-on “Concept for Future Joint Operations” in 1997, was that “we should be increasingly able to accomplish the effects of mass—the necessary concentration of combat power at the decisive time and place—with less need to physically mass forces than in the past.”

That point has disappeared without a trace in Joint Vision 2020. In its place are assorted nuggets about the rapid massing of forces. (See box.)

The strong suspicion is that the change demonstrates the influence on the Joint Staff of those with a vested interest in the massing of forces. If so, it culminates the sniping campaign of recent years against

The Going and Coming of Mass

Joint Vision 2010

“Instead of relying on massed forces and sequential operations, we will achieve massed effects in other ways.”

“With precision targeting and longer range systems, commanders can achieve the necessary destruction or suppression of enemy forces with fewer systems, thereby reducing the need for time-consuming and risky massing of people and equipment.”

“[W]e will be increasingly able to accomplish the effects of mass—the necessary concentration of combat power at the decisive time and place—with less need to mass forces physically than in the past.”

Joint Vision 2020

“Overseas or US-based units will mass forces or effects directly to the operational theater.”

“The capability to rapidly mass force or forces and the effects of dispersed forces allow the joint force commander to establish control of the battlespace at the proper time and place.”

“Beyond the actual physical presence of the force, dominant maneuver creates an impact in the minds of opponents and others in the operational area. ... In a conflict, for example, the presence or anticipated presence of a decisive force might well cause an enemy to surrender after minimal resistance.”

Completely purged from Joint Vision 2020 is the idea that the effects of mass might be achieved without the actual massing of forces. This suggests a Pentagon staff victory for those who have a vested interest in the massing of forces.

technology and the “revolution in military affairs.” To some extent, it would also mark the return to the traditional force-on-force models of attrition warfare.

A curious passage in the new joint vision says that “the presence or anticipated presence of a decisive force might well cause an enemy to surrender.”

That sounds very much like the claim of some Army officials and enthusiasts that it was the presence of an unengaged Army ground force in Albania, not the 11-week air campaign, that caused the Serbs to surrender to NATO in 1999.

For its part, the Air Force seems confident in its own capabilities and expresses support for the revised joint vision.

“We believe that Joint Vision 2020 provides the Air Force the latitude to do what we need to and can do to contribute to full spectrum dominance for the nation,” said Maj. Gen. John W. Brooks, special assistant to the Chief of Staff for the development and communication of Air Force vision, policy, and plans.

2. Air Force 2020

The first of the military vision statements—although it was not called that at the time—was a white paper, “Global Reach—Global Power,” published by the Air Force in June 1990.

It predicted that “advanced technologies will provide United States forces decisive capabilities against potentially well-equipped foes at minimum cost in casualties.” It said that air operations could support land campaigns or sea campaigns, but could also project power directly in an air campaign.

Within a year, events of the Gulf War had confirmed all of that, but by 1996, the Air Force felt the need for a change and published a new vision called “Global Engagement.” The best remembered line of it said that “we are now transitioning from an air force into an air and space force on an evolutionary path to a space and air force.”

That was a hard proposition to live with. It was taken to mean that

airpower would gradually decline in favor of space power. It was also interpreted to mean, in the words of Sen. Bob Smith (R-N.H.), that tomorrow's space force would be paid for by "shedding big chunks of today's Air Force."

The reality was that airpower was becoming more important to military operations, not less so, and that the requirement for both airpower and space power was increasing. To the discontent of some space advocates like Senator Smith, the Air Force began talking about integration of air and space into an operational aerospace regime.

"Air Force Vision 2020: Global Vigilance, Reach, and Power," published June 19, confirms the service's commitment to an integrated aerospace domain that "stretches from the Earth's surface to the outer reaches of space in a seamless operational medium."

Global reach and power are longstanding elements of the Air Force credo, but "global vigilance" is new this time. "By vigilance, we think in terms of the Air Force being on watch across our domain," Brooks said. "The aspect of it that people may think of first is surveillance. That's an important part of it, but it's not the only part. It's also F-15s on combat air patrol in Northern Watch. It's security forces on watch at Tuzla. It's missileers."

Secretary of the Air Force F. Whitten Peters and Gen. Michael E. Ryan, the Chief of Staff, were closely involved with development of the new vision, and all of the Air Force's four-star generals took part several times in the scrub down.

The emphasis is on effects "regardless of where platforms reside, fly, or orbit."

"It doesn't say command goes to people who are pilots," Peters explained. "It doesn't say command goes to people who are just space people. It says it goes to the brightest people in the Air Force we can find who understand all these types of technologies and how to use them effectively as a basis for systems."

Brooks said the Air Force was building on rather than completely throwing out the ideas in the 1996 vision statement. "Global Engagement made a useful point in causing us to think in that sense," he said. The issue is not "whether the capa-

bilities are largely air or largely space" but how best to put them together. However, "will they be more space capabilities in the future than they are now? I believe they will be."

The Air Force contributes about 90 percent of the resources for the military space program—although it never received any budget increase for doing so—but it does not have clear title to the space mission.

Later this year, a Congressionally mandated panel will make recommendations on the best way to organize the military space effort.

Expeditionary Force

The Air Force has grouped its combat forces into 10 Aerospace Expeditionary Forces (AEFs), two of which will be deployed or on call at any given time.

The expeditionary concept was designed for two purposes: to provide tailored forces to theater commanders and to put some stability and predictability back into the lives of Air Force people who go on the deployments.

The concept did not officially go into effect until October 1999, but the Kosovo air campaign earlier that year provided a test of it. In addition

to forces operating from the United States—notably, the B-2 bombers—and from existing bases overseas, the Air Force established 21 expeditionary bases where there had been no bases before.

The vision statement says that an AEF task force, packaged for a smaller-scale contingency, "can provide intelligence, surveillance, reconnaissance, and command and control of aerospace forces over an area roughly half the size of Texas." It can also provide air superiority and strike about 200 targets a day.

As capabilities improve, the Air Force will be able to deploy an AEF in 48 hours, "fast enough to curb many crises before they escalate," and up to five AEFs in 15 days. The Air Force also proposes to expand the battlespace an AEF can control and increase the number of targets it can strike per day.

The Air Force seeks to reduce its "forward support footprint" by having the deployed forces use links to space systems to "reach back" to bases in the United States for combat support.

Inclusiveness is a recurring theme in the vision statement. Just as "vigilance" means all of the aerospace forces on watch and on guard, not just those engaged in intelligence, surveillance, and reconnaissance, the AEFs are part, but not all, of the expeditionary concept.

"Airmen from all across the Air Force contribute to our ability to deploy and sustain powerful aerospace capabilities," Ryan said. "Air expeditionary forces are an important part of that, but so are the capabilities—ranging from the mobility to get them where they need to go to the acquisition, logistics, health care, education, and training—they depend on."

Ryan uses the term "AEF prime" to refer to operational capabilities, such as those of Space Command, that are essential to a deployment but which are not an organic part of the AEF.

The new vision statement says that aerospace power can "strike directly from the United States or from regional bases." With advanced capabilities, it says, "we'll provide the ability to find, fix, assess, track, target, and engage anything of military significance anywhere. We'll transition from the ability to do that in



hours to the ability to do it in minutes."

The Air Force will continue "providing the mobility to rapidly position and reposition forces in any environment, anywhere in the world."

3. Soldiers On Point for the Nation

When the Army adopted its previous vision statement in 1996, it saw no need to be humble. The contribution of land forces, it said, was "to make permanent the otherwise transitory advantages achieved by air and naval forces."

In aid of living up to that, the Army launched a project to develop a powerful "Army After Next" by 2025, getting there by means of a "knowledge-based" intermediary step in 2010 called "Force XXI."

The Army has now pulled the plug on all of that and is looking at a radically different future.

For many years, both the Army and many leaders assumed that the land battle would be the central focus of any conflict. The Gulf War of 1991 called that into question. Army boosters claimed that the 100-hour ground campaign was the decisive factor, but the general consensus was that the 38-day air campaign, which took most of the starch out of the Iraqis, was the pivotal element.

Harsher questions arose from Operation Allied Force in the Balkans in 1999. Army forces were not engaged, although it deployed a brigade-sized unit with 24 Apache helicopters to Albania. Army advocates continue to argue that the reason the Serbs gave up was not the air campaign but rather the intimidating presence of the helicopter task force.

By most estimates, it would have taken several months or longer to prepare and execute a ground invasion.

In August 1999, the Army took two warning shots from defense officials. Deputy Secretary of Defense John Hamre said that "if the Army only holds onto nostalgic versions of its grand past, it is going to atrophy and die." Jacques Gansler, undersecretary of defense for acquisition and technology, told an Army audience that crises of the future will call for a response within hours, not days, and that "massed forces will be re-



placed by massed firepower, precisely placed on targets."

The Army was in danger of becoming marginal. Gen. Eric Shinseki, who became Chief of Staff in June 1999, acknowledged that the Army's heavy divisions were too cumbersome for deployment and its light divisions lacked lethality and staying power.

In a landmark speech to the Association of the US Army Oct. 12, 1999, Shinseki declared a new vision.

The Army would rebuild around lighter divisions and strike brigades. A combat brigade would be able to deploy anywhere in the world in 96 hours. A division could be on the ground in 120 hours, and five divisions in 30 days.

The heavy tank would give way to a 20-ton combat vehicle that runs on wheels rather than tracks and which can be transported by a C-130.

The new Army vision statement, "Soldiers On Point for the Nation," calls the force Shinseki described the "objective force." It says the Army will keep portions of the "legacy force" for the next 15 years and bridge the gap between the two with capabilities developed in an "interim force."

Money and Other Complications

The Army has canceled some programs to help pay for this but is still about \$35 billion short. Secretary of the Army Louis Caldera, meeting with the Defense Writers Group in March, said that decision-makers should look at the cost "to transform the Army once in a generation" compared to what the other services were planning to spend on aircraft programs. "You've got to ask the question, where is the smart investment for the nation?"

"No wonder the Army wants more money," said Jeffery Barnett, writing in *Armed Forces Journal International*. "It wants both transformation and the status quo. It wants to modernize its heavy divisions until the objective force is fielded throughout the Army. This will require funding two forces at once."

Finances aside, Shinseki and Caldera have encountered flak from inside the Army. The heavy armor community is not enthusiastic about replacing tanks with light combat vehicles that run on wheels. The helicopter forces feel left out of the new vision.

Other questions await answers. The practicality of putting five ground divisions into a combat theater in 30 days is debatable unless the Air Force and the Navy have established air supremacy and have weakened the enemy considerably. An enemy of a size to call for five Army divisions would take a lot of weakening.

That leads to the problem of airlift. To get to the fight early, the Army wants priority on a large share of the Air Force's airlift capacity. An Army staff paper, circulating in the Pentagon several months ago, complained about the "large lift requirement for Air Force wings" early in a conflict.

Indeed, the Air Force would need airlift to move its own units, especially the five AEFs in 15 days promised by the new vision statement. The Air Force says it takes about 16 airlift sorties to support deployment of a fighter squadron with 24 aircraft to an established base like Aviano in Italy. Deployment to a bare base would take additional airlift.

Moving the Army's 24 Apache helicopters, tanks, and troops of Task Force Hawk from Ramstein AB, Germany, to Tirana, Albania, in 1999

took 30 days and 542 C-17 airlift missions.

On a happier note, the Army and the Marine Corps seem to have buried the hatchet. The Army used to resent the Marine Corps as being "a second land army," and the Marines worried that the Army wanted to take away their mission.

After a meeting last year with Gen. James Jones, Commandant of the Marine Corps, Shinseki announced that "we have both agreed that neither of us have been on a battlefield so crowded that you couldn't have more capability there." The Army and the Marine Corps have since formed a working group to enhance cooperation between the two land forces.

4. The Future ... From the Sea

It has been a long time since the last big battle at sea, and in recent years, the Navy has turned its attention toward the shore.

The first big step was in 1992, when the Navy shelved its ambitious "Maritime Strategy" and replaced it with a concept called "... From the Sea," which concentrated on operations along the littorals and coastlines of continents.

That gave way, in turn, to a revised vision statement entitled "Forward ... From the Sea" in 1994. The main difference was that the new vision put more emphasis on forward presence. The concept was updated in 1997.

A new vision statement, "The Future ... From the Sea," has been circulating in draft this year to Navy reviewers. It says it is building on the "landward focus" of previous

visions and that "the Navy and Marine Corps are on course with a heading landward."

Defense News reported in March that a new strategic vision, "Power and Influence ... From the Sea," was the brainchild of Secretary of the Navy Richard Danzig and that in it, the sea services would play "a more central role in operations ashore."

The paper that *Air Force Magazine* downloaded from a Navy Web site appears to be a subsequent version of that.

It says that "by remaining forward, naval expeditionary forces guarantee that the landward reach of US influence is present to favorably shape regions of vital interest."

These forces "project power deep inland." How they do so is not specified, but the reference is presumably to sea-launched cruise missiles since it would be a risky task for the Navy's nonstealthy F/A-18 fighters.

Naval forces will "project a defensive umbrella landward" to include "air and missile defense; intelligence, surveillance, and reconnaissance capabilities; naval surface fires; and precision strike."

Much of what the draft vision says—although not the declaration of being "on course with a heading landward"—is also found in a current Navy program guide called "Vision ... Presence ... Power."

Hitting on the theme of access that permeates the draft vision as well, the program guide says that "naval forces can sustain combat-credible presence in forward areas without the need for expensive and inherently vulnerable land-based regional support infrastructures."

This is the familiar Navy pitch that Air Force and Army forces will be denied theater bases in the event

of conflict and that only the Navy can provide access to foreign battle areas.

That problem was anticipated by the Air Force's first vision statement in June 1990, which said that "when the interests of allies are threatened, basing will normally be made available." And so it happened, both in the Gulf War and in Kosovo.

The Navy does acknowledge that its own forces will be "challenged" by such anti-access capabilities as land-based cruise missiles and space-based satellite targeting.

The emphasis on forward presence dates back to 1993, when the Bottom-Up Review said that 10 carriers would be enough for the Navy to carry out its wartime tasking but that additional carriers were justified by a naval-oriented presence mission. The decision of the BUR, confirmed by the Quadrennial Defense Review in 1997, was to allocate the Navy 12 carriers, the number it has today.

Seeing no reason to challenge either the logic or the results, the Navy defines itself by its peacetime mission instead of its wartime requirements. In February, Adm. Jay Johnson, then the Chief of Naval Operations, told Congress that "the sizing and shaping metric for the United States Navy is not two MTWs [major theater wars], it's the day-to-day business that we're asked to conduct out forward."

The Navy is now trying to parlay the presence mission into a big increase in force structure.

Pressed by powerful Navy supporters in Congress, Secretary of Defense William S. Cohen signed on June 26 a report on "the Department of Defense's Naval Vessel Force Structure Requirements."

It says that covering "all likely joint and combined warfighting requirements, overseas presence, and support to contingency operations" would call for 15 big-deck aircraft carriers—up from 12 now—plus a 20 percent increase in attack submarines and a 10 to 15 percent increase in surface combatants.

Cohen presented the list as an option instead of a budget request, but so far, none of the other services has been favored with a similar statement from the Department of Defense about their force structure requirements. ■

Visions Online

■ "Joint Vision 2020," May 30, 2000
www.dtic.mil/jv2020

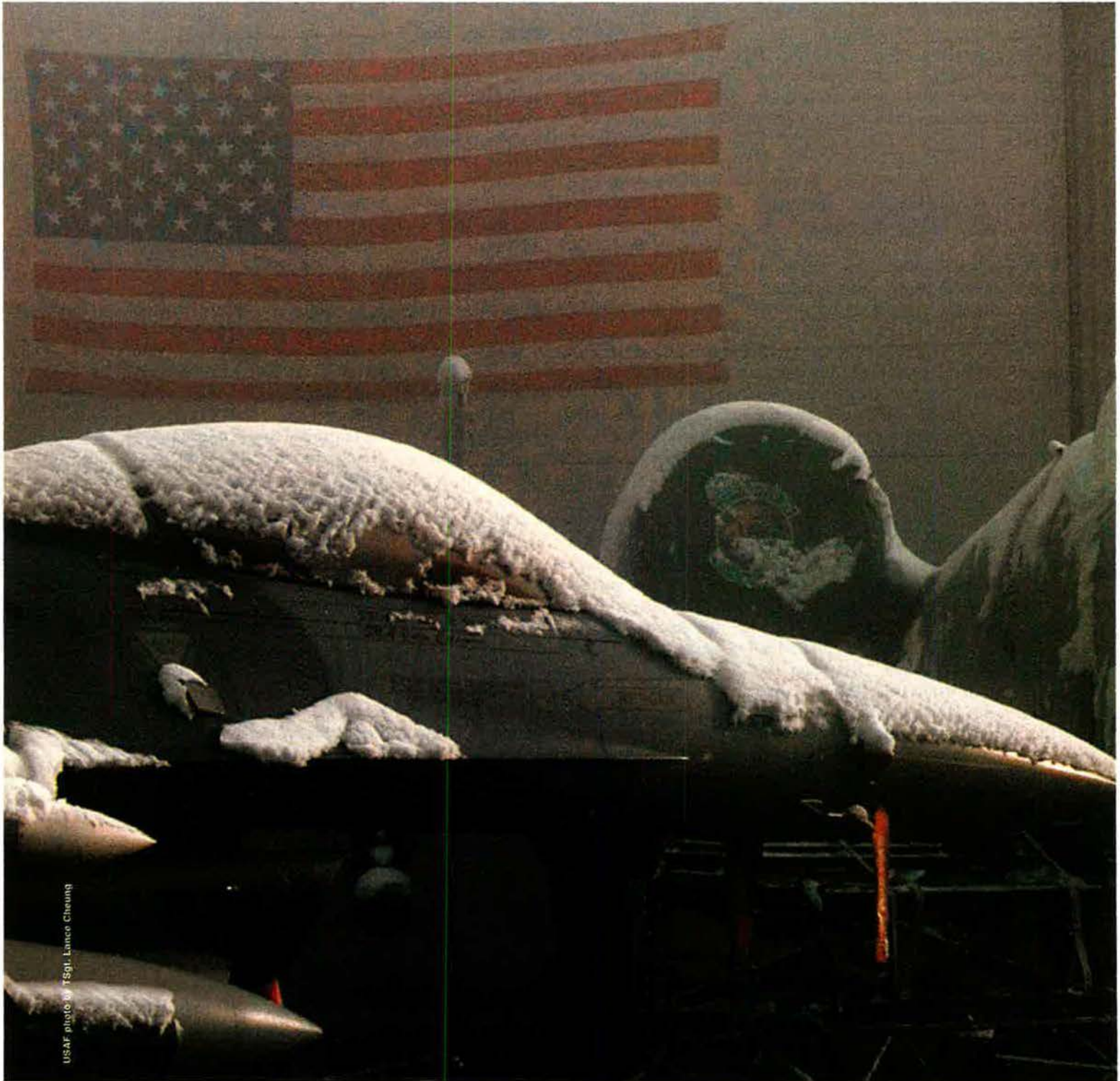
■ "Air Force Vision 2020: Global Vigilance, Reach, and Power," June 19, 2000
www.af.mil/vision

■ "The Army Vision: Soldiers On Point for the Nation ... Persuasive in Peace, Invincible in War," Oct. 12, 1999
www.army.mil/armyvision

■ "Naval Vision 2020: The Future ... From the Sea," Draft, March 2000
www.hq.navy.mil/n3n5/rrmo/NV2020.htm

The Chief sums up the Air Force's situation heading into the Quadrennial Defense Review.

The Needs of the Force



USAF photo by TSgt Lance Cheung

By John A. Tirpak, Senior Editor



At the outset of another Quadrennial Defense Review, the Chief of Staff of the Air Force believes that having enough equipment and personnel to fight two Major Theater Wars in quick succession is still a good yardstick for sizing US forces. It's as good as any other, at least.

Gen. Michael E. Ryan, in a wide-ranging discussion with defense reporters in Washington, D.C., on June 21, said the two-MTW standard seems to "capture most" of the requirements for dealing with threats on the scale of North Korea and Iraq, as well as handling smaller military tasks worldwide.

"I still think it is a good concept" around which to size the US armed forces, Ryan said, though he added he would like to see more attention paid to the size and number of Smaller-Scale Contingencies that the Air Force has routinely been assigned to cover since the end of the Cold War.

Specifically, he said, he would like to see the US plan for those "routine" operations first, and then add forces sufficient to conduct the two major regional conflicts.

Ryan also discussed readiness and industrial base issues, Aerospace Expeditionary Forces, the impact on Air Force airlift of the new Army "transformation" effort, USAF's strategy for its next bomber-type combat air vehicle, unmanned aircraft, tactical modernization, and the prospect of a new space force.

Ryan said a seeming thaw in relations with North Korea did not undercut either the two-MTW strategy or the rationale for deploying a national missile defense.

While quick-succession wars with North Korea and Iraq or Iran are the two notional MTWs used for shaping the force, the strategy is not dependent on those specific scenarios,

Ryan said. He noted that last year's conflict in the Balkans was "a Major Theater War for the United States Air Force," in that it consumed almost all USAF's assets that would be devoted to a single MTW.

Stretched "Pretty Darn Tight"

Had a second theater war erupted, the Air Force would still have been first in with airpower to carry out the national strategy of halting the second aggressor while the first war was being won.

"We could have gone to the second theater," Ryan asserted. However, "we were stretched pretty darn tight."

As for missile defense, Ryan noted that North Korea is not the only nation the US needs to be worried about.

"There are other nations that are striving to be able to deliver weapons of mass destruction with intercontinental-range ballistic missiles," he said, noting that North Korea would not be alone in possessing such a capability within the next two decades.

Ryan said that a national missile defense system should be pursued, but he warned that it should be paid for with new monies that aren't drained away from existing accounts. The force is thoroughly employed and already struggling with insufficient resources, he added.

"We are always concerned about priorities," he explained. "We all agree that the missile [defense] system, when it is feasible, ought to be pursued, ... but we've always said that the missile defense system ought to be [funded] over and above the needs that we currently have."

Ryan pointed out that Air Force readiness "is now at the lowest ... state we've been in years."

Readiness is a key concern for USAF because, typically, "we are the ones who are demanded to be ...

Relations with North Korea may be thawing slightly, but the Air Force's Chief of Staff sees no reason to drop the two-Major Theater War strategy around which the US builds its military. Kosovo proved that MTWs tend to erupt in unexpected places.

first in" when a crisis erupts, noted the Chief of Staff. "We are the early responders in both theaters" of the two-MTW construct, he said, so readiness for the Air Force is also vital to all forces that would follow it into combat.

USAF doesn't have the luxury of getting into a readiness slump that could be fixed over time if a threat began to emerge, Ryan said, since it is expected to be an almost instant-response force.

Substantial funds are being applied to fix spare parts shortages, to try to take care of aging airplanes, and to improve the quality of life for the troops, who are getting harder to hold onto in a booming economy, he asserted.

USAF is raiding the accounts for upgrade, maintenance, and modernization of its real property to fix the readiness problems, he said.

"We are on a 250-year replacement rate for our infrastructure because we took a conscious decision to do that, because we are short [of funds in the other areas]," he said. The Air Force leadership told Congress last year it was \$3.5 billion shy of the figure needed to "turn around readiness and get us back to a fully ready force," Ryan pointed out.

"I am worried about the level of funding for defense in general," he added.

The new Air Force vision statement, recently published, is called "Global Vigilance, Reach, and Power."

It describes how the service has reshaped itself, since the end of the Cold War, into an expeditionary force capable of moving out quickly and setting up forward bases from which it can rapidly launch a devastating air attack on an enemy.

200 Strikes Per Day

Ryan confirmed that the Air Force now anticipates it can deploy one Aerospace Expeditionary Force—about one-tenth the Air Force's total combat capability—in about 48 hours and five AEFs in only 15 days. Further, he said, a single AEF would be able to attack 200 targets a day across an area half the size of Texas, as well as provide air superiority. USAF could go farther and deeper with a greater number of tankers and bombers thrown into the mix.

"Within our AEFs, we have a sufficient number of aircraft—including F-16s, F-15Es, bombers—to be able to do that number of targets per day in a surge capacity; that is, we have them on a 12-hour shift."

The "five-in-15" construct is not a strategy but rather a mechanism "that allows you to visualize what an AEF does for you," Ryan said. "About five AEFs [or about 1,000 attack sorties per day] is what you need per Major Theater War," he added. Moreover, the capabilities of the AEFs are not simply additive but increase with greater depth of Intelligence, Surveillance, and Reconnaissance assets, greater numbers of strike air-

craft, and greater numbers of longer-ranged aircraft. Based farther from the battle area, the force would not be able to strike as many targets; if closer, the number goes up.

"Distance takes away from the number of sorties that you can effect because it takes longer to [fly] them," Ryan noted.

The 48-hour deployment time for one AEF assumes two prepared operating bases are available for USAF aircraft to use.

The five-in-15 clock also assumes the availability of pre-positioned stockpiles of ammunition, spare parts, fuel, and other necessities, as well as "unconstrained lift," Ryan said. To move five full AEFs in two weeks would demand the use of most of Air Mobility Command's transport airplanes. Sharing the airlift with other branches of the armed forces would mean a slower deployment time. He noted that the other forces could also make use of sealift assets and land transportation that is also available to get to the fight.

The Army is in the midst of defining a new transformation strategy for itself that calls for lighter forces and faster deployment times, chiefly in response to its being left out of last year's Operation Allied Force. One reason the Army did not take part is that it is too heavy to get to the fight soon enough to make a difference. (Another, perhaps more critical reason, is that US political leaders understood that the Army could take heavy casualties in a Balkan operation.)

Ryan declined to comment directly on the Army's transformation strategy but did offer that "we won't see an Army transformation force for some years."

The new Army vision "that requires them to be more mobile and agile ... is what the world needs for the future," he asserted. However, this vision of the Army requires a degree of airlift that Ryan said is unaffordable and unrealistic to expect.

"We will never have enough lift—ever—to do two simultaneous theater wars. We can't afford to go there," he said.

A new review of airlift requirements—the Mobility Requirements Study-2005, or MRS-05—is due to be completed this fall. Ryan jokingly observed that he's sure it won't

USAF photo by SSGT. Jim Varhagyi



The Air Force is getting lighter and leaner, the better to move out quickly when contingencies arise. Ryan acknowledges a dangerously low readiness rate, though. Better spares funding and a pay raise should help.



New B-2 Shelters

USAF is in the process of buying portable shelters that it can deploy to a forward operating location. The shelters allow the B-2's sophisticated coatings, tapes, and other stealth surfaces to be maintained in the field.

He said, "If we had our druthers, we would rather forward deploy the airplane to get more sorties out of it rather than go to long-duration sorties," such as were flown in Allied Force.

Beddown locations for the B-2 might include Guam, Diego Garcia, and sites that already host deployed B-52s. Enough will be bought to preposition some and for others to be carried along as part of a deployment package. The shelters are "not

call for any less airlift than is now in the force. The current stated requirement is for 49 million ton-miles a day to be moved; for every million ton-miles a day added, he said, another C-17 would have to be bought.

Toward a New Bomber

Congress has complained that the Air Force is moving too slowly to develop a follow-on bomber to the B-2, especially since the workhorse B-52s now in service are already nearly 40 years old and the B-2 line has been closed. Ryan, however, said the Air Force will not move toward a replacement bomber until it has technology that would afford a "quantum leap" forward in long-range strike capability.

The technical breakthroughs necessary to justify work on a new bomber are not yet in hand, he stated.

"That is why we think in the next 10 to 15 years we need to continue to work on those technologies very hard to give us the next jump," said Ryan. He noted that this leap should be similar to the advance from the B-1 to the B-2. That next jump will be the basis of the next attack aircraft, Ryan said.

"It will have to do with propulsion, ... with improvement in the signature of the airplane, ... radar, ... visual, heat. ... We don't know whether that airplane is orbital. It could be suborbital. It may not be manned. It could have energy weapons on it."

The B-2, he added, has limitations that mean it will always require "sup-



The Army's new strategy envisions faster deployments of lighter forces, but Ryan wonders where all the lift will come from. A new study is expected to call for more C-17s, but it would take a lot to make up the existing shortfall.

port of command and control and communications systems." The B-2, though "a wonderful war machine," is subsonic and can "only go at night" to minimize risk to its crew.

"It doesn't do all the things we want it to do," Ryan asserted.

"We want something that we can ... get there very rapidly, that may be able to go autonomously," said the Chief of Staff. "We are looking at something that has maybe a hypersonic [speed]."

Ryan insisted that the technological change underlying the next strike platform "has got to be a quantum leap, not just a small incremental leap."

very expensive" and will boost the combat effectiveness of the B-2, Ryan claimed.

In the next 10 years, the Air Force will be concentrating on adapting emerging technologies—particularly in weapons, avionics, and the ability to redirect bombers in flight—for the legacy bombers: B-52s, B-1Bs, and B-2s.

Ryan sees "good reason to worry about the health of the defense industrial base," on which the Air Force relies for its "asymmetrical advantages" in warfare. He believes the industrial base has "shrunk to a worrisome level" and should be taken into account when the US awards the

Joint Strike Fighter contract, but only after a clear technical winner has been chosen.

The timetables on the JSF and the F-22 fighter are of high importance to USAF, Ryan said. He noted that new surface-to-air missiles like the SA-10 and SA-12 will likely be widely deployed "in the next five years," and new threat fighter airplanes will be available that will pose a serious risk to USAF's bombers and sensor aircraft in particular.

"We can never send our bombers or for that matter our ISR [Intelligence, Surveillance, and Reconnaissance] fleet forward to a point where they are in jeopardy from these [threats]," Ryan insisted. "We need an aircraft that is agile enough to protect them." The F-22 will fill the mission and replace F-15s that will be "25 to 30 years old when we get our first [F-22] squadrons."

The JSF likely will come along just at the point when the Air Force will have to replace almost all of its F-16s and A-10s, which by then will be past their planned service lives.

"That is a big order," Ryan said, but he's more anxious to get an airplane that is "right" rather than on time.

Job 1: "Get It Right"

"The Joint Strike Fighter still has a lot of developmental work to go," he said. "Because of the age-out of the force, it is important. But it is really important to get it right." Because of

the large number the Air Force plans to buy, the JSF avionics must be thoroughly wrung out "to make sure this airplane is good for a long time ... because we are going to keep it for a long time. [There are] lots of technical challenges on that airplane."

Ryan has previously said that the Air Force's need for the JSF is critical but that the service does not want the JSF if it doesn't come in at close to the advertised price or with the expected level of stealth.

There are no such concerns about the F-22 in his mind. He described the Raptor as having been tested

"more than we've tested any other airplane" before making a production decision.

"We are very confident" the F-22 will live up to its billing, Ryan said, and the need for it has only increased with the rise of new SAMs and threat fighters.

The Air Force is "very committed" to developing an unmanned aircraft component in its fleet, Ryan said. He noted that cruise missiles and other munitions today technically qualify as smart unmanned aerial vehicles, except "they don't come back."



F-22 Team photo by Judson Brothmer

Improved air defenses and aging F-15s mean there can be no further delay on the F-22, Ryan says. The F-22, shown here launching its first AIM-9 Sidewinder, has been exhaustively tested and is living up to expectations, he asserts.

USAF photo by SSGT David J. McCarrison



There are no plans for building a variant of the B-2. Ryan says the next long-range strike aircraft must be a "quantum leap" over existing technology. The next bomber "may not be manned. It could have energy weapons."

The main issue for the service is deciding for which missions it makes sense to send a robotic airplane—or a munition that doesn't return—rather than a manned one.

Command and control of unmanned aircraft that return is "complex," Ryan explained. It is "a heck of a jump" from a High-speed Anti-Radiation Missile-type weapon that locks onto a radar and destroys it to an aircraft "that has to find [the target], ... survive the defenses, and operate with other weapon systems that are in the sky, and return and land and be reusable."

Nevertheless, "we think the [Uninhabited Combat Air Vehicle] program is worth pursuing," he said, because missions will doubtless emerge where that kind of technology is useful. "There are lots and

lots of questions on it, but we are going after it." However, "you have to nail down the mission" first.

Ryan was asked to comment on how much Iraq's air defense system has been worn down by strikes from coalition aircraft over the past few years. He declined. Nor would he say whether Iraq has replenished its system with illegal imports from abroad. However, he praised the rules of engagement that permit coalition forces to strike anywhere in retaliation for a threatening move by Iraq. This arrangement is far superior to "this stupid idea of proportionality" that was used in 1995 air operations in the Balkans. Ryan was commander of 16th Air Force in Italy at that time.

"What happened there was, if they shot at our folks and knocked down a [pilot], we were not allowed to come back and take out a [SAM] site unless, one, it was a smoking gun and, two, we got the UN's approval," said Ryan. "I don't want to ever, ever put people in a position like that again."

Please, No Hits Allowed

He joked that the proportionality rules that applied to operations over Bosnia seemed to suggest that "if they shot at us with an SA-6 and missed, we could shoot a HARM back, but we'd have to miss."

Ryan said he's puzzled by some of the tortured logic he's seen since Allied Force suggesting that the US is not really committed to a war unless it puts its people in grave risk of being killed and that, somehow, US pilots in the Balkans were invulnerable to fire.

"There is not one military man ... in a leadership position that I know of who wants to put people ... at undue risk just to say they were at risk," he claimed. "The idea that you must be at risk, that you have to take casualties ... —not one military officer that I know of in a leadership position believes that."

The job of commanders is to ensure that the troops are exposed to the least risk possible, said Ryan, adding, "but that doesn't mean we don't put them in harm's way." He continued that it was plain "lucky" that no American pilots were killed in Allied Force and that today US pilots are "being shot at" over Iraq.



Photo illustration by Erik Simonsen

For now, USAF will focus on space as a place where information is collected and relayed, Ryan says. However, it will continue investing in the Space Based Laser as a hedge against future challenges for control of the high ground.

"We wouldn't go" if there was a rule insisting that no pilots be harmed, he stated. "We put them at risk every day, but our job is to minimize that risk."

Ryan said he doesn't see a heavy manned presence in space within the next 25 years and no real departure from "what I would call Earth-centric space requirements." That means the Air Force's space role in the next quarter century will focus on "what I call the aerospace domain."

USAF—and all the services—are already heavily dependent on space assets for information on enemy activity, weather, navigation, and for communication and will only become more so, Ryan predicted. This will mean "we are going to have to protect our assets in space," he observed. There will certainly be attempts to jam US satellites, for example.

However, it would take some "substantial change in policy or cataclysmic event or some breakthrough in major technologies that would lead to the weaponization of space, ... using space as a platform for offensive operations," he said.

The Space Based Laser program is an example of how USAF is hedging against the possibility of weapons in orbit, Ryan said.

"In the next 25 years, I see us moving to defensive requirements in space and a capacity—when the policy changes or the demand changes—to be able to go into weaponization if we need to."

Ryan was asked his views on the new, Congressionally mandated space commission, which was created to review ways to enhance US military space power, including whether USAF should spin off a space force or other separate branch of some kind. He said that he thought it would be useful to contemplate "what we ought to do for the future." However, he's adamant that air and space at this particular time ought to be an integrated operating domain.

He noted how B-2s on strikes into Yugoslavia last year relied on satellites for target reconnaissance, for weather information, to navigate with the GPS system, and to communicate with ground controllers. Its weapons were also GPS-guided.

To "pull apart the integration of those capabilities" would simply add overhead costs and create "an artificial separation of the vertical medium."

"We think it is critical that you integrate what happens in space with what happens in the atmosphere [and on the ground]," he asserted.

The Air Force already supplies almost 90 percent of the dollars for space systems, as well as 90 percent of the military space operators, though USAF is not the primary user of the systems. The requirements for space systems, particularly communications, "are driven by the other services. ... We happen to be the experts" at designing and fielding space systems, Ryan said. ■

An aerial photograph of a desert landscape. The terrain is a mix of dark, rocky ground and lighter, sandy or silty soil. A winding road or path is visible, leading towards a small, rectangular building or structure in the middle ground. The overall scene is arid and rugged.

Pilots, navigators, and engineers train at the USAF Test Pilot School—preparing to write new chapters in aerospace history.

Photography by Guy Aceto, Art Director, and Paul Kennedy

In Yeager's Footsteps

Seen from high above Rogers Dry Lake, Edwards AFB, Calif., spreads out in the desert below. In these skies, Air Force test pilots Chuck Yeager, Pete Knight, Joe Engle, and Robert White and NASA test pilots Scott Crossfield and Joe Walker, among many others, made some of aviation's most significant breakthroughs. First flights, new records, Mach 1, Mach 6, initial steps toward space—it all happened in this airspace, at this base. And students at the USAF Test Pilot School are always aware of it.

The USAF Test Pilot School is located at Edwards AFB, which is in the desert of southern California about 75 miles northwest of Los Angeles. Edwards is also home to the Air Force Flight Test Center, NASA Dryden Flight Research Center, Air Force Research Laboratory Propulsion Directorate, and other associated units and agencies.

The military first came to what was then called Muroc in 1933 to design and maintain an Army Air Corps bombing range. Muroc AAF became Edwards AFB in 1950. More than 150 first flights have taken place at Edwards—from the XP-59A, spawning the turbojet revolution, to the X-15, with its hypersonic breakthrough, as well as firsts like Yeager's Oct. 14, 1947, breaking of the sound barrier.



Staff photo by Guy Aceto

Photos by Paul Kennedy



At the school, pilots, navigators, and flight test engineers learn to evaluate aerospace vehicles and systems. They undergo 48 weeks of training: some 537 hours of academics, 52 hours of labs, 21 scored academic tests, nine graded reports, comprehensive oral exams, and some 130 hours of flying for the student test pilots. The students are an experienced group. Pilots and navigators have an average of 8.4 years in service and 1,400 hours of flying time. The engineers are also experienced, with an average five years in service and 170 flying hours.

The intent students (Capts. Scott Ormsby and Greg Gilbreath) at left are attending class in a temporary facility. The Test Pilot School is undergoing extensive upgrading to its original building.



At right, USAF flight test engineer Capt. Michelle Dale listens to a previous lecture. Students also come to the school from other services and industry. Above, Canadian exchange pilot Capt. Ryan Palmer takes notes during a class.





Above are a twin-engine C-12 and an F-16B—two of the many aircraft used by the students during their nearly year-long training. They must be able to evaluate a wide variety of aircraft. These two, like most of the aircraft flown by the school, belong to the Edwards fleet or are contracted.



The school has only two assigned aircraft—gliders. At one time it did conduct spin testing in USAF AT-37s, but once that airframe reached the end of its service life, the school contracted commercial aircraft to perform that part of the curriculum.



Students spend the majority of time in T-38 Talons. At left is an AT-38. However, before they graduate, students will fly in as many as 30 different types of aircraft. And most of the aircraft used in the program have some modifications—additions of equipment used to conduct a variety of tests—whether internal or external.



At left, engineer Dale and Capt. Jim Dutton go over the test points on a flight card, preparing for a flight during which they will collect data on the longitudinal stability of a T-38 test aircraft. Test flight briefs tend to run longer than standard operational briefs because of the need to document and measure every step in the process.



At right, Dutton and Dale go over details with the ground crew and perform their walk around check. They are going to fly a Data Acquisition System T-38. It's been modified with data collection equipment, including the test pitot tube mounted on the nose (top right). The idea is for the students to fly the jet and collect data, as if they were testing a new aircraft.

Below, Rogers Dry Lake offers not only a remote location and more than 345 sunny days a year but also the huge, flat lake bed itself. Hard and sunbaked, it provides an aircrew with options for recovering an aircraft, should things not go according to the test card. The lake bed has about 60 statute miles of runways on an area about 12.5 miles long by five miles wide. A second lake bed, Rosamond Dry Lake, has eight miles of runways.



Staff photo by Guy Aceto



Students routinely practice landing on the lake bed.

It's also used by NASA for the space shuttle. Behind the T-38 landing on the bed at left is one of two modified 747 aircraft NASA uses to transport the shuttle orbiter from Edwards to the Kennedy Space Center in Florida. If a shuttle needs to make a West Coast landing, it would normally use the main runway at Edward but can land on the lake bed if wind conditions make it necessary.



A 45-minute drive north to the small town of Tehachap, Calif., takes students to the Sky/ark North glider club, run at a local airport by Larry Barrett, a graduate of the Test Pilot School. At right and below, Lt. Tim West, a flight test engineer, gets a run down by Barrett. Today, West will fly two sorties with an instructor pilot.



A glider puts students in a different world from powered aircraft. Many enthusiasts say the lightweight aircraft gives them a better understanding of the dynamics of how an airplane flies.



The yellow aircraft above is a Schweizer 2-33, the same aircraft as the TG-4 used in the US Air Force Academy's Soaring Program. At left is the sleek and fully aerobatic Schleicher ASK-21.

Selected vintage military aircraft are carefully screened and brought out to Edwards for student orientation flights. Later the students complete reports on handling qualities and other aspects of the aircraft and flight. Even the instructors take advantage of the opportunity to fly a warbird. At right, instructor Maj. Doug Dodson gets briefed by John Harrison on the particulars of a T-28 Trojan.



At left, a T-38 taxis to the runway while the T-28 does a touch and go.

Students learn to meticulously evaluate every flight. In the test world, describing handling as "mushy," for example, isn't enough; by the time they're through with this course, each student can describe an aircraft's handling in precise, quantitative terms.

New at the school is a space course, a cooperative effort with Air Force Materiel Command and NASA. Testers in the not-too-distant future will need to apply their analytical skills to a new breed of vehicle—piloted, small reusable spacecraft under development by the Air Force, NASA, and industry.

At right, first class members (from left, 1st Lts. Martin A. Martinez III and Nicole L. Rider and Maj. Scott E. Deakin) get instruction from NASA engineer John Bresina in flying one such vehicle—the NASA-Lockheed Martin X-33 reusable launch vehicle—via a NASA mission simulator.

For many students the Test Pilot School has been a step toward astronaut wings.





Above, a student puts an F-15E Strike Eagle through its paces. It's not like the movies: Rather than a seat-of-the-pants approach, TPS stresses a comprehensive, deliberate evaluation of systems and safely and carefully completing tests listed on the test card.



Photo by Paul Kennedy

The USAF Test Pilot School describes itself as the national center of applied aeronautical engineering, where the emphasis is on applying academic theory to military reality. The training is complex, varied, and intense to prepare students to handle any circumstance that may occur in a test flight.



TPS graduates follow in the footsteps of aviation pioneers as they train to become the technological leaders of tomorrow's Air Force. ■

The Air Force needs graduate scientists and engineers, but does it need its own graduate school?

AFIT

Under the Gun

By Bruce D. Callander



that all the nation's colleges and universities are available for the Air Force, why should USAF be running its own graduate school for scientists and engineers?

In the 1990s, USAF leaders decided they did not have an acceptable answer to that question, and they proposed to end in-residence graduate training provided at the Air Force Institute of Technology, located at Wright-Patterson AFB, Ohio.

The plan was soon scrapped, but it already had slowed enrollments at AFIT and raised questions about USAF's commitment to the whole area of Science and Technology. Since then, there has been an ongoing debate over whether USAF is overemphasizing current readiness at the expense of long-range development of USAF's S&T base.

Gen. Robert T. Marsh, USAF (Ret.), commander of Air Force Sys-

Force while attending school. AFIT graduates are some of the best in the country, and they are the best because of the programs we are able to offer. We totally support AFIT as an agency within the Air Force and plan to keep it a vital and viable institution."

The Toughest Job

That said, however, the Secretary conceded that enrollments in AFIT programs have fallen sharply in recent years because of force cuts, poor retention, and growing mission demands.

"One of our toughest jobs," he said, "is deciding on the best use of our resources—whether those resources are planes and materials, or our most valuable resource, our people. While it is an easy task to identify where we would like to have AFIT graduates, in this time of personnel shortages, it is much more difficult to pull officers away from real-world, mission-critical positions for two to three years, or longer, depending on their degrees."

Peters went on, "This is not a choice we like having to make. However, we do make the choice and that's why this year we have a little more than 3,000 of our line, JAG, medical, and chaplain officers either attending, graduating, or inbound to AFIT programs, both in residence in Dayton or at civilian institutions around the country."

Col. George K. Haritos, commandant of AFIT, says the cuts also have created difficulties within the institute itself.

"The problem is that we had to size the graduate school, back in the spring of 1998, to accept 230 master's students and 35 Ph.D. students every year," he explained. "We combined two graduate schools [the Graduate School of Engineering and the Graduate School of Logistics and Acquisition Management] into one. We let go half the faculty from the L&AM school, going from 30 professors down to 16. And we cut some faculty from the School of Engineering. In all, we cut 43 positions, saving \$3.1 million a year in pay.

"Now, the school is sized to accommodate that student load, but, because of the problems with not having enough scientists, engineers, and officers overall, the Air Force has not been able to fill our classes."

He went on, "So, we are not receiving the number of students we need to meet the Air Force requirements and to operate efficiently. When you expect 230 master's students and you get 175 as we did last year, and when you expect 35 Ph.D. students and you get 16, obviously there are problems. Plus you produce fewer graduates for yet another year, making the shortage of people available to fill advanced academic degree billets even more severe."

AFIT grants master's and doctoral degrees to those in its resident program, supervises students in graduate programs at civilian universities, and oversees officers in education with industry programs. Its Civilian Institution Programs places students in more than 400 civilian universities, research centers, hospitals, and industrial organizations in the United States and other countries. Other resident programs offer short, nondegree courses for professional continuing education and provide consultation services to Air Force commanders and staffs.

Back to McCook

The institute began in 1919 as the Air School of Application, located at McCook Field, Ohio. It had six officers in training. Some early graduates were sent on to the Massachusetts Institute of Technology to take aeronautical engineering. Among them was Lt. Jimmy Doolittle, who earned both a master's and doctoral degree there.

Over the years, the institution underwent several organizational and name changes. In 1950, its jurisdiction was shifted from Air Materiel Command to Air University, and, four years later, Congress authorized the AU commander to grant degrees to graduates of the in-residence programs.

In 1967, AFIT became a member of what is now the Southwestern Ohio Council for Higher Education, an association of colleges, universities, and industrial organizations in the Dayton, Ohio, area. AFIT also is active in other community and interinstitutional programs, including the Dayton Area Graduate Studies Institute, a consortium of the engineering schools of AFIT, the University of Dayton, and Wright State University.

In its more than 80 years of existence, the institute has trained some

tems Command from 1981-84, is one of those concerned.

"There has been a de-emphasis in this whole area," said Marsh in a recent interview, "and it's unlike any prior period of our history in the Air Force. I think that, despite very austere times, we've always kept that forward vision of the Air Force and always protected our corps of technically oriented officers working on the future. That's really been de-emphasized today as I see it."

For the moment at least, the threat of eliminating AFIT's in-residence graduate programs has abated. Last May, Air Force Secretary F. Whitten Peters gave AFIT high marks for its past accomplishments and said that the Air Force would continue to support it as an in-house institution.

In a written answer to queries about his decision, Peters said, "AFIT students have provided invaluable research in many areas within the Air

300,000 DoD personnel, including dozens of general officers and many astronauts, 11 of whom earned their degrees in residence.

In the mid-1990s, however, Air Force leaders began to question whether the Air Force needed or could afford to continue in-residence AFIT training. The then-Air Force Secretary Sheila Widnall, a former professor of engineering, proposed closing the in-house schools and contracting more training to civilian institutions. AFIT cut its planned enrollments and prepared to shut down a substantial portion of its operations.

Haritos recalls the period. "It was very late in 1996 when the tentative decision to shut down the graduate school became public," he said. "Immediately afterwards, we were charged to explore alternatives for educating the graduate students. Nobody said that graduate education was not important. They just said that we can't afford to do it in-house."

He continued, "So, the commandant at the time received the order to explore the question: After AFIT is gone, what is the best way to educate people? We explored two possibilities. One was to privatize AFIT, locate it at or near Wright-Patterson, and work with several universities in Ohio to deliver Air Force-related formal graduate education and the research that goes with it. That was an unsolicited proposal from the state of Ohio. The second alternative was to send students to civilian universities, use a select group of quality graduate schools both state and private with demonstrated ability."

Haritos noted that it took more than a year to finish the study and evaluate alternatives, and then compare them with the in-house AFIT.

"We used criteria that were identified in conjunction with AU at the time," he said. "The criteria were quality of education, expected focus of curricula and research to Air Force needs, responsiveness to evolving Air Force requirements, and cost."

Peters Decides

The findings were presented to Peters in early 1998. He concluded that keeping AFIT clearly was the correct choice. That is when he decided AFIT would stay open.

A little later, Air University hired the consulting firm of Booz•Allen & Hamilton to perform an independent

cost-benefits study of the alternatives. That analysis again showed AFIT's in-house program to be superior.

"I remember the figures," said Haritos, "because I was heavily involved with finalizing the numbers. The AFIT in-house cost of graduate education was \$19.9 million per year. Going to a select group of good universities was \$18.6 million per year. So we are talking about \$1.3 million per year."

Widnall, now back in her position as professor of aeronautics and astronautics at MIT, still defends privatization. In a written response to questions, she said, "With the dramatic budget cuts faced by the Air Force—and I understand it's getting worse—we must continually re-examine the way we do things, especially those things which are supportive of but are not actually our core mission.

"You have seen privatization initiatives across the entire range of support activities in the Air Force, from base housing, to food services, to research and development. These privatization efforts have assured the Air Force that it was getting best value for its dollar and have set a standard for in-house activities to measure themselves against and to compete with world-class external firms.

"In some cases, public-private partnerships have resulted, enriching both partners, not with money but with knowledge and experience. It is very important that Air Force personnel have access to higher education in science and engineering and other core specialties. How they do this is a subject for constant re-examination. Cost and quality are both issues.

"Weighing unique Air Force needs against the importance of access to the best in higher education is also important. When the multiple of the effective cost of in-house AFIT tuition for a comparable engineering degree gets too large, say a factor of five, then I do think a serious re-examination is in order for those programs that are comparable to those offered by civilian universities. We will always have unique needs because of our arcane business methods."

Air Force Needs Come First

Marsh disagrees. In an interview, he said, "Those of us on the other

side have long argued that AFIT has met the changing needs of the Air Force over many years in an exemplary fashion. An institution like AFIT, that is Air Force-run, is more adaptable to the changing academic needs of the Air Force than are civilian institutions."

Although Marsh earned his own master of science degrees in instrumentation engineering and aeronautical engineering under AFIT at the University of Michigan, he says that AFIT's in-house programs have a flexibility that civilian institutions can't match.

"To institute even a new course out in the civilian institution world, it takes years to get the faculty all to agree that there's even a need for a new course, to get it structured, and to approve the curriculum," said Marsh. "By contrast, as the Air Force evolved and we saw needs for our people to understand stealth technology, laser and directed-energy technology, and new sensor technology, ... as we saw those needs developing, the Air Force leadership insisted that AFIT develop curricula to deal with those new subjects."

He went on, "Another point is that AFIT has provided the opportunity for the Air Force to accomplish a lot of important research and engineering that was applicable to Air Force needs through the graduate thesis program of students. We have, if you will, vectored students toward subjects of important interest to the service. ...

"There have been attempts to quantify those contributions over time and they have shown that pretty impressive sums have resulted. It has been good research because most of it was performed in conjunction with the Air Force laboratories there at Wright-Patterson. They could take advantage of the opportunities right there at the base to do work that had important relevance to the Air Force."

Another AFSC commander (1984-87), Gen. Lawrence A. Skantze, USAF (Ret.), also stresses the importance of AFIT's research capabilities. Skantze earned his master's degree in nuclear engineering in residence in 1959. In an interview, Skantze recalled his reaction to the proposed shutdown.

"I wrote a letter to the Chief of Staff," he said, "and pointed out that, as a graduate of AFIT, I saw the

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Board of Visitors Report

While the prospect of privatization has diminished, defenders of scientific and technical education see other, more serious dangers to AFIT. Last March, for example, the institute's Board of Visitors took a hard look at the institute as a whole and concluded that it had major problems. In its written report, the board concluded:

- AFIT's low production rate is a major factor "in the eroding scientific and technical base of the Air Force."

- AFIT is in "passive but inexorable shutdown mode despite the Secretary of the Air Force decision to keep it open."

- Failure to meet enrollment targets has resulted in underuse of faculty and facilities and increased costs per student.

- There is no evidence that USAF has addressed the importance of AFIT to the service.

The board complained, too, that its past recommendations for improvements "appear to be languishing in the bureaucracy process."

Summing up its findings, the board said it had found two major causes of "the run down of AFIT and its capabilities." One is what the board called "the extraordinary emphasis on readiness." This, the report said, has resulted in a persistent reduction in investment for AFIT and endangered its ability to survive as a first-quality institution. The other is that USAF and AFIT have been forced to "adapt in a dysfunctional manner, creating a faculty that is misaligned with student load, a student body that is persistently undersized, and a graduation mix that is not meeting USAF needs."

For the near term, the Board of Visitors called for the Secretary of the Air Force and Chief of Staff

jointly to order increased enrollment in AFIT. For the long term, it said, the Air Force should decide on "core graduate education requirements" that will provide a steady stream of expertise into critical skill areas. In the absence of a clear-cut commitment to Science and Technology-educated officers, the board's report said that USAF must accept a less capable future force, ranging from lower skilled manning in USAF labs to lack of smart uniformed buyers in its acquisition corps.

The Board of Visitors noted, too, that until the late 1980s, the commandant of AFIT had been a two-star general officer. The position was later demoted to one-star rank and, more recently, to colonel. "Curiously," the report said, "all formal education institutions in the USAF other than AFIT 'earn' a flag command billet, ... the Air Force Academy (three stars) and Air University (four stars). Lack of a general officer billet is a clear institutional signal of AFIT's lower level of importance."

Skantze cited other evidence of USAF's neglect of AFIT and of Science and Technology in general. Recalling the 1992 consolidation of Air Force Systems Command and Air Force Logistics Command, he said, "Before the merger, the commander of Air Force Systems Command was the one who defended the need to invest in Science and Technology and in AFIT education. That 800-pound gorilla no longer exists. So, the dependency is falling on the commander of Air Force Materiel Command to fight for both S&T and AFIT while at the same time he is not only burdened with overseeing the acquisition of new systems but with providing the logistics support for the current fielded system. That is an awful lot for one man to have on his plate."

"An Essential Element"

Marsh agrees that AFIT needs more top-level support. "You have to have a corporate decision that such an institution is vital to the future of the

Air Force," he said. "It's an essential element, just as the Air University is. We recognize that professional development is essential to the Air Force no matter what its size or structure. I think we have to recognize that a technical development institution also is absolutely essential."

"You have to make that decision. Then, you have to enunciate it to the whole force, ... make it a matter of policy, ... and then, obviously, you have to allocate the necessary resources. We're not talking about enormous resources to operate AFIT. You have to justify them to the Hill, of course, but that is not a problem. But it takes a determination on the part of the Air Force that the acquisition and retention of technically qualified officers are essential and to use this institution to achieve that objective."

Commandant Haritos is hopeful about AFIT's future. "I am optimistic," he said. "The Secretary has gone on record that he thinks AFIT is important. I also have seen a list of [Air Force Personnel Center] initiatives designed to help with our enrollment problem. So, I am hopeful that, in the near future, we will be getting the number of students we should be getting."

"I know we have a lot of people who believe it would be a grave error to shut down AFIT. It's not the kind of error you can reverse. It's not like saying, 'OK we have no money for the F-22 this year, so we won't buy any. We know it's going to cost more next year, so we'll put up a little more money next year and the program will still be OK.'

"But, if you shut down AFIT, all the professors go off and find other jobs. All the staff leave and find other jobs," said Haritos. "You can't just decide you made a mistake. It's gone forever. You can't just start a university from the ground up. If we decide, as corporate Air Force, that we don't need graduate education, we had better be absolutely certain that we are making the right decision." ■

Bruce D. Callander, a regular contributor to Air Force Magazine, served tours of active duty during World War II and the Korean War. In 1952, he joined Air Force Times, serving as editor from 1972 to 1986. His most recent story for Air Force Magazine, "The Recruiting and Retention Problems Continue," appeared in the June 2000 issue.

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The Pentagon and Congress alike are moving to expand and extend retiree access to prescription medications.

the **Pharmacy Benefit**

by **Peter Grier**

INSURANCE coverage for the cost of prescription drugs has become one of the most important health benefits that the Defense Department offers. Like civilians, members of the armed services, their families, and military retirees have been hit hard by the skyrocketing costs of prescription drugs.

That price pressure is not likely to go down on its own. Predictions are that pharmaceuticals will only become more vital to modern medicine in the years ahead.

Thus, the Pentagon is moving to expand and simplify its sometimes confusing patchwork of pharmacy coverage. Most of those tweaks are relatively small. Example: Making sure all DoD military pharmacies have at least the same core formulary, or list of carried drugs.

That's not all that's happening, however.

Congress appears to be on the verge of ordering the biggest change in military drug coverage in years. Absent any new and unforeseen problem, this year's defense authorization legislation appeared virtually certain to open the Pentagon's prescription drug coverage programs to Medicare-eligible retirees.

Such a move could greatly assist many hard-pressed ex-military seniors and go a long way toward fulfilling the promise of health care for life that was extended decades ago to military personnel when they entered their nation's service.

Said Frank Rohrbough, deputy director of government relations at The Retired Officers Association and speaking on behalf of The Military Coalition: "This is probably the single most important health care benefit that our members want and need, so we're very excited."

Massive By Any Measure

By any measure, the DoD pharmacy program is massive. The system serves more than eight million beneficiaries. Spending on drugs and medications accounts for at least \$1.3 billion of the military health system's \$16 billion annual cost. And that cost is fast rising, as it is in the civilian world. Pharmacy spending in DoD is increasing at about 13 percent per year, according to the General Accounting Office. That's comparable to what's happening in the private

sector, which is seeing annual cost increases of 15 percent.

Increases in costs of existing medicines have not been unreasonably high. The problem, rather, stems from introduction of new varieties. According to a recent study conducted by the Kaiser Family Foundation, patients more and more are switching to newly approved pharmaceuticals, which are more expensive. Also, today's doctors simply whip out their prescription pads much more often than they did a generation ago.

For the Pentagon, the effect of these two changes has been dramatic. DoD drug expenditures in the 1995-99 period rose by an astounding 63 percent, while its overall health costs went up 5 percent, according to the GAO.

The largest portion of the Pentagon's pharmacy costs is generated at the outpatient pharmacies maintained in DoD's direct care system of Military Treatment Facilities at US bases around the world. In 1997 (the last year for which complete data are available), these military pharmacies received and filled about 55 million prescriptions costing about \$1 billion. The Pentagon buys its drug supplies through the Defense Supply Center in Philadelphia, negotiating discounts of 24 to 70 percent off list price as a result of DoD's vast buying power.

All active and retired military personnel and their families are entitled to military pharmacy services. Retirees 65 and over, however, have access to MTF pharmacies on a space-available basis. What space available means, in practical terms, is that older retirees can obtain medicines and medical supplies only if they routinely are stocked. However, for special-order medications not carried in the MTF's basic formulary, they must go elsewhere.

Tricare's five managed care support contractors supplement this system. They provide retail pharmacy benefits to eligible beneficiaries. Prescriptions are available from local drug stores in a preferred provider network, at some discount, and through non-network pharmacies.

Finally, the Pentagon's National Mail Order Pharmacy program delivers 30- to 90-day supplies of drugs to a beneficiary's home or temporary address. The NMOP is run by a sixth contractor, Merck-Medco.

Pentagon officials want to provide uniform pharmacy benefits, but, as a result of the stitched-together nature of the drug delivery system, it has not been able to do so. For example, all beneficiaries receive free prescriptions at MTFs; Tricare contractors and the NMOP require co-payments. Nor are the co-pays consistent. For instance, active duty family members using NMOP pay \$4 per prescription; retirees and family members pay \$8. And not all MTF pharmacies carry the same drug formulary.

There are other problems. Until recently, DoD has not even attempted to put in place a data system to track a patient's drug usage throughout the system. This is viewed as a requirement to guard against inadvertent and dangerous drug combinations and to prevent abuses such as stockpiling years' worth of a particular prescription.

Chief Shortcoming

Then comes the biggest shortcoming of all: Most of the 65-and-over military retiree population has no drug benefit at all, other than the inadequate space-available option. These retirees are thrown into the federal Medicare system, which has no pharmacy benefit of its own.

Nobody, it seems, is happy with the current setup. The Air Force Association, in a recent position paper on the subject, had this to say: "A lack of basic prescription drug cost and beneficiary use information, multiple pharmaceutical formularies that complicate management, and the absence of an integrated patient database have ... plagued DoD's pharmacy system."

Echoing AFA is the GAO, which reported that the DoD pharmacy programs "operate under a complicated and confusing array of policies, regulations, and contractual requirements governing key benefit design elements such as eligibility, drug coverage, and cost-sharing."

Things could be getting better soon. A test Pharmacy Data Transaction System went into operation this spring at Wright-Patterson AFB, Ohio. Officials hope to expand it to cover the whole Pentagon prescription system by the end of this year.

This system is intended as a data repository for all prescription information about individual DoD pa-

tients. It would provide to pharmacists computerized red-flag alerts to problems such as patient allergies or dangerous drug interactions.

It also will help put a halt to drug stockpiling—a problem that the GAO has called “pervasive.” It occurs when individual patients visit multiple pharmacies to accumulate more drugs than they need. A GAO report cites the case of a military retiree’s widow who returned \$5,000 worth of inhalant drugs to a nearby MTF upon the death of her husband. “In responding to [questions about] why she and her husband obtained drugs that were not used, the widow pointed out that her husband was entitled to them, he feared his benefits might be curtailed, and so they stocked up,” said GAO.

Pentagon officials are also working toward establishing a uniform formulary, or list of drugs to be stocked, that would be applicable to all pharmacies in the DoD system. Per Congressional guideline, the uniform formulary is supposed to take effect Oct. 1.

That deadline may not be met, however. Drawing up the list and getting it reviewed by both pharmacy groups and beneficiary advisors has simply taken lots of time, said DoD officials.

Pentagon health officials also said they are working toward a more comprehensive reform of their complicated pharmacy structure in the future. Their biggest problem is simply that they have so many drug-dispensing systems gathered under one umbrella.

The situation, as explained by Capt. Charles Hostettler, USN, director of pharmacy programs in the Office of the Assistant Secretary of Defense for Health Affairs: “We have five managed care contractors that take care of the [11] Tricare regions. Each has its own pharmacy benefit management. Each has a retail pharmacy network set up, and they have firewalls set up between them.”

In addition to the National Mail Order Pharmacy program, under yet another contractor, there are the more than 500 MTF pharmacies run by some 120 different management systems.

Clumsy System

The system is so clumsy that mobile military patients sometimes find

it hard to take a prescription from one area and get it filled in another. Sometimes, their easiest course of action is to pay out of pocket for prescriptions and then start the time-consuming process of seeking reimbursement.

“You end up having to work around the system, instead of the system working for you,” said Hostettler.

DoD plans call for eventually combining the contractor, MTF, and mail order systems into one pharmacy management operation. Officials are now studying how that might be done.

The complexity and length of Tricare management contracts could slow this consolidation, but it will happen in time because it makes sense, said DoD officials. “We want to optimize our resources as much as we can and maintain quality,” said Hostettler. “The more efficient a plan is, the more the plan can do for beneficiaries.”

Currently, DoD counts approximately 1.4 million military retirees age 65 and older. All are eligible for space-available services at military facility pharmacies, and less than a third of those have access to current Tricare test programs and mail-order systems.

As many retirees point out, the space-available benefit isn’t what it once was. The combination of a growing retiree population, shrinking military infrastructure, and limited formulary stocks has begun sharply limiting the flexibility and access that Medicare-eligible retirees once enjoyed.

The Air Force Association, in its position paper on the matter, said some MTFs have dropped more expensive, less widely used drugs from stock. Others have restricted access by honoring only those prescriptions written by military doctors.

“Many of the drugs they [older retirees] need are not routinely stocked,” said Rohrbough. “As a generalization, only two in five [older retiree] prescriptions are being filled by military pharmacies.”

Those Medicare-eligible beneficiaries who live near a military installation closed by the Base Realignment and Closure Commission can order drugs through Tricare, per legislation passed by Congress in 1993. And two years ago Congress ordered DoD to begin an experimen-

tal program to test making the National Mail Order Pharmacy program available to older retirees and their families.

DoD selected two test sites—Okeechobee, Fla., and Fleming County, Ky.—and began running the pilot program July 1. To the disappointment of retiree organizations, the Pentagon is charging enrollees a \$200 annual fee on top of cost shares of \$8 for each 90-day supply delivered through the mail and 20 percent for each 30-day supply ordered through a nearby retail outlet.

“The program should not be funded on the back of the beneficiary,” said Rohrbough.

“Extremely Robust Benefit”

Even with the cost sharing, the program should attract upward of 6,000 participants, according to Defense Department estimates. Then, as far as the Pentagon is concerned, the next step would be to assess the feedback from the pilot program and see whether it merits an expansion of this approach to 65-and-over health care. Progress reports are due in October 2000 and again in April and October 2001, per legislative order.

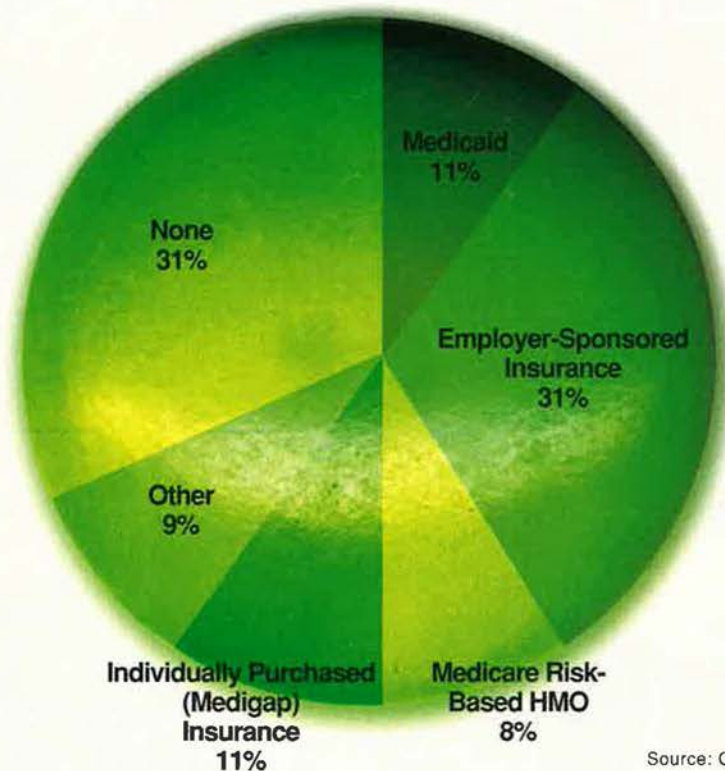
In Hostettler’s view, this Pentagon program will provide those 65-and-older retirees “an extremely robust benefit” with a relative low enrollment fee and low cost share. It’s much better than civilian plans currently being proposed for Medicare recipients, said Hostettler, who pointed out that a recent Clinton Administration plan proposed a 50 percent cost share for prescriptions and a \$1,000 annual cap.

Congress appears to have other, grander ideas. It may supersede the test that lawmakers themselves mandated with an expansion order of its own.

As the Pentagon budget legislation cycle moved in late summer toward a conclusion, both the House and Senate versions of the Fiscal 2001 defense authorization bills included provisions to open all DoD pharmacy programs to all Medicare-eligible beneficiaries, without enrollment fees or special deductibles.

The language of both bills is virtually identical, indicating to officials that some sort of prescription benefit is assured of emerging from the final legislative conference. It is

Sources of Prescription Drug Coverage for Medicare Beneficiaries



Source: Congressional Budget Office

When they turn 65, military retirees are thrown into the federal Medicare system, which has no pharmacy benefit of its own. In an effort to offset these costs, many Medicare enrollees acquire some form of supplemental insurance. However, as the chart shows, 31 percent of Medicare beneficiaries lack any kind of coverage for prescription drugs, and they must bear full costs.

highly unlikely that the Administration would object to the expansion of drug coverage, considering the popularity of the issue on a larger national effort and President Clinton's efforts to add just such a benefit to Medicare.

The legislative step likely will produce the biggest change in Medicare-eligible military retiree health benefits in years.

Said Bob Pipkin, an aide to Rep. David Vitter (R-La.), a staunch supporter, "It's pretty solid. It's very popular."

Pipkin said his boss became interested in the issue after he discovered that many military retirees in his district were driving two hours to an MTF in Biloxi for their prescription needs—without assurance what they needed would be in stock.

If either provision remains intact, 65-and-over military retirees should be able to go to retail pharmacies in their communities and get prescrip-

tions filled with at most a 25 percent co-payment. That would be reduced to no more than 20 percent if the retiree uses a Tricare network pharmacy—generally a major chain drug-store.

And stocks of drugs needed for maintenance medication would be available through NMOP at \$8 for a 90-day supply.

"That's a real time saver and a real valued benefit that most older retirees need," said Rohrbough.

Expansion to Medicare-eligible military retirees and their families likely would cost \$400 million to \$600 million a year, according to Defense Department estimates. While that is a considerable amount, it may represent a relatively inexpensive way to greatly ease the health care burden on older retirees at a time when members of Congress are searching for ways to live up to the promise, made by military recruiters, of health care for life.

Stephen P. Backhus, director of GAO veterans' affairs and military health care issues, told Congress this spring, "The most significant gap in military health care coverage is a pharmacy benefit for those older retirees who do not have access to military pharmacies. Targeting benefit enhancement to this need may provide the most benefit for the least cost in the short term."

If all proceeds as planned, and adequate funds are included in defense appropriations legislation, this benefit could be in place as early as April 2001. ■

Peter Grier, a Washington editor for the Christian Science Monitor, is a longtime defense correspondent and regular contributor to Air Force Magazine. His most recent article, "The Changing World of Air Force Medicine," appeared in the April 2000 issue.



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Verbatim

By Robert S. Dudley, Executive Editor

Remembering Aug. 2, 1990

"Kuwait is free. It's rebuilt. It has a thriving economy. Its citizens travel all over the world. Iraq is contained. It has a broken economy. It is an isolated state. And I think that's the fundamental difference between Iraq and Kuwait and probably the fundamental accomplishment [of US military action in the Gulf] over the last 10 years."—**DoD spokesman Kenneth H. Bacon, in Aug. 1 Pentagon news conference.**

Androgynous Zones

"The 'Revolution in Military Affairs' is now the mantra of those who seek remote, clinical, and surgical solutions to what has traditionally been a close-in chaotic, and bloody brawl. This has weakened the concept of the warrior, as the androgynous technician has gained ascendancy in some quarters."—**Bernard E. "Mick" Trainor, retired Marine Corps general, in Aug. 2 Wall Street Journal.**

Non-Pure War

"I don't think the armed forces in our country should assume, as matter of sort of staff college training, that, when you go into one of these operations, you're going to be given carte blanche—'Bomb anything you want; get the mission done.' It doesn't work that way. It's not pure war. ...

"Now, I think one of the reasons the armed forces—and, in particular, the Air Force planners—had difficulty [accepting the plan for Operation Allied Force] was because we'd been to school on Desert Storm. Desert Storm was an entirely different battlefield. It was a battlefield that was clean; it was clean of civilians, mostly clean of refugees, clean of vegetation, mostly purely visible. It was pretty much clean of media, too. I would suggest to you that you have to be prepared in the future to fight on cluttered battlefields, where there are civilians, ... where there's tough vegetation, where there's tough weather. It's a much more challenging operational environment."—**Gen. Wesley Clark, former Supreme Allied Commander Europe, in June 8 remarks**

at Brookings Institution in Washington, D.C.

Butchers of Brussels?

"NATO has claimed that its air campaign against [Yugoslavia] was 'the most precise and lowest-collateral-damage air campaign in history.' However, Amnesty International has serious concerns. ... Amnesty International believes that—whatever their intentions—NATO forces did commit serious violations of the laws of war, leading in a number of cases to the unlawful killings of civilians."—**Amnesty International, in June 5 report, "Collateral Damage' or Unlawful Killings? Violations of the Laws of War by NATO During Operation Allied Force."**

We Feel Much Better

"One of the things people need to remember is that local school districts really have jurisdiction in terms of their educational policy. We are not throwing the military out. We're throwing military recruiters out."—**Elaine Koury, San Francisco school district spokesperson, in May 29 Washington Times article about how some public schools ban military recruitment on campus.**

Double Vision

"I'm worried about the [defense] industry, because we now have a small number of very large organizations, and I know that there's a great deal of concern about that competitive base. We really now have only two companies that build fighter aircraft, and I share the concern over that, and that concern is valid.

"I'll make a prediction, however. The two production lines we have now, if my guess is right, could both be gone 10 years from now, and the reason is that we'll be building entirely different kinds of aircraft—namely robotic that won't have pilots in them—controlled by airplanes like AWACS that do have people on them but that are way out of the line of fire."—**Hans Mark, director of defense research and engineering, as quoted by reporter**

Ann Roosevelt in May 30 Defense Week.

The 20 Percent Solution

"The Marine Corps is trying hard to reduce the high casualty rates suffered by the infantry in urban warfare. A year ago, officers were startled in one exercise to have units lose an average of 38 percent of their troops in each day of simulated city fighting. ... In a round of exercises last month, the Marines cut the simulated casualty rate to below 20 percent."—**Item in May 29 Washington Post.**

Dogs of War

"[US leaders] need to understand what limitations our [alliance or coalition] partners are going to place on us. When you're the big dog and one of the puppies tells you what you can and cannot do, that's a real hard way to do business. ... If your partner says you can't bomb except between 2:00 in the morning and 4:00 in the morning, maybe you don't want him as a partner, maybe you don't want him on your team. ... The big dog should not accept some degree of compromise that places our people in harm's way and makes the fight long."—**Lt. Gen. Michael C. Short, USAF (Ret.), former commander of NATO air forces in Kosovo, in May 12 speech at American Institute of Aeronautics and Astronautics.**

My 2nd Grader Probably Couldn't Do It, Either

"Something strange is happening in the vice president's cabin as his jet flies from Chicago to Washington. Al Gore is uncharacteristically animated. ... 'Want to see what happens when you have a military contractor get you a VCR?' Gore asks a visitor, then leaps to his feet to demonstrate the custom-built Air Force Two machine. It is a baffling assortment of flashing colored buttons and mysterious commands. 'Whichever one you press, it's the wrong one,' Gore says, trying several buttons until a flashing airplane appears, but no movie."—**Item in July 26 Washington Post.**

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Rickenbacker

ANYONE seeking to define "warrior" can do it with a single word: Rickenbacker. Capt. Eddie Rickenbacker was a warrior in two wars, becoming the American Ace of Aces in 1918 and demonstrating rare leadership and courage in World War II. Rick, as he liked to be called, never ceased to watch out for the interests of the United States.

Beloved by many, hated by not a few, Rickenbacker was the quintessential American leader-patriot of the 20th century, a man who fought to protect his interests and to promote those of the United States. He also had his weaknesses, including an inability to bear fools lightly, a predisposition to speak rashly, and a cranky insistence that co-workers give a 110 percent effort.

He was born in Columbus, Ohio, in 1890, the son of Swiss immigrants. His surname originally was spelled Rickenbacher. The Teutonic sound of it caused Rickenbacker many problems and, as a result of World War I, he changed it. In 1918, he became Eddie "Rickenbacker"—with the change of that single letter somehow giving him comfort.

His father, William, was a day laborer who regularly beat him with a switch. Rickenbacker responded by becoming a juvenile delinquent—a small-time petty thief and bully who was so quick with his fists that his impoverished parents feared he would wind up in reform school. Yet when his father was murdered on the job, young Edd, as he was then called, underwent a transformation.

He was not quite 14, but he assumed responsibility for his family, a task usually shouldered by an eldest son. (Rickenbacker did have an

older brother.) Rickenbacker immediately dropped out of school to begin working 72-hour weeks in a sweatshop glass factory. At this job, he earned a nickel per hour—\$182 per year. He didn't have to spend a year there, though, for he was at the start of a Horatio Alger career that would see him swiftly take on a series of ever more responsible jobs for which he was both too young and too uneducated.

His swift ascendancy in part was fueled by the courses he took from the International Correspondence School, an institution that helped many a poor lad, Walter Chrysler among them. By age 17, he was supervising more than a dozen adult professionals in an experimental engineering laboratory for the Columbus Buggy Co., which was then launching a new line of automobiles.

Racing and Riches

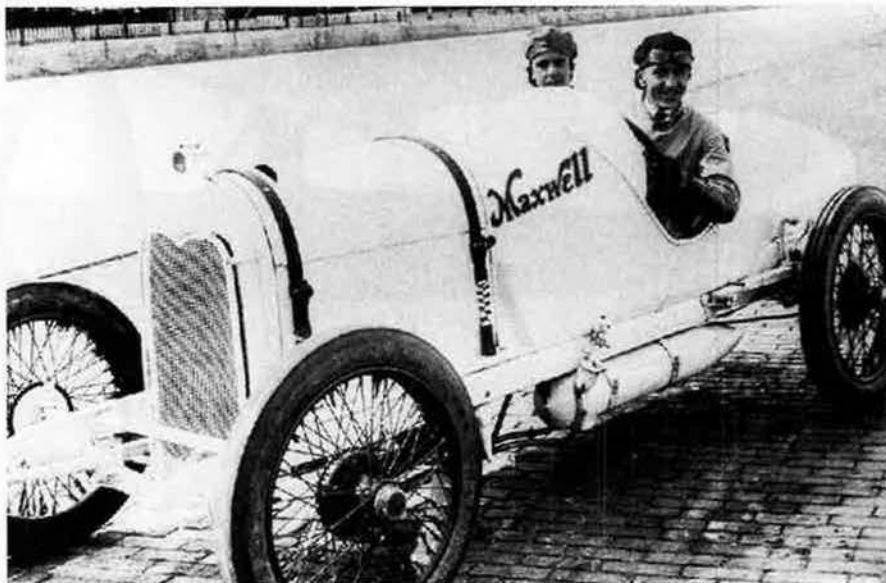
Rickenbacker was on the road to riches. He found he was a natural salesman and manager. Soon he was earning \$150 a month at a time when lawyers and doctors made less. By age 19, he was 6 feet, 2 inches tall, weighed 165 pounds, and was sharpening his skills as a professional racing car driver. Within a few years, he had reached the top of his new profession, earning \$60,000 the last year he raced. That was the equivalent today of \$1 million.

As a driver, Rickenbacker was shrewd and savvy, carefully preplanning his races to maximize his advantages. He developed practical leadership skills and drilled his pit crew into teams able to change tires and refuel faster than any competitor. In his prerace planning, Rickenbacker took account of the track,

By Walter J. Boyne

Capt. Eddie Rickenbacker leans against a World War I aircraft with the famous Hat in the Ring insignia of the 94th Pursuit Squadron.





Shown here in a Maxwell at the Indianapolis Motor Speedway with his mechanic, Rickenbacker had gained celebrity status as a race car driver even before he became a flying ace in World War I.

weather conditions, and the way his equipment stacked up to the competition. Then, he drove with cool precision, pushing the envelope of risk but without recklessness.

He developed a smiling public persona. His race colleagues thought of him as a mean driver, one who used any trick he could devise to win. It was good training for a future fighter pilot.

He did not let his celebrity go to his head, for he was painfully aware of his lack of education. Rickenbacker took self-improvement courses and always tried to expand his vocabulary. Now Rickenbacker, frequently thrust into exalted company, watched how leaders in politics and business behaved and began to emulate their actions. (In his mid-20s, he noted that these individuals had middle initials, which he lacked. He selected V, and then selected "Vernon" to go with it.)

In 1916, Britain was at war, but the Sunbeam Motor Car Co. invited Rickenbacker to England in hopes he would build a team to race Sunbeam cars in America. English intelligence was convinced that Rickenbacker was a German secret agent. It kept Rickenbacker under close watch around the clock.

Far from being pro-German, however, Rickenbacker itched to fight for the Allied cause. He proposed creating an air squadron composed solely of race-driver friends. The US Army shrugged off his idea as impractical.

When the US entered the war in April 1917, Rickenbacker volunteered and became an Army staff driver, exchanging celebrity status and high income for a sergeant's pay. He went to France confident that he could worm his way into the flying service, trading his steering wheel for a joystick.

Chauffeur to Pilot

In France, Rickenbacker proved an excellent chauffeur. (Some claim he drove for Gen. John J. "Black Jack" Pershing, the commander of the American Expeditionary Forces in France. He did not.) On one trip, he impressed Col. Billy Mitchell with his roadside repairs of their Hudson staff car. Mitchell, who drove wildly and furiously himself, liked having the personable and famous Rickenbacker drive for him.

An old Rickenbacker friend, Capt. James Ely Miller, was tasked to supervise the buildup at Issoudun of a huge new flight training center for American aviation cadets. Running into Rickenbacker in Paris, Miller asked him to become his engineering officer, a crucially important job and one for which Rickenbacker was eminently well-suited. Rickenbacker quickly agreed, on the condition that he could take flight training. Miller agreed, and Rickenbacker persuaded Mitchell to release him. It remained only for him to fudge his true age and fake his way through his physical (he had vision problems). He was in.

Rickenbacker entered France's primary flying school at Tours, starting on the little clipped-wing Penguins and soloing after only two hours with an instructor pilot. He racked up 25 flying hours in 17 days and graduated as a first lieutenant in the Signal Corps. He was now an officer and a gentleman and was headed straight for trouble at Issoudun.

It was a kind of class war. From the start, aviation attracted wealthy students from some of America's elite colleges and universities. The Yale Units and the Lafayette Escadrille personified this staking out of air combat as a "gentleman's" game.

More than 1,000 young pilot candidates, many from top schools and America's wealthy families, found themselves sent to Issoudun for training, only to find that construction of the 3rd Aviation Instruction Center was far from complete. They came expecting to go immediately into flight training. Instead, the Army put them to work constructing roads, buildings, latrines, railroad spurs, and hangars, often under the supervision of the newly commissioned roughneck, Eddie Rickenbacker.

Worse, while they labored in the mud, former colleagues who had remained in the US were arriving as commissioned officers.

Furious with the system, the cadets took out their anger on Rickenbacker, openly mocking his poor grammar and rough language. In his autobiography, Rickenbacker writes that he understood how these men could resent the fact that he, a "Swiss-German engineer with a grammar school education," had authority over them. In truth, their remarks deeply angered Rickenbacker. He got even by assigning them even rougher tasks, such as digging latrines.

Hard Driver

Had the cadets been more mature, they might have seen that Rickenbacker was driving himself harder than any of them, trying to transform Issoudun from muddy fields into a flying school. Unknown to them, he spent all his spare time bootlegging ground school and flying training. He persuaded tough Maj. Carl Spaatz to let him go to gunnery school at Cazaux to prepare for assignment to an operational squadron.

The first two operational units, the 94th and 95th Pursuit Squadrons, were

stationed at Villeneuve-les-Vertus, 20 miles behind the front. In March 1918, as pilots and mechanics began to assemble, their new Nieuport 28 fighters began to dribble in.

At \$18,500 each, the Nieuport 28 was one of the war's most expensive fighters, as well as one of the most beautiful. It was powered by a 160-hp Gnome rotary engine, making it fast and maneuverable. France was glad to sell the Nieuports to the US; its own military had declined to use them. They knew that its delicate lines concealed serious design flaws.

The tremendous vibration gener-

Gervais Raoul Lufbery, a kindred spirit if ever one existed. Lufbery had distinguished himself with the Lafayette Escadrille, downing 17 enemy airplanes. The word in the Escadrille was that his score was much higher, but the taciturn Lufbery usually flew alone and rarely reported his kills.

Fellow Mechanic

Lufbery was assigned to the 94th Pursuit Squadron, Rickenbacker's squadron. It was going into action soon, and the Americans wanted Lufbery to help guide the squadron's

entrance into combat. Lufbery and Rickenbacker, both former mechanics, hit it off right away. They understood engines and the men who worked on them and regarded grease under the fingernails as a badge of honor. Lufbery tutored Rickenbacker, escorting him on his first flight over the lines. Rickenbacker later said, "Everything I learned, I learned from Lufbery."

Rickenbacker spent much of his spare time on the ground working with the mechanics to improve the performance of the Nieuports. In other squadrons, the Gnome engines normally ran 30 hours before they required an overhaul. At the 94th, Rickenbacker helped the mechanics find ways to drill the cylinders to increase the lubrication. In so doing, the engine's time between overhauls more than doubled.

Rickenbacker's work with the mechanics generated contempt among the squadron's more cultured members. His poor grammar and his profanity were still regarded as the signs of a blue-collar worker, not an officer.

Rickenbacker discovered that, when aloft, he saw only a small percentage of what was going on in the air. Worse, he found he had a tendency to get airsick when he followed the cautious corkscrew evolutions that Lufbery used to avoid being surprised. In time he overcame both difficulties and concentrated on two goals: to be the first in the squadron to shoot down



Rickenbacker (center) poses next to a Spad with fellow 94th Pursuit Squadron pilots (l-r) 1st Lt. Joseph Eastman, Capt. James Meissner, 1st Lt. Reed Chambers, and 1st Lt. Thorne Taylor.

ated by the whirling rotary engine and by machine gun fire routinely cracked the rigid fuel lines connecting tanks and engine. Gasoline would spew over the fuselage, causing many sudden, catastrophic in-flight fires. If the Nieuport did not catch fire, it could break up in a dive, for a buildup of airspeed could cause the leading edge of the upper wing to tear off, allowing the fabric to balloon up and leaving the wing devoid of lift.

Thus Rickenbacker and his colleagues were going to war against veteran, combat-hardened opponents—who would be equipped with superior airplanes—in a Nieuport 28 in which they had never trained and which tended to catch fire spontaneously and lose its wing in a dive. Rickenbacker could hardly wait.

It now appears fated that Rickenbacker would connect with Maj.



Already a legend for downing 17 enemy aircraft while with Lafayette Escadrille, Maj. Raoul Lufbery taught Rickenbacker aerial combat tactics and led Rickenbacker's first flight over enemy lines.

a German and to be the first to become an ace.

Double Disappointment

Lt. Douglas Campbell was to deprive him of both prizes. Campbell, along with Lt. Alan Winslow, shot down the 94th's first two German aircraft—a Pfalz and an Albatros—on April 14, 1918. Campbell also became the first official ace with his fifth victory on May 31. Rickenbacker actually scored his fifth kill on May 28 and his sixth on May 30, but neither was confirmed until after Campbell's. Campbell was acclaimed as the first ace. Though he badly wanted the honor, Rickenbacker never contested Campbell's claim.

Rickenbacker was a serious pilot, and he flew often. His first confirmed victory came on April 29 flying with Capt. James Norman Hall. Hall and Rickenbacker both dived and fired on a Pfalz, Rickenbacker closing within 150 yards before firing. The claim was confirmed even before the two pilots touched down.

The victory gave him confidence, which he sorely needed, given the hostile or patronizing treatment of his squadron mates. In an account written in 1919, Rickenbacker conceded, "There is a peculiar gratification in receiving congratulations from one's squadron for a victory in the air. It is worth more to a pilot than the applause of the whole outside world."

On a subsequent mission, Hall, a

flight leader, was shot down and captured behind German lines. Rickenbacker was named to replace Hall as a flight commander. He had been at the front for less than two months, and his total flying time was under 150 hours, but he was in charge of leading men in combat.

On May 17, Rickenbacker flew with Reed Chambers on a voluntary patrol. Bitterly cold in their open cockpits at 20,000 feet, the two men had no oxygen, just as they had no heat, parachutes, or radios. Rick spotted three Albatros fighters, and with his judgment possibly impaired from

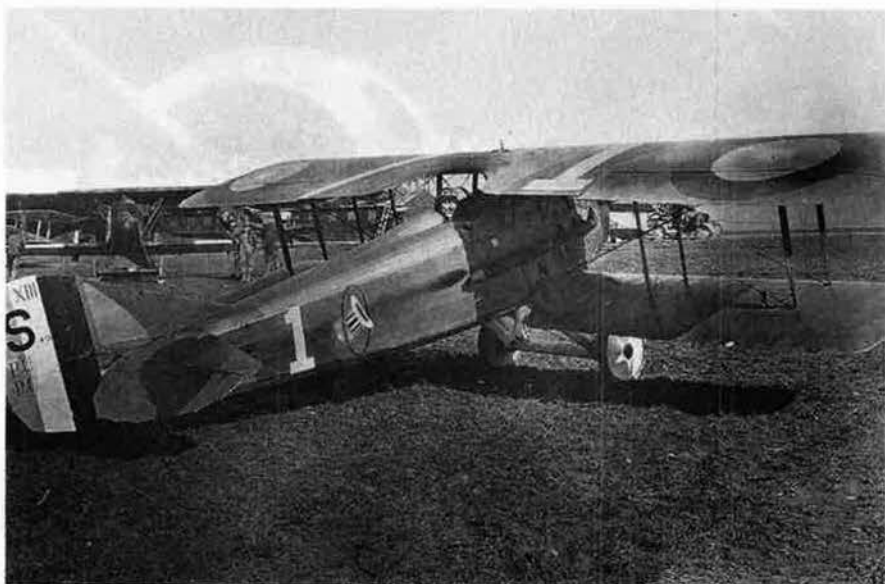
a lack of oxygen, put his Nieuport in a headlong dive.

He fired at the first enemy airplane at about 14,000 feet, killing the pilot, and then pulled up sharply. His upper right wing failed with a tremendous crack as his leading edge ripped off and the Nieuport went into a swiftly turning tailspin. The other two enemy airplanes followed him down, snap-shooting. By applying full power, Rickenbacker managed to pull out at 4,000 feet and, controls hard over, staggered back to a hot landing at his home field.

Only two days later, Rick and the



Rushed into production, the Fokker D.VII was operational in April 1918 and became Germany's top single-seat fighter of World War I. In his autobiography, Rickenbacker described it as "maneuverable, speedy, and tough."



The French-built Spad XIII was a solid gun platform, maneuverable speedster, and considered the finest fighter developed by the Allies. Rickenbacker, sitting here in one, personally picked up the first Spad assigned to the 94th PS.

94th suffered a blow when Lufbery lost his life in an attack on a high-flying Rumpler observation airplane, leaping or falling to the ground from his flaming Nieuport.

The desire to become an ace obsessed Rickenbacker, and he flew many solo patrols, an increasingly risky business, for the Germans had just introduced what would be recognized as the best fighter of the war, the Fokker D.VII. Rickenbacker never compromised his leadership duties. He took his responsibilities as a flight leader seriously, giving newcomers lots of ground instruction and always accompanying them on their first flights over the lines.

Rickenbacker had mastered his trade; he "saw the sky" as clearly as any pilot and was able to identify enemy aircraft at great distances. He countered the enemy's technology by

making use of the Nieuport's strong features while avoiding the weak and dangerous. Rickenbacker scored victories on May 28 and 30 and reached the coveted status of ace.

Then, serious problems began.

In its first few months, the 94th had run up 16 victories and was holding its own in the battle to command the air. It then seemed to disintegrate under the force of circumstances. A new German offensive brought with it the best in German airpower. During June, July, and August, the 94th Pursuit Squadron suffered eight losses.

For most of that long summer, Rickenbacker was confined to bed with a chronic fever. Grounded for weeks at a time and often hospitalized, he nevertheless insisted on flying whenever he could drag himself to an airplane. Combat required swift climbs and swooping dives, not good for an ailing ear, and he was confined to a hospital, first to have an abscess lanced and then for a mastoid operation. His doctors assumed he would never fly again. They assumed wrong.

The Spad XIII

A lesser person might have decided that he had done quite enough; he was an officer, an ace, and he had a ticket home. He didn't see it that way. On July 5, Rickenbacker went to the huge aviation depot outside of Paris and picked up the very first Spad XIII that would go to the 94th Squadron.

The Spad XIII was an advanced version of the highly successful Spad VII and was powered with a 235-hp Hispano-Suiza geared engine. The engine was far more complex than a Gnome engine, and it was not unusual for 50 percent of all Spad XIII's to be out of action with engine problems. The pilots liked it when the engine ran, however, for it was strong and able to dive swiftly and pull out sharply with no fear of structural failure.

Rickenbacker familiarized himself with the Spad during a lull in the fighting in July and August and was able to take a significant role during the September Battle of St. Mihiel. As anxious as he was to increase his score, Rickenbacker spent most of the battle in ground attack sorties, leading his flight down to ground level. On Sept. 14, he scored his seventh victory and began a streak

Rickenbacker received the Medal of Honor and many awards from both the US and France for his World War I service. Rickenbacker poses by his Spad that bears bullet hole patches—the small circles with a German symbol.



that would end with his becoming the Ace of Aces.

On Aug. 21, 1918, Maj. Harold E. Hartney was appointed commander of the 1st Pursuit Group, which comprised the 27th, 94th, 95th, and 147th squadrons. Hartney inherited a pair of major problems. First, heavy losses in the four squadrons had produced the stench of bad morale. Second, the group was riven by a quarrel over replacing the Nieuport 28s with the Spad.

Hartney needed help. He had been observing Rickenbacker's leadership skills both in combat and on the flight line. Despite strong opposition from headquarters ("not officer material") and from some of the blue-bloods in the squadron, Hartney appointed Rickenbacker to command the 94th.

Rickenbacker was delighted and immediately called two meetings. The first was with his pilots, where he set down his rules: No nonsense on the flight line; everyone takes care of mechanics; every man to fly often; every man to be aggressive.

The second meeting was with the mechanics. He told them he knew of their problems with the Spads and would give them 100 percent support. They responded, and within weeks, the 94th's Hispano engines

were going 100 hours flying time between overhauls, compared to 30 hours in other squadrons.

In just two conversations, Rickenbacker turned the 94th around, propelling it to become the war's crack fighter unit, with more victories and more hours over the lines than any other American outfit.

On Sept. 25, Rickenbacker put his words into action. During a solo mission over the lines, he spotted a pair of German observation airplanes escorted by a flight of five deadly Fokker D.VII's. Rickenbacker attacked, killing the pilot of one Fokker, then plunged on to down an observation aircraft before diving out of the fight. For this act of daring and bravery, Rickenbacker years later received the Medal of Honor.

Rickenbacker scored twice more in September and another 14 times in October. A promotion to captain, held up by his enemies in headquarters, came in October.

"Scientific Murder"

Of much greater importance to Rickenbacker was the success of the 94th, which became the most lethal US squadron and ended the war having downed 69 enemy aircraft and receiving 18 losses. Rickenbacker



During World War II, Rickenbacker carried out special government missions as a civilian. Here, he's shown with Secretary of War Robert Patterson and Gen. Carl Spaatz (center). Below, the younger Rick in his Spad.

was truly the Ace of Aces—but he was also the CO of COs. He forged his leadership in combat, seeking battle himself, and insisting that his squadron seek it as well. He always took advantage of the odds, avoiding casualties wherever possible. Unlike most of his peers, he did not see aerial combat as some form of latter-day gallantry. He termed it “scientific murder.”

He was a master executioner. He finished the war with a total of 26 victories, the most of any American. (In World War I, partial victory credits were counted as whole credits. By today's count, Rickenbacker's total would be 24.3, still more than any other American.)

Rickenbacker came home as a national hero but wouldn't capitalize on it for personal gain. He refused to appear in films and avoided making endorsements. He helped found the Rickenbacker Automobile Co., which from 1922 to 1927 produced 35,000 cars but no profits. When it went bankrupt, Rickenbacker took on the debt and paid it off in the midst of the Great Depression.

Rickenbacker had greater success with other ventures. One was renovation and improvement of the now-famed Indianapolis Speedway. Yet his greatest challenge was Eastern Air Lines, whose leadership he assumed in 1934. Rickenbacker ran the airline with an iron hand and made it one of the most profitable airlines in America.



After Japan attacked Pearl Harbor on Dec. 7, 1941, Eddie Rickenbacker volunteered his services. He refused to take cabinet-level positions in the government or accept a rank of major general in the Army Air Forces, preferring to serve the government in a civil capacity.

After some routine tours inspecting bases, Rickenbacker in October 1942 was given a top secret assignment. The Secretary of War, Henry L. Stimson, tasked him to carry a

stern reprimand from President Roosevelt to Gen. Douglas MacArthur, who had been making statements critical of the Administration. Then came an unexpected turn of events. On Oct. 21, the B-17 in which he was flying was forced to ditch in the Pacific. Rickenbacker and his seven companions spent three weeks on a raft. One man died of exposure, but Rickenbacker brought the others through.

Stimson admired Rickenbacker and used him for missions around the world during the conflict.

When the war ended, Rickenbacker returned to run Eastern Airlines. Times had changed; the competition was tougher, and he would make several serious errors in selecting equipment. For example, he opted for the ill-fated Lockheed Electra

turbojet aircraft at the very moment that other airlines were beginning to acquire jet transports. Soon, Rickenbacker was forced to turn Eastern's reins over to others.

Rickenbacker spent his latter years traveling, making speeches, and seeing to the ghostwriting of his autobiography, *Rickenbacker*. He was, by his own estimation, “the luckiest man alive.” He died in his sleep in 1973 at 82, to be remembered forever as one of American airpower's true giants. ■

Walter J. Boyne, former director of the National Air and Space Museum in Washington, is a retired Air Force colonel and author. He has written more than 400 articles about aviation topics and 29 books, the most recent of which is Beyond the Horizons: The Lockheed Story. His most recent article for Air Force Magazine, “Ranch Hand,” appeared in the August 2000 issue.

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— quoted from Gen. John P. Jumper
commander, Headquarters Air Combat Command, Langley AFB, VA



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2000 AFA Team of the Year

Crew Chief's Best



From the left, Bancroft, Warren, Fischer, Elledge, and Cundy.

Keepest 'em flying. That is the responsibility of the crew chiefs, who ensure that USAF aircraft are in top flying condition at all times. In 1999, this job took 76 percent of all crew chiefs overseas on deployments, where they maintained more than 40 types of aircraft for missions as diverse as combat strikes in Operation Allied Force to humanitarian relief in Central America. Five crew chiefs, all enlisted members from the aircraft maintenance force, were selected by the Air Force and AFA as the Team of the Year.

AFA National President Thomas J. McKee noted, "While some Air Force specialties can be missed for a few days with minimal operational impact, crew chiefs cannot be missed at all, even for a few hours. Without their efforts, USAF aircraft could not and would not fly."

SSgt. Ronald D. Bancroft, 16th Aircraft Generation Squadron (AFSOC), Hurlburt Field, Fla., deployed to Brindisi, Italy, for Operation Allied Force. As lead crew chief, he maintained four 16th Special Operations Wing AC-130U gunships and helped to launch 53 gunship sorties into Kosovo. He turned in a 95 percent maintenance mission effectiveness rating. Within 12

hours of arrival, Bancroft had two more gunships repaired, prepped, armed, and ready to go. He also directed repairs on other aircraft and, when a Navy F-14 suffered a burnt wiring harness for an external fuel tank, he worked with Navy technicians to get it repaired rapidly.

TSgt. Kent C. Cundy, with AETC's 97th Maintenance Squadron, Altus AFB, Okla., is the 97th Air Mobility Wing's "best aircraft crew chief." His isolation of discrepancies during C-17 ground engine runs produced an overall 12-hour fix rate of 82.3 percent, which far exceeded the command goal of 62 percent. He sustained an 80 percent mission capable rate and 95 percent departure reliability rate. Tasked to support Kosovo relief efforts, his efforts raised the on-time departure reliability rate to 90 percent. Cundy's leadership skills and proficiency helped the unit earn AETC's Maintenance Effectiveness Award.

SrA. Brett D. Elledge, C-130 crew chief with AMC's 40th Airlift Squadron, Dyess AFB, Tex., was selected to be a flying crew chief, a position normally reserved for more senior mechanics. He was also singled out by the inspector general team for the best safety practices they had seen in 10 years. During a crucial resupply

mission to Soto Cano AB, Honduras, Elledge spotted a gear box problem normally requiring an engine change. Instead he worked with the Honduran air force and engineered a temporary fix that let the mission proceed.

SSgt. Edwin W. Fischer, 325th Bomb Squadron (ACC), Whiteman AFB, Mo., is a B-2 stealth bomber crew chief. In Allied Force, his thoroughness and efficiency helped produce a perfect record in B-2 sortie production and on-time takeoffs. Selected as section trainer, Fischer revamped 60 task curriculums within two months and trained or certified more than 300 personnel in two bomb squadrons.

SSgt. Gary G. Warren Jr. is an A-10 crew chief with PACAF's 355th Fighter Squadron, Eielson AFB, Alaska. Warren's leadership enabled his section to achieve an overall 97 percent pass rate on quality assurance inspections. His technical skill produced a 100 percent eight-hour fix rate and 86.3 percent mission capable rate. He was also instrumental in making sure that seven A-10s that his squadron acquired from Moody AFB, Ga., were prepped and ready for deployment in time for the squadron's second trip to Al Jaber AB, Kuwait, for Operation Southern Watch.

AFA and the Air Force recognize the best crews, aerial tactician, and crew chief for their 1999 accomplishments.

USAF's Best in Operations

Lt. Gen. Claire L. Chennault Award

Best Aerial Warfare Tactician

Prior to the launch of Allied Force, Maj. Phil M. Haun, weapons and tactics chief for the 52nd Fighter Wing (USAFE), Spangdahlem AB, Germany, masterminded NATO's first integrated combat search and rescue task force operational concept centered on the use of A-10 pilots as combined mission commanders. His training program for A-10 and MH-53J crews was critical to successful rescues of downed pilots during Allied Force. He also created the blueprint to employ NATO's aircraft against tactical targets. And Haun used A-10s and F-16CGs to provide 24-hour coverage—A-10s in daytime, F-16CGs at night—for airborne forward air control. Haun also was mission commander for 19 strike packages flown in Kosovo. When his A-10's right engine was destroyed by a surface-to-air missile, he coaxed his aircraft to the Macedonian border and landed safely.



Lt. Gen. William H. Tunner Award

Best Airlift Aircrew

En route from Elmendorf AFB, Alaska, to NAS Lakehurst, N.J., the C-130 flown by Lt. Col. Paul A. Curlett and his 3rd Operations Group (PACAF) crew developed two severe engine leaks, forcing them to shut down engines No. 1 and No. 4. The crew, flying over Canada, was too far away to make an emergency landing at either Edmonton or Cold Lake airfields, 1.5 hours away. Co-pilot 1st Lt. Brent R. Himes noticed a small airfield called The Pas, with 6,300 feet of runway, located only 10 miles away. The crew decided to divert to The Pas but were unable to get radar guidance from Edmonton. Relying only on visual cues, they made a safe landing at The Pas.

From the left: Lt. Col. Paul A. Curlett, SSgt. David L. Walker, SSgt. John D. Sneets, and 1st Lt. Brent R. Himes. Not pictured: Capts. Richard K. Wells and Ronnie Hall.

Gen. Curtis E. LeMay Award

Best Bomber Aircrew

The B-52H crew Havoc 11, 20th Expeditionary Bomb Squadron, RAF Fairford, UK, fired Allied Force's first weapon—an AGM-86C conventional air launched cruise missile. Havoc 11 was leading an eight-ship formation of B-52s. The crew achieved several other firsts, including the first to lead a combined formation of B-52Hs and B-1Bs in combat. Their first sortie lasted more than 15 hours. They flew a total of 16, more than any other bomber crew. They developed, planned, and implemented multibomber formation operations. They were the "airspace experts" and trained some 150 aircrew members.

Standing, from the left: Capts. Linden C. Adams, Merrice Spencer, Jason W. Taylor, and Richard A. Sposato. Kneeling from the left: Capts. James W. Dunn and Jeffrey D. Neischel. Not pictured: Maj. John E. Colletta.



CMSAF Thomas N. Barnes Award

USAF's Best Crew Chief

"Better, Faster, Cheaper" might well be the motto of TSgt. Stewart J. Crerar, B-2 crew chief with the 393rd Bomb Squadron, 509th Bomb Wing (ACC), Whiteman AFB, Mo. He prepared his aircraft for combat three days ahead of schedule and launched the first B-2 strike in Allied Force. Crerar produced a flawless sortie production rate. His efficiency meant that in 45 combat sorties, spare aircraft were never needed. His leadership and expertise made him the 393rd BS Crew Chief of the Year and the 509th BW's Maintenance Professional of the Year.

Gen. Thomas S. Power Award

Best Missile Combat Crew

Capt. Keith A. McCartney and 1st Lt. Cynthia L. Perry, 341st Space Wing (AFSPC), Malmstrom AFB, Mont., teamed to win the 1999 Guardian Challenge Award with the second highest ICBM crew score in the history of the competition. McCartney's rigorous training and evaluation regimens enabled squadron crews to achieve an annual evaluation pass rate of 96 percent. Perry's drive and leadership resulted in her selection for early assignment to the standardization/evaluation team. This crew directed the squadron in the crucial task of the transportation and installation of nuclear code panels. Their efforts earned the Blanchard Trophy for the wing for a second straight year.



Space Operations Award

Best Space Operations Crew

Charlie Crew—a strategic missile warning crew of the 21st Space Wing (AFSPC), Peterson AFB, Colo.—achieved several firsts. They provided key combat support during Allied Force by manually developing and releasing data usually seen only by tactical sensors. They were the first crew to detect and report a no-notice space launch. They were the first to process data from two foreign experimental ICBM launches, which gave US experts the chance to study the new boosters. When a satellite anomaly and data-relay outage threatened the ability to monitor a foreign submarine, the crew stepped in to provide coverage.



From the left, back row: A1C Jami Nelson, SrA. Terry Witmer, A1C Mickey Sederberg, SrA. Gregory Reed, and Capt. Andrew Kovch. Front row: MSgt. (sel.) Steve Ryan and 1st Lt. Sabine Slover. Not pictured: MSgt. Rick Green and SSgt. Anthony Hernandez.



An RC-135 Rivet Joint aircraft flies near Yugoslavia during an Operation Allied Force mission.

Gen. Jerome F. O'Malley Award

Best Reconnaissance Crew

Recon 01, an RC-135 Rivet Joint crew, interrupted a scheduled in-flight refueling during an Allied Force reconnaissance mission to support the rescue of a downed F-117 pilot. As the pilot was parachuting down, Recon 01 crew members tracked his position and alerted a nearby E-3 Airborne Warning and Control System aircraft crew. The RC-135 pilots, Lt. Col. Michael Zenk and Capt. Rodney Cousins, flew the unarmed Rivet Joint closer to the Serbian border. They provided the pilot's location and data on the immediate threat, enabling controllers to guide search and rescue forces for extraction. Recon 01 also provided support in the search for three missing US Army soldiers, as well as the rescue of a downed F-16 pilot. Award recipients are from the 38th and 343rd Reconnaissance Squadrons and the 55th Operations Support Squadron, all at Offutt AFB, Neb., and the 95th RS and 488th Intelligence Squadron, both from RAF Mildenhall, UK.



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From the left: SSgt. Terence Wiley, Army Spc. Carolee Caine, SSgts. Keith Standing and Jennifer Wade, 1st Lt. William Roach, Maj. John Mahaffey, 1st Lt. James Chambers, SSgt. David Benbrook, and MSgt. Mark Georgeff. Not pictured: CMSgt. Cristopher Bailey, SrA. John Burke, Maj. John Carter, TSgts. Christopher Cook and Walter Downing III, Maj. Robert Faulk Jr., SSgt. Christina Gosling, Capt. James Gray, Maj. Jeffery Herd, SSgts. Heather Leach and Sandra Lott, MSgt. Adam Mangual, SrA. Justin McGowan, Maj. Thomas Powell, SrA. Jason Redmond, SSgt. Jeremy Roberts, Capt. Gregory Taylor, Maj. Brian Vaughan, John West Jr., and Mark Whitmire, and TSgt. John Williams.

Airborne Battle Management Crew of the Year

Best Crew of the Year

In the first integration of information from an E-8 Joint STARS radar aircraft and data from unmanned aerial vehicles and an Army fire-finder artillery detection radar system, Crew 3 members were able to detect and target Serb positions for attack by Allied Force fighter aircraft. The crew, from the 12th Expeditionary Airborne Command and Control Squadron (ACC), Robins AFB, Ga., conducted ground surveillance of the Kosovo region, reported significant enemy movement, and directed successful strike fighter attacks. Their pioneering use of these intelligence assets confirmed the revolutionary role of the E-8 as a battle management platform.



From the left, back row: MSgt. Michael Morar, SSgts. Gary Martin and Lonnie Allen, MSgt. Bruce Kingsbury, Lt. Col. James Pankau, MSgt. Robert Wood, and Lt. Col. Ross Victor. Front row: Capt. Gregory Ervin, Maj. Matthew Brand, Capt. Eric Zimmerman, Maj. John McGuire, and SSgt. Billy Wilkins.

Brig. Gen. Ross G. Hoyt Award

Best Air Refueling Aircrew

Flying out of San Vito AS, Italy, the crew of Ogre 01, from AFSOC's 67th Special Operations Squadron, RAF Mildenhall, UK, participated not once, but twice in the course of the rescue of the F-117 pilot downed in Serb territory. On March 27, the MC-130P Combat Shadow crew was tasked to refuel the three helicopters sent to rescue the pilot. They orbited the area for 90 minutes, avoiding Serb surface-to-air missile threats and, in poor weather, refueled the helicopters at 700 feet and within five miles of Serb territory. At this point the MC-130P was critically short of fuel itself, but the crew located a KC-135, refueled, and returned to the Serbian border. The F-117 pilot was rescued and delivered by helicopter to Tuzla AB, Bosnia. The Ogre 01 crew was then directed to pick him up at Tuzla and deliver him to Aviano AB, Italy.



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Best Air National Guard Unit

Top ANG Unit of the Year

Members of the 172nd Fighter Squadron, 110th Fighter Wing, W.K. Kellogg Airport, Mich., served with distinction in Allied Force. Equipped with night vision capability, the O/A-10 squadron carried out close air support, forward air control, and combat search and rescue missions round-the-clock. One of only three ANG fighter units in Allied Force, the 172nd racked up 240 combat sorties totaling 800 hours, destroying and damaging Serb artillery and armor. Additionally, the squadron flew more than 4,400 hours safely in 1999, garnering them the ACC Flying Safety Award.

From the left: Maj. J.D. Van Havel and Jim Ewald are two of the 172nd's O/A-10 pilots.

Best Air Force Reserve Unit

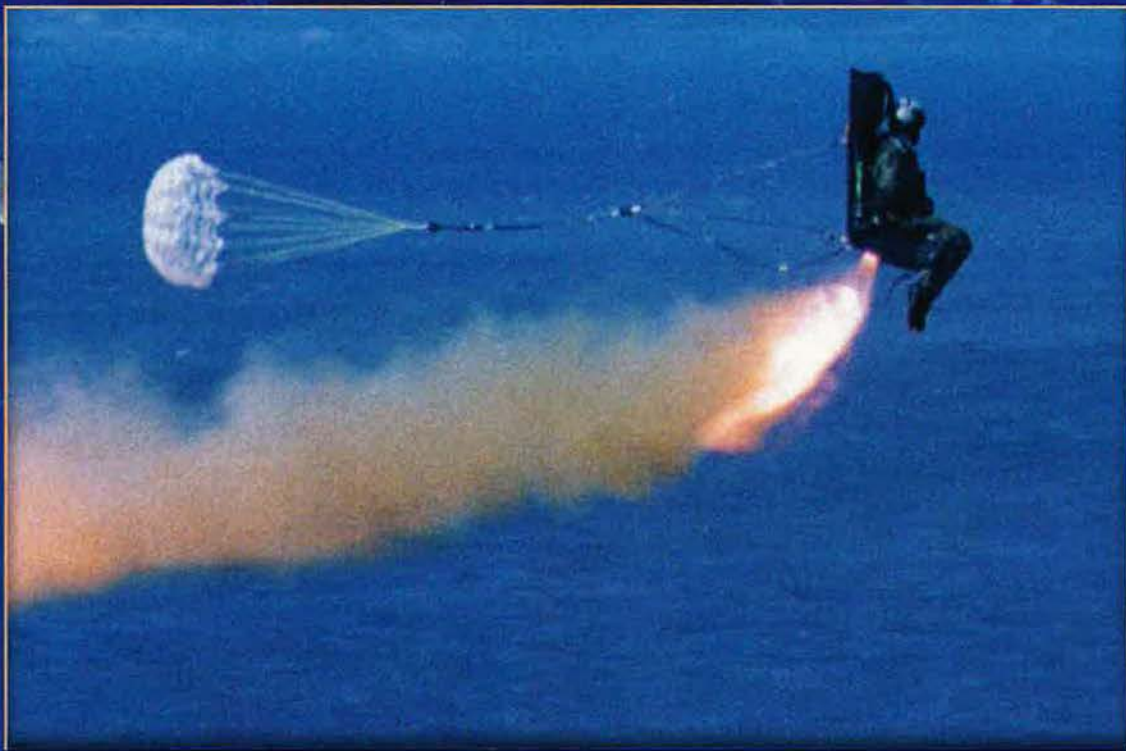
Top AFRC Unit of the Year

During its second Persian Gulf deployment in six months, the 70th Air Refueling Squadron, 349th Air Mobility Wing, Travis AFB, Calif., flew 68 sorties supporting 677 Air Force, Navy, and coalition aircraft. The squadron's KC-10 aircraft off-loaded nearly 4 million pounds of fuel. When a Navy F/A-18 suffered a broken fuel probe, Maj. Bob Millmann and his crew assisted in the aircraft's safe recovery and landing. Barely a week after returning from their second Gulf deployment, the 70th ARS volunteered to support Allied Force. It maintained two crews in theater during the entire conflict, providing relief for exhausted active duty crews.

From the left are members of one 70th ARS aircrew: SSgt. Ernest Valles, Capt. Jeff Kozak, Col. Jim Lynott, and CMSgt. Karen Redd.



Continued on p. 87.



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President's Award

Best Air Force Reserve Aircrew

A Total Force aircrew flying a KC-10 from the 70th ARS, Travis AFB, Calif., refueled six F-15Es, two F-16s, and one EC-130 aircraft (twice) at four separate rendezvous points in an intense 90-minute period during Allied Force. Only one was scheduled. Led by Reserve Capt. Jeffrey Pennington, 70th ARS, and augmented by active duty pilot Capt. Jeffrey McCleery, the crew off-loaded nearly 100,000 pounds of fuel within range of Serb missiles. Their cool professionalism enabled the fighter and EC-130 aircrews to complete their missions in a narrow window of clear weather, resulting in the destruction of a munitions storage building and an electrical power plant.

From the left: SSgt. Ernest Valles, Capt. Jeffrey Pennington, and MSgt. Jeffrey Pinto.



Photo by Paul Kennedy



Maj. Gen. Earl T. Ricks Award

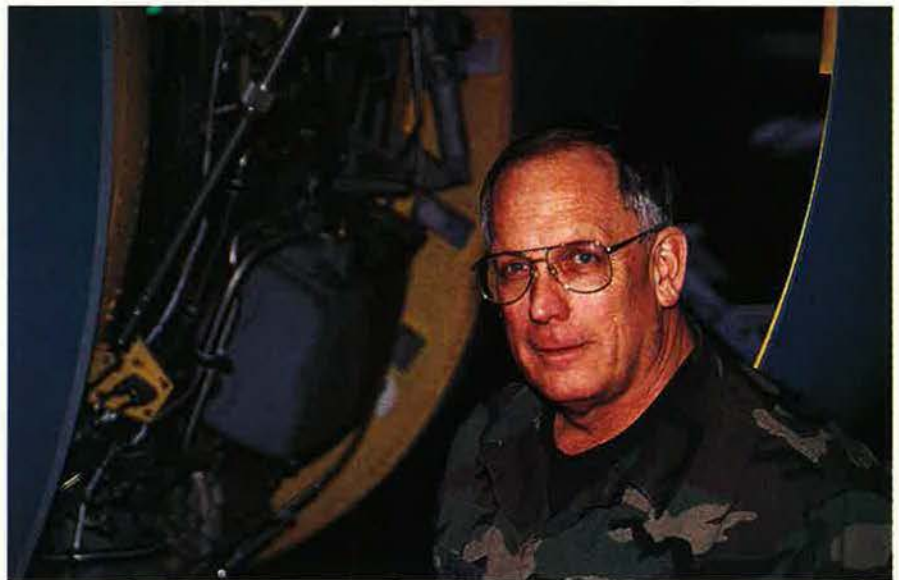
Best Airmanship in the Air National Guard

A routine deployment to Iceland for Operation Coronet Norseman tested the leadership ability and tactical skills of Lt. Col. Randall G. Riccardi, F-15 pilot with ANG's 122nd Fighter Squadron, 159th Fighter Wing, NAS JRB New Orleans, during an unexpected confrontation with Russian bombers. Under his leadership, F-15s on alert successfully intercepted and turned back two Russian Tu-95 Bear bombers, the first real-world scramble in Iceland in more than eight years. Riccardi's professionalism and tactical skill earned praise from the admiral commanding NAS Keflavik, Iceland. Stateside, Riccardi also expertly trained more than half of the current pilots in the 159th FW, with no mishaps.

CMSgt. Dick Red Award


Best ANG Aerospace Maintenance

CMSgt. Thomas A. Childers, 121st Maintenance Squadron, 121st Air Refueling Wing, Rickenbacker IAP, Ohio, is responsible for avionics, propulsion, and accessory aircraft maintenance on the unit's KC-135R aircraft. Directing 177 maintenance personnel, Childers supervises the Pacer CRAG avionics modernization program. He fostered a culture of safety in his flight by updating lockout/tagout procedures, and he consolidated tool kit instructions and procedures. His emphasis on top performance standards is matched by his concern for unit morale and cohesiveness: He played a key role in establishing the Deserving Airmen Promotion System, now a model program for the wing, and in strengthening the wing's Chief Council, a problem-solving organization with access to wing leadership.





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For ground systems, TRW developed, installed and now sustains a new system, Launch And Network Control

Equipment (LANCE), that integrates commercial off-the-shelf (COTS) hardware and software components and significantly reduces customer operations and maintenance costs.

TRW is also integrating the Defense Travel System (DTS), a DoD-wide travel management system to seamlessly automate the three DoD travel processes: authorization, reservation and voucher filing.

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Field Operating Agencies (continued)

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Commander
Col. Martin L. Harper

Air Force News Agency

Kelly AFB, Tex.



Commander
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Air Force Office of Special Investigations

Andrews AFB, Md.



Commander
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Air Force Operations Group

Washington



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Air Force Personnel Center

Randolph AFB, Tex.



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Air Force Personnel Operations Agency

Washington



Commander
Maj. Gen. John F. Regni

Air Force Program Executive Office

Washington



Air Force Acquisition Executive
Lawrence J. Delaney

Air Force Real Estate Agency

Bolling AFB, D.C.



Director
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Air Force Review Boards Agency

Andrews AFB, Md.



Director
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Air Force Security Forces Center

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San Antonio



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Air Force Studies & Analyses Agency

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Commander
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Direct Reporting Units

Air Force Communications & Information Center

Washington



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Air Force Doctrine Center

Maxwell AFB, Ala.



Commander
Maj. Gen. Lance L. Smith

Air Force Operational Test & Evaluation Center

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Commander
Maj. Gen. William A. Peck Jr.

United States Air Force Academy

Colorado Springs, Colo.



Superintendent
Lt. Gen. John R. Dallager

11th Wing

Bolling AFB, D.C.



Commander
Col. James P. Hunt

Air Force Generals Serving in Joint and International Assignments

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DASD for Reserve Affairs (Readiness, Training, & Mobilization)

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Military Advisor to Chairman, Reserve Forces Policy Board

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Director, Special Programs, USD, AT&L

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Principal Director, Combating Terrorism Policy & Support, USD, Policy

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Ballistic Missile Defense Organization

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Ft. Meade, Md.

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Defense Logistics Agency
Ft. Belvoir, Va.

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Defense Information Systems Agency
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Commander, Defense Supply Center Columbus
Defense Logistics Agency
Columbus, Ohio

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Deputy Director, Plans & Customer Operations Directorate
National Imagery & Mapping Agency
Reston, Va.

Brig. Gen. Robert P. Summers
Director, Nuclear Support & Operations, DTRA
Alexandria, Va.

Joint Chiefs of Staff

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Vice Chairman, Joint Chiefs of Staff

Gen. Michael E. Ryan
Chief of Staff, United States Air Force

Lt. Gen. Bruce A. Carlson
Director, Force Structure, Resources, & Assessment

Maj. Gen. Robert A. McIntosh
Asst. to Chairman, Reserve Affairs

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Maj. Gen. Timothy A. Kinnan
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Shaw AFB, S.C.

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Deputy Commander, CENTCOM Air Forces
Shaw AFB, S.C.

Maj. Gen. Silas R. Johnson Jr.
Chief, US Military Training Mission, Saudi Arabia
Riyadh, Saudi Arabia

Maj. Gen. Victor E. Renuart Jr.
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Riyadh, Saudi Arabia

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Commander in Chief, US European Command
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Ramstein AB, Germany

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Ankara, Turkey

Maj. Gen. Charles N. Simpson
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Stuttgart-Vaihingen, Germany

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Stuttgart-Vaihingen, Germany

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Commander, Cheyenne Mountain Operations Center
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Brig. Gen. Kelvin R. Coppock
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Maj. Gen. John D. Becker
Director, Operations & Logistics
Scott AFB, Ill.

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Director, C³ Systems
Scott AFB, Ill.

Brig. Gen. James G. Roudebush
Command Surgeon
Scott AFB, Ill.

Brig. Gen. James W. Swanson
Chief Counsel
Scott AFB, Ill.

Brig. Gen. Donald C. Wurster
Inspector General
Scott AFB, Ill.

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Mons, Belgium

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Ramstein AB, Germany

Lt. Gen. Ronald E. Keys
Commander, Allied Air Forces Southern Europe
Naples, Italy

Maj. Gen. Thomas L. Baptiste
Chief of Staff, Allied Air Forces Southern Europe
Naples, Italy

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Deputy Commander, Joint Command North
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SHAPE
Mons, Belgium

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Mons, Belgium

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Kalkar, Germany

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Larissa, Greece

Brig. Gen. Michael G. Lee
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Brig. Gen. Frederick D. Van Valkenburg Jr.
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Elmendorf AFB, Alaska

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Commander, CONUS Region
Tyndall AFB, Fla.

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Peterson AFB, Colo.

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Director, Plans
Peterson AFB, Colo.

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Brig. Gen. Robert H. Latiff
Commander, Cheyenne Mountain Operations Center
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Commander, Air Component Command, ROK/US Combined Forces
Command

Maj. Gen. Michael M. Dunn
Deputy Chief of Staff, United Nations Command and US Forces Korea

Brig. Gen. Jeffrey B. Kohler
Chief of Staff, Air Component Command, ROK/US Combined Forces
Command, and Vice Commander, US Air Forces Korea

Central Intelligence Agency

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Associate Director of Central Intelligence for Military Support

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Commander, Army & Air Force Exchange Service
Dallas

Brig. Gen. Rodney W. Wood
Vice Commander, Army & Air Force Exchange Service
Dallas

Department of Energy

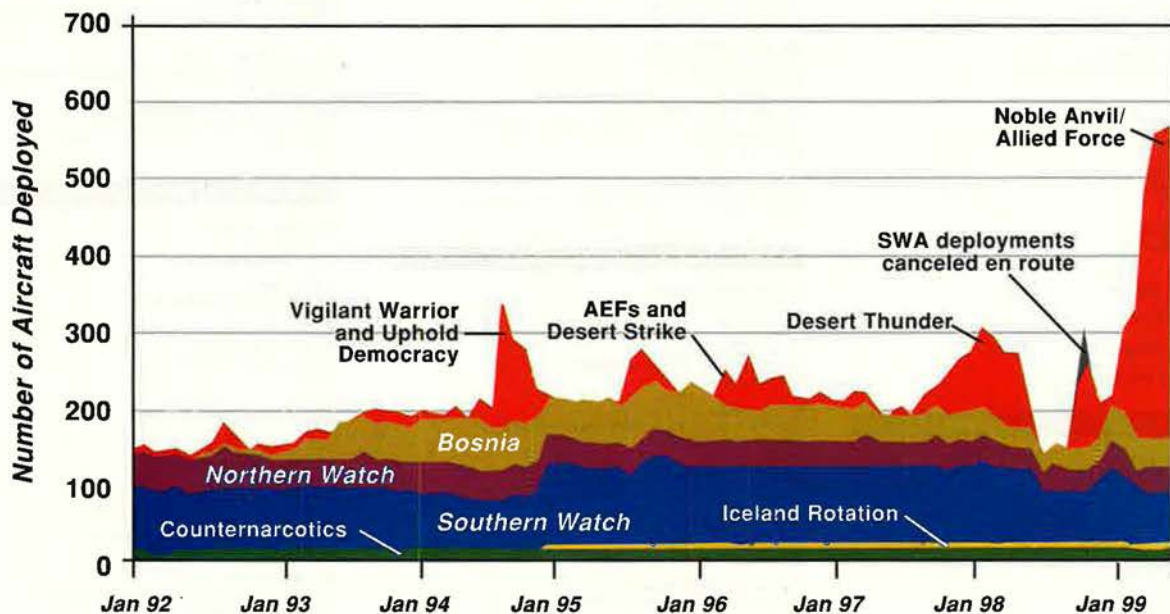
Brig. Gen. Thomas F. Gioconda
Acting Asst. Secretary for Defense Programs
Washington

The Chart Page

By Tamar A. Mehuron, Associate Editor

Pressing Engagement

USAF Deployments Through the 1990s



Source: Col. Robert Allardice, USAF, "Expeditionary Aerospace Force ... Defining the Cost of Engagement."

In 1990–91, USAF prepared for, waged, and stood down from a big war—Desert Storm. The rest of the 1990s was spent in worldwide “engagement,” featuring constant, draining deployments such as Northern Watch, Southern Watch, and Bosnia, plus “surges” to meet sudden crises. Of the latter type, the largest and most wearing was Allied Force in the Balkans, which strained airmen and aircraft nearly to the limit. The graph depicts the number of aircraft tasked for these various contingencies.

To better manage the allocation of troops and equipment to meet these demands, USAF devised the Expeditionary Aerospace Force concept, which service leaders hope will even out the pressures associated with the policy of engagement.

AEF Aerospace Expeditionary Force
SWA Southwest Asia

OUR SFW IS SO SMART IT CAN MULTIPLY.

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LONG RANGE
SURVEILLANCE

AIR-TO-GROUND
WEAPONS

INTELLIGENCE
GATHERING

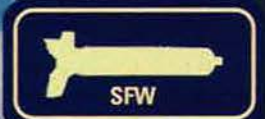
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AFA/AEF Almanac

Compiled by Frances McKenney, Assistant Managing Editor

Chapters of the Year

YEAR	RECIPIENT(S)
1953	San Francisco Chapter
1954	Santa Monica (Calif.) Area Chapter
1955	San Fernando Valley (Calif.) Chapter
1956	Utah State AFA
1957	H.H. Arnold Chapter (N.Y.)
1958	San Diego Chapter
1959	Cleveland Chapter
1960	San Diego Chapter
1961	Chico (Calif.) Chapter
1962	Fort Worth (Tex.) Chapter
1963	Colin P. Kelly Chapter (N.Y.)
1964	Utah State AFA
1965	Idaho State AFA
1966	New York State AFA
1967	Utah State AFA
1968	Utah State AFA
1969	(no presentation)
1970	Georgia State AFA
1971	Middle Georgia Chapter
1972	Utah State AFA
1973	Langley (Va.) Chapter
1974	Texas State AFA
1975	Alamo Chapter (Tex.) and San Bernardino (Calif.) Area Chapter
1976	Scott Memorial Chapter (Ill.)
1977	Thomas B. McGuire Jr. Chapter (N.J.)
1978	Thomas B. McGuire Jr. Chapter (N.J.)
1979	Brig. Gen. Robert F. Travis Chapter (Calif.)
1980	Central Oklahoma (Gerrity) Chapter
1981	Alamo Chapter (Tex.)
1982	Chicagoland—O'Hare Chapter (Ill.)
1983	Charles A. Lindbergh Chapter (Conn.)
1984	Scott Memorial Chapter (Ill.) and Colorado Springs/Lance Sijan Chapter (Colo.)
1985	Cape Canaveral Chapter (Fla.)
1986	Charles A. Lindbergh Chapter (Conn.)
1987	Carl Vinson Memorial Chapter (Ga.)
1988	Gen. David C. Jones Chapter (N.D.)
1989	Thomas B. McGuire Jr. Chapter (N.J.)
1990	Gen. E.W. Rawlings Chapter (Minn.)
1991	Paul Revere Chapter (Mass.)
1992	Central Florida Chapter and Langley (Va.) Chapter
1993	Green Valley Chapter (Ariz.)
1994	Langley (Va.) Chapter
1995	Baton Rouge (La.) Chapter
1996	Montgomery (Ala.) Chapter
1997	Central Florida Chapter
1998	Ark-La-Tex Chapter (La.)
1999	Hurlburt Chapter (Fla.)
2000	Wright Memorial Chapter (Ohio)

Profiles of AFA Membership

As of June 2000 (Total 147,336)

59%	One-year members	Of AFA's service members (who account for about 10 percent of USAF total strength):
12%	Three-year members	62% are officers
29%	Life Members	38% are enlisted
20%	Active duty military	
48%	Retired military	Of AFA's retired military members:
16%	Former service	74% are retired officers
6%	Guard and Reserve	26% are retired enlisted
6%	Patron	
2%	Cadet	
2%	Spouse/widow(er)	

AFA "Member of the Year" Award Recipients

State names refer to winner's home state at the time of the award.

YEAR	RECIPIENT(S)	YEAR	RECIPIENT(S)
1953	Julian B. Rosenthal (N.Y.)	1977	Edward A. Stearn (Calif.)
1954	George A. Anderl (Ill.)	1978	William J. Demas (N.J.)
1955	Arthur C. Storz (Neb.)	1979	Alexander C. Field Jr. (Ill.)
1956	Thos. F. Stack (Calif.)	1980	David C. Noerr (Calif.)
1957	George D. Hardy (Md.)	1981	Daniel F. Callahan (Fla.)
1958	Jack B. Gross (Pa.)	1982	Thomas W. Anthony (Md.)
1959	Carl J. Long (Pa.)	1983	Richard H. Becker (Ill.)
1960	O. Donald Olson (Colo.)	1984	Earl D. Clark Jr. (Kan.)
1961	Robert P. Stewart (Utah)	1985	George H. Chabbott (Del.) and Hugh L. Enyart (Ill.)
1962	(no presentation)	1986	John P.E. Kruse (N.J.)
1963	N.W. DeBerardinis (La.) and Joe L. Shosid (Tex.)	1987	Jack K. Westbrook (Tenn.)
1964	Maxwell A. Kriendler (N.Y.)	1988	Charles G. Durazo (Va.)
1965	Milton Caniff (N.Y.)	1989	O.R. Crawford (Tex.)
1966	William W. Spruance (Del.)	1990	Cecil H. Hopper (Ohio)
1967	Sam E. Keith Jr. (Tex.)	1991	George M. Douglas (Colo.)
1968	Marjorie O. Hunt (Mich.)	1992	Jack C. Price (Utah)
1969	(no presentation)	1993	Lt. Col. James G. Clark (D.C.)
1970	Lester C. Curl (Fla.)	1994	William A. Lafferty (Ariz.)
1971	Paul W. Gaillard (Neb.)	1995	William N. Webb (Okla.)
1972	J. Raymond Bell (N.Y.) and Martin H. Harris (Fla.)	1996	Tommy G. Harrison (Fla.)
1973	Joe Higgins (Calif.)	1997	James M. McCoy (Neb.)
1974	Howard T. Markey (D.C.)	1998	Ivan L. McKinney (La.)
1975	Martin M. Ostrow (Calif.)	1999	Jack H. Steed (Ga.)
1976	Victor R. Kregel (Tex.)	2000	Mary Anne Thompson (Va.)

Air Force Association National Presidents



Jimmy Doolittle
1946-47



Thomas G. Lanphier Jr.
1947-48



C.R. Smith
1948-49



Robert S. Johnson
1949-51



Harold C. Stuart
1951-52



Arthur F. Kelly
1952-53



George C. Kenney
1953-54



John R. Alison
1954-55



Gill Robb Wilson
1955-56



John P. Henebry
1956-57



Peter J. Schenk
1957-59



Howard T. Markey
1959-60



Thos. F. Stack
1960-61



Joe Foss
1961-62



John B. Montgomery
1962-63



W. Randolph Lovelace II
1963-64



Jess Larson
1964-67



Robert W. Smart
1967-69



George D. Hardy
1969-71



Martin M. Ostrow
1971-73



Joe L. Shosid
1973-75



George M. Douglas
1975-77



Gerald V. Hasler
1977-79



Victor R. Kregel
1979-81



John G. Brosky
1981-82



David L. Blankenship
1982-84



Martin H. Harris
1984-86



Sam E. Keith Jr.
1986-88



Jack C. Price
1988-90



D.R. Crawford
1990-92



James M. McCoy
1992-94



Gene Smith
1994-96



Doyle E. Larson
1996-98



Thomas J. McKee
1998-2000

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Edward P. Curtis
1946-47



Jimmy Doolittle
1947-49



C.R. Smith
1949-50



Carl A. Spaatz
1950-51



Thomas G. Lanphier Jr.
1951-52



Harold C. Stuart
1952-53



Arthur F. Kelly
1953-54



George C. Kenney
1954-55



John R. Alison
1955-56



Gill Robb Wilson
1956-57



John P. Henebry
1957-58



James M. Trail
1958-59



Julian B. Rosenthal
1959-60



Howard T. Markey
1960-61



Thos. F. Stack
1961-62



Joe Foss
1962-63



Jack B. Gross
1963-64



W. Randolph Lovelace II
1964-65



George D. Hardy
1966-67



Jess Larson
1967-71



George D. Hardy
1971-72



Joe L. Shosid
1972-73



Martin M. Ostrow
1973-75



Joe L. Shosid
1975-76



Gerald V. Hasler
1976-77



George M. Douglas
1977-79



Daniel F. Callahan
1979-81



Victor R. Kregel
1981-82



John G. Brosky
1982-84



David L. Blankenship
1984-85



Edward A. Stearn
1985-86



Martin H. Harris
1986-88



Sam E. Keith Jr.
1988-90



Jack C. Price
1990-92



O.R. Crawford
1992-94



James M. McCoy
1994-96



Gene Smith
1996-98



Doyle E. Larson
1998-2000



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AFA's Regions, States, and Chapters

These figures indicate the number of affiliated members as of June 30, 2000. Listed below the name of each region is the region vice president for that region.

CENTRAL EAST REGION 13,434

John E. Craig II

Delaware 785
Delaware Galaxy 581
Diamond State 204

District of Columbia 858
Nation's Capital 858

Maryland 2,875
Baltimore* 836
Central Maryland 419
College Park Airport 160
Thomas W. Anthony 1,460

Virginia 8,548
Danville 49
Donald W. Steele Sr.
Memorial 3,609
Gen. Charles A. Gabriel 1,222
Langley 1,848
Leigh Wade 147
Lynchburg 83
Northern Shenandoah Valley 211
Richmond 527
Roanoke 284
Tidewater 367
William A. Jones III 201

West Virginia 368
Brig. Gen. Pete Everest 46
Chuck Yeager 322

FAR WEST REGION 16,042

Rich Taubinger

California 14,994
Antelope Valley 625
Bakersfield 111
Bob Hope 1,061
Brig. Gen. Robert F. Travis 1,253
C. Farinha Gold Rush 1,772
David J. Price/Beale 633
Fresno* 410
Gen. B.A. Schriever
Los Angeles 808
General Doolittle
Los Angeles Area* 1,748
Golden Gate* 851
High Desert 283
Maj. Gen. Charles I. Bennett Jr. 346
Monterey Bay Area 307
Orange County/Gen. Curtis
E. LeMay 1,018
Palm Springs 559
Pasadena Area 423
Robert H. Goddard 873
San Diego 1,067
Tennessee Ernie Ford 846

Hawaii 1,048
Hawaii* 1,011
Maui 37

FLORIDA REGION 12,020

David R. Cummock

Florida 12,020

Brig. Gen. James R. McCarthy 418
Cape Canaveral 1,367
Central Florida 1,528
Col. H.M. "Bud" West 289
Col. Loren D. Evenson 693
Eglin 1,834
Falcon 453
Florida Highlands 370
Gainesville 282
Gen. Nathan F. Twining 517
Gold Coast 430
Hurlburt 527
Jerry Waterman 1,360
John C. Meyer 174
John W. DeMilly Jr. 360
Miami 424
On Wings of Eagles 280
Pensacola 155
Treasure Coast 176
West Palm Beach 383

GREAT LAKES REGION 9,854

W. Ron Goerges

Indiana 1,705
Central Indiana 470
Columbus-Bakalar 36
Falls Cities 59
Fort Wayne 241
Grissom Memorial 170
Gus Grissom 147
Lawrence D. Bell Museum 275
Lester W. Johnston 38
Southern Indiana 184
Terre Haute-Wabash Valley 85

Kentucky 801
Gen. Russell E. Dougherty 509
Lexington 292

Michigan 2,322
Battle Creek 226
Huron 117
James H. Straubel 906
Kalamazoo 295
Lake Superior Northland 172
Lloyd R. Leavitt Jr. 137
Mid-Michigan 89
Mount Clemens 298
PE-TO-SE-GA 82

Ohio 5,026
Capt. Eddie Rickenbacker
Memorial* 793
Frank P. Lahm 544
Greater Cincinnati 229
North Coast* 388
Steel Valley 264
Wright Memorial* 2,808

MIDWEST REGION 9,801

Robert M. Williams

Illinois 3,711
Chicagoland-O'Hare 1,338
Greater Rockford 91
Land of Lincoln 410
Richard W. Asbury 294
Scott Memorial 1,578

Iowa 716
Gen. Charles A. Horner 252
Lancer 159
Northeast Iowa 101
Richard D. Kislign 204

Kansas 1,024
Contrails 64
Lt. Erwin R. Bleckley 678
Maj. Gen. Edward R. Fry 282

Missouri 2,263
Earl D. Clark Jr. 434
Harry S. Truman 629
Ozark 276
Spirit of St. Louis 924

Nebraska 2,087
Ak-Sar-Ben 1,787
Lincoln 300

NEW ENGLAND REGION 4,916

Eugene M. D'Andrea

Connecticut 921
Charles A. Lindbergh 129
Flying Yankees 151
Gen. Bennie L. Davis 164
Gen. George C. Kenney 83
Igor Sikorsky 95
Northern Connecticut 134
Sgt. Charlton Heston 165

Maine 370
Eastern Maine 219
Maj. Charles J. Loring Jr. 89
Southern Maine 62

Massachusetts 2,295
Boston 159
Laurence G. Hanscom 152
Maj. John S. Southrey* 208
Minuteman 318
Otis 196
Paul Revere 727
Pioneer Valley 180
Taunton 167
Worcester* 188

New Hampshire 844
Brig. Gen. Harrison R. Thyng 305
Pease 539

Rhode Island 257
Metro Rhode Island 219
Newport Blue & Gold 38

Vermont 229
Burlington 229

NORTH CENTRAL REGION 4,659

Charles A. Nelson

Minnesota 1,318
Gen. E.W. Rawlings 1,061
Richard I. Bong 257

Montana 533
Big Sky 420
Treasure State 113

North Dakota 728
Gen. David C. Jones 342
Happy Hooligan 143
Red River Valley 243

South Dakota 807
Dacotah 452
Rushmore 355

Wisconsin 1,273
Badger State 316
Billy Mitchell 594
Madison 363

NORTHEAST REGION 9,243

Raymond "Bud" Hamman

New Jersey 2,659
Adm. Charles E. Rosendahl 136
Aerospace Founders 68
Brig. Gen. E. Wade Hampton 183
Brig. Gen. Frederick W. Castle 186
Hangar One 136
Highpoint 86
Hudson* 71
John Currie Memorial 25
Mercer County 227
Passaic-Bergen* 208
Sal Capriglione 90
Teterboro-Bendix 25
Thomas B. McGuire Jr. 882
Tri-County 52
Union Morris 284

New York 3,524
Albany-Hudson Valley* 408
Chautauqua 71
Colin P. Kelly 268
Forrest L. Vosler 270
Francis S. Gabreski 287
Gen. Carl A. "Tooney" Spatz 245
Gen. Daniel "Chappie"
James Jr. Memorial 145
Genesee Valley 255
Iron Gate 199
L.D. Bell-Niagara Frontier 419
Lloyd Schloen-Empire 154
Nassau Mitchel 377
Queens 250
Thomas Watson Sr. Memorial 176

Pennsylvania 3,060
Altoona 68
Brandywine 182
Eagle 68
Greater Pittsburgh* 440
Joe Walker-Mon Valley 115
Lehigh Valley 251
Liberty Bell 663
Lt. Col. B.D. "Buzz" Wagner 124
Mifflin County* 117
Olmsted 361
Pocono Northeast 223
Total Force 179
York-Lancaster 269

*These chapters were chartered prior to Dec. 31, 1948, and are considered original charter chapters; the Maj. John S. Southrey Chapter of Massachusetts was formerly the Chicopee Chapter; the North Coast Chapter of Ohio was formerly the Cleveland Chapter.

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AFA's Overseas Chapters

CHAPTER	LOCATION
United States Air Forces In Europe (USAFE)	
Charlemagne	Geilenkirchen, Germany
Dolomiti	Aviano AB, Italy
Lufbery-Campbell ..	Ramstein AB, Germany
Spangdahlem	Spangdahlem AB, Germany
United Kingdom	Lakenheath, UK
Pacific Air Forces (PACAF)	
Keystone	Kadena AB, Japan
Miss Veedol	Misawa AB, Japan
Tokyo	Tokyo, Japan
Supreme Headquarters Allied Powers Europe (SHAPE)	
Gen. Lauris G. Norstad	Mons, Belgium

AFA's First National Officers and Board of Directors

This panel of officers and directors acted temporarily until a representative group was democratically elected by membership at the first National Convention, in September 1947.

OFFICERS

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First Vice President Edward P. Curtis
Second Vice President Meryll Frost
Third Vice President Thomas G. Laphier Jr.
Secretary Sol A. Rosenblatt
Assistant Secretary Julian B. Rosenthal
Treasurer W. Deering Howe
Executive Director Willis S. Fitch

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Burton E. Donaghy	Benjamin F. Warmer
James H. Douglas Jr.	Lowell P. Weicker
G. Stuart Kenney	Cornelius Vanderbilt Whitney
Reiland Quinn	John Hay Whitney

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Rufus Rand, Sarasota, Fla.
Sol A. Rosenblatt, New York
Julian B. Rosenthal, New York
James M. Stewart, Beverly Hills, Calif.
Lowell P. Weicker, New York
Cornelius Vanderbilt Whitney, New York
John Hay Whitney, New York

NORTHWEST REGION 6,279

Barbara M. Brooks-Lacy

Alaska 1,210
 Anchorage 920
 Fairbanks Midnight Sun 290

Idaho 379
 Magic Valley 111
 Snake River Valley 268

Oregon 1,242
 Bill Harris 145
 Portland* 781
 Willamette Valley 316

Washington 3,448
 Greater Seattle 1,223
 Inland Empire 782
 McChord 1,443

ROCKY MOUNTAIN REGION 7,232

Boyd Anderson

Colorado 5,140
 Colorado Springs/Lance Sijan ... 2,867
 Gen. Robert E. Huyser 150
 Long's Peak 276
 Mel Harmon 145
 Mile High 1,702

Utah 1,611
 Northern Utah 673
 Salt Lake 437
 Ute-Rocky Mountain 501

Wyoming 481
 Cheyenne Cowboy 481

SOUTH CENTRAL REGION 9,100

Billy M. Boyd

Alabama 2,528
 Birmingham 413
 Mobile 283
 Montgomery 1,465
 Tennessee Valley 367

Arkansas 1,410
 David D. Terry Jr. 990
 Ouachita 138
 Razorback 282

Louisiana 1,874
 Ark-La-Tex 1,084
 Greater New Orleans Area 333
 Maj. Gen. Oris B. Johnson 457

Mississippi 1,311
 Golden Triangle 383
 Jackson 198
 John C. Stennis 730

Tennessee 1,977
 Chattanooga 135
 Everett R. Cook 475
 Gen. Bruce K. Holloway 612
 H.H. Arnold Memorial 213
 Maj. Gen. Dan F. Callahan 542

SOUTHEAST REGION 9,756

Zack E. Osborne

Georgia 4,185
 Carl Vinson Memorial 1,794
 Dobbins 1,768
 Savannah 315
 South Georgia 308

North Carolina 3,141
 Blue Ridge 377
 Cape Fear 206
 Kitty Hawk 88
 Piedmont 514
 Pope 693
 Scott Berkeley 628
 Tarheel 635

South Carolina 2,430
 Charleston 712
 Columbia 455
 Ladewig-Shine Memorial 234
 Strom Thurmond 387
 Swamp Fox 642

SOUTHWEST REGION 8,934

Scotty Wetzel

Arizona 4,686
 Barry Goldwater 198
 Cochise 100
 Frank Luke 1,163
 Phoenix Sky Harbor 1,287
 Prescott 171
 Richard S. Reid 172
 Tucson 1,595

Nevada 2,096
 Dale O. Smith 460
 Thunderbird 1,636

New Mexico 2,152
 Albuquerque 1,382
 Fran Parker 462
 Llano Estacado 308

TEXOMA REGION 17,257

Thomas J. Kemp

Oklahoma 3,193
 Altus 436
 Central Oklahoma (Gerrity) 1,706
 Enid 551
 Tulsa 500

Texas 14,064
 Abilene 501
 Aggeland 190
 Alamo 4,718
 Austin 1,414
 Concho 368
 Dallas 1,077
 Del Rio 222
 Denton 375
 Fort Worth 2,147
 Gen. Charles L. Donnelly Jr. 566
 Ghost Squadron 146
 Heart of the Hills 165
 Lubbock 213
 Northeast Texas 474
 Panhandle AFA 123
 Permian Basin 114
 San Jacinto 1,251

H.H. Arnold Award Recipients

Until 1986, AFA's highest Aerospace Award was the H.H. Arnold Award. Named for the World War II leader of the Army Air Forces, it was presented annually in recognition of the most outstanding contributions in the field of aerospace activity. In 1986, the Arnold Award was redesignated AFA's highest honor to a member of the armed forces in the field of National Security. It continues to be presented annually.

YEAR	RECIPIENT(S)
1948	W. Stuart Symington, Secretary of the Air Force
1949	Maj. Gen. William H. Tunner and the men of the Berlin Airlift
1950	Airmen of the United Nations in the Far East
1951	Gen. Curtis E. LeMay and the personnel of Strategic Air Command
1952	Sens. Lyndon B. Johnson and Joseph C. O'Mahoney
1953	Gen. Hoyt S. Vandenberg, former Chief of Staff, USAF
1954	John Foster Dulles, secretary of state
1955	Gen. Nathan F. Twining, Chief of Staff, USAF
1956	Sen. W. Stuart Symington
1957	Edward P. Curtis, special assistant to the President
1958	Maj. Gen. Bernard A. Schriever, commander, Ballistic Missile Division, ARDC
1959	Gen. Thomas S. Power, commander in chief, Strategic Air Command
1960	Gen. Thomas D. White, Chief of Staff, USAF
1961	Lyle S. Garlock, assistant secretary of the Air Force
1962	A.C. Dickieson and John R. Pierce, Bell Telephone Laboratories
1963	The 363rd Tactical Reconnaissance Wing, TAC, and the 4080th Strategic Wing, SAC
1964	Gen. Curtis E. LeMay, Chief of Staff, USAF
1965	The 2nd Air Division, PACAF
1966	The 8th, 12th, 355th, 366th, and 388th Tactical Fighter Wings and the 432nd and 460th Tactical Reconnaissance Wings
1967	Gen. William W. Momyer, commander, 7th Air Force, PACAF
1968	Col. Frank Borman, USAF; Capt. James Lovell, USN; and Lt. Col. William Anders, USAF, Apollo 8 crew
1969	(No presentation)
1970	Apollo 11 team (J.L. Atwood; Lt. Gen. Samuel C. Phillips, USAF; and astronauts Neil Armstrong, Col. Edwin E. Aldrin Jr., USAF, and Col. Michael Collins, USAF)
1971	John S. Foster Jr., director of defense research and engineering
1972	Air units of the Allied Forces in Southeast Asia (Air Force, Navy, Army, Marine Corps, and the Vietnamese Air Force)
1973	Gen. John D. Ryan, USAF (Ret.), former Chief of Staff, USAF
1974	Gen. George S. Brown, USAF, Chairman, Joint Chiefs of Staff
1975	James R. Schlesinger, Secretary of Defense
1976	Sen. Barry M. Goldwater
1977	Sen. Howard W. Cannon
1978	Gen. Alexander M. Haig Jr., USA, Supreme Allied Commander, Europe
1979	Sen. John C. Stennis
1980	Gen. Richard H. Ellis, USAF, commander in chief, Strategic Air Command
1981	Gen. David C. Jones, USAF, Chairman, Joint Chiefs of Staff
1982	Gen. Lew Allen Jr., USAF (Ret.), former Chief of Staff, USAF
1983	Ronald W. Reagan, President of the United States
1984	The President's Commission on Strategic Forces (the Scowcroft Commission)
1985	Gen. Bernard W. Rogers, USA, Supreme Allied Commander, Europe
1986	Gen. Charles A. Gabriel, USAF (Ret.), former Chief of Staff, USAF
1987	Adm. William J. Crowe Jr., USN, Chairman, Joint Chiefs of Staff
1988	Men and women of the Ground-Launched Cruise Missile team
1989	Gen. Larry D. Welch, Chief of Staff, USAF
1990	Gen. John T. Chain, commander in chief, Strategic Air Command
1991	Lt. Gen. Charles A. Horner, commander, US Central Command Air Forces and 9th Air Force
1992	Gen. Colin L. Powell, USA, Chairman, Joint Chiefs of Staff
1993	Gen. Merrill A. McPeak, Chief of Staff, USAF
1994	Gen. John Michael Loh, commander, Air Combat Command
1995	World War II Army Air Forces veterans
1996	Gen. Ronald B. Fogleman, Chief of Staff, USAF
1997	Men and women of the United States Air Force
1998	Gen. Richard E. Hawley, commander, Air Combat Command
1999	Lt. Gen. Michael C. Short, commander, Allied Air Forces Southern Europe
2000	Gen. Michael E. Ryan, Chief of Staff, USAF

John R. Alison Award Recipients

Established in 1992, the John R. Alison Award is AFA's highest honor for industrial leadership.

1992	Norman R. Augustine, chairman, Martin Marietta Corp.
1993	Daniel M. Tellep, chairman and chief executive officer, Lockheed Corp.
1994	Kent Kresa, chief executive officer, Northrop Grumman Corp.
1995	C. Michael Armstrong, chairman and chief executive officer, Hughes Aircraft
1996	Harry Stonecipher, president and chief executive officer, McDonnell Douglas Corp.
1997	Dennis J. Picard, chairman and chief executive officer, Raytheon Co.
1998	Philip M. Condit, chairman and chief executive officer, Boeing Co.
1999	Sam B. Williams, chairman and chief executive officer, Williams International Co., LLC
2000	Simon Ramo and Dean E. Wooldridge, missile pioneers

W. Stuart Symington Award Recipients

Since 1986, AFA's highest honor to a civilian in the field of National Security has been the W. Stuart Symington Award. The award, presented annually, is named for the first Secretary of the Air Force.

YEAR	RECIPIENT
1986	Caspar W. Weinberger, Secretary of Defense
1987	Edward C. Aldridge Jr., Secretary of the Air Force
1988	George P. Schultz, secretary of state
1989	Ronald W. Reagan, former President of the United States
1990	John J. Welch, assistant secretary of the Air Force (acquisition)
1991	George Bush, President of the United States
1992	Donald B. Rice, Secretary of the Air Force
1993	Sen. John McCain (R-Ariz.)
1994	Rep. Ike Skelton (D-Mo.)
1995	Sheila E. Widnall, Secretary of the Air Force
1996	Sen. Ted Stevens (R-Alaska)
1997	William Perry, former Secretary of Defense
1998	Rep. Saxby Chambliss (R-Ga.) and Rep. Norman D. Dicks (D-Wash.)
1999	F. Whitten Peters, Secretary of the Air Force
2000	Rep. Floyd Spence (R-S.C.)

Gold Life Member Card Recipients

Awarded to members whose AFA record, production, and accomplishment on a national level have been outstanding over a period of years.

Name	Year	Card No.
Gill Robb Wilson	1957	1
Jimmy Doolittle	1959	2
Arthur C. Storz Sr.	1961	3
Julian B. Rosenthal	1962	4
Jack B. Gross	1964	5
George D. Hardy	1965	6
Jess Larson	1967	7
Robert W. Smart	1968	8
Martin M. Ostrow	1973	9
James H. Straubel	1980	10
Martin H. Harris	1988	11
Sam E. Keith Jr.	1990	12
Edward A. Stearn	1992	13
Dorothy L. Flanagan	1994	14
John O. Gray	1996	15
Jack C. Price	1997	16

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1963-64



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USAF (Ret.)**
1964-66



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1966-69



J. Gilbert Nettleton Jr.
1969-73



George D. Hardy
1973-75



Sen. Barry M. Goldwater
1975-86



George D. Hardy
1986-89



James M. Keck
1989-94



Walter E. Scott
1994-97



Thomas J. McKee
1997-98



Michael J. Dugan
1998-2000

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1963-64



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1964-66



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1966-67



Dr. Leon M. Lessinger
1967-68



Dr. L.V. Rasmussen
1968-71



Dr. Leon M. Lessinger
1971-73



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1973-74



Dr. William L. Ramsey
1975-81



Dr. Don C. Garrison
1981-84



George D. Hardy
1984-86



Eleanor P. Wynne
1986-87



James M. Keck
1988-89



Gerald V. Hasler
1989-94



Thomas J. McKee
1994-97



Walter E. Scott
1997-93



Jack C. Price
1998-2000

AFA Executive Directors



Willis S. Fitch
1946-47



James H. Straubel
1948-80



Russell E. Dougherty
1980-86



David L. Gray
1986-87



John O. Gray
1987-88



Charles L. Donnelly Jr.
1988-89



John O. Gray
1989-90



Monroe W. Hatch Jr.
1990-95



John A. Shaud
1995-

AFA National Secretaries

Sol A. Rosenblatt	1946-47
Julian B. Rosenthal	1947-59
George D. Hardy	1959-66
Joseph L. Hodges	1966-68
Glenn D. Mishler	1968-70
Nathan H. Mazer	1970-72
Martin H. Harris	1972-76
Jack C. Price	1976-79
Earl D. Clark Jr.	1979-82
Sherman W. Wilkins	1982-85
A.A. "Bud" West	1985-87
Thomas J. McKee	1987-90
Thomas W. Henderson	1990-91
Mary Ann Seibel	1991-94
Mary Anne Thompson	1994-97
William D. Croom Jr.	1997-2000

AFA National Treasurers

W. Deering Howe	1946-47
G. Warfield Hobbs	1947-49
Benjamin Brinton	1949-52
George H. Haddock	1952-53
Samuel M. Hecht	1953-57
Jack B. Gross	1957-62
Paul S. Zuckerman	1962-66
Jack B. Gross	1966-81
George H. Chabbott	1981-87
William N. Webb	1987-95
Charles H. Church Jr.	1995-2000

Year	Total	Life Members	Year	Total	Life Members
1946	51,243	32	1974	128,995	837
1947	104,750	55	1975	139,168	898
1948	56,464	68	1976	148,202	975
1949	43,801	70	1977	155,850	1,218
1950	38,948	79	1978	148,711	1,541
1951	34,393	81	1979	147,136	1,869
1952	30,716	356	1980	156,394	2,477
1953	30,392	431	1981	170,240	3,515
1954	34,486	435	1982	179,149	7,381
1955	40,812	442	1983	198,563	13,763
1956	46,250	446	1984	218,512	18,012
1957	51,328	453	1985	228,621	23,234
1958	48,026	456	1986	232,722	27,985
1959	50,538	458	1987	237,279	30,099
1960	54,923	464	1988	219,195	32,234
1961	60,506	466	1989	204,309	34,182
1962	64,336	485	1990	199,851	35,952
1963	78,034	488	1991	194,312	37,561
1964	80,295	504	1992	191,588	37,869
1965	82,464	514	1993	181,624	38,604
1966	85,013	523	1994	175,122	39,593
1967	88,995	548	1995	170,881	39,286
1968	97,959	583	1996	161,384	39,896
1969	104,886	604	1997	157,862	41,179
1970	104,878	636	1998	152,330	41,673
1971	97,639	674	1999	148,534	42,237
1972	109,776	765	2000	147,336	42,434
1973	114,894	804			

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USAFA's Outstanding Squadron 2000

At the US Air Force Academy, Cadet Squadron 33, known as the "Ratz," was named winner of the Air Force Association's Outstanding Squadron Trophy for 2000. CS 33 ranked best among 40 squadrons at the academy in military leadership and academic and athletic achievements.

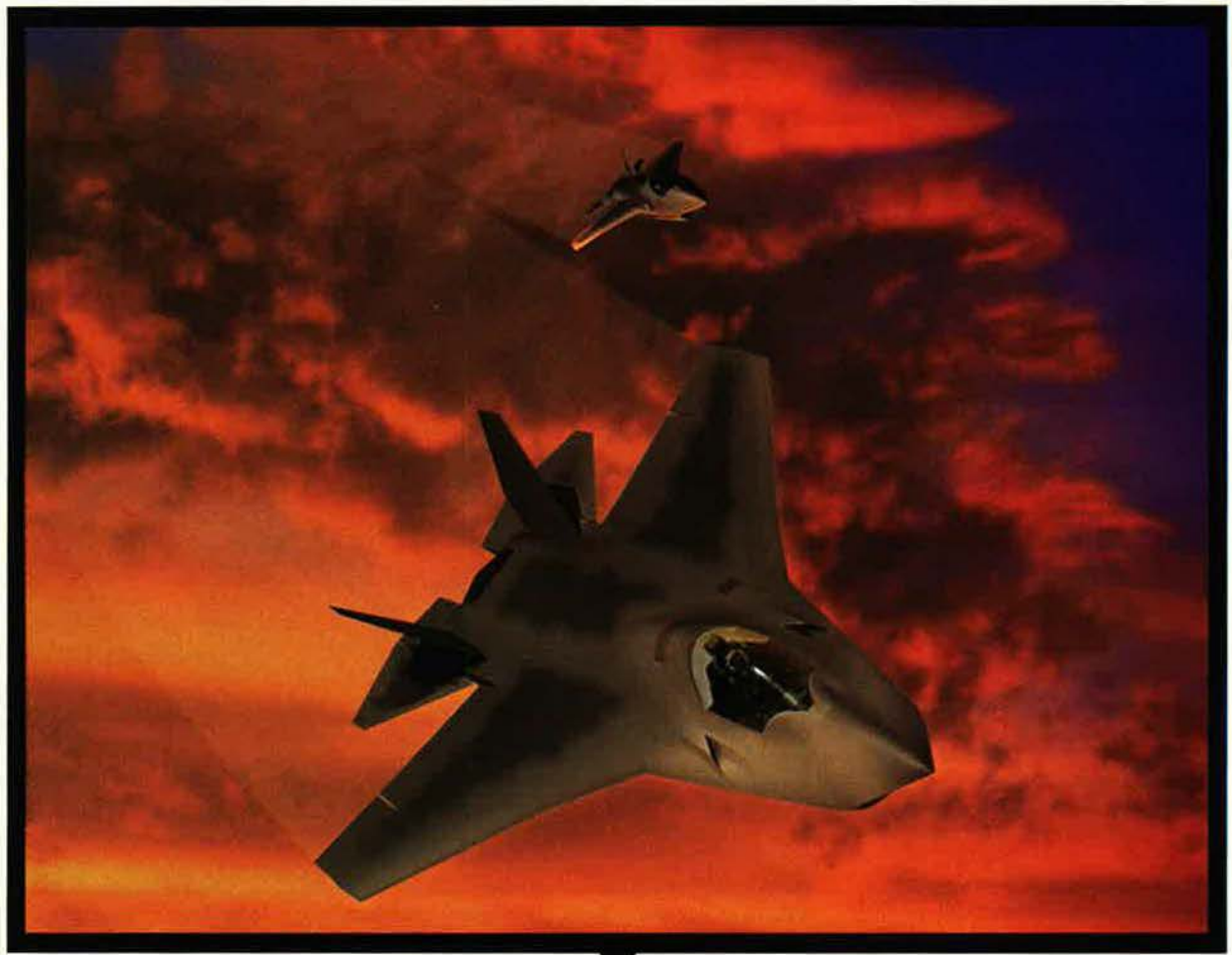
The squadron was honored at the 41st annual Outstanding Squadron Dinner held in Colorado Springs, Colo., in May. It was sponsored by AFA and the Colorado Springs/Lance Sijan Chapter, with support from USAFA's Association of Graduates through a contribution from TRW. Representing all corporate sponsors at the event was retired Lt. Gen. Patrick Caruana, head of TRW's Space Based Infrared System Low program.

Accepting the trophy for the Ratz were squadron commanders Cadet Lt. Col. Scott M. Charlton (fall) and Cadet Lt. Col. Tracy K. Tinianow (spring).



AFA National President Thomas J. McKee (at the podium) introduces cadet squadron commanders Tinianow (left) and Charlton. (Tinianow was the No. 1 graduate in the Class of 2000.)

The Ratz have won the prestigious award on two previous occasions.



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AFA / AEF National Report

By Frances McKenney, Assistant Managing Editor

AFA Takes USAF Vision to Capitol Hill

Nearly 400 guests—including 27 US Representatives—turned out for the latest Air Force Association and USAF Office of Legislative Liaison educational reception on Capitol Hill. The event highlighted the Air Force's new vision statement, "Global Vigilance, Reach, and Power."

Held in July in the foyer of the House Rayburn Office Building, the reception was attended by House Armed Services Committee Chairman Rep. Floyd Spence (R-S.C.) and fellow committee members Jim Gibbons (R-Nev.), Robin Hayes (R-N.C.), Walter Jones Jr. (R-N.C.), Steven Kuykendall (R-Calif.), Mike McIntyre (D-N.C.), Solomon Ortiz (D-Tex.), Silvestre Reyes (D-Tex.), Jim Ryun (R-Kan.), and Loretta Sanchez (D-Calif.).

Other guests included Reps. Don Young (R-Alaska), chairman of the Resources Committee; from the House Defense Appropriations Subcommittee, David Hobson (R-Ohio) and Norman Dicks (D-Wash.), who is also co-chairman of the Airpower Caucus; from the Veterans' Affairs Committee, Collin Peterson (D-Minn.) and Cliff Stearns (R-Fla.), who is the Air Force Caucus chairman.

Other US Representatives on hand: Sanford Bishop Jr. (D-Ga.), Lois Capps (D-Calif.), Howard Coble (R-N.C.), John Larson (D-Conn.), Tom Latham (R-Iowa), Edward Royce (R-Calif.), Bobby Scott (D-Va.), Charles Stenholm (D-Tex.), Lee Terry (R-Neb.), John Thune (R-S.D.), Dave Weldon (R-Fla.), and David Vitter (R-La.).

Representing the Air Force were Undersecretary of the Air Force Carole A. DiBattiste, Lt. Gen. Donald L. Peterson, deputy chief of staff for personnel, Maj. Gen. T. Michael Moseley, director of legislative liaison, and Maj. Gen. Lance L. Smith, head of the Air Force Doctrine Center at Maxwell AFB, Ala.

The center had prepared material for the three-sided storyboards at the reception. The storyboards explained Global Vigilance, Reach, and Power and USAF's role in an integrated aerospace domain.



Photo by Susan Kennedy

US Rep. Norman Dicks (D-Wash.) and Maj. Gen. John Barry, director of strategic planning, USAF's Deputy Chief of Staff for Plans and Programs, talk at the latest AFA-USAF Capitol Hill reception.

Focus on Defense

Utah state AFA chapters—**Northern Utah, Salt Lake, and Ute-Rocky Mountain**—and Industrial Associates held their annual Focus on Defense symposium in June at Hill AFB, Utah.

Addressing the theme "Challenges of Space Sustainment" was keynote speaker Gen. Ralph E. Eberhart, Air Force Space Command commander. Lt. Gen. Eugene L. Tattini, Space and Missile Systems Center commander, covered planning for future support needs. Other presentations during the day-long gathering covered the industry perspective, with James F. Albaugh, Boeing senior vice president, and Robert L. Crippen, Thiokol Propulsion president, among the speakers. A panel discussion on sustainment challenges and the "view from the Pentagon" wrapped things up for the audience of more than 200.

But it wasn't all work at Hill. As Craig E. Allen, Utah state president, noted in the symposium booklet, the idea for the symposium originated when the state's Industrial Associates organized a golf tournament 21 years ago to raise funds for aerospace education activities. Soon af-

ter, they linked the symposium to the tournament.

This year, the two-day golf tournament netted \$32,000 for the Utah Aerospace Education Foundation, according to Dennis Guymon, president of the Ute-Rocky Mountain Chapter. Other traditional festivities during the three days at Hill included a salmon barbecue at the Hill Aerospace Museum and the "Midcourse Correction" dinner after the first day of golf.

Northern Utah Chapter President Pat Condon was chairman of the symposium committee, with Maj. Gen. Scott C. Bergren, commander of the Ogden Air Logistics Center, as the military host.

California State Convention

Hosted by the **Palm Springs Chapter**, the California State Convention got under way on the first Thursday in June with a poolside reception, so conventioners could meet AFA National President Thomas J. McKee in an informal setting.

A golf tournament kicked off the next day's activities, which included tours to look at desert flora and fauna

and homes of the city's famous residents. AFAers gathered at the Palm Springs Air Museum that evening for a reception.

James H. Estep was re-elected state president during the business sessions. Three area vice presidents elected were Michael Peters (also elected as executive vice president) of the **Brig. Gen. Robert F. Travis Chapter**, William Anders from the **Robert H. Goddard Chapter**, and Martin Ledwitz of the **Pasadena Area Chapter**. Richard Jones from the **C. Farinha Gold Rush Chapter** and Edwin W. Lewis Jr. of the **Antelope Valley Chapter** will serve as treasurer and secretary, respectively.

At the awards luncheon that followed, guest speaker McKee described insights he has gained during outreach visits to USAF bases and AFA chapters. He also told the audience that both Chief of Staff Gen. Michael E. Ryan and CMSAF Jim Finch have issued letters supporting an AFA membership drive aimed at active duty members. McKee then helped present Outstanding Performance, Exceptional Service, and Meritorious Service awards.

In the Distinguished Achievement awards category, the **David J. Price/Beale Chapter** earned the community relations award. The **Gen. B.A. Schriever Los Angeles Chapter** won the aerospace education and overall programming award. The Palm Springs Chapter won the membership award, and the **Tennessee Ernie Ford Chapter** won the communications and best single program award.

One hundred-fifty guests attended the awards banquet, where keynote speaker Maj. Gen. Richard V. Reynolds, commander of the Air Force Flight Test Center at Edwards AFB, Calif., spoke about his center's activities.

Among the awards given out that evening, John K. Barbour, Ford Chapter president, received the Member of the Year award, and Maj. Gen. (sel.) Michael P. Wiedemer, who was then Sacramento Air Logistics Center commander, received the Military Person of the Year award.



AFA National President McKee presents Julian Rosenthal with a custom-made Air Force Magazine cover, featuring a 1950s photo of the AFA founding father and national director emeritus. During the July visit, Rosenthal, who celebrated his 92nd birthday on the 4th of July, recalled his AFA service as Chairman of the Board and National Secretary.

About the Tricare Supplement . . .

Air Force Association members who were previously covered by one of AFA's seven Tricare insurance supplements which was discontinued have been offered coverage, without medical screening for pre-existing conditions, in another plan, according to James M. Simpson, AFA director of membership operations. All of those affected have been contacted, he said.

Discontinuance of the old plan earlier this year generated numerous calls to the association's Member Services department.

Simpson said it had become impossible to continue the AFA Tricare Standard supplemental insurance plan that covered both inpatient and outpatient care but which had no deductible amount on payment of claims and no medical prequalification.

In all, about 1,500 members had carried this option.

As their policies expire, these members will be offered gap coverage for an additional year at the same price as before, but with a \$250 (\$500 per family) deductible. This one-year period allows enough time for policyholders who have concerns about pre-existing conditions to qualify for coverage under other plans, Simpson said.



Air Combat Command Commander Gen. John Jumper (center) poses with (l-r) John Craig II, region president (Central East Region); Mary Anne Thompson, national director; guest Sandy Dorsey; and George Golden, past state president, at Langley (Va.) Chapter's eighth annual "Salute to ACC."

Three-State Convention

Arizona, New Mexico, and Nevada combined forces for a tri-state convention in June, hosted by the **Albuquerque (N.M.) Chapter** in Albuquerque.

Rep. Heather A. Wilson (R-N.M.), a 1982 graduate of the Air Force Academy and the first woman military veteran to serve in Congress, was the evening banquet's keynoter. According to Peter D. Robinson, New Mexico state president, "She gave a persuasive and personal talk on the importance of AFA and the contribution of military members to the US."

Other convention events: a golf tournament, regional and state meetings, and briefings from Col. Polly A. Peyer, 377th Air Base Wing commander at Kirtland AFB, Col. Jim Johnson, the 27th Logistics Group commander at Cannon AFB, and Col. Douglas M. Husley Jr., 49th Fighter Wing vice commander from Holloman AFB.

Re-elected as state officers during the business session for New Mexico were president, Robinson; vice president, Joseph V. Traina; secretary, Edward S. Tooley (all three from the Albuquerque Chapter); and treasurer, Kenneth J. Huey Jr., from the **Llano Estacado Chapter**.

The following slate for Arizona AFA state offices was nominated: Arthur W. Gigax, president, and Donita F. Plaurmann, secretary, both of the **Phoenix Sky Harbor Chapter**; and from the **Tucson Chapter**, James I.

Wheeler, vice president, and Carl E. Beck, treasurer. In addition, Wheeler was named Arizona's Member of the Year, and during the banquet, Bob Anderson was recognized as Regional Teacher of the Year. He is a member of the **Richard S. Reid Chapter** and an Aerospace Science Instructor at Nogales High School.

Nevada re-elected its state officers: Kathleen Clemence, Douglas M. Melson, Steven D. Ingersol, who are president, vice president, and secretary, respectively and all from the **Dale O. Smith Chapter**, and George A. Peterson, treasurer, from the **Thunderbird Chapter**.

Next year's southwest region convention and state meetings will be held in Las Vegas, Clemence reported.

Tennessee State Convention

Rep. Harold E. Ford Jr. (D-Tenn.) was the awards banquet speaker at the Tennessee State Convention, hosted by the **Everett R. Cook Chapter** in Memphis in April.

Ford was first elected to Congress in 1996 at age 26 and follows in the footsteps of his father, who served in the US House of Representatives from 1975 to 1997. The younger Ford serves on the Government Reform and Education and the Workforce committees. He spoke to conventioners about veterans affairs.

William Freeman, Tennessee state president, presented the Congressman with a copy of *A Reason to Live*,

a 1988 book by Cook Chapter member John Harold Robinson on his World War II experiences.

In a highlight of the awards presentations, Glenn L. Fuller, past state president and currently Cook Chapter treasurer, received the Tennessee Volunteer of the Year award. Billy M. Boyd, region president (South Central Region) joined Freeman in making the presentation.

Other convention activities included an opening social and visits to local attractions such as *Memphis Belle*. The famous World War II B-17 was the first aircraft in VIII Bomber Command to complete 25 missions. The Cook Chapter has helped raise funds to secure a climate-controlled facility for the aircraft, now located at Mud Island River Park.

State officers elected were Joseph E. Sutter, president, and George A. Vitzthum, secretary, both from the **Gen. Bruce K. Holloway Chapter**; Nancy I. Blanchard, from the **Maj. Gen. Dan F. Callahan Chapter**, vice president; and James C. Kasperbauer, Cook Chapter, treasurer.

Belle Replica in Ohio

The **North Coast (Ohio) Chapter** joined the US Aviation Museum and local chamber of commerce in co-hosting the visit of a *Memphis Belle* replica at Lost Nation Airport in Willoughby, Ohio, in June.

Centerpiece for the two-day event was a B-17G painted with the markings of the actual B-17F *Memphis Belle*. The replica is owned by restaurant-chain owner and vintage aircraft collector David Tallichet and was among several B-17s used for the filming of the 1990 movie "Memphis Belle."

Retired Col. Robert K. Morgan, who piloted the actual Belle as a 24-year-old captain, was on hand at the airport to meet visitors, sign autographs, and answer questions. At a banquet honoring him, he spoke about the history of the aircraft and Eighth Air Force.

Chapter officials who attended the banquet included Parker E. Reed, chapter past president; A.S. "Bud" Pecnik, treasurer; and Richard L. Shaeffer, aerospace education vice president.

Chapter members Ted F. Ganda and Robert F. Leonard manned the AFA tent at the airport. Their display featured model aircraft, patches, and other Air Force memorabilia.

At New Boston AFS

Members and guests of the **Brig.**

Gen. Harrison R. Thyng (N.H.) Chapter (formerly the Amoskeag Chapter) toured New Boston AFS, N.H., in June.

Maj. John Scott, operations officer for the 23rd Space Operations Squadron, hosted the group. In his briefing, he described the facility's role as one of eight satellite tracking stations of the 50th Space Wing.

The tracking stations have responsibility for the daily operation of most of the Air Force Satellite Control Network. They command, track, record, and process on-orbit satellite data for DoD, NASA, and NATO programs. The other seven tracking stations are located at Vandenberg AFB, Calif.; Diego Garcia; Thule AB, Greenland; Kaena Point, Hawaii; Andersen AFB, Guam; Schriever AFB, Colo., and Oakhanger, UK (operated by the UK).

"The weather cooperated," wrote Chapter President Eric P. Taylor, so after the tour, the chapter's officers grilled hamburgers and hotdogs for a picnic lunch at the air station's community center.

Music, Music, Music

The **Lloyd Schloen-Empire (N.Y.) Chapter** and other tri-county New York chapters joined the Bethpage High School Student Civic Associa-

tion of Bethpage, N.Y., in sponsoring a concert in May by members of the US Air Force Band of Liberty.

Responding to publicity flyers sent out by the **Nassau Mitchel Chapter**, 350 guests—including AFA members from several chapters—turned out to enjoy music by the 50-piece band, which traveled to Long Island from its base at Hanscom AFB, Mass.

The afternoon concert featured a range of music, from "The Liberty Bell March" by John Philip Sousa to a Mozart concerto. As a special treat, nine high school students were invited to play with the Air Force band on a selection called "The Fighter in the Sky."

At the concert, the Schloen Chapter arranged for a local Air Force recruiter, Sgt. Keith Lundberg, to present certificates of appreciation to the high school's principal, Antoinette MacLeod, guidance counselor Jennifer Payne, and teacher Betty DeAmbrosis, to thank them for allowing military recruiters to participate in their school's career day.

The chapter raised funds from a dozen sponsors to provide the band with lunch and a special dinner at a turn-of-the-century mansion clubhouse at Oyster Bay Golf Course in Woodbury, N.Y.



This Is the Aerospace Education Foundation

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F10 Windproof Lighter. By Zippo. Brushed stainless steel. **\$13**

F11 Golfer's Money Clip. By Zippo. Brushed stainless steel with ballmarkers and greenskeeper. **\$13**

F12 AFA Umbrella. 60" in white and dark blue with AFA logo and fiberglass shaft. **\$25**

F13 3" Decal. Member or Life Member. Specify inside or outside window. **\$.15**

F14 AFA Golf Balls. Titanium Top Flight by Wilson with full color AFA logo. Sleeve of 3. **\$8.50**

F15 Pewter Medal. AFA logo. Suitable for plaques and decorative placement. 1.75" diameter. **\$5**

AFA Conventions

Sept. 8–13	AFA National Convention, Washington
Sept. 16–17	Delaware State Convention, Dover, Del.
Sept. 29–Oct. 1	New Hampshire State Convention, Portsmouth, N.H.
Oct. 13	Utah State Convention, Ogden, Utah

More AFA/AEF News

■ A New Jersey state AFA group—including chapter officers and several past state presidents from around the state—conducted a flag retirement ceremony in June at Wrightstown Park in Wrightstown, N.J. **Aerospace Founders Chapter** President Zygmunt Wozniak reported that in preparation for the ceremony, the AFA chapters set up collection points in Union, Edison, Holmdel, and New Egypt, N.J., for people to turn in worn out flags.

■ Nearly two dozen **Mercer County (N.J.) Chapter** members took part in the Memorial Day parade in Hamilton Square, N.J. They were led by Chapter President Arthur Beach and Stephen E. Lipski Jr., who wore AFA jackets and ball caps and carried an AFA banner. Behind them were chapter members riding in a truck, followed by another truck broadcasting music with an Air Force theme. Beach said the AFA banner had been made several years ago by chapter member Henry K. Frese, who assembled it on his own initiative, after learning that the chapter couldn't afford a commercially made version.

For the Cadets

Across the US, chapter members were on hand as AFROTC and AFJROTC units presented AFA awards to cadets.

At Oklahoma State University in Stillwater, Okla., S.T. Ayers from the **Central Oklahoma (Gerrity) Chapter** presented an AFA Leadership Award to Kyle J. Uptmor in a ceremony held at OSU's Noble Research Center atrium.

In Tifton, Ga., Terance E. Cawley, treasurer of the **South Georgia Chapter**, attended the Tift County High School's annual awards banquet to present an AFA award to 16-year-old Garrett D. Hall. Also from the South Georgia Chapter, Lt. Col. Richard E. Hornbeak gave David Phillips an AFA award at Valdosta State University's annual AFROTC military ball in Valdosta, Ga.

George C. McLees from the **Swamp Fox (S.C.) Chapter** attended Crestwood High School's awards banquet at the Shaw AFB Officers Club to present an AFA award to Marlon

Garner. Group commander for the school's 13-year-old AFROTC unit, Garner was a member of the drill team, earned top grades, and was a school leader.

A cadet change of command ceremony at the University of Nebraska-Lincoln included presentation of an AFA medal and citation by **Lincoln (Neb.) Chapter** President Mark R. Musick to Katherine Rush.

The **Chuck Yeager (W.Va.) Chapter's** Steven H. Burgh, Senior Aerospace Science Instructor at Cabell Midland High School in Ona, W.Va., presented an AFA award to Brad Childers at Cadet Awards Day. The school received the Jimmy Stewart Aerospace Education Award last year for the cadets' video on the theme of "AFJROTC: Preparing Leaders for the 21st Century."

Oregon State President John Lee, of the **Portland Chapter**, presented University of Portland cadet Andrew Ray with an AFA award at a ceremony at a local hotel.

At Syracuse University's annual Chancellor's Review, Reid T. Muller, president of the **Forrest L. Vosler (N.Y.) Chapter**, presented Kurt Wiest with an AFA award. The ceremony included a review of the cadet corps

by Chancellor Kenneth Shaw. Commander of the university's AFROTC detachment is chapter member Col. Frederick L. Wieners.

Erwin B. Nase of the **College Park Airport (Md.) Chapter** presented Anders Yaneki with an AFA award at a University of Maryland-College Park AFROTC dining-in at the school's student union.

For nearly two decades, **Chattanooga (Tenn.) Chapter's** John W. Glass III has attended the AFJROTC awards night at Ridgeland High School in Rossville, Ga., to present an AFA award, including a citation, medal, and an inscribed lead crystal mug. Chad Harris received the honors this year from Glass, who is chapter president. The cadet's Aerospace Science Instructor is retired MSgt. Charles H. Gilbert, an AFA member.

As Education Committee chairman, Robert D. Lewallen represented the **Ak-Sar-Ben (Neb.) Chapter** at the AFJROTC awards banquet where Paul Allen of Abraham Lincoln High School, Council Bluffs, Iowa, received an AFA award. Chapter member Maj. Scott L. Moore, USAF (Ret.), is the school's SASI.

At Highland Park High School in Topeka, Kan., Dawn M. Hand received an AFA award from Ronald G. Fraass of the **Maj. Gen. Edward R. Fry (Kan.) Chapter**. The SASI at the school is retired Col. David K. Burke, a chapter member.

Col. Daniel L. Hoile, commander of AFROTC Det. 620 at Bowling Green State University in Bowling Green,



Cadets at S.R. Butler High School in Huntsville, Ala., stand in formation as Tennessee Valley (Ala.) Chapter President Greg Schumann pins an AFA medal on Randall Perkins.

Ohio, presented Jeffrey A. Russell with an AFA award. Hoile is a member of the **Frank P. Lahm (Ohio) Chapter**.

Julia James of Ben L. Smith High School in Greensboro, N.C., received her AFA award at her school's 32nd annual awards ceremony, held at the local American Legion post. Retired MSgt. Edker L. Brentham, an AFA member most recently with the **United Kingdom Chapter**, served as master of ceremonies for the event and is James's ASI.

Earl Bullock from the **Dallas Chapter** gave Marissa Avila an AFA award in a ceremony at Cedar Hill High School in Cedar Hill, Tex. Her SASI is retired Col. Joseph O. McNabb, also of the Dallas Chapter. He wrote, "We had numerous dignitaries in attendance, and they were all very impressed with your organization's responsiveness to our young future leaders."

With flags for the 50 states fluttering in the wind and several photographers recording the scene, the president of Central Washington University, James A. Norton, joined Lt. Col. Charles K. Taft Jr., AFROTC Det. 895 commander, in presenting an AFA award to Johnny F. Hill. The occasion was the university's 12th annual Presidential Day Retreat and Awards Presentation. Taft is a member of the **Inland Empire (Wash.) Chapter**.

Representing the **Golden Triangle (Miss.) Chapter**, Ronald J. Vaughan attended the awards banquet for Lafayette High School in Oxford, Miss., to give an AFA award to Yulanda Bishop. The school's ASI is retired MSgt. Richard J. Burt, a Golden Triangle member.

Ashley Brown, a junior at Sequoyah High School in Canton, Ga., accepted an AFA award from Capt. David R. Calland, AFRC, of the 94th Airlift Wing at Dobbins ARB and a member of the **Dobbins (Ga.) Chapter**. The ceremony took place at Reinhardt College in Waleska, Ga. Also from the chapter, Patrick J. McDonald donned his mess dress for the Shiloh High School AFJROTC Military Ball, held at a resort in Stone Mountain, Ga., where Christina Robertson received her AFA award.

Hurlburt (Fla.) Chapter's Emil "Max" Friedauer attended the awards ceremony at Gulf Breeze High School in Gulf Breeze, Fla., and pinned an AFA medal on Jennifer Barnwell.

From the **Harry S. Truman (Mo.) Chapter**, Gary J. Fox attended the awards banquet for the cadets at Blue Springs High School, presenting Alex Jacques with an AFA award. The SASI at the school, located in Blue Springs,

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Mo., is chapter member retired Lt. Col. Charles A. Rikli.

Ladewig-Shine Memorial (S.C.) Chapter President Ronald E. Crow gave Socastee High School's John P. Sullivan an AFA award twice—at the state convention in Myrtle Beach and again at the school's annual awards ceremony, two weeks later. Retired Col. James G. Wood Jr., chapter member, is the SASI at the school, located in Myrtle Beach.

Gary W. Heckman of the **Jerry Waterman (Fla.) Chapter** attended

a military ball at the University of South Florida in Tampa, Fla., where Tim O'Keefe received an AFA award.

At Del Campo High School's 14th annual dining-out, held at McClellan AFB's Officers Club, Michelle A. Tjie was honored with an AFA award. Del Campo's cadets have won AEF's JROTC video contest three consecutive times, beginning in 1994. The SASI at the school, located in Fair Oaks, Calif., is retired Col. Earl J. Farney of the **C. Farinha Gold Rush (Calif.) Chapter**.

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At New Boston AFS, N.H., Eric Taylor, president of the Brig. Gen. Harrison R. Thyng Chapter, presents a memento to Maj. John Scott, thanking him for hosting a visit in June by chapter members.

The AFA award was the first one presented at the JROTC awards ceremony at Chapman High School in Inman, S.C. Claire E. Brittain Jr., from the **Strom Thurmond (S.C.) Chapter** did the honors. The recipient, Eric S. Owens, took home an achievement ribbon, too. His ASI is chapter member retired CMSgt. Russel A. Ranson.

Gen. George C. Kenney (Conn.) Chapter Secretary Frederick J. Chaison III presented Jonathan Wood with an AFA award at a luncheon for ROTC cadets at the University of Connecticut—Storrs. Col. Robert M. Gabor, chapter president, is a professor of aerospace studies at the school.

As part of a dining-out held at the Goodfellow AFB Officers Club for Angelo State University in San Angelo, Tex., **Concho Chapter** President Howard L. "Lee" Bodenhamer gave Christopher M. Nunez an AFA award.

Columbia (S.C.) Chapter's Roger Rucker was on hand for a combined change of command ceremony, drill team performance, parents' night, and awards ceremony at Columbia High School, where Carlos Brown received an AFA award. Brown's SASI is retired Lt. Col. Fred R. Easterlin, a chapter member. Another chapter member, retired Col. Douglas M. Senter, who is the SASI at Dutch

Fork High School in Irmo, S.C., honored Marcus Drayton with an AFA award, recognizing the cadet's performance as squadron commander and at summer leadership school.

Kaye H. Biggar, **Alamo (Tex.) Chapter** president, handed out several awards at the University of Texas at San Antonio awards banquet held at the Lackland Gateway Club. The AFA Gen. William McBride Scholarship—named for the AFA senior advisor and national director emeritus—went to Michael Lynn. The Alamo Chapter Military Excellence Award went to Jonathan E. Esparza, Daniel M. Hervas, and Linda L. Slusarski. Melodie R. Stovall took home the Col. George Weinbrenner Scholarship—named for an Alamo Chapter member—and Joseph L. Arnold received the AFA award.

Also in the "Lone Star State," **Del Rio Chapter** President William R. Bishop attended Del Rio High School's awards banquet at the Laughlin AFB Officers Open Mess to give an AFA award to Dan Williams.

A native of Rostock, Germany, Gregor Schacht, joined Candace Cooper in receiving AFA awards from retired Lt. Col. Herbert W. "Bill" Powley of the **Gen. Bruce K. Holloway (Tenn.) Chapter**. The cadets are students at Unicoi County High School in Erwin, Tenn., where Powley is SASI. ■

Correction

"Evening in Fort Worth" in July, p. 81, incorrectly stated that Gen. John D. Ryan, former USAF Chief of Staff, was stationed at Carswell AFB, Tex., in the 1960s. He was stationed there in the 1950s.

Reunions

reunions@afa.org

6th AF, including 20th Troop Carrier Sq, 24th and 51st FSs. Oct. 13–15, 2000, at the Airpower Museum in Ottumwa, IA. **Contact:** Robert L. Taylor (515-938-2773, days, or 515-938-2147, evenings) (aaaapmhq@pcsia.net). For **51st FS:** Ed Ellenberg, 140 Meadowview Dr., Fairfield Glade, TN 38558 (931-484-5692) (emellenberg@yahoo.com).

6th Ferrying Gp, Long Beach AB, CA (WWII). Sept. 24, 2000, at The Grand at Willow St. Centre in Long Beach, CA. **Contact:** Jean Davis, 2520 E. 220th St., Long Beach, CA 90810 (310-834-6517).

9th BG. Oct. 4–8, 2000, at the Holiday Inn City Center in Tucson, AZ. **Contact:** Herbert W. Hobler, 295 Mercer Rd., Princeton, NJ 08540 (800-244-1945).

13th AF Veterans Assn, all units. Oct. 18–21, 2000, in Dayton, OH. **Contact:** Phil Dyer, 7049 W.

Illinois St., Ludington, MI 49431 (231-843-9597).

15th TCS (WWII). Oct. 22–25, 2000, in Charleston, SC. **Contact:** Joseph Yuhasz, 6926 S., 725 E., Unit B, Midvale, UT 84047-1488 (801-566-5752) (rjyuhasz45@aol.com).

20th BS. Oct. 6–8, 2000, at the Officers Club, Barksdale AFB, LA. **Contacts:** Frank Rogers, 2426 Melrose Pl., Bossier City, LA 71111 (318-747-4985) or Ray Burgess, 221 Norcross St., Bossier City, LA 71111 (318-746-2444).

27th Air Transport Gp (WWII), including the 310th, 311th, 312th, and 325th Ferrying Sqs.; 86th, 87th, 320th, and 321st Transport Sqs.; and 519th and 520th Service Sqs. Oct. 11–13, 2000, at The Menger Hotel in San Antonio. **Contacts:** Donald Diehm, 246 Laurelwood Ln., Horseshoe, NC 28742 (828-891-5422) or Fred T. Garcia, 11903 N. 77th Dr., Peoria, AZ 85345-8251 (602-878-7007).

29th FIS, Malmstrom AFB, MT. Oct. 29–31, 2000, at The Menger Hotel in San Antonio. **Contact:** Tommy Manley, 19906 Encino Cove, San Antonio, TX 78259 (210-497-2481) (manleysa@aol.com).

31st Fighter Officers Assn. Oct. 19–22, 2000, at the Ramada Plaza Beach Resort in Fort Walton Beach, FL. **Contact:** Rocky Eubank (512-282-1077) (rockyeub@aol.com).

35th FG/Wg Assn, former officers and enlisted personnel. Oct. 11–14, 2000, at the Embassy Suites Airport/Opryland Area in Nashville, TN. **Contacts:** Rip Collins, 10039 Kemp Forest Dr., Houston, TX 77080 (713-462-4242) (maroon@hal-pc.org) or Aleck Holet, 190 Blaylock Mountain Rd., Cookeville, TN 38506 (931-839-3846) (holet@multipro.com).

40th BS, 6th BW. Oct. 13–15, 2000, in Roswell, NM. **Contacts:** Len Kunko, 1601 S. Kentucky

Ave., Roswell, NM 88201 (505-622-7546) (lkunko98@prodigy.net) or Bob Pottle (505-623-3538).

48th TCS/313th TCG. Nov. 14–16, 2000, in St. Petersburg, FL. **Contact:** Dudley Rose, PO Box 123, Madison, OH 44057 (440-428-3284).

57th FIS. Iceland (1954–57). Oct. 12–14, 2000, at the Radisson Inn Charleston Airport in Charleston, SC. **Contact:** Del Oxford, 5859 Andreas Way, Charleston SC 29418-5201 (843-767-3884) (ddoxford@aol.com).

67th Recon Tech Sq. Yokota AB, Japan (1958–72). Oct. 13–15, 2000, at the Imperial Palace Hotel & Casino in Biloxi, MS. **Contacts:** Peter Durnell, 2294 Jessica Ln., Kissimmee, FL 34744 (407-847-4553) (peter_durnell@compuserve.com) or (rkenkelly@aol.com).

78th FS. Oct. 5–9, 2000, in Columbia, SC. **Contacts:** Ken Sweet (414-541-4015) or G.T. Alexander (804-550-3415) (wingsail@aol.com).

79th FG Assn. 85th, 86th, and 87th FSS. Oct. 29–Nov. 3, 2000, at The Welk Resort Center in Branson, MO. **Contact:** Edwin P. Newbould, 1206 SE 27th Ter., Cape Coral, FL 33904 (941-574-7098).

86th Fighter–Bomber Gp. including the 525th, 526th, 527th Sqs and group Hq (WWII). Oct. 11–14, 2000, in Meridian, MS. **Contact:** Sid Howard, 211 Brownstone Dr., La Habra, CA 90631-7397 (714-992-2504).

91st ARS. Oct. 5–7, 2000, at the Holiday Inn City Center in Columbus, OH. **Contact:** Dick Seivert, 173 Kandel Cir. SE, North Canton, OH 44720-3351 (330-499-4676) (rseivert@neo.rr.com).

91st Recon Sq (LR) Photo. Panama and Trinidad (1945–48). Oct. 17–19, 2000, in Las Vegas. **Contact:** Allen Weddle, 9748 Golden Dr., Orangevale, CA 95662 (916-988-0753) (aweddle@compuserve.com).

154th Observation Sq. Adams Field, AR (1925–2000). Oct. 13, 2000, at Little Rock AFB, AR. **Contact:** Ron McDaniel (501-987-1074) (ronald.mcdaniel@arlink.af.mil).

301st BW/Gp. Oct. 12–15, 2000, at the Sheraton Shreveport Hotel in Shreveport, LA. **Contact:** Lloyd F. Meyer, 1001 Saddle Dr., Helena, MT 59601 (406-442-8799).

309th TCG/16th TCS. Dreux AB, France. Oct. 11–15, 2000, at the Grand Casino Bayview Hotel in Biloxi, MS. **Contact:** Bob France (228-452-2970).

325th FG (WWII). Oct. 11–15, 2000, at the Embassy Suites Hotel Intl. Airport in Coraopolis, PA. **Contacts:** Ralph and Carol Cathcart, 113 N. Lincoln St., Augusta, MI 49012-9721 (616-731-2421) (cathcart@net-link.net).

339th FG Assn. Oct. 18–22, 2000, at the Four Points Hotel by Sheraton Riverwalk in San Antonio. **Contact:** Larry Powell (818-363-3950).

345th BG. AAF. Oct. 1–5, 2000, in Charleston, SC. **Contact:** Ken Gastgeb, 2143 Melrose Ct., #221, Norman, OK 73069-5269 (405-364-1350) (kensoffice@juno.com).

376th ARS. Oct. 13–15, 2000, at the Officers Club, Barksdale AFB, LA. **Contact:** 376th AREFS Reunion, PO Box 376, Barksdale AFB, LA 71110-0376.

381st BG (H) Memorial Assn (WWII). Oct. 17–22, 2000, at the Gold Coast Hotel & Casino in Las Vegas. **Contacts:** Joe Waddell, 6707 Bridge Rd., #203, Madison, WI 53713-1804 or Joe

Newell, 2670 N. Betty Ln., Las Vegas, NV 89156-4608.

390th BG (H) Veterans Assn. Eighth AF, Station 153, Framlingham, UK (WWII). Sept. 26–Oct. 1, 2000, in Tucson, AZ. **Contact:** Ken Rowland, PO Box 28363, Spokane, WA 99228-8363 (phone: 509-467-2565 or fax: 509-467-2565) (rowland@ior.com).

391st BG. Oct. 5–9, 2000, at the Doubletree Hotel Omaha Downtown in Omaha, NE. **Contacts:** Wendell Fetters, 2001 Condolea Dr., Leawood, KS 66209 (913-491-1611) (waffe2@aol.com) or Bob Holliday, 525 McNeilly Rd., Pittsburgh, PA 15226 (412-561-7620) (hps80@aol.com).

440th Signal Battalion (SCARWAF), all eras. Oct. 3–5, 2000, at the Smuggler's Inn in Tucson, AZ. **Contact:** Richard Fluke, 160 440th Blvd., Saxton, PA 16678-8939 (richardfluke@hotmail.com).

450th BG (H) Assn. Oct. 11–15, 2000, at the Holiday Inn Center City in Tucson, AZ. **Contact:** Doid K. Raab, 5695 Ireland Rd. NE, Lancaster, OH 43130.

454th BG. Italy (WWII). Oct. 18–23, 2000, in St. Louis. **Contact:** Ralph Branstetter, 454th BG, PO Box 678, Wheat Ridge, CO 80034-0678 (303-422-6740).

464th BG. 15th AAC (WWII). Sept. 10–14, 2000, at the Gold Coast Hotel & Casino in Las Vegas. **Contact:** Gene C. Taylor (541-389-9070).

483rd BG Assn. Oct. 10–17, 2000, in Covington, KY. **Contact:** Verne Cole (vcole1@earthlink.net).

490th BG (H). Oct. 11–15, 2000, at the Clarion Meridian Hotel in Oklahoma City. **Contact:** Fred C. Seals Jr., 2800 Castlwood Dr., Norman, OK 73072-7525 (405-321-1522) (fseals@aol.com).

493rd BG (H). Eighth AF (WWII). Oct. 16–22, 2000, at the Hilton Salt Lake City in Salt Lake City, UT. **Contact:** Jack Rude, 2609 S. Bowie St., Amarillo, TX 79109 (806-353-2486).

601st Tactical Control Wg. Germany (1945–95), and all subordinate units. Oct. 18–21, 2000, in Oklahoma City. **Contact:** John B. Haggard, 6843 E. Nelson Dr., Tucson, AZ 85730 (520-790-4747) (haphagg1@juno.com).

823rd RED HORSE Sq. Hurlburt Field, FL. Sept. 12–14, 2000, at the Ramada Plaza Beach Resort in Fort Walton Beach, FL. **Contact:** CMSgt. Floyd (850-881-2189 or DSN: 641-2189) (susan.floyd@823rhs.hurlburt.af.mil).

1254th Air Transport Gp. Oct. 27–28, 2000, in Arlington, VA. **Contact:** Joseph Kuchinsky, 1254th ATG (SM) Alumni, 106 Ridge Point Pl., Gaithersburg, MD 20878 (301-948-8835) (joekuchinsky@rcn.com).

6927th Radio Sq Mobile. Onna Point, Okinawa. Oct. 26–29, 2000, at the Quality Inn & Suites in Savannah, GA. **Contact:** Ray Thibodoux, 6108 Milne Blvd., New Orleans, LA 70124-2014 (504-488-8214) (raytib@aol.com).

AAC Flying Cadet Class of 1940-D. Oct. 15–18, 2000, in Carmel, CA. **Contact:** Harry Halberstadt, 245 Live Oak Ln., Los Altos, CA 94022 (650-941-5541) (harry1435@aol.com) (colh@earthlink.net).

AAF/USAF Crash Rescue Boat Assn. Oct. 13–15, 2000, at the Holiday Inn Riverview in Charleston, SC. **Contact:** Wayne A. Mellesmoen, 204 Gregory Rd., West Palm Beach, FL 33405-5032 (phone: 561-588-5504 or fax: 561-588-1580) (sgtboats@aol.com).

AAF Cadet Training Class ATC 44 (WWII), including surviving family members. Oct. 5–8, 2000, at the Wright–Patterson Air Force Museum in Dayton, OH. **Contact:** David Vaughn, 1210 W. Oliver St., Owosso, MI 48867 (517-723-2211) (davidvau@shianet.org).

Air Force Security Police Assn. Oct. 11–14, 2000, at Wright–Patterson AFB, Ohio. **Contacts:** Jerry Bullock (888-250-9876) or MSgt. Mike Scott (877-370-0583) (spmemorial@aol.com).

Class 44-B, Hicks Field, TX. Oct. 6–8, 2000, at the Clarion Hotel in Fort Worth, TX. **Contact:** Lee Lamar (913-381-7771) (lee.lamar@worldnet.att.net).

Connelly Navigator Classes 51-19 to 66-17. Sept. 15–16, 2000, in San Antonio. **Contact:** Jim Faulkner, 4109 Timberlane, Enid, OK 73703 (580-242-0526) (faulkner@ionet.net).

Douglas, GA, aviation cadets and instructors. Oct. 15–21, 2000, in Jekyll Island, GA. **Contact:** R.D. Wilcox, 809 Hillaire Rd., Lancaster, PA 17601 (717-898-8617) (bob.wilcox3@gte.net).

Fighting Scouts of the Eighth AF. Oct. 5–8, 2000, at the Sheraton-Grand Hotel in Irving, TX. **Contact:** E. Richard Atkins, 1304 Cochise Dr., Arlington, TX 76012 (817-261-3007) (dick8af@flash.net).

First Air Commando Assn. CBI (WWII). Oct. 25–29, 2000, in San Antonio. **Contact:** James Eckert, PO Box 1005, Stonewall, TX 78671 (830-644-2393).

Pilot Training Class 71-03, Reese AFB, TX. Sept. 29–30, 2000, at the Hotel Inter-Continental Chicago in Chicago. **Contact:** John Wolaver, 11305 Peacock Hill, Great Falls, VA 22066-1155 (home: 703-430-9390 or office: 301-767-4086) (jwolaver@startec.net).

RF-86 Pilots. Sept. 26–29, 2000, at the Doubletree Hotel National Airport Pentagon City in Arlington, VA. **Contacts:** (rube@juno.com) (samftrplt@aol.com) (<http://u2.lvc.com/goldie/rf-86.htm>).

RAF Station Manston, all units. Oct. 5–8, 2000, at Randolph AFB, TX, and two-week cruise to South America, Jan. 21, 2001. **Contact:** Milton J. Torres, 11200 SW 99th Ct., Miami, FL 33176 (305-238-3342).

Southeast Asia Forward Air Controllers. Sept. 21–24, 2000, at the Ramada Plaza Beach Resort in Fort Walton Beach, FL. **Contact:** Bob Boswell (321-639-7335) (aerix@email.msn.com) (www.fac.aerix.com).

USAF Helicopter Pilot Assn. Tucson and Phoenix, AZ. Oct. 16–22, 2000. **Contact:** USAF HPA, PO Box 38036, Phoenix, AZ 85069 (fax: 602-995-1363) (paul-air@primenet.com).

WWII Air Commando Assn. 2nd Gp, CBI, and 3rd Gp, southwest Pacific. Oct. 12–15, 2000, in Dayton, OH. **Contact:** W. Robert Eason, 10031 Barnetts Ford Rd., Orange, VA 22960-2307 (540-672-4074). ■

Mail unit reunion notices well in advance 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.

Seeking **Sgt. Hugh E. Bateman** of Mississippi, who was stationed at Tan Son Nhut, South Vietnam, 1968-70, with the 460th TRW material control section. He married a Vietnamese woman named Dhu (?) and may have moved to Okinawa. **Contact:** Ed Newhall, 10 Parker St., Exeter, NH 03833 (esnewhall@prodigy.net).

Seeking **Bernie L. Bickerton, Sayer Merrit (sp?), and Keith Soderberg**, all stationed in San Vito, Italy, with the 6917th Communications Sq, 1982-84. **Contact:** Kelly S. Nolan, 7216 Tanbark Ln., Fort Wayne, IN 46835 (219-486-1778) (chalk1up@twi.com).

Seeking **Don Smith**, stationed at Davis-Monthan AFB, AZ, in 1970. His father in Boston was a dentist or a doctor. **Contact:** Jeff S. Williams (phone: 520-235-7991 or fax: 520-623-2311) (jefftherealtor@aol.com).

Seeking **SMSgt. Michael Douglas**, a tower controller at Columbus AFB, MS, before retiring in 1984 or 1985, who flew a Learjet for Ceko Industries. **Contact:** Jim Omillian (850-678-7244) (omillian@fwbnet.com).

Seeking **A.F. "Bud" McConnaughey** who was stationed at RAF Lakenheath, UK, 1966-68, with the 492nd FS. He had a sister, **Charlotte Webber**, who lived in Bellflower, CA. **Contact:** Shaun and Michelle Jarman, 42 New St., Cullompton, Devonshire, UK EX15 1HA.

Seeking **Jane Reese Irvine**, daughter of Lt. Gen. C.S. "Bill" Irvine, and **Col. Demetrius G. Stampados**, deputy commander, 3904th Composite Wg (SAC) at Camp Carson, CO, 1950-52, and Stead AFB, NV, 1952-54. **Contact:** Bill Kingsbury (909-792-0573).

Seeking contact with anyone who knew **Allen R. Tiernan**, an F-84 pilot with the 9th FS, 49th FBG, Taegu, South Korea, whose airplane crashed in March 1952. **Contact:** Tom Johnson, 2740 Dove Meadow Ct., Cameron Park, CA 95682 (530-677-9738) (tjohn@innercite.com).

For display, seeking memorabilia related to **21st Air Force** and its predecessors: 23rd AAF Ferrying Wg, North Atlantic Div/Wg of Air Transport Command/Military Air Transport Service, Eastern Transport Air Force. **Contact:** Capt. Scott Nahrgang, 21AF/CVE (DSN 440-8024) (609-724-8024) (scott.nahrgang@mcguire.af.mil).

Seeking **Brian Johnson** of Waukegan, IL, son of Elizabeth and Henry Johnson. He may be stationed in Germany and may be a pilot. **Contact:** Yolanda (Glass) Brown (myjrny2@yahoo.com).

Seeking information on **Lt. Pier Pierce**, a P-51 pilot from Bath, NY, who was stationed in southern England in 1944. **Contact:** Kenneth L. Jones, 191 Litchi Grove Ct., San Jose, CA 95123-1751.

For restoration project, seeking B-29 crew members **Cooper, S. King, H. Poole Jr., F. Swain, and W. Way**, of the 17th Tow Target Sq, 4750th Air Defense Wg, Yuma, AZ, March 1956, who flew #44-69972 on its last flight, from Yuma to NAF China Lake, CA. **Contact:** Clifford Gaston, 210 Meadowland, Universal City, TX 78148 (210-658-3442) (gaston@texas.net).

Seeking anyone who served with **Maj. Jerome R. Isenberg**, staff judge advocate, 635th Combat Support Gp., U Tapao AB, Thailand, June 1966-June 1967. **Contact:** Myrna Isenberg, 4640 NW 93rd Ave., Sunrise, FL 33351 (954-742-6868).

Seeking contact with the officer who was **shot down over France** in April 1944, taken to a seminary at La Brosse-Montceaux, near

Monterea, then passed on to a resistance group. **Contact:** Elizabeth Rapley, 6-1900 Marquis Ave., Ottawa, Ontario, Canada K1J 8J2 (wrwapely@cyberus.ca).

Seeking an airman, possibly named Taylor, from South Carolina, who knew **Grace Asher** of Hanley, in the Stoke-on-Trent area of England in 1945. **Contact:** Roger Goldstraw, Draycott, Old Melton Rd., Normanton-on-Wolds, Nottingham, UK NG12 5NH (0115-9372075).

Seeking information, photos, and personal accounts from individuals stationed at **Santa Maria AAF, CA**, during WWII and **Hancock Field, CA**, during the 1940s and 1950s. **Contact:** William C. McKee, 1023 Terrace Ave., Santa Maria, CA 93455 (wcmckee@utech.net).

Seeking crew members of **B-36 #44-92044**, 7th BW, Carswell AFB, TX, who were on a flight to San Diego, Feb. 22, 1952, to Convair's AMC for mod work. **Contact:** Milton R. Kuhl Jr., 309 E. Bush St., Fort Bragg, CA 95437 (phone: 707-962-0309) (fax: 707-962-0582) (miltkuhl@mcn.org).

Seeking anyone who knew **M.D. Barnes**, Cadet Class 41-H, Luke Field, AZ, who retired as a lieutenant colonel. Also seeking any 41-H member or members of another class assigned to Hickam Field, HI, in 1941 or 1942. **Contact:** Macasline D. Barnes Jr., 3053 Tamarack Trl., Roanoke, VA 24018.

Seeking "Gun Fighter" aircrew members of the 421st TFS, 366th TFW, who served at Da Nang AB, South Vietnam, in April 1972, who knew **Capt. Mason I. Burnham**, F-4D WSO. **Contact:** Joe Rinella (877-359-6181).

Seeking contact with **SSgt. Edward Bronski** and **TSgt. Edward McGovan**, both of the 322nd BS, 91st BG, whose B-17 *Patty Gremlin Junior*, #42-29973, crashed at Polegate, Sussex, UK, Aug. 31, 1943. **Contact:** Wallace F. Reed, 83 Bannerdale, Rd., Sheffield, UK S7 2DQ.

Seeking information on **2nd Lt. August L. Weiss**, B-24 bombardier with Fifteenth AF who was reported MIA, Sept. 21, 1944, over Yugoslavia. **Contact:** John Chopelas, 508 S. Gray St., Killeen, TX 76541-7132 (254-526-4971).

For exhibit, seeking photos, documents, uniforms, equipment, or other memorabilia for **Greenville AFB, MS**, museum. **Contact:** Cliff Nash (phone: 662-334-3121 or fax: 662-335-8757) (glh@tecinfo.com).

Seeking AAF veterans who may have information on "Foo Fighters" or UFO sightings during WWII. **Contact:** Michael Scoggins, 1169 True Rd., McConnells, SC 29726 (mcsoggins@earthlink.net).

Seeking **Michael Francis Murphy**, 1604th ABG, Kindley AB, Bermuda, September 1965-September 1967. **Contact:** Phillip E. Whitehouse, 1405 Stanley Dr., Columbus, GA 31904.

Seeking contact with **Clifford Joseph "Joe" Crادر or Crader**, who was stationed at RAF Alconbury, UK, during WWII. **Contact:** Katrina Crader, 704 Colorado St., Fort Collins, CO 80524 (970-482-4509) (katnap@uswest.net).

Seeking USAF crewmen rescued by US Navy "Black Cats"; **Sgt. Harold J. Smith**, 871st BS, 497th BG, who was rescued by Black Cats and destroyer USS *Grayson*, Jan. 6, 1944; and airman who came under Japanese air attack on Tinian, December 1944. **Contact:** Don Klotz, 296 Millstone Rd., Wilton, CT 06897 (phone: 203-

762-9111 or fax: 203-762-9763) (dklotzvp23@aol.com).

Seeking information on **A1C Edward J. Fleming**, who was killed in the crash of a B-29 from the 19th BW, South Korea, July 7, 1953. Also interested in information about survivors and details of the crash. **Contact:** Ed Jensen, 3117 9th St. N., Fargo, ND 58102-1341 (edjensen@i29.net).

Seeking members of the **3650th Basic Military Training Wg** and basic trainees, Sampson AFB, NY, 1950-56. **Contact:** C. Phillips (phone: 716-633-1119 or fax: 716-633-9118) (chip34@aol.com).

Seeking information on high-altitude night photography and Project Charley carried out by the **91st Strat Recon Sq**, Yokota, Japan, 1952-53. **Contact:** Robert R. Ott, 1523 1st St., Paonia, CO 81428 (970-527-3373).

Seeking information on **Lt. (?) Jess L. Brinegar Jr.**, a B-17 bombardier who flew in the northern campaigns over Germany, 1943-44, with a squadron whose insignia shows Bugs Bunny leaning against a cloud, holding a bomb under his right arm. **Contact:** Cecil Brinegar, 8529 NW 23rd St., Oklahoma City, OK 73127 (405-789-7659) (c97124@earthlink.net).

Seeking information on permanent party and TDY personnel stationed at **Augusta AFB or Daniel Field, GA**, 1939-46. **Contact:** Willis Boshears, Airport Manager, Daniel Field, Augusta, GA 30904 (706-733-1647) (boshears@mindspring.com).

Seeking information on the **SB-17 #339457**, used by the 10th Rescue Squadron at Cold Bay, Alaska, and pictured in "Flashback," *Air Force Magazine*, May 2000, p. 114. Also seeking anyone who knew **Adam W. Swigler Jr., Robert Alexander, or Edward Ontko**, 10th RS, 1946-48. **Contact:** E. Louise Swigler, 719 Beachcomber Dr., Lynn Haven, FL 32444.

Seeking information on a "last resort bomb sight" from a B-52D. Both pilot and copilot had one, mounted on an aluminum rail so it could be moved to the left or right. It could also flip up or down. **Contact:** Vincent S. Simon, 5515 Three Oaks Cir., Houston, TX 77069 (281-444-5388).

Seeking **Moorland Harvey** (sp?), a sergeant in the AAF, stationed near London in 1945. **Contact:** Mandy Rance-Matthews, 1 Ruddlemoor, St. Austell, Cornwall, UK PL26 8XF.

Seeking **Stanley Corbett Jr.**, who served at Lowry AFB, Colo., during summer and fall 1964. **Contact:** Michael Franklin, 3447 S. Grape St., Denver, CO 80222 (303-758-6482).

If you need information on an individual, unit, or aircraft, or want to collect, donate, or trade USAF-related items, write to "Bulletin Board," *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Items submitted by AFA members have first priority; others will run on a space-available basis. If an item has not run within six months, the sender should resubmit an updated version. Letters must be signed. Items or services for sale, or otherwise intended to bring in money, and photographs will not be used or returned. We reserve the right to condense notices.



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Pieces of History

Photography by Paul Kennedy

The Few



Even before the US entered World War II, many Americans were moved to volunteer for the war in Europe through the British Royal Air Force and the Royal Canadian Air Force. The RAF eventually organized some 240 American volunteer pilots into RAF Fighter Command's 71st, 21st, and 133rd Squadrons—the Eagle Squadrons. No. 71 Squadron was the first, formed in fall

1940. It was followed by the other two in May and August 1941. At the time depicted by this diorama at the US Air Force Museum, No. 71 Squadron flew Spitfires Mk Vs. Together, the Eagle Squadrons destroyed more than 70 enemy aircraft. Most of these pilots wanted to join the US Army Air Forces after the attack on Pearl Harbor, so after some negotiations, the squadrons

were incorporated in September 1942 into the AAF's 4th Fighter Group as the 334th, 335th, and 336th Fighter Squadrons. Today these squadrons fly the F-15E Strike Eagle.

Courtesy of the US Air Force Museum, Wright-Patterson AFB, Ohio

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