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JOURNAL OF THE AIR FORCE ASSOCIATION

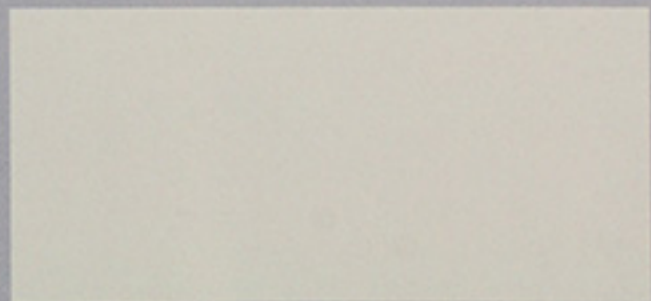
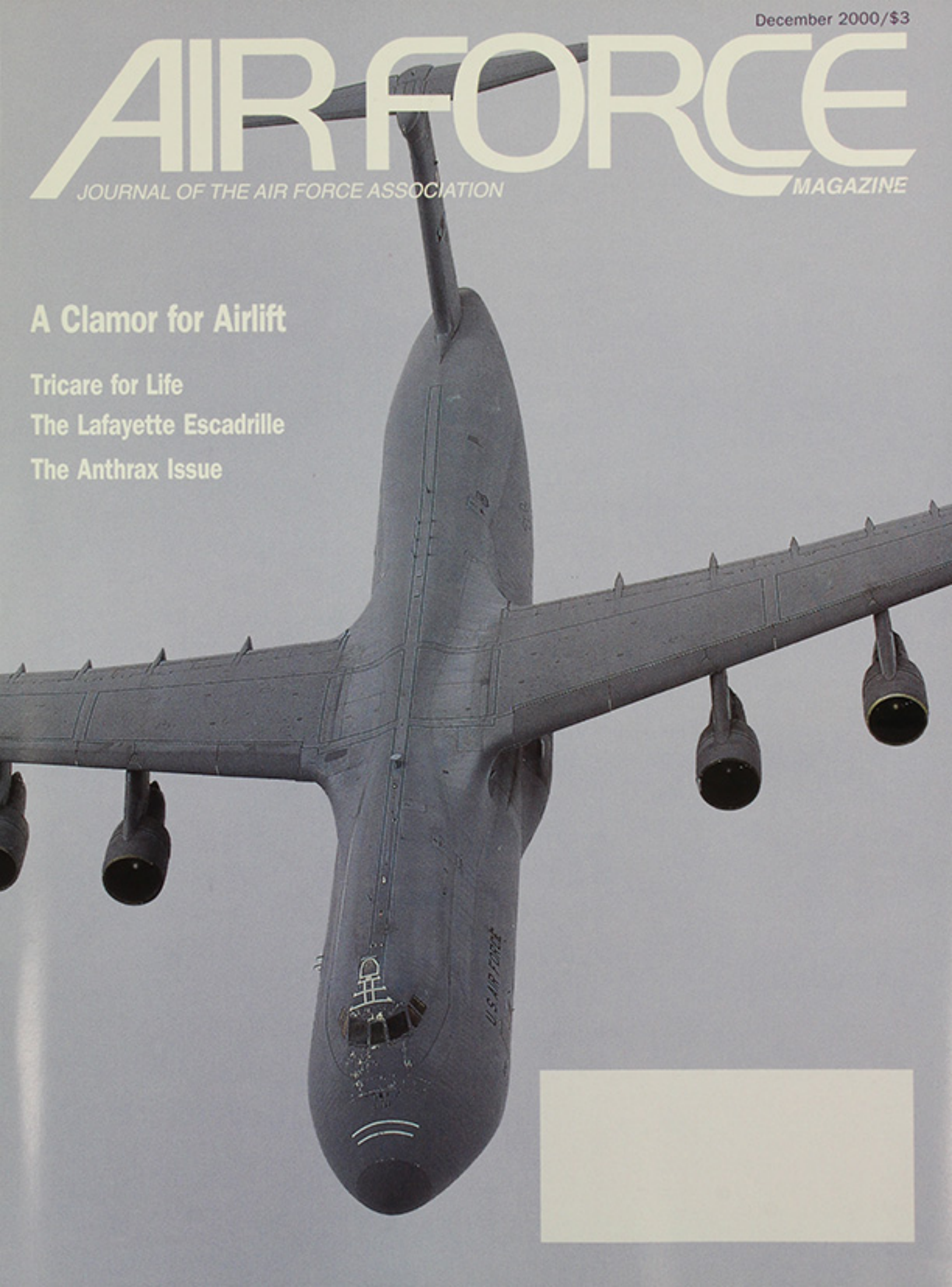
MAGAZINE

A Clamor for Airlift

Tricare for Life

The Lafayette Escadrille

The Anthrax Issue



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About the cover: A C-5B from the 60th Air Mobility Wing, Travis AFB, Calif., is among USAF's transports struggling to meet demands. See "A Clamor for Airlift," p. 24. Photo by Ted Carlson.

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By John T. Correll, Editor in Chief

The Bill Comes Due

In early September, with Congressional hearings coming up on military readiness, Secretary of Defense William S. Cohen admonished the Joint Chiefs of Staff not to "beat the drum with a tin cup in hand to try to generate more pressure for defense spending."

Neither Cohen nor anyone else imagined then how strong a case for defense spending would be presented to Congress and the public before the month was out, only part of it the doing of the service chiefs.

The first shot came Sept. 14 from the non-partisan Congressional Budget Office, which said the services would need another \$51 billion a year, just to stay even with where they are today.

The armed forces did not get into this hole overnight. Through the 1990s, they took one budget cut after another, even as operations and deployments abroad multiplied. They had to divert money from investment accounts to pay for everyday expenses, and thus did not replace equipment as it aged and wore out. Now the bill has come due.

To keep their existing quality at the present budget levels, CBO said, the services would have to be cut by 25 percent—a reduction on the order of two active Army divisions, three carrier battle groups, and three active duty Air Force fighter wings.

More than half of the shortfall identified by CBO was money needed to recapitalize the force, making up for a 10-year hiatus in which the Pentagon repeatedly put off replacing aircraft and other systems. The fleet is now the oldest in history, and rife with maintenance and readiness difficulties.

At the hearings on Sept. 27, Sen. Rick Santorum (R-Pa.) asked the service chiefs point-blank how much more money they needed. In the past, the chiefs have been criticized for their reluctance to publicly state their full requirements if they exceeded the official budget ceiling.

This time, there was no hesita-

tion. They said they need \$48 billion to \$58 billion more a year than they are getting now. The Air Force laid down the largest requirement, an additional \$20 billion to \$30 billion per year.

"I must tell you that the near-term readiness of the United States Air Force has not turned around," Gen. Michael E. Ryan, Air Force Chief of Staff, told Congress. "At best, it has

The defense shortfall is huge—and is steadily getting huger.

leveled off. Combat unit readiness has dropped well over 20 percent, and our mission capability rates on our aircraft are down more than 10 percent over the last decade."

Ryan said that "our aircraft are aging out at a rate that has us very concerned. We must recapitalize this force. The average age of a United States Air Force aircraft is 22 years old today, and in 15 years it will be nearly 30 years old, even if we execute every modernization program we currently have on the books. We have never dealt with a force this old, and it is taking inordinate time and work and money to keep the force airworthy and ready."

The Air Force has "mortgaged long-term readiness to shore up short-term readiness," he said. "We're buying about one-third of the aircraft needed to stop the force aging, and we are on a 250-year replacement cycle for our infrastructure, where our people work and live."

The only way to assure readiness of forces engaged abroad has been to draw down units based in the United States.

The story is much the same with the other services.

On Oct. 5, the General Accounting Office, which had been separately

pursuing a related issue, spoke up. GAO warned that the Pentagon's operations and maintenance accounts—the ones into which investment funds had been diverted—are themselves running short and need another transfusion of money.

These accounts could be billions short as expenses go beyond the budget projection for contingency operations, real property maintenance, health care, and fuel.

The national news media had begun to take notice by that point, and reporters at the Defense Writers Group breakfast on Oct. 26 asked Secretary of the Air Force F. Whitten Peters how much more money the services had to have.

For the armed forces to continue to do what they are doing today, Peters said, "Probably we need, DoD wide, somewhere on the order of \$80 billion to \$100 billion a year in rough numbers."

Reports of a huge defense shortfall have circulated in Washington for years. The problem has also been discussed behind closed doors. The declaration of the service chiefs in September was without recent precedent, though, and the CBO and GAO reports lent support to what the chiefs said.

The situation is too bad to be explained away by those who want to keep a tight lid on the defense budget.

Bear in mind that the stated shortfalls do not address new or emerging missions. If defense of space or the protection of electronic infrastructures from foreign attack are considered, for example, the unfunded requirement is higher.

In the recent election campaign, neither side recognized the full extent of the problem. How much the next Administration can or will do to fix it remains to be seen.

The nation spends less than 3.0 percent of the Gross Domestic Product on defense, the lowest percentage since before Pearl Harbor.

It isn't enough. And if it takes a tin cup and a drum to correct that, let the noise begin. ■

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Wrong on Tridents

Adam J. Hebert [in "For Bombers, Does START Equal Stop?" October, p. 26] stated that the triad currently has 432 Trident II D-5s. This is wrong. The Nuclear Posture Review, along with strategic arms control treaties, has influenced the changing of the [Submarine Launched Ballistic Missile] fleet from 18 to 14 boats. The four [Trident I] C-4 boats are to be taken out of service, with the other four C-4 boats converted to [Trident II] D-5s.

Rear Adm. Dennis M. Dwyer, director of programs for US Navy strategic systems, [states in an] October article in *Sea Power*, "Currently seven Ohio-class submarines are deployed in the Pacific Ocean with Trident I (C-4) missiles. The eighth Pacific SSBN, USS *Alaska*, is currently being converted from the C-4 to the Trident II (D-5) missile system. In the Atlantic Ocean, 10 US and four UK submarines are deployed with D-5 missiles.

"The four oldest C-4-capable SSBNs will be removed from strategic service beginning in 2003, and the four remaining C-4 SSBNs will be converted to the Trident II strategic weapon system. ... In May, USS *Alaska* entered Puget Sound Naval Shipyard to undergo conversion. The removal of her C-4 missile tubes and equipment is complete. The installation of the D-5 system is ahead of schedule. USS *Nevada* will begin her conversion in January 2001. The removal of the four oldest SSBNs from strategic service will begin in 2003."

The B-1 bomber wasn't counted either, though it's nuclear capable. Just because it is shifted to a conventional-only role doesn't make it so. It would be better to retire all B-52s and the 50 Peacekeeper missiles.

Bill Larson
Fort Walton Beach, Fla.

■ *Our error.* The current triad SLBM fleet has 18 SSBNs with a total of 432 missiles—a combination of Trident I (C-4) and II (D-5) missiles. For START II, the proposed numbers are 14 SSBNs with 24 Trident D-5s each.—THE EDITORS

Budget Truth

Your October editorial "Budget Truth" [p. 2] is right on the spot. Unfortunately, the ones that need to read it the most either won't read it or will ignore it.

It's a real shame that our major news media sources are so liberal that they blind themselves to the truth about the armed forces. I guess we can only hope that such things that are happening right now in the Middle East will open their eyes to the realities of the real world and our failed foreign and military policies.

Lt. Col. David Napoli,
USAF (Ret.)
Kansas City, Mo.

Air War Korea, 1950–53

After reading your exhaustive chronology ["Air War Korea, 1950–53," October, p. 36] about the US Air Force during the Korean War, I was struck by the many lessons that are applicable to today's Total Air Force 50 years later.

First, General of the Army Douglas MacArthur was right on target when he said, "The nation that does not command the air will face deadly odds. Armies and navies to operate successfully must have air cover." His wisdom is just as profound today as it was the day he said it.

Second, the US cannot afford to lose the first battles of any wars in the 21st century, like we did in the early days of the Korean War. As we mark the 50th anniversary of the Korean War, we must, as a free and prosperous nation, commit ourselves

to learning from the mistakes of the past so that our military personnel do not come home in body bags. The foremost lesson would be to see to it that the men and women of our Total Air Force have all the new aircraft, ammunition, spare parts, and quality-of-life enhancements to fight and win this nation's wars.

Jim Dolbow
Arlington, Va.

I wish to correct the July 27, 1953, entry. My middle initial is not "S" but "O" for Owen. My crew and I were over Korea on a [photoreconnaissance] mission at the time the signing was happening. We were not dropping leaflets, as stated.

The 91st [Strategic Reconnaissance Squadron] played a significant role in the Korean action. Much of it was aerial photorecon. In a previous edition of your magazine, an article on photorecon gave space to many others but did not mention the RB-29 and the 91st SRS.

Hopefully [noting] the above correction will show to all that the 91st SRS did indeed fly photorecon missions during the Korean action. I agree with [retired] SMSgt. Robert R. Ott ["Letters: More on Reconnaissance," January, p. 11] [that] much was classified but surely has been declassified by now. An acknowledgement of this work would honor the men who lost their lives doing it. And there were many who are still unaccounted for.

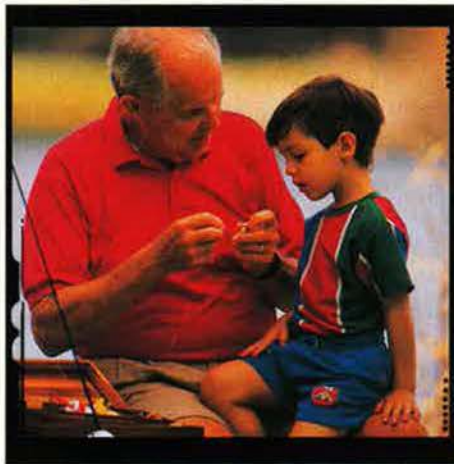
Denver O. Cook,
USAF (Ret.)
Mount Vernon, Va.

Page 40 has a picture of an airman posing with a damaged RF-51. That airman was then-1st Lt. Grover J. "Jim" Isbell, who retired as a major general, commanding the Oklahoma Air National Guard. The story behind the picture was almost a tragedy but ended up with a humorous twist.

Jim had sacked out after a morning's [reconnaissance] when he was summoned to [operations] for a routine test hop. Grumbling about his

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aborted nap, he asked the ops officer what had been wrong with the bird and was told in a joking manner that the "engine quits on takeoff." Jim took off and as he started his turn out of traffic, the engine quit. Jim had just enough altitude to turn back to the runway and tried to get the landing gear down before landing. He didn't quite make it—with the results shown in the picture. About 15 minutes after all the dust had settled, Jim came trudging back into ops, looked the ops officer straight in the eye and said, "It sure does." Thence back to his sack.

(By the way, we had had so much trouble with the tailwheels not extending that they were welded down. It cost a little airspeed, but what's 10 or more mph compared to what a MiG could do? You can see in the photo that extended tailwheel, which helped minimize belly damage, and after an engine and prop change and a satisfactory test hop, the Mustang was back to flying missions.)

I think you have the names reversed on the p. 57 photo. I have twice been face-to-face with Lt. Gen. Glenn O. Barcus, not affectionately known then in some circles as "the highest paid safety officer in the USAF." He is reputed to have arrived at a base which had recently experienced an aircraft accident and as soon as he alighted asked, "Who has been relieved so far?" The story may not be factual, but it is expressive of his reputation.

Stern as the general was, I take my hat off to him for going out on actual combat missions to get an up close and personal look at the air war over Korea.

Maj. Gen. Stanley F.H. Newman,
USAF (Ret.)
Oklahoma City

On June 18, 1953, a C-124 of the 22nd [Troop Carrier Squadron] crashed, killing 129 crew and passengers. I thought that should be in the chronology of Korean War events.

MSgt. Robert W. Hootman,
USAF (Ret.)
Kendallville, Ind.

Enjoyed the article. Several references were made [to] the B-29 as a medium bomber. Is this an error or when did this designation take place?

E.L. Spivey
Greensboro, N.C.

■ Available sources don't give a specific date but credit the designation

"medium" to after World War II but before the Korean War.—THE EDITORS

I am a bit disappointed in the chronology. I was assigned to the 49th [Fighter-Bomber Wing] in July 1950. About mid-July, I was sent to Taegu in South Korea to rearm and refuel F-51s that were flying out of Japan. We stayed there and operated the base all through the Pusan perimeter episode. Several of us stayed when the Air Force pulled back to Pusan.

After the landings at Inchon, the F-51s stopped coming in, and F-80s of the 7th, 8th, and 9th [Fighter Squadrons] of the 49th moved in. Some time after that, the 51st FBW made their appearance for a very short time.

I saw three B-26s at the base for a little while. I remember one landing on a taxiway by accident one night, [hitting] two or three F-80s in the parking area. I also remember on two different occasions where B-29s attempted to make emergency landings there. Neither was successful. I was moved to Japan for a couple of months when the Chinese invaded. But the 49th maintained a presence at [Taegu].

I returned and we transitioned to F-84Es. I finally left there in January 1952. All this time I was a member of the 49th FBW. In the article I could find very little mention of the 49th, when we had people and planes in the thick of it as much as anybody. I worked as a maintenance man and supply parts inspector, but I know we flew a lot of missions and unfortunately lost our share of planes and people. I am proud to have been a 49er.

G.T. Kaptckinskie
Huntsville, Tex.

I was a staff sergeant in the 1453rd Medical Air Evacuation Squadron, based at Hickam AFB, Hawaii, with a TDY squadron at Haneda AB, Japan. We flew air evacuation in Korea and were honored by the Air Force for our work.

I do not understand why all the articles on USAF completely overlook our position in the Korean War. I have received numerous letters and telephone calls from some of the military we evacuated from the war, thanking us for the job we did getting them back to the US safely and in good spirits. We did our job in the finest way possible, with a manner of conduct to make the flight of the wounded a happy one.

I know all the men and women I flew with would appreciate reading

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about how we added to USAF and [our] contribution to the war. Although some of us are gone, those of us still around would like to know that what we did has not been overlooked or forgotten.

James M. Rochelle
Tamarac, Fla.

I had one disagreement with retired Lt. Col. Norvin C. "Bud" Evans. [See "Letters: Air War Korea, 1950-53," November, p. 8.] He stated that four sets of tanks had been built by the squadron maintenance officers of 7th, 8th, and 9th [Fighter Squadrons].

I don't think the Air Force changed that much between the 1950s and 1960s. If there was any work to it, an enlisted person would have done it. The maintenance officers may have come up with the idea or even designed them, but I doubt if they built them.

SMSgt. Gail H. Meyer,
USAF (Ret.)
Altus, Okla.

Musing that other members of the Korean War's 1st Provisional Troop Carrier Group had not "come forth to sing their song," [retired] Lt. Col. Gerald E. Teachout inserts a few sour notes into the historical record of airlift operations in the first months of that war. [See "Letters: Air War Korea, 1950-53," November, p. 8.]

Stating that "we flew C-46s into places that fall and winter that no one else could get into" flagrantly overlooks the trusty C-47s that carried a significant portion of the "crude airstrip" operational load during that period and later.

A second error: "We helped haul the walking wounded out of the Chosin Reservoir area." Truth is that 11 of us with C-47s from 21st Troop Carrier ("Kyushu Gypsy") Squadron rescued 4,689 entrapped, wounded Marine and Army troops, plus a few loads of corpses, from Hagaru-ri (at the reservoir) and Koto-ri (10 miles south) with help from three Marine/Navy R4Ds. The Hagaru-ri operation was Dec. 1-6, 1950 (snowstorm intervened Dec. 7), and then from Koto-ri Dec. 8-10. (We waited until late on Dec. 12, then went home to Itazuke AB [Japan], as the troops, plus 98,000 disgruntled North Korean civilians, loaded out at Hungnam on a Navy-assembled flotilla.)

Hagaru-ri airstrip, hacked from frozen ground, was about 2,500 feet long with a 25-foot dike at the north end, guaranteeing none would overshoot. Takeoffs obviously were southward. Koto-ri airstrip was about 2,000

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feet long with a huge slag pile on approach end that required nearly rolling one's wheel on its top, then chopping power and diving for the strip.

Our staging was from Yonpo AB on the seacoast about 1.5 miles southwest of Hagaru-ri. (It had been a North Korean [air base] and was the only established base in the Hungnam/Hamhung area.)

At Yonpo, evacuated troops were given emergency medical attention, then flown to hospitals in Japan primarily by C-54s with aircrews that included flight nurses and corpsmen. Possibly some C-46s were used if Teachout is partially correct, but I never noticed any.

Col. Paul C. Fritz,
USAF (Ret.)
Austin, Tex.

Last Shot at Those Letters

R.D. Truitt wrote in your October issue ["Letters: Those Letters," p. 5]: "It is said that the Slavic Serbs have the longest memories and are the best haters in the world. This they have proved with their vicious, murderous, and revenge-filled campaigns throughout the Balkan region, and only the deliberately blind could fail to see it and, worse, deny it."

How sad [for] someone [to write] the above statement. After all, anyone knowing their Air Force history would be aware of the fact that 500 American and 200 Allied pilots were rescued by the Serbs at great personal cost to themselves in 1945, in one of the world's largest rescue operations (Operation Halyard) behind enemy lines (since Yugoslavia at that time was overrun by the Germans).

Milana Bizic
Pittsburgh

On Pieces of History

[On] the photo of the BT-9B trainer [October, "Pieces of History: Mishap," p. 96] in the USAF Museum at [Wright-Patterson AFB, Ohio]: That chassis has other designations. It was a BC-1A Basic Combat plane with machine guns and optical sight at Maxwell Field [Ala.] in 1940, all naked aluminum finish. The original BC-1 was deployed in Panama at Albrook Field when I arrived there in July 1941. This model was blue and yellow with an additional .30-caliber flex gun in the back seat.

I was a Link Trainer instructor who flew in this thing's backseat for many hours, giving instrument checkouts to pilots of the 37th Pursuit Group. Nice memories.

MSgt. Joe Franklin,
USAF (Ret.)
Whitesburg, Tenn.

Bennie Schriever

The article "The Man Who Built the Missiles" [October, p. 80] about Gen. Bernard Schriever and the missiles developed under his leadership was absorbing. When the events took place, many facts were classified, but they now have been verified, sequenced, and retold by the outstanding historian [retired] Col. Walter J. Boyne.

John D. McQuigg
Tampa, Fla.

The article certainly brought back a few memories. I never met Schriever, but I did work in three different site-activation task force sites during the early 1960s: at Forbes AFB [Kan.] on the Atlas I, at Lincoln AFB, Neb., on the Atlas II, and at Whiteman AFB [Mo.] on the Minuteman program.

Lt. Col. Kenneth C. Weatherwax,
USAF (Ret.)
Fort Walton Beach, Fla.



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12. Tax Status (For completion by nonprofit organizations authorized to mail at special rates) (Check one) The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes: <input checked="" type="checkbox"/> Has Not Changed During Preceding 12 Months <input type="checkbox"/> Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement)					
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Aerospace World

By Peter Grier

Bronze Star Eligibility Narrowed

Congress, in a provision of the Fiscal 2001 National Defense Authorization Act, has voted to limit eligibility criteria for the Bronze Star.

Under the change, only personnel receiving imminent danger pay may receive the medal. In the Kosovo conflict, some Air Force personnel who were at Stateside bases but involved in supporting aircraft used in combat were nominated for the Bronze Star.

"The change to the award criteria for the Bronze Star Medal is unfortunate," said the Secretary of the Air Force, F. Whitten Peters. "The changing nature of warfare, as well as the Air Force's evolution into an Expeditionary Aerospace Force, makes geographic location of combat forces a secondary concern."

"Linking the award to imminent danger pay, which excludes many deserving Air Force men and women, is not the way to go," Peters added.

Berets for All, Says Army Chief

Next year, everyone in the Army will be issued a black beret, said Army Chief of Staff Gen. Eric K. Shinseki.

The Oct. 17 statement caught the Army by surprise. It means that headgear formerly reserved for elite Rangers will now become the province of everyone from cooks to chaplains.

"It will be a symbol of unity, a symbol of Army excellence, a symbol of our values," said Shinseki in an address to the Association of the United States Army.

The beret will replace the flat green cap. It will be issued to troops next June.

In a written statement, the Special Forces Association, which represents active and retired Army commandos, including Rangers, called the move "disrespectful."

Top DoD Tester Sees No F-22 Showstoppers

Philip E. Coyle III, DoD's director of operational test and evaluation, told defense reporters Oct. 19 that, as far as he is concerned, the F-22



USAF photo by Jim Ross

Oct. 24 was busy at Edwards AFB, Calif. The Lockheed Martin X-35A Joint Strike Fighter demonstrator flew in from Palmdale, Calif. An F-22 launched an AIM-120 over the China Lake range, completing important flight-test criteria. And the space shuttle Discovery landed (above), after being diverted from Florida.

development program is good to go. His office sees no systemic testing problems ahead, despite the fact that there is currently "a lot going on" insofar as F-22 tests.

Among the upcoming milestones was the scheduled flight of version 3.0 of the F-22's avionics system software aboard a prototype aircraft. Plans called for installation of the software on the fighter between Nov. 10 and Dec. 12.

According to Congressional criteria, Raptor 4006 also had to take to the air prior to the aircraft's scheduled Dec. 21 Defense Acquisition Board review. That flight at the time was set for Dec. 15.

The F-22 flying test bed, a modified 757, has been a big help in avionics testing. But it won't be able to achieve perfection of the system, said Coyle.

"I believe they will have some problems in the aircraft that they just simply will not be able to simulate," he said.

Of the existing F-22 prototypes, 4001 is scheduled to be sent to Wright-Patterson AFB, Ohio, for live-

fire testing toward the end of the year. Aircraft 4002 is being used for ground-based missile ejection tests. Aircraft 4003 is being used for flight tests.

Raptor 4004 was likely to make its first flight by Dec. 13, said Coyle.

Space Community Goes Green

Gen. Michael E. Ryan, the USAF Chief of Staff, has approved an Air Force Space Command proposal to make the green flight suit the standard uniform for space and missile operators.

The Air Force Chief of Staff in September approved the wear of the green flight suit, known as the "green bag," and jackets for all space and missile operators, effective immediately. A blue one-piece suit, commonly called the "blue bag," has been standard space issue for nearly 12 years.

Ryan approved the plan Sept. 27. Air Force Space Command launched its implementation Oct. 1 with final phase out of the blue uniform no later than October 2001.

The one-year implementation plan broadly calls for phasing in the green

flight suit as the existing supply of blue crew uniforms is expended. Some 3,000 active and reserve persons currently wearing the blue crew uniform will be supplied with green bags through the command.

Lawsuit Targets World War II Memorial

A disparate group of organizations opposed to placing a World War II memorial on the National Mall in Washington at the east end of the Reflecting Pool have filed suit in US District Court, aiming to halt its construction.

The protestors' lawsuit claims that the National Capital Planning Commission and other government bodies subverted laws intended to protect the Mall's open space when they made the memorial siting decision.

In response to the lawsuit, the American Battle Monuments Commission said in a written statement, "We are confident that judicial proceedings will conclude favorably and that the National World War II Memorial will be built on its approved and dedicated site."

The public has never really had a chance to express its views, say the plaintiffs.

"This memorial, with its outrageous history of ... subverted laws, cannot claim to honor our veterans, our nation, or anything that has to do with openness, fairness, lawfulness, or heeding the will of the people," said National Coalition to Save Our Mall member Neil Feldman.

Other members of the lawsuit coalition include World War II Veterans to Save Our Mall and the D.C. Preservation League.

A similar lawsuit filed in 1998 by opponents of the proposed Air Force Memorial in nearby Arlington, Va., lost in both US District Court and the US Circuit Court of Appeals.

A groundbreaking ceremony for the World War II memorial took place Nov. 11.

Zinni Defends Choice of Aden

Gen. Anthony C. Zinni, the recently retired commander of US Central Command, took full responsibility for choosing Yemen as a refueling stop for Navy ships. He spoke before the Senate Armed Services Committee on Oct. 19.

The retired Marine also vigorously defended the choice, saying that the Yemeni port of Aden was more secure than Djibouti, the African Red Sea port the Navy previously used. In addition, the choice of Aden was made in part to try and forge better ties with Yemen and encourage it to

Defense Authorization Bill for 2001

On Oct. 6, members of the House and Senate Armed Services Committees reached agreement on a defense authorization bill that increases real, inflation-adjusted spending on the military for the second year in a row.

The \$309.9 billion measure included not only Pentagon programs but also defense programs in the Department of Energy.

It represents a modest 1.5 percent hike over President Clinton's budget request. It provides much-needed increases for readiness, procurement, and recruitment and retention, said key committee members.

"We still need to do more," said Sen. John Warner (R-Va.), chairman of the Senate Armed Services Committee. "Our military forces are presently involved in overseas deployments at an unprecedented rate. More and more we are being forced to confront the problems that result from trying to do too much with too little."

Lawmakers voted for a 3.7 percent pay raise for military personnel, effective Jan. 1, 2001. The Fiscal 2001 National Defense Authorization Bill also includes an extensive expansion of military retiree health benefits.

Looking ahead to budgets to come, the defense panels requested in bill provisions that the Pentagon prepare a number of plans for future forces. They require the Secretary of Defense to undertake a comprehensive review of the nuclear posture of the US, for instance, and for the Air Force to undertake a "comprehensive planning process" to identify long-term technology needs.

The legislation also mandates a semiannual report to Congress on the commitments and contributions of European allies to the peacekeeping operations in Kosovo.

In aerospace related moves, the authorization bill would:

- Reverse an Air Force decision to slow the Airborne Laser by adding \$85 million to the \$149 million budget request for the program. Congressional conferees called for the service to obtain agreement from the Ballistic Missile Defense Organization before making any changes in the ABL budget, schedule, or technical requirements.

- Transfer responsibility for the Space Based Infrared System Low Program from the Air Force to BMDO.

In a move that would affect all services, lawmakers expressed concern about the course of the Pentagon's anthrax vaccination program. "Several Defense Contract Audit Agency and DoD Inspector General reports have found irregularities in the financial management of DoD's Anthrax Vaccination Immunization Program, and questions have been raised about the program's long-term effects on recruitment and retention," concludes a House Armed Services Committee report on the authorization bill.

Therefore conferees voted to require periodic DoD reports on the number of personnel separations resulting from refusal to participate in the anthrax program, as well as its overall financial health. They also imposed limits on the purchase of more vaccine until the Food and Drug Administration approves the current manufacturer and a strategy for obtaining a second source has been developed.

fight the very terrorism that struck the destroyer USS *Cole*.

Cole was hit by a suicide bomber Oct. 12, killing 17 and injuring more than 30.

"There are no rear areas out here. There are no safe barracks," said Zinni.

Asymmetrical conflict with guerilla forces will likely be a fact of life for the US in the new century, according to the former CENTCOM chief.

"We're going to see that again. We will eventually see a weapon of mass destruction used in a terrorist act, somewhere, in this mode," Zinni told senators. "And I would just say we had better start thinking about how we're going to be prepared for that because we're woefully unprepared for that event."

The decision to use Yemen was first made in 1997. Twenty-six Navy

ships refueled there before the *Cole* attack, according to Zinni.

He said he had been told that a decade ago Navy ships in the region typically refueled at sea. But that is less practical today, partly because the Navy now has only 21 oilers, down from 32 in 1992.

USAF Adds New Combat Rescue Specialty

The Air Force, committed to bringing its people back safely from dangerous missions, has added a new specialty, combat rescue officer, to its career fields list.

Personnel in the new 13DXA category will provide expertise to command and battle staff units. They will also go into the field themselves and conduct rescue operations.

"By creating this new career field, we recognize how vital the person-

nel recovery and combat rescue missions have become in our Expeditionary Aerospace Force concept," said Air Force Secretary F. Whitten Peters.

At first the field will consist of four active duty officers. One will be assigned to Headquarters Air Force and one to Air Combat Command. The remaining two will serve with whatever rescue squadron is chosen to implement the new program.

The Air Force expects more than 160 officers—active duty, Guard, and Reserve—to enter the field by 2007. Training will consist of both formal training and unit experience.

Lockheed JSF Makes First Flight

Lockheed Martin's X-35A Joint Strike Fighter demonstrator made its long-awaited first flight Oct. 24.

The aircraft lifted off a runway at Lockheed's Palmdale, Calif., facility at 9:06 a.m. (local time). Twenty-two minutes later, it landed at the US Air

Force test facility at Edwards AFB, Calif.

The flight, in which the supersonic fighter soared to an altitude of 10,000 feet above the California desert, signified the X-35's entry into a flight-test program.

Lockheed is locked in competition with Boeing to become builder of the new fighter, a program valued at some \$200 billion. One of the fighter houses would be in line to produce thousands of aircraft for the Air Force, Navy, and Marine Corps. Boeing's X-32A demonstrator made its first flight in September.

The Lockheed pilot, Tom Morgenfeld, said the first flight was virtually "trouble free" and devoid of surprises. The X-35 climbed quickly to 10,000 feet and maintained an airspeed of 250 knots while flying figure-eight maneuvers.

Overall JSF Program Slips a Bit

The Department of Defense will likely

select the winner of the Joint Strike Fighter program a bit later than planned, Undersecretary of Defense for Acquisition, Technology, and Logistics Jacques S. Gansler told reporters at a breakfast meeting Oct. 12.

The original schedule called for DoD to make the call between competitors Lockheed Martin and Boeing next spring. That decision will now probably take place no earlier than September 2001.

"If you are looking realistically, it is probably more likely in the fall than in the summer, but it is in that time period," said Gansler.

There are three main reasons for the delay, said the Pentagon procurement chief. The first is that as the contractors move into the flight-test regime they are likely to have to do more tests than they have currently planned. The second is that Congress cut the JSF's total budget in the Fiscal 2001 authorization bill by more than \$150 million.

Peters Says Defense Needs \$80 Billion to \$100 Billion Per Year Boost

The Defense Department would need a one-third increase in budget simply to maintain the forces and capability it already has, Air Force Secretary F. Whitten Peters said in October.

Peters told reporters in Washington that the military services collectively require "somewhere on the order of \$80 billion to \$100 billion a year" to maintain fleet ages at acceptable levels.

That would represent an increase of about a third over the current Pentagon budget of about \$300 billion.

The Air Force alone needs "\$20 billion to \$30 billion a year in order to recapitalize," Peters said.

As an example of Air Force needs, he noted that 40 percent of the 40-year-old KC-135R tanker fleet is down for repairs at any given time and that it takes a year to get a KC-135 through depot maintenance because of all the age-related problems discovered during the periodic overhauls. Younger airplanes are more efficient and cheaper to maintain.

To keep the Air Force at a "steady state," with aircraft average age at about 20 years, the service would need to buy 150 new airframes a year for the next 15 to 20 years, Peters asserted.

"I think this year we have done 50, ... substantially fewer than 150," he said.

Acknowledging that such a massive increase in funds is unlikely, Peters said he would welcome a national debate about what the country wants its military to be able to do "and what kind of risk do you want us to take."

Peters also bluntly rebutted rumors that USAF's support for the Joint Strike Fighter is lukewarm. Peters said the JSF will come in at a cost comparable to the most advanced version of the F-16 it will replace and offer far greater capability.

The idea of forgoing the JSF and buying F-16 Block 60s "is a nonstarter," Peters said.

"It does not make a whole lot of sense to scrap what we've done and start over again," he asserted, especially since "large blocks" of the F-16 fleet will reach certain retirement age within a decade.

Likewise, Peters said suggestions that the F-22 be can-

celed in favor of buying more F-15s ignores the fact that the F-15 line would have to be re-engineered at great cost to deliver a more capable airplane, and that F-15Es USAF is buying now by Congressional mandate already cost "\$100 million a pop." Even a reduced force of only 100 or so F-22s would be a nightmare to manage, Peters said.

"That is not enough" to take care of worldwide responsibilities, perform necessary testing and training, and keep personnel from being so overworked that they leave the service, Peters said.

He believes the F-22 will clear testing requirements for entry into production as early as this month but no later than February. The biggest risk in the program's schedule, he said, is the availability of software engineers. Many are being lured from defense work to "dot com" businesses, Peters noted.

Peters anticipates hard choices ahead on strategic reconnaissance. The U-2 fleet will fall below necessary levels in about 2007, meaning a decision will have to be made in about 2004 whether to bet on the success of the Global Hawk Unmanned Aerial Vehicle or restart the U-2 production line. The Global Hawk, Peters said, is unable to do all the missions the U-2 can do.

Asked to comment on the Space Commission, which is studying whether space activities should be spun off from the Air Force, Peters said such a move would be "shortsighted."

"What comes from space is valuable because of the way you integrate it with everything else you do," Peters asserted, and a separate entity with responsibility for space would hamper integration with layers of bureaucracy.

Those clamoring for weapons in space should be aware, Peters noted, that a true space-based laser that is an operational system and not just experimental, has been estimated to cost "\$40 billion a pop." Hypersonic aircraft that would service space weapons would require "\$300 [million] to \$400 million a year" in development funds over a decade or more, he added.

"The technology is not there, the data is not there," Peters asserted. "We don't have the money to fund these kinds of things, given the current budgets that we see."

An E-Blaster From Chuck Spinney

Defense critic Chuck Spinney distributes his opinions in a series of what he calls "E-mail Blasters." He posts these on his Web site as well. He has a considerable following in Washington, where he is a favorite of many in Congress and in the news media.

On Oct. 11, he sent around Blaster #391, entitled "John T. Correl & the Question of Integrity?" In it, Spinney denounces the editorial in the October issue of *Air Force Magazine* as "carefully constructed, first-rate intellectual slime" and invites his readers to "judge for yourself if Correl speaks the TRUTH, or is deliberately lying, or is merely an ignoramus."

What set him off, of course, were the lines in the "Budget Truth" editorial that said, "Pentagon gadfly Chuck Spinney is circulating a chart that depicts the current defense budget as almost four times as large as during the Vietnam War. (Spinney leaps to his conclusion by ignoring the effects of 525 percent cumulative inflation since 1968.)"

The basis for that part of "Correl's" editorial was Spinney's E-mail Blaster #381, "Madness of Versailles: The 4 Percent Solution," dated Aug. 20. We reproduced Spinney's defense budget chart from that Blaster on p. 10 of the October issue. It arrayed budgets in current dollars, thus portraying defense as costing four or five times as much as it did in the peak years of the Vietnam War.

In his more recent Blaster #391, Spinney attacks what he calls my "audacity (or stupidity)" for saying he had ignored the effects of inflation. He chastises me for not noticing that he published an article in *Defense News* on Sept. 5, in which, he says, his numbers are adjusted for inflation. Those numbers, he says, are almost the same as the numbers that "Correl" used.

If Spinney got it right in *Defense News*, then good for him. I didn't see that article. I do not read everything he puts out. I was going by his August Blaster #381—which, by the way, is still posted on his Web site. It creates a misconception about the defense budget, just as I said it did. The editorial

cited his chart from the August Blaster as an example of analysis gone wrong, but the main focus of the editorial was broader, explaining when and how the defense budget cuts of recent years happened.

In the August Blaster, Spinney characterized his chart—the one where defense budgets are not adjusted for inflation—as a way to "place the numbers in an historical context" and to put the 4 percent budget scenario "in the context of past hopes and dreams as well as the reality of past defense budgets."

If you regard current dollars (not adjusted for inflation) as the appropriate way to compare budgets in "historical context," then Spinney's August chart will be right up your alley.

In the Oct. 11 Blaster, Spinney says it was all right to use current dollars for his August chart because "removing the effects of inflation did not change my conclusion—namely that the 4 percent of GDP defense budget will spark a budget war with Social Security and Medicare (i.e., the conclusion that Correl chose not to mention)."

Actually, we did mention that. On p. 10 of the October issue, we quoted Spinney as saying that spending 4 percent of GDP on defense "would be tantamount to a declaration of total war on Social Security and Medicare in the following decade."

However, as recently as 1994 and for many decades prior to that, the nation allocated more than 4 percent of GDP to defense, so a return to that level should not be beyond the nation's means to afford. The question is whether that level of allocation is necessary. For more on that issue, see our Web site at www.afa.org.

Spinney stuck both the "Budget Truth" editorial and the Air Force Association Statement of Policy onto Blaster #391. That's good. As Spinney says, people should judge for themselves.

For Spinney's Blaster see www.infowar.com/iwftp/cspinney. For "Correl," see www.afa.org and click on What's New.

—John T. Correll

Finally, Congress has prohibited Lockheed and Boeing from pumping their own money into their JSF prototypes to speed things up.

"This is the largest program in the history of the world, I guess," said Gansler. "You would expect there to be a little interest on both parts to win and therefore to spend some of their own money on it, [but] Congress said you can't do that."

Predator Suffers Multiple Crashes

An Air Force RQ-1A Predator Unmanned Aerial Vehicle assigned to the 15th Reconnaissance Squadron crashed on restricted land at Nellis AFB, Nev., on Sept. 14. The Air Force had no comment on causes, pending an investigation of the incident.

In a second accident, a Predator UAV crashed near the El Mirage Test Facility, Calif., on Oct. 4. The aircraft was undergoing a routine test at the time of the crash.

AFRC Responds to Cole Attack

In the days following the terrorist



Honors are rendered as the remains of five sailors from USS Cole arrive at Ramstein AB, Germany. Air Force Reserve Command units provided airlift and mortuary support in the wake of the terrorist attack on Cole. This C-17 is from the 315th Airlift Wing, Charleston AFB, S.C. A crew from the same unit then transported the bodies to Dover AFB, Del. Honor guards for this ceremony came from Ramstein's 86th Airlift Wing and NAS Sigonella, Italy.

USAF photo by MSgt. Keith Reed

Air Combat Mission Systems

AMRAAM
EGBU-15 Guided Bombs
HARM, HARM Targeting System (Export)
Joint Standoff Weapon
Maverick
Paveway Laser Guided Bombs
Sidewinder
Sparrow
Towed Decoys
Airborne Jammers Series
F-4 Phantom: Radar Upgrade
RF-4: Navigation Attack Radar
F-15 Eagle: Radars
F-16 Falcon: Mission Computers
F/A-18 Hornet: Radars and Radar Warning Receiver
F-22 Raptor: Radar (Joint Venture) and Processor
F-111: Terrain Following Radar
F-117 Stealth: Targeting System
Joint Strike Fighter: Avionics and Weapons
B-2 Spirit: Radar
C-130 Hercules: Talon-1 Navigation Attack Radar
AC-130 Spectre Gunship: FLIR and Fire Control Radar
CV-22 Osprey: Radar and Infrared Systems
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attack on the Navy destroyer USS *Cole* in Yemen, Air Force Reserve Command units responded with air-lift and port mortuary support.

On Oct. 15, a C-141 crew from the 452nd Air Mobility Wing, March ARB, Calif., flew 33 survivors to meet loved ones in Norfolk, Va. An active duty medical trauma unit based in Germany cared for the injured on the long flight home.

Two days earlier a Reserve C-17 crew from the 315th Airlift Wing, Charleston AFB, S.C., had flown the bodies of five of the sailors killed in the attack to Ramstein AB, Germany. A second crew from the same unit then transported the bodies to Dover AFB, Del., for port mortuary processing. A brief airplane-side ceremony honored the dead upon their arrival.

Air Force Reservists comprise 74 percent of the designated port mortuary support force. Most of the 290 personnel so designated are assigned to Dover or Travis AFB, Calif.

Boeing Unveils Uninhabited Combat Aircraft

Boeing unveiled the first X-45A Uninhabited Combat Air Vehicle in a ceremony in St. Louis on Sept. 27.

The aircraft, which resembles a cross between a B-2 stealth bomber and a radio-controlled model, is only 27 feet long, with a 34-foot wingspan. It is designed to carry a variety of weapons and to be stored unassembled in a small container for up to a decade.

Workers can unpack and reconstitute theUCAV in an hour, said Boeing officials. The all-electric aircraft is



Vietnam-Era Gunships Keep Going and Going

AC-130H Spectre gunships—a weapons system originally designed only to last through the Vietnam War—are getting a new lease on life and will continue in service well into the new century, thanks to an overhaul program currently under way at Robins AFB, Ga.

The overhaul is rebuilding the aircraft's Infrared Suppressor System, which is nicknamed "tub" and is designed to thwart heat-seeking missiles.

"[The IRSS is] like an extra cowling that hides the heat signature of the engines from observers below," said Al Lowas, aerospace engineer for the AC-130H Integrated Product Team.

Extreme heat and pressure and the salt air at the AC-130H home base of Hurlburt Field, Fla., all contributed to IRSS deterioration.

The overhaul and rewiring consists of a complete teardown and rebuild of the IRSS and replacement of half its components. Since the system was designed in the 1960s, Robins maintainers had no set procedures to follow.

The work should save the Air Force up to \$1 million and two weeks of downtime per aircraft, per year.

"The overhaul should make these tubs last for the next seven to 10 years," said Lowas.



More than 400 people were on hand when Boeing unveiled the first Uninhabited Combat Air Vehicle on Sept. 27 at Lambert-St. Louis IAP, Mo. Flight testing is to begin in spring 2001 at Edwards AFB, Calif.

projected to cost only \$10 million apiece and is small enough that six can be carried in a C-17.

"We see in the future that this aircraft will help take care of some of the air-to-ground threats that we face right now and allow manned assets to do their jobs more efficiently and safely," said Lt. Col. Michael Leahy,UCAV government program manager.

The rise of theUCAV could significantly affect the whole concept of air combat. It is intended mainly for use as a defense suppression weapon before a wave of manned aircraft.

Such systems do not signal the end of the need for combat pilots, officials said.

"The role of the pilot will change concerning this aircraft," said Leahy, "but I think the person who operates this in the mission control console has to have every bit the knowledge of strategy and tactics in the operational art of war that any pilot has."

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New ID Card Makes Debut

The Department of Defense has begun issuing its new "smart card" identification card, officials announced Oct. 10.

Three Air Force bases and an Air National Guard unit are among the first to test the software which processes card information, as part of the phased-in smart card introduction.

Langley AFB, Va.; Osan AB, South Korea; Ramstein AB, Germany; and the 203rd RED HORSE unit in Virginia Beach, Va., are thus in the forefront of an ID revolution.

"This card gives our people a key technological tool to improve performance while protecting individual privacy," said Undersecretary of Defense (Personnel and Readiness) Bernard D. Rostker.

The credit-card-sized ID contains an embedded computer chip with 32 kilobytes of data storage, a magnetic stripe, and two bar codes. Besides serving as identification, it will eventually allow access to secure areas and permit entry into restricted computer networks.

The card could be used to process food service charges in mess halls and update deployment information. Officials are studying whether to include medical and dental information, student status, and other personal data on the card.

"The smart card will give us the capability to digitally sign documents, transactions, orders, and a lot of other implements we use to do business," said Paul Brubaker, deputy chief information officer, Office of the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence.

It has taken about a decade to develop the new card. One-third of the Air Force target population should receive theirs by February 2001. The remainder should be outfitted by September 2002.

Initial costs are \$6 to \$8 per card. DoD has no current plans for military family members, retirees, and inactive Guard and Reserve members to receive smart cards, due to the expense.

UCAV flight testing is set to begin next spring at Edwards AFB, Calif. The program plans for all testing to be completed by 2005. Operational aircraft could be deployed by 2010 if the Air Force decides to go in that direction, Leahy said.

Remains of Vietnam-Era USAF Pilot Identified

On Sept. 13, remains retrieved from an excavation site near Hanoi were positively identified through a series of DNA tests as Air Force Lt. James Milton Jefferson, according to the *Washington Post*. A military board had declared Jefferson officially dead in June.

Jefferson, an Air Force Academy graduate, was near the end of his tour with the 390th Tactical Fighter Squadron at Da Nang AB, South Vietnam. He disappeared May 12, 1967, during a raid on a North Vietnamese air field. He was serving as the bombardier/navigator in an F-4.

Flight commander then-Col. Norman C. Gaddis ejected safely from the two-seat Phantom and was captured and held as a prisoner of war for six years. Though he was shown Jefferson's helmet and other personal effects, his captors said nothing about the pilot's fate.

Remains were first spotted at the suspected crash site of the F-4 in 1998. Some 1,993 US military personnel are still listed as missing in Vietnam.

Putin Postpones, Announces Military Cuts

At a meeting of Russia's National Security Council on Sept. 27, President Vladimir V. Putin put off massive cuts in the Russian military.

Only a few weeks before, Putin's defense minister, Marshal of Russian Federation Igor D. Sergeyev, had said that the 1.2 million person

Russian military would be cut to 850,000 by 2003.

Putin intended to shelve that plan. He said streamlining the armed forces was more important than mechanical reductions.

"We spend colossal resources on the military, and we allow the military budget to be wasted on peripheral issues that have nothing in common with either the army's combat readiness nor with its direct supplies," he said, per the *New York Times*.

However, Putin announced Nov. 9 that the cuts would go through.

Experts agreed that cuts are needed but differed on where they would lead and whether necessary modernization would follow.

Employers Pinched by Reservist Deployments

Most employers support the principle of worker participation in the National Guard or Reserve. But the military's increasing reliance on part-time warriors has also left many employers in a bind as valuable employees disappear for weeks at a time.

That is the conclusion of a recent Department of Defense poll, which found that nearly half of responding employers said a two week absence by a Guard or Reserve employee caused problems. Fully 80 percent said there were negative effects when deployments stretched 30 days or more.

Yet as the US military stretches around the world to handle peacekeeping and humanitarian actions, such long deployments are becoming more



The NF-16D Variable-Stability In-Flight Simulator, Test Aircraft (above) recently arrived at the US Air Force Test Pilot School at Edwards AFB. The VISTA trainer can simulate fighters such as the F-15 and the Navy F-14 in flight and gives students an opportunity to learn how to test future integrated cockpits.



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SecDef Says US Needs To Plan Homeland Defense

A cyber or terrorist attack on the United States homeland is one of the most dangerous threats to national security US forces face. Even so, more needs to be done to guard against such eventualities, Secretary of Defense William S. Cohen said in what was billed as a major speech on Oct. 2 to the Center for Strategic and International Studies.

Right now local authorities are supposed to take the lead in responding to domestic attacks. But the Pentagon might need to take a primary role, intimated Cohen, despite understandable sensitivities about the intrusion of the military into domestic affairs.

"Is there any other institution in this country that has the organizational capability, the logistics capability, other than the Department of Defense, to respond, to provide transportation, to move medicines and personnel, provide the hospital beds, etc.?" asked Cohen.

Currently DoD is working to answer the questions of authorities in 120 US cities about what to do in case the unthinkable happens. Issues include protection of fire and police personnel and what to do about contaminated casualties.

Such preparation is necessary. But if terrorists strike many places at once—a not unlikely scenario—domestic agencies may be overwhelmed and call for direct military assistance.

"We need to work this out in advance so we don't have [a] kind of constitutional challenge or confusion taking place in those times of crises," said Cohen.

common. No longer is reserve service a matter of a few weekend camping trips and some summer time off.

Better communication between the military and employers, and between employers and their Guard/Reserve employees, might help at least ameliorate concerns.

The National Committee for Employer Support of the Guard and Reserve, based in Arlington, Va., hopes to establish a database and media plan for employers with Guard/Reserve workers. It already supports "bosslifts," in which bosses are flown into military bases for a look at the second life their employees lead. Employers most want to know how many of their workers are subject to military call-up, who they are, and what their schedule might be—as far in advance as possible.

"Most employers tell us they can almost eliminate the real burden of replacing people temporarily if they have enough advance notice," said Bryan E. Sharratt, executive director of the organization.

IG Blasts Civil Air Patrol

The Civil Air Patrol has poor safety procedures, a lax attitude toward maintenance and financial accounting, and is under investigation by federal authorities for possible law violations, according to a Department of Defense Inspector General report.

CAP has been the Air Force's volunteer auxiliary since the 1940s. It exists as an education and training force for civilians and undertakes some real-world missions such as counterdrug flights. It receives about \$28 million a year in Air Force funds.

It has 52 wings, composed of 1,700 smaller units called groups, squadrons, or flights, spread throughout all the states, D.C., and Puerto Rico. It has a fleet of more than 530 of its own light airplanes, as well as 4,700 airplanes owned by volunteer members.

The IG report only confirmed a widespread opinion in the Air Force that CAP needs more oversight. Of 86 airplanes studied by the Pentagon IG, 62 percent had been flown without undergoing rudimentary safety checks, such as visual inspection for damage or oil checks. Some 29 percent had gone a year without checks.

In many cases there were no records of such mandatory maintenance activities as transponder tests.

As to money, accounting policies and procedures were in disarray, said the report. Likewise for pilot records.

"The CAP did not adequately manage pilot records to verify that CAP pilots are fully qualified to operate corporate aircraft and fly assigned missions," said the IG.

The FBI and the Air Force Office of Special Investigations are continuing a probe into such possible criminal activity as double billing for flying missions. In July 1999, federal agents raided CAP headquarters and that of its Air Force oversight office, at Maxwell AFB, Ala., to seize possible evidence.

Air Force officials plan to keep a closer watch on CAP in the future. A new agreement between the organizations took effect Oct. 1. Among other things, it allows the Air Force to withhold money or suspend Air Force mission status due to safety or fraud concerns.

Cohen Says: Learn to Love EU

In a speech to NATO defense ministers Oct. 10, Secretary of Defense William S. Cohen said the US must take a more positive view of the European Union's efforts to develop its own military identity.

"It is clear that in the future NATO will no longer be the only major multilateral structure with a role in responding to crises, including military crises, which could affect European



Lt. Col. Kenneth Dressel speaks at an Oct. 10 ceremony at Moody AFB, Ga., as he assumes command of the 49th Flying Training Squadron. The unit moved from Columbus AFB, Miss., to provide an Introduction to Fighter Fundamentals course.

USAF photo by TSgt. Cecil Daw

New Air Force Safety Records

Fiscal 2000 saw the Air Force experience its lowest number of major aircraft accidents ever, as well as its second-best year in on-duty ground safety.

The aviation mishap rate was 1.04 per 100,000 flying hours. The previous best was 1.11, set in 1991.

Other records set included the lowest number of major accidents, 22; lowest number of aircraft destroyed, 14; and fewest aviation fatalities, seven.

A major mishap is defined as an accident in which someone is killed, the airplane is destroyed, or the airplane incurs more than \$1 million in damage.

"These aviation rates are pretty significant, especially when you account for the increased ops tempo, deployments, and operations in austere locations such as Southwest Asia," said Air Force Chief of Safety Maj. Gen. Timothy A. Peppe. "This is a tremendous accomplishment."

A significant contributor to the overall flight safety record was a decline in mechanical failures. There were only four confirmed aircraft mishaps due to mechanical fault in 2000, down from 20 in 1999.

Meanwhile, the service saw its second-best ground safety year, with six on-duty fatalities. There were only three such deaths in 1998, the lowest rate.

Off-duty ground safety was a more dangerous story. The Air Force lost 51 airmen in 2000, as opposed to a record low 41 last year.

"The primary causes remain motor vehicle accidents, alcohol use, and people who are not wearing seat belts," said Peppe. "We are optimistic that with continued focus and commitment to make operational risk management a part of on- and off-duty life, we can do better."

stability and security," Cohen said.

The US has been skeptical of EU attempts to forge its own security structure in the past, on grounds that such a move could diminish NATO's importance. The new EU-NATO relationship must take into account four things, according to Cohen. NATO and EU efforts to strengthen European security must be coherent and mutually reinforcing. The two organizations need to treat each other as equals. Contacts must be close and frequent. There should be no discrimination against the member states of either organization.

The NATO deputy supreme allied commander Europe should become the "strategic coordinator" between NATO and EU forces, said the US defense chief.

First Air Force Space Commander Dies

Retired Air Force Gen. James V. Hartinger, who rose from an Army private to become a four-star general and first commander of Air Force Space Command, died Oct. 9 in Colorado Springs, Colo. He was 75.

Hartinger was drafted into the Army in 1943. After service in World War II as an enlisted man he entered West Point. He was named commander in chief of NORAD in 1980. In 1982 he became the first head of the new Air Force Space Command.

News Notes

■ On Oct. 2 the Air Force unveiled its newest base when Buckley ANGB, Colo., became Buckley AFB. Command responsibility for the installation shifts from the 140th Wing of the

Colorado ANG to Air Force Space Command's 821st Space Group.

■ An Article 32 hearing, similar to a civilian preliminary hearing, against a 61st Airlift Squadron pilot charged with negligent homicide and dereliction of duty opened Oct. 16 at Little Rock AFB, Ark. The charges against Capt. Darren A. Haughn stem from a

Dec. 10, 1999, incident in which the C-130 he piloted landed short of the runway at Ahmed Al Jaber AB, Kuwait, killing three.

■ On Oct. 13, the Navy announced that the MV-22 Osprey has been judged operationally effective and suitable for land-based operations. The move validates eight months of evaluation and brings the aircraft a step closer to full-rate production, Marine Corps officials said.

■ Among individuals recognized as Outstanding Department of Defense Employees with Disabilities at a Pentagon ceremony Oct. 11 was Susan L. Kunz, assistant base visual information manager, Air Mobility Command, Scott AFB, Ill.

■ The Air Force's newest Maverick air-to-ground missile has successfully completed its first test firing, officials announced Oct. 11. The AGM-65H/K missile, launched from an A-10A, destroyed a target tank. Among other things, the new Maverick variant doubles the guided weapon's standoff range.

■ In a move intended to standardize the designation of 14th Air Force with numbered air forces in other unified commands, US Space Command has changed the component designation for 14th Air Force from AFSPACE to SPACEAF.

Senior Staff Changes

CHANGES: Brig. Gen. Curtis M. **Bedke**, from Vice Cmdr., 8th AF, ACC, Barksdale AFB, La., to Cmdr., 2nd BW, ACC, Barksdale AFB, La. ... Brig. Gen. Craig R. **Cooning**, from Dir., MILSATCOM Jt. Prgm. Office, AF Prgm. Executive Office, Asst. SECAF, Acq., Los Angeles AFB, Calif., to PEO, Space Prgrms., AF Prgm. Executive Office, Asst. SECAF, Acq., Rosslyn, Va. ... Brig. Gen. Tommy F. **Crawford**, from Dep. Dir., Ops. (Natl. Systems Spt.), Jt. Staff, Pentagon, to Dir., Jt. Matters, DCS, Air & Space Ops., USAF, Pentagon ... Brig. Gen. William M. **Fraser III**, from Cmdr., 2nd BW, ACC, Barksdale AFB, La., to Dep. Dir., Ops. (Natl. Systems Spt.), Jt. Staff, Pentagon ... Brig. Gen. Paul M. **Hankins**, from Dir., Recruiting & Retention Task Force, OSAF, Pentagon, to Cmdt., AFOATS, AU, AETC, Maxwell AFB, Ala. ... Maj. Gen. Jack R. **Holbein Jr.**, from Cmdr., Spec. Ops. Command Pacific, PACOM, Camp H.M. Smith, Hawaii, to C/S, JFCOM, Norfolk, Va. ... Maj. Gen. Michael S. **Kudlacz**, from Dir., Ops. & Tng., DCS, Air & Space Ops., USAF, Pentagon, to Dir., OSIA, Defense Threat Reduction Agency, Dulles, Va. ... Brig. Gen. William L. **Shelton**, from Dir., Manpower & Orgn., DCS, P&P, USAF, Pentagon, to Dir., Rqmts., AFSPC, Peterson AFB, Colo. ... Brig. Gen. John M. **Speigel**, from Cmdt., AFOATS, AU, AETC, Maxwell AFB, Ala., to Principal Dep. Asst. SECAF, Strategic Development (Manpower, Reserve Affairs, Instl. & Environment), Pentagon ... Brig. Gen. Joseph P. **Stein**, from Cmdr., 7th BW, ACC, Dyess AFB, Tex., to Dir., Manpower & Orgn., DCS, P&P, USAF, Pentagon ... Brig. Gen. Simon P. **Worden**, from Dep. Dir., C², DCS, Air & Space Ops., USAF, Pentagon, to Dep. Dir., Ops., SPACECOM, Peterson AFB, Colo. ... Brig. Gen. Donald C. **Wurster**, from IG, AMC, Scott AFB, Ill., to Cmdr., Spec. Ops. Command Pacific, PACOM, Camp H.M. Smith, Hawaii.

COMMAND CHIEF MASTER SERGEANT RETIREMENT: CMSgt. Mike L. **Myers**.

CCMS CHANGE: CMSgt. John **Ensor**, to Command Chief Master Sergeant, US Air Force Academy, Colorado Springs, Colo.

SENIOR EXECUTIVE SERVICE RETIREMENT: Gerald B. **Kauvar**.

SES CHANGES: Robert E. **Corsi Jr.**, to Dep. Administrative Asst., Office of the Administrative Asst., USAF, Pentagon ... John M. **Gilligan**, to Principal DAS, Business & Info. Mgmt., Dep. Chief Info. Officer, Pentagon. ■

Deutch Won't Talk

John M. Deutch, former CIA director and ex-deputy secretary of defense, has declined to answer government investigators' questions about his alleged mishandling of classified material when in office, officials said Oct. 10.

Deutch is keeping mum on advice of counsel, said Pentagon spokesman Rear Adm. Craig Quigley. A Justice Department special prosecutor has recommended that Deutch be prosecuted for security violations.

Among the specific mysteries which thus remain are what has become of computer disks that Deutch used to store an electronic diary he compiled of his Pentagon experiences between 1993 and 1995.

"We do not have those floppy disks; those have not been recovered," said Quigley.

Deutch has admitted using unsecured home computers to handle classified data. Those computers were also used to access the Internet, leading to security officials' fears that the data were compromised by hackers or foreign governments.

The Pentagon has been looking into both where those computers are and what secrets the data may have contained.

"What was the information, was it classified, how classified was it? ... We would like to ask, but he has declined to answer questions at this point, through counsel," said Quigley.

■ NASA's 100th space shuttle mission was directed by two Air Force officers. Col. Brian Duffy was commander of the space shuttle *Discovery* mission. Lt. Col. Pamela A. Melroy was pilot, the third female so designated.

■ MSgt. Steven C. Adams, 347th Civil Engineer Squadron Fire Protection Flight, Moody AFB, Ga., has been chosen as a recipient of a prestigious Tuskegee Airmen, Inc., award, the CMSgt. Fred Archer Military Award for an outstanding senior enlisted member. The Moody firefighter was cited for providing fire protection for 92 combat aircraft and 319 facilities.

■ The Defense Department's most sophisticated telescope changed hands Oct. 1. Responsibility for the Maui Space Surveillance Complex transferred from Air Force Space Command to Air Force Materiel Command, reflecting a greater emphasis on research activities as opposed to tracking and photographing satellites.

■ RED HORSE squadrons celebrated their 35th anniversary at the end of September. The first two Rapid Engineer Deployable, Heavy Operational Repair Squadron Engineer units were formed under Tactical Air Command in September 1965. Today they continue to provide the Air Force with a mobile, rapid-response civil engineer force.

■ An Air Force investigation has determined that a bird strike caused the crash of a Hill AFB, Utah, F-16 on June 21 at the Cold Lake Air Weapons Range, Alberta, Canada. A white pelican struck the canopy of Capt. Richard Pietrykowski's aircraft. He ejected with minor injuries.

■ The Air Force ordered T-6A Texan II trainers grounded Sept. 18, following an August T-6A crash. The new aircraft will remain grounded until an engine-oil coolant system is replaced.

Search Begins for AFA Executive Director

The Air Force Association has begun its search for a new executive director to replace John A. Shaud, who has indicated he wishes to retire in 2001 after six years in the position. A search committee has been appointed to identify candidates.

The search committee consists of Jack C. Price as chairman, Monroe W. Hatch Jr., and Roy A. Boudreaux. Price is a former AFA National President and National Chairman of the Board. Hatch is a former executive director. Boudreaux is a national director with broad experience in AFA.



Shaud

Persons wishing to be considered by the search committee must submit their requests in writing, to be received by Feb. 1, 2001, to:

**Air Force Association
Attn: Search Committee
P.O. Box 994
Arlington VA 22216-0994**

The Air Force Association intends to select a new executive director by next summer.

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■ On Oct. 14, remains believed to be those of 15 American servicemen missing in action from the Korean War were to be repatriated in a formal ceremony at Pyongyang, North Korea. The transfer marked the largest number of remains recovered in one operation since joint recovery work began in North Korea in 1996.

■ Northrop Grumman's Electronic Sensors and Systems Sector has been awarded a follow-on contract for B-52H AN/ALQ-55 countermeasures system upgrades, which should deliver five times the jamming power of the old. ■

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All of the services need more airlift, and there isn't enough of it to meet the demand.

A Clamor for Airlift

WITHIN the last 14 months, the Air Force reorganized as an "expeditionary" service and the Army adopted an urgent new goal of becoming lighter and more agile, shifting emphasis from heavy armored units transportable mainly by sea to lighter units that can travel by air. Both services—and the Marine Corps as well—are relying on airlift as never before to get to the fight.

It is no secret, though, that the USAF strategic airlift fleet is inad-

equated to the stated national strategy of being able to win two widely separated Major Theater Wars fought in close succession. Hardware problems have forced the airlift fleet below stated minimum operating levels. At the same time, airlift will likely be called on more and more frequently as forces shrink and must rely on mobility to cover the same ground.

"It is clear to me," warns Air Force Secretary F. Whitten Peters, "that expeditionary operations, as planned by the Air Force and now as planned

by our sister services, are going to require more strategic airlift. Today, we cannot meet the wartime requirements we already have without accepting risk—and we never could—and our future requirements are growing. We just don't know how much yet."

Peters added, "Unfortunately, we do not have an executable plan to meet those growing needs."

Airlift is the key "enabler" of Air Force and Army operations as envisioned under their new deployment



The airlift fleet is groaning under the weight of new demands from the military services, all of which are trying to be more expeditionary and get to the action faster. Airlift is in such short supply that the Air Force has considered delaying retirement of C-141 Starlifters like these, many of which have already been consigned to the boneyard.

By John A. Tirpak, Senior Editor





Moving passengers is not the problem; the Civil Reserve Air Fleet, which moves people in a crisis, is fully subscribed with participants. Oversize and outsize cargo is the challenge, and only big-mouth airlifters can do the job.

philosophies. Given its critical role, airlift's status—how much there is, who pays for it, and who has priority to use it—will likely be one of the flash points of the military debate in the coming months.

Already, the airlift shortfall is identified as one of the unfunded priorities of the Air Force. The USAF Chief of Staff, Gen. Michael E. Ryan, told Congress in September that the Air Force over the next decade will need to boost its budget by some \$30 billion to keep ahead of the maintenance costs associated with its aging aircraft, including airlifters.

"A Big Number"

"It is a big number, this cost," Ryan told *Air Force Magazine*. "We have to figure out when it stops making sense to fix some of these old airplanes and it would just be cheaper to buy a new one."

Sometime after the new Administration has settled into office, the Pentagon will conduct an updated Quadrennial Defense Review that re-evaluates the world situation and the posture of US forces. The QDR will drive the Defense Planning Guidance, which instructs the services on what their spending priorities should be.

Helping to illuminate the airlift issue will be a new and thoroughgoing report on mobility needs and capabilities called Mobility Requirements Study-2005. It has been prepared by the Joint Staff in the Office of the Chairman of the Joint Chiefs

of Staff. It looks at the whole capability of US forces to move around the world, whether by truck, rail, sea, or air. The requirement for airlift is stated in terms of how much cargo can be moved per day.

For years, the US had an airlift requirement of 66 million ton miles per day, the term ton mile denoting the amount of airlift capability required to move one ton a distance of one nautical mile. That was an interim airlift goal; the real requirement was far higher but considered unattainable.

After it entered office in early 1993, the Clinton Administration conducted its own Mobility Requirements Study. That study, which was completed in 1994, lowered the requirement to 49.7 million ton miles per day, where it has remained ever since. Of that amount, the Air Force is expected to provide 29.2 million ton miles per day with military airlifters; the balance comes from commercial carriers through the Civil Reserve Air Fleet.

The good news is that the CRAF program is fully subscribed, with participants at desired levels in all categories. It is widely expected, though, that the MRS-05—a new blueprint for the military airlift capability desired by 2005—will specify a higher benchmark for organic airlift capacity.

Air Mobility Command has been unable to fulfill the stated requirement of 49.7 million ton miles per

day, mostly because of hardware problems stemming from spare parts shortages and the obsolescence of key systems, particularly on the C-5 Galaxy heavy lifter.

The Army's new emphasis on faster deployment is another factor weighing heavily on the MRS-05. Stung by its sluggish deployment—and subsequent nonparticipation—in the 1999 Balkans conflict and the enormous amount of airlift necessary to deploy Task Force Hawk to Albania, the Army has decided that it needs to "transform" itself into a quick-moving power.

Shinseki's Vision

Army Chief of Staff Gen. Eric K. Shinseki has stated a goal of being able to deploy, anywhere in the world, a brigade within four days, a division in five days, and five divisions within 30 days.

Shinseki unveiled the new strategy last fall at the annual meeting of the Association of the US Army. The strategy states, "Heavy forces must be more strategically deployable and more agile, with a smaller logistical footprint, and light forces must be more lethal, survivable, and tactically mobile. Achieving this paradigm will require innovative thinking about structure, modernization efforts, and spending."

Shinseki later said he expected the Army to become an all-wheeled—that is, nontracked—force by 2010, a prediction that raised howls of protests from Army traditionalists who believe that armored invincibility on the battlefield should never be traded for speed of deployment.

One of the programs Shinseki has targeted as a standard-bearer of the new philosophy is the Crusader howitzer. The Crusader and its resupply vehicle were both expected to weigh in at about 50 tons apiece, meaning that only one part of the two-vehicle, 100-ton system could be transported in a C-5 Galaxy at a time. The Crusader design has been slimmed down to a combined weight of about 80 tons, and Shinseki has further declared that the Army will not buy any field equipment that won't fit in either a C-130 tactical transport or in the back door of a C-17 strategic airlifter.

The Army's goals, however, have not won acclaim from the other services. An Air Force official involved

with preparing for the QDR scoffed that “changing a 100-ton Crusader to an 80-ton Crusader is hardly a ‘transformation strategy.’” Whether the Army’s new direction will take root will depend on the outcome of the QDR, and especially the MRS-05.

That there will be high friction over the apportionment of airlift is already becoming evident. Various interest groups have begun circulating position papers in preparation for the QDR. In July, John Kreul, a defense analyst with the Institute of Land Warfare, released a paper titled “Son of QDR: Prospects for the Army.” He complained that the Army is being unfairly labeled as “too slow and heavy to be relevant.” Kreul countercharged that USAF shortchanges mobility and, in any event, hogs all the available airlift when a crisis erupts.

“In fact,” Kreul asserted, “the Air Force currently consumes about 70 percent of that scarce capacity in the first 10 days of a crisis-response deployment.”

Not Excessive

Actually, it’s not remotely accurate to say that USAF consumes an excessive or disproportionate share of the nation’s airlift, if the experience in the Balkans is any guide.

Deployment of the Army’s smallish Task Force Hawk from one part of Europe to another required 542 C-17 airlift missions. In sharp contrast, the deployment of an F-22

squadron, which would have a tremendous amount of firepower, would require only about six C-17 missions. It is true that Task Force Hawk deployed to a bare Albanian base; if an F-22 squadron did the same, it would need extra support and hence more airlift to bring it in. However, the longer range of fixed wing aircraft allows the US the flexibility to deploy to better-equipped areas (such as Aviano AB, Italy), obviating the need to bring in support.

For many other types of Army units, the story is much the same. It takes 98 C-17 missions to move a Patriot air defense battalion overseas. It will take 98 C-17 missions to move a Theater High Altitude Air Defense battalion.

Meanwhile, Ryan reports that USAF’s embrace of new deployment concepts has allowed AMC to reduce by 22 percent the number of airlifter sorties required to deploy an Aerospace Expeditionary Force, the basic unit of USAF combat power.

The Air Force and Army are also not the only customers for airlift, and those other users also have to wait in line when a crisis erupts.

Marine Corps Assistant Commandant Gen. Terrence R. Dake told reporters in Washington in August that he hopes his service gets weighed along with the others in a balanced fashion when the QDR assesses airlift needs.

The enthusiasm for expeditionary forces is “the right thing to do for the

nation,” Dake said, and getting those expeditionary forces out will have to be a balancing act between “expeditionary [forces] and that which is heavy-hitting combat power [i.e., the Army], and all the things you bring in between.”

Dake maintained that he doesn’t see the new Army and Air Force emphasis on expeditionary structure as “a threat” to Marine Corps interests, but he thinks the QDR should take a hard look at “what ... exists that is already shaped to be expeditionary.”

There is “a finite amount of lift,” he noted, and all the various forces that must be brought to bear in the early part of a conflict “have to be managed inside the lifts.” In each scenario, the theater commander will have to put priorities on airlift for the kinds of forces he thinks are most crucial at the outset, Dake said.

“We’ve always felt that early entry capability was something the Marine Corps offered, and certainly a forcible entry from the seas is our forte.” The Marines, he said, are an enabler for follow-on forces into a theater and deserve their share of airlift, too.

The General Accounting Office, in a study of airlift capabilities it completed in June for the late Rep. Herbert H. Bateman, who was then chairman of the House Armed Services subcommittee on military readiness, found that the Air Force is short about a third of the organic airlift necessary to meet national strategy requirements.

Can’t Do Two

The Defense Department, the GAO wrote, “does not have sufficient airlift and aerial refueling capability to meet the estimated two Major Theater War requirements.”

“In total,” the GAO continued, “we estimate DoD is short (1) over 29 percent of the needed military airlift capability and (2) nearly 19 percent of the needed refueling aircraft.” The GAO said this didn’t necessarily mean the US couldn’t win in the postulated two Major Theater War scenario. However, “the Office of the Joint Chiefs of Staff estimates that due to airlift shortfalls, military forces would arrive later than originally planned, thereby increasing the risk that war plans would not be executed in a timely manner and possibly increasing casualties.”



The military airlift fleet also routinely handles humanitarian missions. Here, a truck belonging to the globetrotting Fairfax County, Va., Fire and Rescue is loaded aboard a C-5 to aid in finding earthquake victims in Turkey.

USAF photo by Michael Ayers

Air Force officials said that the two Major Theater War scenario depends on rapid deployment of certain hardware in the first month of operations, and that about three-fourths of this hardware "falls into the oversize or outsize category," meaning that it cannot fit on civilian freighters and must be carried by either the C-5 or C-17.

The GAO noted that Air Force officials said the shortfalls are due "primarily to the age of the aircraft and spare parts shortages."

Airlift shortfalls among older airplanes like the KC-135 tanker and C-5 Galaxy have cropped up "because of the increasing number of aircraft that need depot maintenance," the GAO asserted.

"More aircraft [are] in depot for longer periods than planned (which is factored into mission capable rate)," the GAO said.

One AMC official noted that older airplanes like the KC-135 may have "thousands and thousands of hours left on the airframe," and airframe life as measured in flying hours is a key component of assessing an aircraft's physical age. However, the official said, "When you bring a 40-year-old airplane into depot, ... no matter how well it's been taken care of ... you will find things like corrosion that can ... threaten the continued viability of that airframe."

The flow rate at which aircraft are expected back from depot maintenance is disrupted because of unex-

pected problems found during the inspection process and which must be repaired before the aircraft can be returned to service, a retired general explained.

"It's like when you take your old car in for maintenance," he said. "They always find something else wrong with it."

The Aging Aircraft Program Office at Wright-Patterson AFB, Ohio, is working on ways to detect structural fatigue and corrosion problems on the KC-135 long before they might appear in the aircraft, since AMC has stated its intention to keep the type well into the 2020s and beyond.

An AMC spokesman, however, said the command had not noticed any "unusual" recent problems with corrosion on the KC-135 and that mission capable rates for the type are even running slightly above the requirement. In August, the spokesman reported, mission capable rates for the KC-135 were running at 86 percent, vs. a "desired" level of 85 percent.

The GAO said that AMC reported its number of tankers—359, including 317 KC-135s and 42 KC-10s—is "acceptable, assuming the aircraft can be shifted between the two nearly simultaneous wars."

"Technical Surprises"

However, Peters worries about the tanker fleet, noting, "We have no significant replacement programs on the books for our aging tankers." He

went on: "It is not that we aren't going to have the tankers immediately, but what we are seeing on the KC-135 fleet are what appears to be an increasing mission incapable rate due to technical surprises. ... These are the kinds of problems which can put a whole fleet down or 200 aircraft down overnight for a period of time and those are the kinds of worries we have."

There is no question, however, that the chief culprit behind the airlift shortfall is the C-5 Galaxy, which in August turned in a mission capable rate of 63.3 percent vs. a requirement of 75 percent. Broken C-5s consistently gum up the train of worldwide AMC aircraft movements which take place 24 hours a day, AMC officials reported.

US Transportation Command and AMC chief Gen. Charles T. Robertson Jr. calls the C-5 "the bad actor" when it comes to dragging down airlift availability rates.

A series of fixes to the C-5 are already under way, although a complete program to bring the type up to AMC's standards in departure reliability will have to await the results of MRS-05.

"We have worked these contracts very carefully ... so we don't get ahead" of the mobility study, one AMC official noted.

The C-5 upgrades already under way involve a series of fixes to the aircraft's engines, avionics, landing gear, electrical system, flight controls, hydraulics, and fuel system. While most of the improvements raise mission capability rates less than 1 percent, collectively, they will increase the C-5's mission capable rate by 11 percent, raising it to just about the desired mission capable rate of 75 percent, according to AMC program officials.

Moreover, the fixes are expected to save AMC about \$510 million per year in operating and support costs, meaning they will pay for themselves in a few years.

The biggest needed improvement to the C-5, though, is new engines. Lockheed Martin is conducting a program to develop an upgrade that would refit the C-5B fleet with the General Electric CF6-80 engine. The company, acting as the Air Force's agent, selected the commercial, off-the-shelf engine, which is used on most civilian and military widebodies

USAF photo by SSgt. Paul Holcomb



On paper, the KC-135 should go on forever with good maintenance. Experience, though, shows that old airplanes really do need much more work than do newer ones. Typically, a fourth of the KC-135 fleet is down with unexpected problems.

around the world, in June. The re-engining of the C-5 fleet in total would raise the type's mission capability rates into the 90 percent-plus range and add significantly to the number of ton miles per day that AMC could move.

In addition, the new engines would be warranted to remain on the wing for more than 10,000 hours. The current engines need to be taken off the wing for inspections and maintenance at 1,500 hours.

New Flight Rules

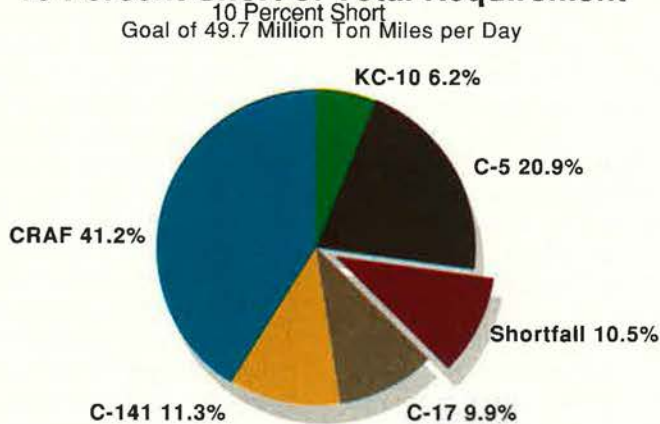
The C-5 engine improvement is also necessary for the C-5 to operate under new international flight rules. With the existing engines, the C-5 cannot climb fast enough with even a half load of fuel to the entry-point-to-track altitudes and corridors now mandated in Europe.



USAF photo by MSgt. Keith Reed

Parts shortages and old airplanes mean more late nights for ground crews. Here A1C Brent Hornick and SrA. Kacey Moore unpack a gas turbine compressor for a C-130.

10 Percent Short of Total Requirement



In 1994, the US set its airlift requirement at 49.7 million ton miles per day. As of the start of 2000, the capacity of the Air Force strategic airlift fleet still fell short by 5.2 million ton miles per day. That's a shortfall of more than 10 percent. The organic airlift fleet (excluding CRAF) is nearly 30 percent short of oversize and outsize cargo capacity, the GAO found.

"Up until now, we've been able to ask for waivers," for extra time to climb to the most efficient air corridors, an AMC official reported. After Jan. 1, 2001, however, "we've been told no more waivers will be granted." That means the C-5 will have to fly at less efficient routes that require more flying time and consume more fuel. Moreover, it will require more tankers since the type will often have to take off with less than a full load of fuel to expeditiously reach even the less-desirable tracks.

The C-5 re-engining would be tried first with the C-5B fleet, which is younger than the C-5A fleet and would

clearly pay back the investment over the airframe life. Expansion to the C-5A fleet might be used as an incentive to Lockheed Martin for quality performance on the first batch.

"We expect this to be a large success, like the KC-135R [re-engining program]," an AMC program official asserted.

The C-5 re-engining is among the projects that will be presented in its Analysis of Alternatives to meet the airlift capability requirements set by the MRS-05. The AOA will present ways it can meet the updated ton miles per day requirements and the cost associated with each one. The C-5 re-

engining would have to be weighed against other alternatives or sets of alternatives, such as further buys of the C-17 airlifter, greater crew ratios on tanker aircraft, and assorted smaller initiatives that can raise the throughput of the airlifter fleet.

Even if the full C-5 re-engining were to go ahead, fabrication of a test aircraft, testing the aircraft, and creating a production capability could not be accomplished quickly. Only a few airplanes could be all the way through the re-engining and available for service in 2005. Air Mobility Command officials said the most efficient re-engining schedule would make the change while the C-5 was in depot maintenance; about 12 per year would get the new power plants over five years. Since about 19 to 22 C-5s currently go through depot each year now, there would not be any interim effect on the fleet's capability.

The C-17 multiyear contract, signed in 1996 and hailed as one of the keys to getting the program back on track, is about to enter its final phase. Boeing, which builds the C-17, will need to begin building long-lead castings next year if any C-17s beyond the original 120 for the Air Force are to be bought without a break in the production line. The forgings and castings involved require three years of lead time.

Out of Cash

Boeing had offered the Air Force a follow-on multiyear buy of an additional 60 airplanes, at 15 per year,



The C-17 is unquestionably more capable than the C-141 it is replacing; it can carry nearly double the load. With only about half as many C-17s as C-141s planned, AMC's flexibility is reduced. One C-17 can't be in two places at once.

which would have driven the price per aircraft down to \$149 million each—including larger fuel tanks—but the Air Force, short of funds, was obliged to allow the offer to expire at the end of 1999.

“Like everyone else, we are waiting for the MRS-05 to see what the new requirement is,” a Boeing spokesman said. Boeing may make a new multiyear offer, but obtaining an advantageous price will largely depend on whether the Air Force can avoid a break in the production line.

Even though the Air Force has stated a requirement to replace special operations C-141s with 15 C-17s beyond the originally specified 120, as yet no funds have been put in the budget to accommodate them. The Fiscal 2002 budget so far has long-lead funding in it for only five airplanes.

In the Fiscal 2001 budget, the Air Force deleted three C-17s, postponing them for several years. The production line was unaffected, though, because the UK had ordered four C-17s to lease from Boeing, and the British aircraft “simply took the place of some American aircraft on the assembly line,” the Boeing spokesman said. Though the Air Force will provide training and support to the UK for the C-17s, an AMC spokesman said no effect on the US Air Force is expected as a result of the UK C-17 lease.

While one of the options in AMC's Analysis of Alternatives would likely

include replacement of some or all of the C-5s with C-17s, such an option would not be the service's preferred choice. As Robertson told the House Armed Services Committee in the fall of 1999, “It is not good business to put all your eggs in one basket. ... I would never recommend going down to just one airlifter—as long as we can afford it.”

The GAO determined that the KC-10 continues to reliably turn in a performance slightly better than required, averaging a mission capable rate of 88 percent vs. a requirement of 85 percent. Used in both the airlift and tanker roles, the KC-10 slightly offsets the shortages among other aircraft in AMC's fleet.

The Analysis of Alternatives is also reported to include an option that would extend the life of a small number of C-141Bs, which were slated to leave the inventory completely by 2006. While costs would increase from maintaining an entire support system for just a few airplanes, more T-tails would be retained, adding flexibility to the fleet and more aircraft to cover missions.

The C-17 is replacing the C-141 on nearly a one-for-two basis, meaning that, although the tonnage that can be moved with the larger airplane is roughly the same, there are fewer individual aircraft to spread around the globe.

Robertson, addressing the House Armed Services readiness subcommittee in October of last year, said,

“Even though tonnage capabilities remain close to the same, we lose tremendous flexibility with so many fewer tails.” The 135 C-17s “can only be in half as many places as 270 C-141s.”

Another approach to fixing—at least in the short term—the mission capable rate of the airlift fleet is simply to continue fully funding the spare parts line items in the Air Force budget. The service has added money back into spares after cutting its spending several times in the 1990s, but a senior service official admitted that “we put the money in, and we take it back out for something else. We have not made a solid enough commitment to spares yet, in my opinion.”

Air Mobility Command has made operational changes to further squeeze missions and productivity from its airlifter fleet. At the Tanker Airlift Control Center at Scott AFB, Ill., AMC has developed a computerized system that gives on-demand visibility into where its airplanes are, what they're carrying, who's on the crew, where they're headed next, and when they should arrive. A flight manager who oversees as many as 10 aircraft keeps tabs on the airplanes and stays in touch with the crews, helping them with field diversions or other problems that may arise during their missions. The system has streamlined repair of broken airplanes and rerouting of crucial items by other aircraft, command officials reported.

Ryan told members of the Defense Writers Group in Washington, D.C., last June that the MRS-05 is being examined by the Joint Chiefs especially for “how much higher we need to go [in millions of ton miles per day] to reduce risk.”

However, he put the potential cost of the MRS-05 recommendations in perspective. As a rule of thumb, Ryan said, for every million ton miles per day of increased airlift, you have to increase by about seven C-17s the size of the airlift fleet.

Ryan continued that he does not feel the MRS-05 will be the last word on the airlift situation.

“The demand for lift is an issue that will always be there,” he said. “We will never have enough lift, ever, to do two simultaneous Major Theater Wars. We can't afford to go there.” ■

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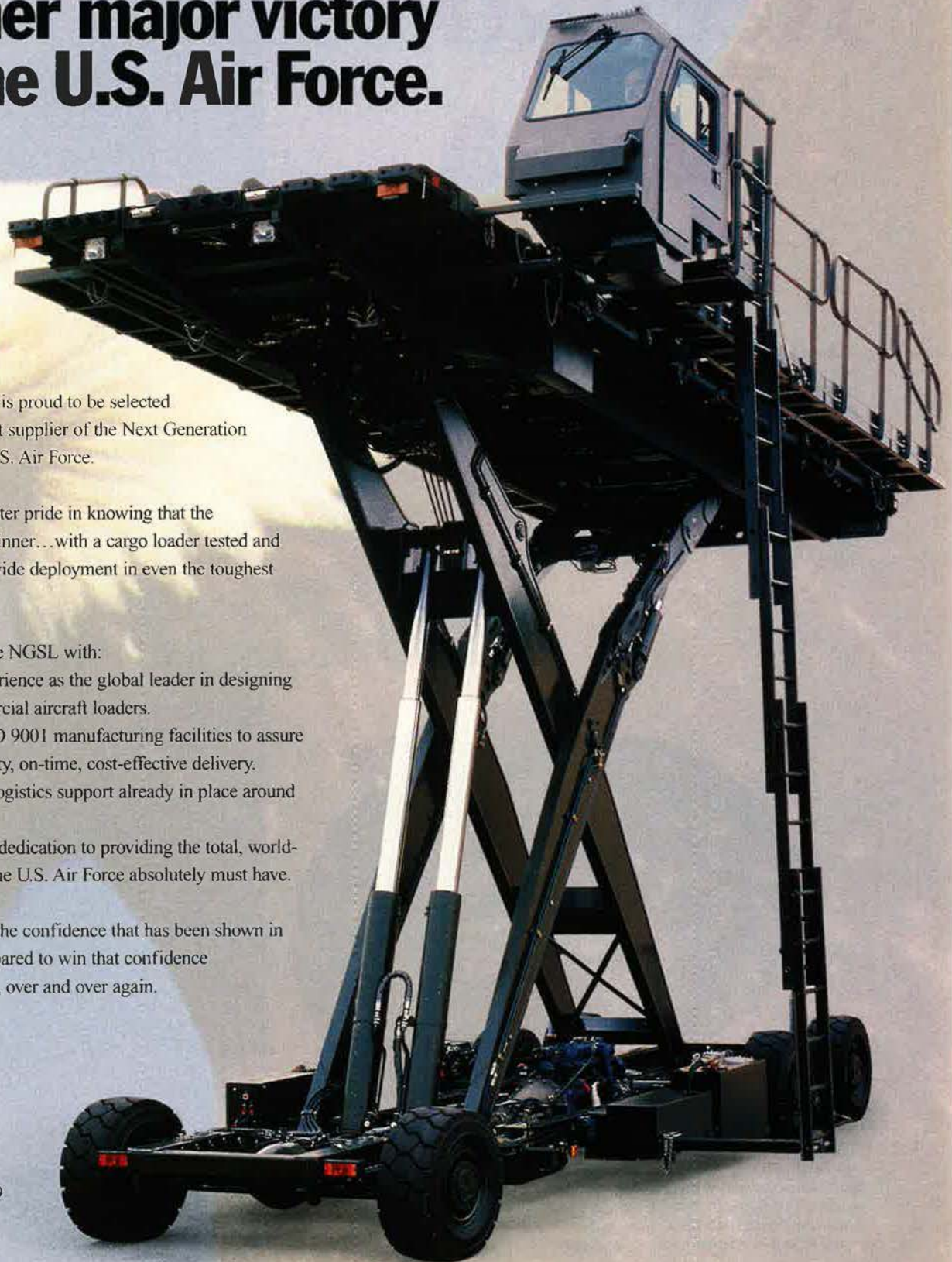
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They were common, everyday items back then.
Now they bring back memories of an uncommon time.

Keepsakes From Korea

Photography by Paul Kennedy

Pieces of Korean War history run the gamut from entire fighter aircraft to more modest sized memorabilia like this elaborately painted cap. It belonged to 2nd Lt. Clifford Allison Jr., who flew 100 missions in an F-84E with the 154th Fighter-Bomber Squadron (Arkansas Air National Guard), from July 1951 to March 1952.



This colorful jacket belonged to SSgt. Norman Fix. He was a radio operator on B-29s with the 345th Bomb Squadron, Yokota AB, Japan, during the Korean War. Even today, such embroidered jackets are de rigueur with troops in the Far East.

The name on this flight suit says it all. With a total of 34.5 victories, Col. Francis S. Gabreski heads the list of AAF and USAF aces with victories in both World War II and the Korean War. Gabby posed for this photo with his F-86 in September 1951. He had just shot down his second MiG-15.





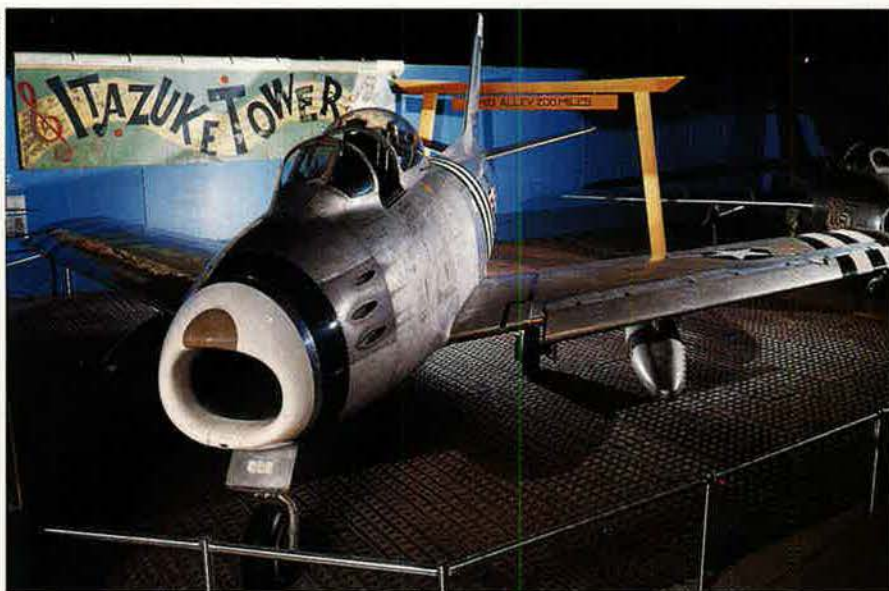
Painting on leather jackets was an art form that carried over from World War II into the jet age. However, many pilots put away their leathers in favor of newer, warmer garments like the short N-2A flying jacket on the far left.



Pride in a new separate service is evident in the artwork on the "spring up" cap above. At left, the "Ike" jacket shows up in its new Air Force blue.



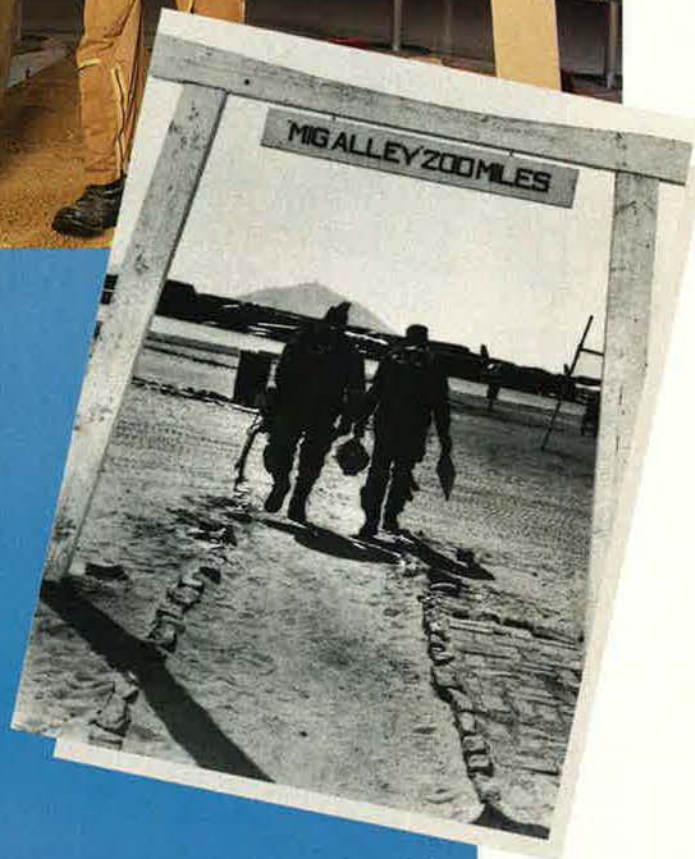
Photos by Paul Kennedy



Probably the most recognizable aircraft from the Korean War, the North American F-86 Sabre was USAF's first swept-wing jet fighter. Pilots flying the F-86 shot down 792 MiGs during the war, with only 76 losses. This one is on display at the US Air Force Museum at Wright-Patterson AFB, Ohio. It bears 4th Fighter Group markings, as flown by Lt. Col. Bruce Hinton on Dec. 17, 1950, the day he became the first F-86 pilot to down a MiG.

A new display at the museum depicts a pilot and crew chief walking back from a flight line in Korea. It brings to mind the famous photo (inset) of two 4th Fighter-Interceptor Wing pilots passing beneath a torii-style gateway at Kimpo AB as they head for combat in MiG Alley.

The equipment list for flight crews in the Korean War included everything from hard hats, G suits, and side arms to navigation and first-aid kits. In the photo below is a radio carrier vest with a bright yellow life preserver vest in front.



An array of survival equipment includes a direction-finding radio, signal mirror, and "blood chit" bearing a US flag. Blood chits promised a reward for assisting a downed American pilot.



First appearing during the Korean War in November 1950, MiG-15s were formidable opponents, and US Far East Command offered \$100,000 for the first one delivered intact. No enemy pilot took up the offer until after the war. In September 1953, North Korean Senior Lt. No Kum Sok defected to South Korea, landing a MiG-15 at Kimpo AB. It was disassembled and airlifted to Wright-Patterson AFB in December 1953, then reassembled and flight-tested. It was transferred to the museum in 1957.



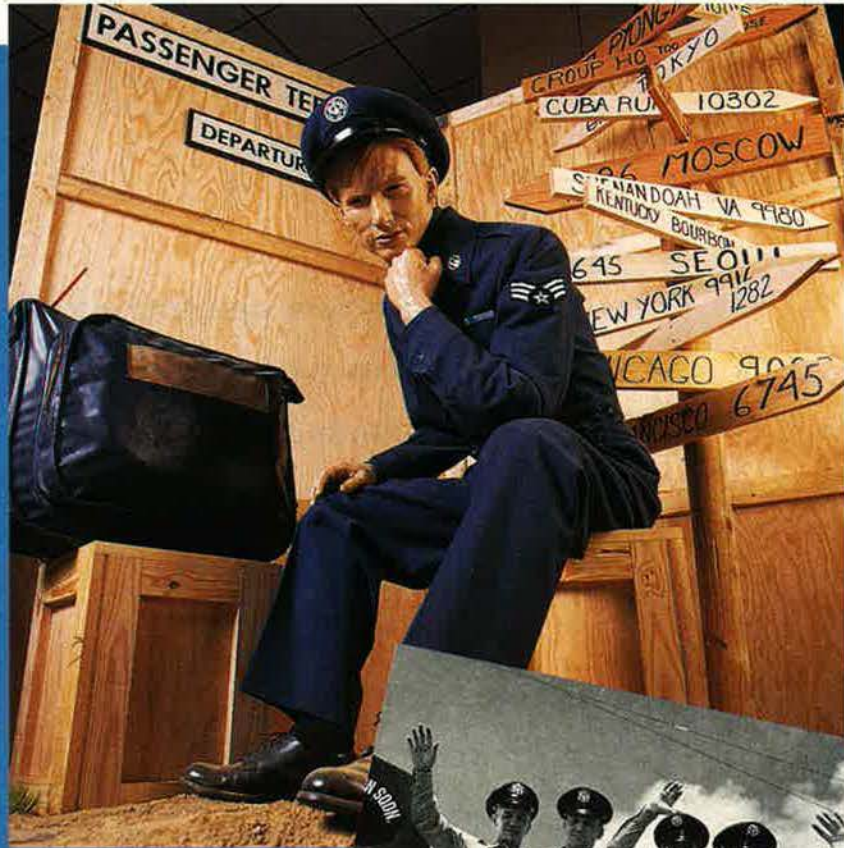
At left is a flight helmet with a United Nations emblem. Fifteen other nations joined the US and South Korea in providing combat forces for UN Command in Korea. Noncombatant nations provided medical support.



The Cold War affected folks on the home front, too, with duck-and-cover drills and buildings marked with bomb shelter signs like the one at the far right. In 1951, the Air Force Association sponsored and Harvey Publications published the comic book shown here. The children who picked it up might well have built the F-86 model pictured, too.



The museum display of hurry-up-and-wait (at right) signals the end of the Korean War. When it was over, the five POWs shown in the photo inset were among those headed home. Released in August 1955 after 31 months as POWs were (l-r) Capt. John Buck, Maj. William Baumer, A2C Daniel Schmidt, TSgt. Howard Brown, and A1C Steve Kiba.




It is a T-17 carbon granule microphone with push-to-talk switch and five-foot-long rubberized cord. For Korean War veterans, though, it might evoke memories of calling in an airstrike or calling out an alert for MiGs or maybe even calling home via radio.



A pile-lined field cap is a reminder of the bone-chilling winters in Korea—and, in turn, the muddy, unpaved streets in spring. Even humble items like this one have the power to bring back such recollections of the "Forgotten War"—now remembered 50 years later.

We wish to thank private collector Mike Keefe for providing many of the caps and jackets pictured here, as well as the US Air Force Museum for enabling access to its displays and collections. ■



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Just sustaining today's force will require a \$51 billion per year boost.

CBO Confirms the Defense Spending Gap

The Congressional Budget Office recently issued two major statements on DoD spending. "Budgeting for Defense: Maintaining Today's Forces" was presented Sept. 14 by Dan L. Crippen, CBO director, to the Senate Budget Committee. "Procurement Costs to Maintain Today's Military Forces" was presented Sept. 21 by Christopher Jehn, CBO's assistant director for national security, to the House Armed Services Committee. CBO reported the existence of an annual \$51 billion gap between actual spending and what is needed to sustain the force. Here are excerpts:

From "Budgeting for Defense: Maintaining Today's Forces"

Throughout much of the 1990s, the funds US policy-makers allocated to national defense followed a ... downward trend, as budgets fell along with forces (see Table 1). In 1998, the defense budget reached a 20-year low. In 1999, policy-makers halted that decline and provided regular and supplemental appropriations that constituted real (inflation-adjusted) growth in the resources available to support national defense activities. In particular, funds for procuring new equipment and weapons, which had shrunk by a larger percentage than had the total defense bud-

get, began to receive significant, real boosts.

That increased funding, however, has not eliminated questions about future defense budgets—in particular, about the level of funding necessary to sustain today's forces. ...

DoD divides its forces into two major categories: strategic (basically nuclear) and conventional (see Table 2). For strategic forces, common measures of size and structure include ballistic missiles and bombers. Metrics used for conventional forces include divisions (Army and Marine Corps), tactical air wings (Air Force, Marine Corps, and Navy), and battle force ships (Navy), which include all Navy ships involved in combat—for example, aircraft carriers, surface combat ships, and submarines—as well as certain other vessels. ...

The concept of a sustaining budget represents the funding that DoD would require in a "steady state," when everything was held constant and nothing changed over time. In other words, CBO's estimate begins with the size and structure of today's military and calculates the annual budget that would be necessary to sustain it into the future. ...

CBO estimates that sustaining funding for DoD would total \$327 billion (Table 3). The discussions that follow break down that total by budget title. Most of the funds that the Congress appropriates for DoD fall into six titles: military personnel; Operations and Maintenance; procurement; Research, Development, Test, and Evaluation; military construction; and family housing. CBO developed separate estimates of funding for those categories for each of the three military departments and a total estimate for the rest of DoD's organizational components.

Military Personnel. The military competes with the private sector for its personnel. To keep the quality and quantity of today's forces in a steady state, their compensation must remain competitive with compensation in the private sector, which generally rises each year at a rate above inflation. So a sustaining budget for military personnel must increase each year.

In 2000, the Congress appropriated \$74 billion for military personnel. To calculate a sustaining budget for that category, CBO had to choose an actual period over which to project the increase in pay and benefits. Such a choice is necessarily arbitrary; CBO chose 2001 through 2015 as a reasonable span over which to make its calculations. ... To maintain military pay and benefits at today's level over that period, military personnel appropriations would need to average \$82 billion annually, CBO estimates.

Operations and Maintenance. Together with the funding for military personnel, the Operations and Maintenance appropriations provide most of DoD's annual operating budget. The adequacy of O&M funds,

Table 1. Funding for Defense Department and Personnel for the Services in Selected Fiscal Years, 1989–99

	1989	1993	1997	1999	Percentage Change 1989–99
Budget Authority (In billions of 2000 dollars)					
Military personnel	109	93	78	73	-33
O&M	116	99	99	109	-6
Procurement	97	58	44	52	-47
RDT&E	47	42	38	39	-17
Military construction	7	5	6	6	-20
Family housing	4	4	4	4	-11
Total	380	302	269	282	-26
DoD Personnel (In thousands)					
Active duty	2,130	1,705	1,439	1,386	-35
Guard and Reserve	1,171	1,058	902	869	-26
Civilian	1,107	984	786	704	-36

therefore, is an important determinant of whether military forces are trained and ready to fight on short notice.

Part of the O&M appropriations covers pay and benefits for most of the civilians who work for the Defense Department. To estimate a sustaining budget for those costs, CBO used the same period (2001–15) and techniques that it used for military personnel. CBO estimates that O&M funding would need to average about \$107 billion annually to maintain a civilian workforce equivalent to today's and to cover the cost of the items and services that are also funded through these appropriations. In 2000, the Congress appropriated about \$102 billion for the O&M title.

Procurement. Funding for procurement buys new weapons and other equipment that DoD needs to carry out its missions in peacetime and to prepare for war. The funds cover a wide array of items ranging from aircraft, ships, and missiles to automobiles and air conditioners.

The Congress appropriated \$53 billion for defense procurement in 2000, but by CBO's estimate, annual sustaining funding for procurement totals about \$90 billion. That figure falls within the range of past experience and is only about 15 percent below the average for the 1980s—a period when DoD was buying large quantities of many systems. (In 2000 dollars, funding for procurement averaged \$64 billion in the 1970s, \$104 billion in the 1980s, and \$59 billion in the 1990s.)

Research, Development, Test, and Evaluation. In 2000, the Congress appropriated \$38 billion for the programs that make up the RDT&E category of DoD's budget. At \$40 billion, CBO's estimate of the RDT&E funding necessary to sustain today's forces is quite close to the appropriations for 2000.

Military Construction Appropriations. In 1997, DoD operated about 1.7 billion square feet of facili-

Table 2. US Military Forces in Selected Fiscal Years, 1989–99

	1989	1993	1997	1999	Percentage Change 1989–99
<i>Strategic Forces</i>					
Land-based ICBMs	1,000	787	580	550	-45
Heavy bombers	310	194	126	143	-54
SLBMs	576	408	408	432	-25
<i>Conventional Forces</i>					
<i>Land forces</i>					
<i>Army divisions</i>					
Active	18	14	10	10	-44
Reserve	10	8	8	8	-20
<i>Marine Corps expeditionary forces</i>					
Active	3	3	3	3	0
Reserve	1	1	1	1	0
<i>Naval forces</i>					
<i>Battle force ships</i>					
Aircraft carriers	566	435	354	317	-44
<i>Aircraft carriers</i>					
Active	15	13	11	11	-27
Reserve	1	0	1	1	0
<i>Navy carrier air wings</i>					
Active	13	11	10	10	-23
Reserve	2	2	1	1	-50
<i>Air forces</i>					
<i>Tactical fighter wings</i>					
Active	25	16	13	13	-48
Reserve	12	11	8	8	-33
<i>Airlift aircraft</i>					
Intertheater	401	382	345	331	-17
Intratheater	468	380	430	425	-9

Table 3. Fiscal 2000 Appropriations for Defense Department and CBO's Estimate of a Sustaining Defense Budget, by Budget Category

(In billions of 2000 dollars budget authority)

	Appropriation for Fiscal 2000	Sustaining-budget Estimate
Military personnel	74	82
O&M	102	107
Procurement	53	90
RDT&E	38	40
Military construction	5	5
Family housing	4	4
Total	276	327

Table 4. DoD's Past Purchases of Selected Equipment and CBO's Estimates of Purchases Under a Sustaining Budget (by Fiscal Year)

	Average Annual Purchases		Annual Sustaining-budget Purchases	
	1975-90	1991-2000	Based on Longer Service Lives	Based on Shorter Service Lives
Tanks, artillery, and other armored vehicles	2,083	145	588	883
Helicopters				
Scout and attack	78	7	105	169
Utility	109	69	151	183
Battle force ships	19	7	8	11
Aircraft				
Fighter and attack				
Navy	111	42	64	88
Air Force	238	28	89	124
Electronic warfare	21	7	9	12
Tactical & strategic airlift	31	15	20	26
Tankers	5	1	12	14
Heavy bombers	7	1	3	3
Other	16	0	11	15

Table 5. CBO's Estimate of a Sustaining Budget for Procurement, by Service

(In billions of 2000 dollars)

	Army	Navy/ Marine Corps	Air Force	Defense Agencies	Total
Procurement of major systems	5	20	15	<2.5	40
Other procurement	10	15	20	5	50
Total	15	35	35	5	90
Appropriations in Fiscal 2000	10	23	18	2	53

ties, ranging from office buildings to schools for the dependents of military personnel to facilities on air bases. Construction and replacement of those facilities and improvements to them are funded under the military construction title of the defense budget, which also covers many of the costs associated with base closures. In 2000, the Congress appropriated about \$5 billion for this category, and CBO's estimate of a sustaining budget for it is about \$5 billion as well.

Family Housing Appropriations. Appropriations for family housing in 2000 totaled about \$4 billion, and CBO's estimate of sustaining funding for that budget title is the same. The appropriations finance the costs of constructing, improving, operating, maintaining, and leasing military family housing units. ...

The gap between current defense budgets and the

Congressional Budget Office's estimate of the funding needed to sustain today's military offers a challenge to future policy-makers. In broad terms, they have two options for eliminating that gap: They could either bring the amount of the sustaining budget down to today's level of funding—by cutting specific programs or forces or by paring down their missions—or they could increase funding for defense.

From "Procurement Costs to Maintain Today's Military Forces"

Throughout most of the 1990s, the military services did not purchase replacements for many of the items in their inventories of equipment. For other items, the quantities procured were significantly reduced. Over-

all, procurement budgets fell by about one-third from their Cold War levels.

As a result of the reduction in purchases, many items in the current inventory are considerably older today, on average, than comparable items were in the 1970s and 1980s. ...

In [a] new study, CBO estimates the steady-state cost to support and maintain the United States' current military forces. One major element of that estimate ... is CBO's calculation of the cost of procurement: \$90 billion a year. That estimate assumes a one-for-one replacement of every item in DoD's inventory at an annual rate consistent with the item's service life. In instances in which no replacement item is planned, CBO assumed that the current model would be bought.

CBO's \$90 billion estimate is larger than recent budgets. The Congress appropriated \$53 billion for procurement in Fiscal 2000 and \$62 billion this year for Fiscal 2001. But CBO's estimate is about 15 percent below the average for the 1980s—a period when DoD was buying large quantities of many systems. ...

In Table [4], the first two columns provide historical perspective. They show average annual purchases—first for 1975 through 1990 and then for the decade of the 1990s. The third column shows CBO's calculations of the numbers of each item required to maintain inventories at current levels. CBO used those numbers to derive spending estimates. The final column shows the purchases that would be needed had CBO used the shorter service lives that reflected historical patterns.

If, every year, DoD purchased all of its systems in the quantities CBO calculated, eventually, the equipment in its inventories would evenly span the range of ages—from newly delivered items to those ready for retirement. With such a distribution, the quantities retired would be steady, instead of varying from year to year as they do now. Thus, the age of an inventory (the average age for all systems of a particular type) would come to equal half the equipment's service life.

Table [5] presents CBO's estimates of sustaining budgets for procurement for the military departments and defense agencies. For the Department of the Navy, which includes the Marine Corps, and the Air Force, the estimates are roughly \$35 billion a year each. The figure for the Army is much lower—about \$15 billion a year. Another \$5 billion a year for the defense agencies completes the overall estimate, which totals \$90 billion.

The estimate of \$15 billion for the Army can be compared with a procurement appropriation in 2000 of \$10 billion. The \$35 billion estimate for the Navy and Marine Corps is also considerably more than the 2000 amount of \$23 billion. Similarly, the estimate for the Air Force—also \$35 billion—greatly exceeds the 2000 appropriation of \$18 billion. And the estimate for sustaining procurement for defense agencies—at \$5 billion—exceeds the 2000 appropriation of \$2 billion. ... ■



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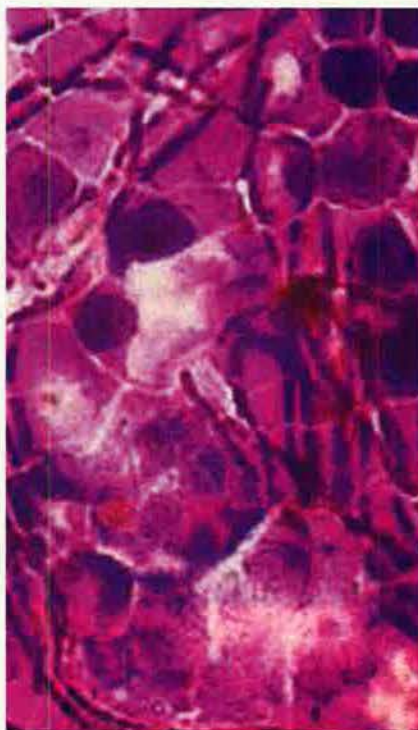
REASONS. THERE'S ONLY ONE **C-17.**

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Forever New Frontiers

Despite frequent reassurances from the Pentagon, the troops remain skeptical.

By Bruce D. Callander

the Anthrax Issue



THINGS have changed. They used to stand you in line, give you two or three shots, and off you went. Nobody asked what they were for." So said Army Col. Gaston Randolph, director of DoD's hugely controversial Anthrax Vaccine Immunization Program.

Randolph was attempting to explain why the services' effort to vaccinate the troops against deadly anthrax has generated more controversy than any previous immunization program.

"There has been a ... shift in the relationship between health care providers and patients," he noted. "No longer do you just put a patient in a doctor's office or in a shot line. We have been empowering patients with education so that they can make informed judgments about whether they want this, that, or some other kind of treatment. We see that in the military, too." He went on, "You

have to tell them what they are getting and what side effects they might expect. They ask questions, and they expect answers, and rightfully so.”

Col. Deneice Van Hook, chief of the Air Force Surgeon General’s Prevention Division, noted, too, that perceptions about the anthrax shots are different from those of other shots.

“There is,” she said, “a much higher emotional response to this vaccine. You have to understand that we are giving people an immunization that they see as a biological warfare agent. That alone scares people, and I understand that emotional response.”

Understanding or not, Van Hook bluntly declared, “There is no science to support their fear.”

The words of Secretary of Defense William S. Cohen: “We determined that vaccination is the safest, most reliable way to protect our service members from a potential threat that is 99 percent lethal to unprotected, untreated individuals.”

Fervent Reassurance

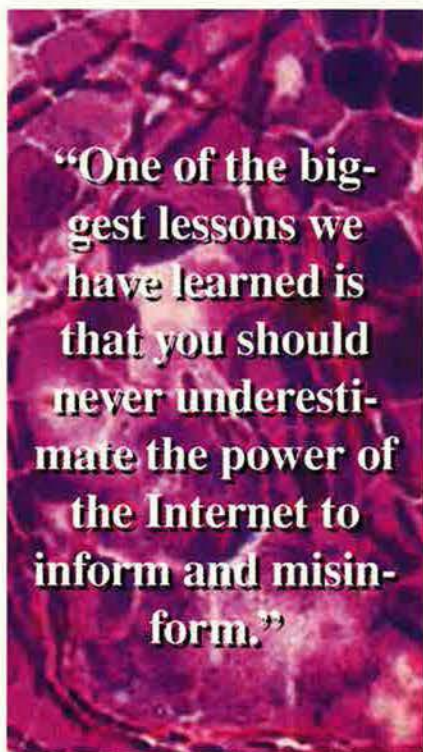
Despite frequent and fervent official Pentagon reassurances of this type, the vaccination program has drawn intense fire from many quarters, including Congress. Opponents say the problem is not emotionalism or faulty perceptions but questionable medicine and heavy-handed management.

One prominent critic is Rep. Christopher Shays (R-Conn.), chairman of the House Government Reform subcommittee on national security, veterans’ affairs, and international relations. His panel carried out an oversight investigation of the program and, in February, issued a report questioning both the safety and effectiveness of the shots. It argued that DoD should designate the vaccine as experimental and suspend mandatory immunizations until an improved vaccine is available.

Rep. Walter Jones (R-N.C.) of the House Armed Services Committee followed up with a letter to President Clinton, asking him to heed the recommendations and use his powers as Commander in Chief to halt the program.

Several exchanges between the Pentagon and the lawmakers followed, but the Defense Department stood firm on its vaccination program.

Another major critic is Rep. Dan Burton (R-Ind.), the chairman of the House Committee on Government Reform. In October, Burton announced that his committee would hold new hearings on the vaccination program. While he acknowledged that DoD has scaled back the shots because of shortages, he said it had not complied with Congressional requests for suspension.



In his announcement, Burton added, “An increasing number of individuals are suffering life-altering injuries from the vaccine.”

At Burton’s request, the General Accounting Office, a Congressional watchdog agency, surveyed Air National Guard and Air Force Reserve Command pilots and crew members, asking them what reactions they had to the vaccine and what effect the immunization program had on their career decisions.

GAO had mailed 1,253 questionnaires to members. By early October, the GAO issued a preliminary report to the committee on the survey on the 828 Guard members and Reservists who had responded to the survey.

The GAO reported:

■ AVIP gets scant support. While

respondents had positive attitudes toward immunizations in general, 65 percent reported that they had little or no support for the Pentagon’s anthrax program. Only 17 percent said they thought information presented on the DoD Web site was accurate. And almost nine out of 10 respondents said they probably would have safety concerns about vaccines for other biological warfare agents.

■ Physical reactions are underreported. Of those respondents who had taken the shots, 86 percent said they had local or systemic reactions. This percentage is higher than that reported by service officials. GAO said that some 60 percent of its respondents explained that they didn’t report their reactions. Of these, almost half claimed that they feared ridicule, loss of flight status, or adverse impacts on their military or civilian careers.

■ The vaccinations are hurting retention. About 25 percent of respondents had switched units (most to take nonflying jobs), gone to inactive status, or quit the military within the past two years. While they cited factors such as family reasons and job opportunities among the factors, GAO said, “When asked to rank the one most important factor, the anthrax immunization was the highest.” Another 18 percent of those who are still in the service said they planned to leave within six months and also cited the anthrax vaccine program as the top reason.

The statistical significance of this survey is somewhat murky. Some defenders of the anthrax program have noted that the GAO survey was based on a relatively small sample. In its report, the GAO notes that this was only a pretest of the questionnaire and that they had only 828 respondents, of whom only 42 percent (about 348) had actually had any shots. Moreover, all of the respondents were self-selected and therefore could not be said to comprise a truly random sample.

Internet Megaphone

The debate over the program has found its way to the Internet as well. “One of the biggest lessons we have learned,” said Randolph, “is that you should never underestimate the

power of the Internet to inform and misinform. It used to be that protesters made posters, put on marches, and maybe ran ads in newspapers with limited audiences. Now, they can go worldwide, and in an instant, the information is available to millions."

To defend the program, AVIP opened its own Web site (www.anthrax.osd.mil). It presents what it believes are the facts about the disease and the vaccine and provides links to other government and private sources of information.

Officials often direct USAF members to a site called "Virtual Flight Surgeons Inc." at www.aviation-medicine.com. The site is run by civilians, Randolph said, but some are in the reserves as well. When a number of ANG and AFRC pilots refused vaccination for fear it would lead to their being grounded from their airlines jobs, the group went out to the airlines, interviewing not only people in operations but the medical directors.

The flight surgeons give a balanced discussion of the vaccine but conclude that flight crew members have nothing to fear either in their military status or civilian jobs.

Lt. Col. Susan Northrup, chief of operational medicine in the USAF Surgeon General's office, said she often refers skeptical crew members to the site for reassurance. She added, "I'm a flight surgeon myself, and we have not seen reaction rates any higher than with any other vaccine. By and large, our pilots are taking these and doing just fine."

Randolph concedes the services underestimated the anxiety that rated members would have about the vaccinations.

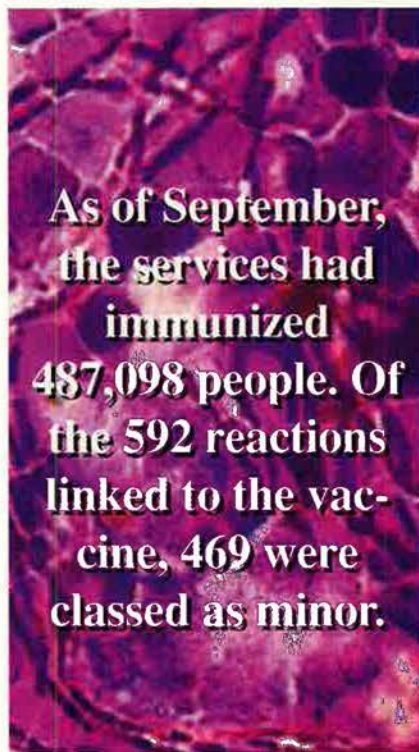
"Pilots and other people on flight crews have very special health requirements," he said. "The absence of being ill is very important to them. ... We probably should have recognized early on that, as with other health issues, fliers were going to have some unique concerns."

Northrup agreed. She said, "If you worried about whether something that you were required to take might affect your being allowed to do what you love to do, you'd probably raise questions, too. They also are concerned about whether they can support their families. But I have not heard of any individuals who have

had their civilian airline jobs threatened."

Few Real Refusals

Resistance to the vaccinations has attracted widespread press coverage, but officials note that only a relative handful of members actually had refused the injections. As of August, they said, there had been a total of 441 refusals, including



129 in the Air Force. Most refusers have received nonjudicial punishment, said Randolph. A limited number have gone to court-martial, most of them in the Marines, but the majority have been administratively separated, he said.

"The feeling is that this is basically a refusal of an order," said Randolph, "and each case is handled separately by the local commander."

Van Hook suggested, too, that not all those who raise questions actually refuse the shots. According to her, "There are lots of folks who initially say, 'I'm not going to take the immunization,' but when we go through a full one-on-one education program, they realize there is nothing to fear and go ahead and take the shots. So we don't want to call those people refusers."

The extent of adverse physical reactions to the vaccine itself also has been exaggerated, the officials said.

"They have been very similar to other vaccines in terms of the reactions you would commonly expect," said Randolph. "It's closest to that for tetanus, and of course, millions and millions of people have had tetanus shots. I'm talking about redness, a little pain at the injection site, swelling, and other things such as that."

He went on, "In terms of systemic reactions, the shots seem to be consistent with other vaccines as well. But, again, we are talking about minor reactions that are self-limiting and don't require hospitalization or loss of work time. Generally, you take an over-the-counter pain medication and you're just fine. There have been no deaths and no long-term chronic or life-threatening illness."

Two Million Doses

Van Hook gave a breakdown of the reported reactions for all services. As of September, she said, the services had immunized 487,098 people, injecting 1,947,053 doses of vaccine. Over the period, 1,152 reactions have been reported and reviewed by an expert civilian panel. It determined that 592 were "certainly or probably" caused by the anthrax vaccine.

Of the 592 reactions linked to the vaccine, Van Hook said, 469 were classed as minor, meaning the members didn't lose any duty time or have to be hospitalized. Another 114 members did lose some duty time, most of them because of reactions at the injection site. Others had manifestations such as rashes, flu-like symptoms, intestinal problems, and itchiness.

"Only 10 were actually hospitalized," said Van Hook, "and all were due to allergic inflammatory reactions at the injection site."

She added, however, "There have been several studies that seem to indicate that females are more apt to have reactions than males, but we really don't know what's causing that. That gender difference is one of the things we have asked the Center for Disease Control to investigate."

Overall, however, the reports so

far have come as a welcome surprise to officials. Van Hook said, "Actually, the adverse reaction rate is lower than we would have anticipated with most vaccines. It's very low and the serious adverse reaction rate is extremely low with this vaccine."

In recent months, the controversy over the vaccine has cooled a little. The Pentagon's efforts to put out more information may be one reason, but it also could be because there has been a slowdown in the vaccination program itself.

The problem is in the supply of the vaccine. The services rely on a single provider, BioPort Corp. of Michigan. The firm has been expanding and, during the process, has halted production.

"Until they receive approval for their newly renovated vaccine facility from the Food and Drug Administration," said Randolph, "we have a finite amount of stockpiled vaccine that was produced earlier. So we have had to slow down the program."

According to a July 17 policy letter signed by Rudy de Leon, the deputy secretary of defense, those deployed for at least 30 days to the high-risk theaters of Southwest Asia and Korea will continue to be vaccinated. Vaccinations for personnel deploying to these areas should begin prior to arrival in theater and are authorized to begin up to 45 days prior to deployment.

"We're vaccinating only people who are forward deployed in the two high-threat areas of Southwest Asia and Korea," Randolph said.

While the shortage will interrupt the vaccination schedule for other members, officials say those who already have begun the series of shots won't have to start over.

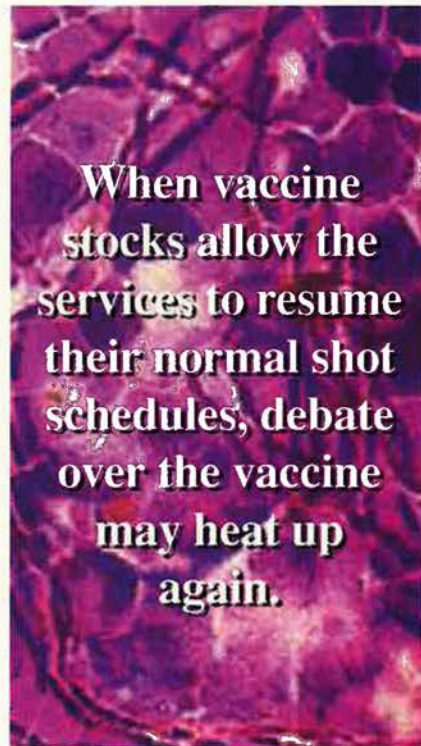
Van Hook said current service guidelines say members who have had only one shot given more than two years ago will have to restart the series. Those who have had two can pick up where they left off.

That guideline is consistent with other immunizations, she said. "Say, for example, that we start a woman out on hepatitis B vaccine, which requires three shots, and she gets pregnant," said Van Hook. "We delay immunization until after she is through with her pregnancy, but we don't restart the series."

When the program resumes its former pace, officials said, all members will receive an initial series of six shots over 18 months, followed by an annual booster. At the moment, the booster shots have been suspended except for members headed into high-risk areas.

Back on Schedule

If all goes well, the services should



have no trouble getting back on schedule by early 2001. Randolph said, "We have enough to get us through about spring of next year with the current slow-down rules. We estimate that somewhere between January and the end of March, we'll have that FDA approval of the newly renovated vaccine suite and we'll have more vaccine."

Even though it cannot release more vaccine at the moment, BioPort continues to produce it. "As part of the FDA approval process, they have to produce new vaccine in the renovated facility," said Randolph. "Three lots have to come out successfully. So approval also would be approval of three lots of vaccine and each lot has about 200,000 doses in it."

All this assumes there are no ma-

ior hitches in the approval schedule, however. Against the possibility of further problems, AVIP has contingency plans that include developing additional sources of the vaccine.

The program's critics have questioned its safety and effectiveness. One recurring allegation is that the shots were responsible for the maladies commonly termed Gulf War Illness. That charge was fueled in 1994 by Congressional testimony from the Army's Surgeon General Lt. Gen. Ronald R. Blanck. He said that the "anthrax vaccine should continue to be considered as a potential cause for the undiagnosed illnesses in Persian Gulf military personnel." Blanck later retracted the statement and said there is no link between the shots and the problems reported by Desert Storm veterans, but it is still a live issue.

The decision to halt production of the vaccine also was taken by some critics as evidence that the shots are risky. But Randolph insists it was not FDA that ordered the interruption in delivery of the shots. "Early on," he said, "we realized that the original facility would not be large enough to handle the volume of production we needed and approved an expansion of what then was [Michigan Biologics Product Institute]. It is the renovation, which requires new FDA approvals, that has caused the vaccine shortage."

When stocks allow the services to resume their normal shot schedules, debate over the vaccine may heat up again, but officials close to the immunization program have no doubts about its importance or safety. Said Van Hook, "I've had four of the shots myself. I didn't have any reaction other than that associated with a little lump in my arm. If there were enough vaccine, I would give it to my child today." ■

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, "Virtual Military Personnel Flight," appeared in the October 2000 issue.

Tufted Lancer



Searching for ways to improve aerodynamic design, engineers had one side of this new Republic P-43 Lancer covered with pieces of string. The engineers then used movie cameras to record movements of the strings during wind tunnel and other tests. In this way, they determined the patterns of airflow over different parts of the aircraft.

By Robert S. Dudley, Executive Editor

Astronomical

"My sense is there is not a national consensus to weaponize space, and even if there were, the costs and technical challenge of putting weapons in space are great. While there are some folks ... who feel that they are slighted until they can pull triggers from space, I just don't think that is a realistic desire over the next 25 years. ... Twenty to 25 years. ... The last time anybody tried to estimate the cost of a real space-based laser to do real stuff, you were talking about \$40 billion a pop. If you think F-22 is expensive, this is really going to be expensive."—**Secretary of the Air Force F. Whitten Peters, in Oct. 26 remarks to the Defense Writers Group in Washington, D.C.**

One President at a Time

"President Clinton remains Commander in Chief. We maintain our defense posture as aggressively as it has been maintained and will continue to do so throughout this period of time until the next President is sworn in ... in January. Any country [that] would seek to take advantage of what they perceive to be any exploitive opportunities would be making a very grave mistake."—**Secretary of Defense William S. Cohen, in Nov. 8 post-election remarks to Pentagon reporters.**

Trenchant Analysis

"In the rush to convince lawmakers and the public that Operation Desert Storm marked a dramatic change in the way future wars will be fought, many in the Pentagon forgot what actually happened. Lost in the high-tech ballyhoo was the reality that it took highly trained armored, light infantry, and airmobile units—plus 40-year-old B-52s—to sweep the Iraqis out of Kuwait. Desert Storm was mostly a low-tech victory."—**Robert Wilkie, counsel to Senate Majority Leader Trent Lott (R-Miss.), writing in October 2000 Naval Institute Proceedings.**

Needed: More Airlift

"The mobility forces in the 2005

Program Objective Memorandum (POM) are insufficient in meeting the current National Military Strategy. ... The Joint Chiefs unanimously agree 54.5 [million ton miles per day] capability is needed concurrently to mitigate risk and to meet the requirements identified in this study."—**From a near-final draft executive summary of the Mobility Requirements Study 2005, planned for December release.**

Of Capability and Rank

"Someday, some way, we are going to have to break those two apart, particularly in an economy which has demands on these kinds of people across the spectrum of commerce. I think legislation will be needed in the future, and, I've said it before, to try and pay for capability in our armed forces, rather than paying for rank."—**Gen. Michael E. Ryan, Air Force Chief of Staff, remarks to an Oct. 30 symposium in Washington, D.C.**

Close Call

"I held secrets no one outside Iraq, and only a handful of people inside the country, could know. Not even the aggressive UN inspectors ... knew what we still had and how dangerous the situation was. None of them knew that Saddam had been within a few months of completing the bomb when he invaded Kuwait."—**Khidhir Hamza, formerly Iraq's top nuclear weapons scientist, in remarks reported in Nov. 5 Washington Post.**

That Would Just Spoil Things

"I have studied Communist systems all my life, and I have no illusions about the nature of such regimes. As Chairman Kim [Jong Il] would be the first to acknowledge, there is an abyss between his political ideology and ours. North Korea is among the least free nations on Earth. There is little, if any, respect for global norms of human or civil rights. From the top down, the emphasis is on uniformity, order, and discipline. The result is indeed order but at a heartbreaking cost in

human happiness, creativity, and welfare. Chairman Kim and I referred to our profound differences in our talks, *but* we did not allow them to obstruct progress."—**Secretary of State Madeleine Albright, in Nov. 2 remarks at the National Press Club about her visit to North Korea.**

The More, the Merrier

"We must develop a clearer and—to be blunt—a more positive vision of the future NATO-EU [European Union] relationship. ... It is clear that, in the future, NATO will no longer be the only major multilateral structure with a role in responding to crises, including military crises, which could affect European stability and security. ... We recognize that development of a foreign and security dimension to the EU is a natural, even inevitable, part of the process of European integration begun after World War II. ... Let me be clear on America's position: We agree with this goal—not grudgingly, not with resignation, but with wholehearted conviction."—**Secretary of Defense William S. Cohen, in Oct. 10 meeting in England of NATO defense ministers.**

Adventures in Jointness

"The bulk of our nation's land and air forces—'heavy' forces designed to defend Central Europe against the Soviet Union—are not optimally suited for today's increasingly common missions. Each of the military services is changing, or 'transforming,' to enhance its strategic responsiveness and broaden its utility. The Army, for example, is becoming lighter to reach crises more rapidly. The Air Force is forming 'Aerospace Expeditionary Forces' to gain increased flexibility. The Navy is implementing doctrinal changes to address operations in the littorals. The Marine Corps, however, requires no such renovation."—**Gen. James L. Jones, Commandant, US Marine Corps, writing in October 2000 Armed Forces Journal International.**

It covers military retirees 65 and older, but details are yet to be worked out.

Tricare

By Tom Philpott

To the surprise of many, Congress has delivered to the military community Tricare for Life, a program that is expected to bring about the greatest expansion of health care benefits in at least three decades.

It happened in October in an end-of-session vote. The legislation, to take effect Oct. 1, 2001, aims to restore lifetime health care to 1.4 million beneficiaries eligible for Medicare because of age (65 and up) or disability.

Under the new plan, the lifetime value of the health care benefit will increase by more than a third. That will boost the federal government's annual expenditure by a net of up to \$6 billion (in 2000 dollars).

"This is a huge win for military retirees," said Rep. Floyd D. Spence, a South Carolina Republican who serves as chairman of the House Armed Services Committee. His nearly unqualified praise was typical of reaction among retirees and their supporters within the services and on Capitol Hill.

A few, however, were more restrained, and the Air Force Association was among those counseling caution. While noting that "some of the provisions seem attractive—on the surface," AFA's Oct. 17 statement warned, "We are not yet certain that this [program] will actually live up to the claims made for it. The association will continue to research, monitor, and be an active participant in any health care reform initiative, but we are still a long way from recommending to our members that

this new program is the answer for all of our health care needs."

One thing is beyond dispute: It was an extraordinary confluence of political and social forces that caused Congress to take the step that no lawmaker or service association was bold enough to predict months earlier.

Two central figures were Sen. John Warner (R-Va.), the chairman of the Senate Armed Services Committee, and Rep. Steve Buyer (R-Ind.), chairman of the House Armed Services military personnel subcommittee. They had the support of Republican Congressional leaders and, in the end, strong bipartisan support, which they used to bring forth a program that intends to not only end age discrimination in military health care but to shield benefits for the elderly and Medicare-eligible disabled from future defense spending showdowns.

No Longer a "Nice to Have"

The legislation enhances the benefits of these two groups and redesignates them as an "entitlement," meaning that annual federal funding becomes mandatory, not discretionary.

It also shifts away from the defense budget and into the new Department of Defense Medicare-Eligible Retiree Health Care Fund as much as \$200 billion in unfunded obligations associated with these new benefits. The fund will be administered by the Treasury Department.

The intent of all these moves is to permit the nation's 784,000 military retirees, 391,000 spouses, and 214,000

for Life

survivors to gain access to better and more comprehensive health care coverage. It will come through one of two routes:

- Tricare Prime, the military's managed care health plan.
- Tricare Standard, DoD's fee-for-service insurance plan once known as CHAMPUS.

At present, the size of DoD's network of uniformed and civilian health care providers limits the number of retirees who are enrolled in Tricare Prime. That limitation is expected to continue, and as a result, expectations are that most Medicare-eligibles will come to use Tricare Standard as a second payer (behind Medicare) of their health costs.

It has been billed as a backup or supplement to Medicare with no exclusions for pre-existing conditions and no enrollment fees, premiums, deductibles, or co-payments. In principle, this is what service retirees have long sought.

Plans call for Tricare Standard to pick up many of the costs, fees, and deductible amounts that Medicare will not cover. These include the routine 20 percent co-payment on medical bills and the large deductible required for hospitalization.

Tricare for Life was approved as part of the Fiscal 2001 National Defense Authorization Act and thus is enshrined in law. This has caused some experts to conclude that a fundamental and irreversible change has taken place.

For example, Paul Arcari, director of government relations for The Retired Officers Association, said

that, if all goes as expected, beneficiaries, starting next October, "can safely drop their supplemental insurance policies." Such a step would save the average 65-and-older retiree several hundreds of dollars a year.

AFA said it was urging members not to cancel any current Medicare supplement insurance they now hold because "to do so could be financially devastating" if the program were to be delayed or altered.

Concerns About Tricare

Yet to be seen, said skeptics, is how effectively Tricare functions as a second payer. They noted that Tricare has become notorious for slow payment, a fact that has infuriated doctors and caused many of them to flee the system. Moreover, the skeptics also wondered how Tricare companies will be able to pay 100 percent of costs not covered by Medicare and turn a profit at the same time.

"We do not know how this program will work, and so far as we can determine, neither does anyone else," AFA said. "We will continue to ask questions and stay on top of the program every step of the way."

Experts said that, under the new plan, Tricare Standard would not become a true wrap-around Medicare supplemental plan, covering every possible expense not covered by Medicare. The intent, rather, is to guarantee beneficiaries 65 and older, at minimum, the same level of coverage they enjoyed before turning 65. The new law extends Tricare

Standard into old age so that a person's shift to Medicare doesn't result in reduced benefits.

In other words: Tricare Standard, while it won't become a different supplemental plan, no longer will disappear when a beneficiary turns 65, as is the case today.

The use of Tricare Standard as second payer to Medicare should have

DoD Praises the "Golden Supplemental"

At the Pentagon, optimism about the new Tricare program is widespread. James T. Sears, executive director of DoD's Tricare Management Activity, made the following comments in an Oct. 26 session with the press.

"I hope you all are aware of the sorts of benefits we're talking about: The [65-and-over] benefit, the pharmacy benefit, the ability for folks when they turn 65 to stay in Tricare. I call it the 'golden supplemental' for folks who have Medicare as first payer and Tricare as the 'golden supplemental.' I can't think of a better health plan or a more comprehensive health plan, and [it is] way beyond what I would have dreamed would have occurred this year. ...

"We've got a wonderful benefit going into place that really rounds out the Tricare program, cradle to grave, now, and all the other benefits that we're putting in place. Somebody asked me today, 'Well, how are you going to pay for it?' I don't have an answer to that, except what we're talking here are entitlements and bills that will be paid, and that we will put these programs in place."

What About Tricare Senior Prime?

It still unclear how the new program will affect those beneficiaries already enrolled in Tricare Senior Prime at select test sites. Defense officials will study their options in the months ahead.

The Senior Prime enrollees already pay Part B premiums in return for access to military managed care, but so far, Medicare hasn't acknowledged an obligation to reimburse the military for some of the cost of caring for enrolled seniors. Military hospitals haven't been able to show Medicare officials that they are exceeding previous levels of effort in treating elderly beneficiaries, a condition for reimbursement.

Defense officials hope to renegotiate the deal with the Health Care Financing Administration, which oversees Medicare. They will argue that HCFA can only gain from more efficient use of in-service facilities. To give that approach a chance, Congress voted to extend the Senior Prime demonstration through at least December 2001. If HCFA doesn't agree to a more favorable deal on reimbursements, Tricare Prime enrollees likely will just be transitioned to the Tricare for Life plan.

no impact on a patient's choice of physician, Tricare officials said.

For many service elderly, Tricare for Life should reduce annual health care costs to just Medicare Part B premiums which, in 2000, ran \$45.50 a month if the insured had signed up at age 65. Seniors who decline Part B enrollment when they first become eligible do face a 10 percent penalty on premiums for each year they delay past age 65.

So, for example, a 75-year-old retiree who now buys Part B coverage delayed coverage for 10 years; when the number of years is multiplied by 10 percent, it means his or her premium will be 100 percent higher, or \$91 per month.

Arcari said about 84,000 Medicare-eligible beneficiaries lack Part B coverage. Military associations have pressed Congress for legislation to waive the late fee penalty for military retirees.

It's "something we hope to address next year," said Arcari, but Congressional committees with jurisdiction over Medicare and its trust fund have opposed such moves in the past, fearing the precedent it might set.

Arcari said military retirees living in the United States should sign up for Part B "as soon as possible" and then hope for a fix.

In 1999, Army Gen. Henry H. Shelton, Chairman of the Joint Chiefs, began to raise expectations of major health care reform for the year 2000 by acknowledging broken promises of lifetime health care to retirees and encouraging formation of an oversight panel on military health care run by the Joint Staff.

Political pressure on the Pentagon included high-profile lawsuits brought against the government by many military retirees, including a group led by Air Force retiree and lawyer Col. George "Bud" Day, a recipient of the Medal of Honor.

Administration Defaults

By January 2000, however, it had become clear that the Joint Chiefs had failed to persuade the Clinton Administration to raise the topline on defense spending to accommodate far-reaching and expensive health benefit reform.

At that point, the Republican-led Congress assumed leadership on the issue, but initial efforts by Warner and Buyer were relatively modest in scope, entailing primarily enhancements to the pharmacy benefit for older retirees.

In May, Rep. Gene Taylor (D-Miss.) raised the ante when he pushed through a defense bill amendment to expand Tricare Senior Prime within five years from its status as a 10-site test to a nationwide program. Senior Prime reflects a concept known as Medicare Subvention. The idea is to open military managed care to service elderly if Medicare agrees to reimburse the military for at least a portion of the care to elderly beneficiaries.

By June, an increasing number of disgruntled retirees had rallied around a different piece of legislation—the \$9 billion-a-year "Keep Our Promise" bill introduced by Rep. Ronnie Shows (D-Miss.) and Sen. Tim Johnson (D-S.D.). The Shows-Johnson bill proposed to open to all military retirees the menu of health

care options available to federal civilian employees under the Federal Employees Health Benefits Program. However, the Shows-Johnson bill would have had the government pick up the full cost of premiums only for the retirees who entered service before June 1956, when Congress first passed a law limiting health care access for retirees to "space available" care.

In response to the new initiative, Warner introduced a new amendment that he and co-sponsor Sen. Tim Hutchinson (R-Ark.) said would end "age discrimination in military health care."

The plan (later named Tricare for Life) was to make these changes permanent, but Congressional Democrats said that the \$40 billion cost, over 10 years, violated the budget resolution. They warned Warner that his amendment, if approved, would trigger a procedural challenge that could tie up the entire defense bill.

Believing he lacked 60 votes to defeat such a challenge, Warner opted to limit the program to two years, through September 2003. He vowed to work with the Senate Budget Committee to find a way to make the changes permanent before the start date in October 2001. Without permanency, he knew, retirees wouldn't feel comfortable dropping their Medicare supplemental insurance.

In late September, Buyer, chairman of the House military personnel subcommittee, decided not only to embrace Warner's plan but also improve on it. Buyer unveiled what he called a Warner-Buyer proposal to make Tricare for Life permanent. He would remove Warner's two-year sunset provision and order the program funded as an entitlement paid for through a special trust fund run by Treasury.

Earlier, both Warner and the Joint Chiefs had floated the idea; Warner was expected to pursue it in 2001.

Warner: Risk Too High

Irritated by this unexpected late-inning development, an angry Warner declared that Buyer's attempt to deliver Medicare-eligibles from the uncertainty of a two-year program was well-intended but would put at risk both Tricare for Life and the defense bill itself. He had seen nothing that might ease his worry about

the procedural challenge; he didn't have 60 votes.

By Sept. 21, Warner was convinced that he had killed the idea and was eager to say why. He said, "I've got but a few days, before the Senate and the House stop for the year, to get through a conference report covering the entire military and \$300-plus billion. I cannot risk the Senate stopping that bill on a point of order."

Buyer and Spence, Warner's opposite number on the House side, continued to press a late-hour shift to permanent legislation. Buyer said the turning point came during an Oct. 4 House Armed Services Committee hearing attended by Shelton and the four service chiefs.

"What I wanted to do was break the dynamic of this debate, that the reason we can't take care of the military retirees is because we have other very important needs," Buyer said. "So I asked the chiefs, 'If I were no longer pitting military retirees' health care against other priorities, would you agree to that?' Obviously they all said, 'Yes.'"

With the chiefs' endorsement, Buyer said, he won over House Speaker J. Dennis Hastert (R-Ill.). Hastert, in turn, persuaded Trent Lott (R-Miss), Senate majority leader.

The House on Oct. 11 approved the defense bill, with its Tricare for Life provisions, in an overwhelming vote. On the next evening, the Senate did the same, but not before disposing of a challenge from Sen. Bob Kerrey (D-Neb.).

Kerrey, a Medal of Honor recipient, warned colleagues that the plan would exceed spending targets by \$6 billion a year, "in a bill that has never been debated, in a program that's never been discussed."

Kerrey's challenge was supported by several senators including Sen. Phil Gramm (R-Tex.). Gramm at one point charged that Congress was "taking money away from poor young people and giving it to old people who are rich."

The health care trust fund will operate just like one established in 1986 to handle military retired pay. The existing cost of health care obligations will be picked up by the Treasury as an "unfunded liability." Each year, DoD will make payments into the new fund to cover future benefits of persons coming on active duty.

Beyond Tricare for Life

Besides establishing Tricare for Life, the latest defense bill enhances pharmacy benefits for the Medicare-eligible retiree population.

Starting April 1, 2001, beneficiaries will be able to use the military's National Mail Order Pharmacy Program to buy a 90-day supply of most drugs for \$8 per prescription.

Seniors living near a military installation can continue to use base pharmacies at no charge. Besides the mail order plan, they also will have access to Tricare's retail pharmacy network, which requires 20 percent co-payment on each prescription.

The roughly 800,000 Medicare-eligibles who live far from bases won't be left out. They will have access to the mail order program, and in addition, Rep. Steve Buyer (R-Ind.) pressed successfully for access to nonnetwork pharmacies, too, with a 25 percent co-pay and a \$150 deductible.

Other provisions of the bill will provide new benefits to younger beneficiaries. Sharon Barnes, with The National Association for Uniformed Services, said these include a reduction in maximum out-of-pocket health costs (the "catastrophic cap") from \$7,500 to \$3,000 per year.

The new law will extend Tricare Prime Remote coverage to families of 80,000 active duty members living more than 50 miles away from a military treatment facility. It ends Tricare Prime co-payments of \$6 or \$12 per visit for family members.

No one yet has a reliable estimate of that annual payment, but it won't be small.

Topline Must Rise

"The topline for defense spending still must be increased in order to accomplish this," Buyer said.

Starting in October 2001, DoD's managed care capacity at military treatment facilities will determine the level of access that Medicare-eligibles have to Tricare Prime. If enrollment is full, or if they live far from a military base, retired 65-and-older beneficiaries would be expected to find a civilian provider, use their Medicare benefits as the first payer, and then turn to Tricare Standard for payment of costs not covered by Medicare.

Arcari characterized the entire health care packet as "an extraordinary accomplishment." A Tricare official, however, noted that it also poses a major challenge.

"This," he said, "will affect everything that military medicine does—claims, appointments, contracts, the way dollars flow, our relationship with [the Health Care Financing Administration], access standards for hospitals and clinics. People are just waking up to this realization. They are overjoyed that the broken promise is going to be renewed, but it [proper implementation] is going to take a Manhattan Project level of effort."

Meanwhile, military associations

remain committed to the Shows-Johnson bill, which would open the Federal Employees Health Benefits Program to military retirees. As FEHBP premiums rise, however, retirees are expected to find superior value in the Tricare for Life program.

Arcari asked, "Why would you pay \$2,000 a year for family coverage when you can use Tricare for Life at no cost" other than Medicare Part B premiums?

Tricare officials said they already are working up a robust communication plan to reach beneficiaries with full details of Tricare for Life as soon as possible. If all goes as planned, elderly military retirees, for the first time in many years, will get the care they need without worrying about huge bills.

"Once and for all, we are taking care of our military retirees by giving them Tricare for Life and by improving their prescription drug benefit," said Rep. Sue Myrick (R-N.C.), in a statement preceding the Oct. 11 House vote on the issue. "Our military retirees were promised lifetime health care coverage when they answered the call of duty, and it's about time that we fulfilled our promise." ■

Tom Philpott, the editor of "Military Update," lives in the Washington area. His most recent article for Air Force Magazine, "It's Showdown Time on Tricare," was published in the April 2000 issue.

Powell's 1.6 million-strong military was supposed to be the floor below which the US dared not go.

The Base Force

By Lorna S. Jaffe

Editor's note:

Ten years ago this month, DoD officially began transforming its Cold War force into the Base Force. A military that long had been preoccupied with global war started shedding 500,000 troops and focusing on regional conflicts.

This step—pushed hard by Gen. Colin Powell, Chairman of the Joint Chiefs of Staff—came only after a major Pentagon struggle, one ably chronicled in "The Development of the Base Force: 1989–1992" by Lorna S. Jaffe of the JCS Joint History Office.

As Jaffe's 1993 study showed, the changeover was painful and hard-fought. The four service chiefs opposed the cuts. President Bush's Defense Secretary, Dick Cheney, did not approve the plan until convinced he could reverse the drawdown. Powell himself saw the Base Force as the minimum required for superpower responsibilities.

After taking office in January 1993, the newly elected President, Bill Clinton, launched his own defense review. The outcome was the elimination of 300,000 more troops, six more Air Force wings, two more Army divisions, and 150 more Navy warships. It marked the end of the Base Force.

What follows are excerpts of the Jaffe study. The full version can be obtained from the Government Printing Office.

SINCE the late 1940s, the US had based National Military Strategy on the necessity of deterring and, if deterrence failed, successfully fighting a global war against the Soviet Union. In 1987, Joint Staff strategists began to examine some of the planning assumptions supporting this strategy. Their review led them to conclude that National Military Strategy should put greater emphasis on regional planning. While strategists were developing new approaches based initially on assessments of US capabilities (but increasingly on their assessment of the reduced threat from the Warsaw Pact), Joint Staff force planners in 1988 began to analyze the force structure that supported current strategy. The prospect of an accelerated decline in defense funding, together with the sweeping changes taking place within the Warsaw Pact, prompted them to recommend significant force reductions.

When Gen. Colin L. Powell became Chairman of the Joint Chiefs of Staff in October 1989, he brought to the position his own views on the likely shape of the world in the 1990s and a determination to restructure the US armed forces to meet this new environment. He not only gave direction to the efforts already under way on the Joint Staff but pushed them further, shaping them to conform to his strategic vision. The result was a new National Military Strategy and a new conceptualization of force structure to support this strategy. This strategy and its supporting configuration of forces marked a major departure from the US approach to the world during the preceding 40-plus years. Their development influenced as well the development of a new national defense strategy and a new national security strategy....

Scenarios for Regional War

Through [the latter 1980s], Joint Staff strategists continued to press for greater emphasis on regional planning. ... The work done by J-5 in designing scenarios for regional war reinforced Joint Staff strategists' conclusion that the major focus of strategy must shift to regional planning and led to the realization that this shift would require force restructuring. ... [An important figure in the Base Force story, USAF Maj. Gen. George Lee Butler, in May 1987 became vice director of J-5, strategic plans and policy.] By the time he became director of J-5 in August 1989, [Lt. Gen.] Butler had developed his own strategic overview. ... On the basis of his assessment

Quiet Study I assumed no change in strategy, but Quiet Study II postulated a shift to regional contingencies.

of developments in the Soviet Union, Butler concluded that the Cold War was over, Communism had failed, and the world was witnessing a second Russian Revolution. He examined the implications for US strategy of the success of the policy of containment. In his view, the world was entering a multipolar era, in which superpowers would find it increasingly difficult to influence events militarily. In addition to the decline of the Soviet Union and the further evolution of West European alliance relationships, the coming era would see the rise of new hegemonic powers, increasingly intractable regional problems, and the global impact of disastrous Third World conditions.

Butler maintained that the US was the only power with the capacity to manage the major forces at work in the world. Implementing this new use of US power in order to shape the emerging world in accordance with US interests would require a coherent strategy that defined US vital interests, decided the role of the military, and then set the necessary forces in place. It would also require dealing with the nation's fiscal problems. When he presented his views to the Air Staff in September 1988, he anticipated that budgetary retrenchment would lead to a major restructuring of the armed forces. If they did not undertake this task themselves, they would find reductions forced upon them.

Initially, Butler thought that the changes he had outlined would take place over a decade and that the US would have to deal with them within the context of an ongoing relationship with the Soviet Union. However, in the autumn of 1988, when he traveled to the Soviet Union as head of the US team to negotiate an agreement on the prevention of dangerous military activities, he found that the Soviet Union was in worse condition than he had realized. He concluded that the shift in the balance of world power would therefore be accelerated.

As vice director of J-5, Butler pursued the development of his ideas on the need for a new US approach to the world independently of the Strategy Division's efforts to shift the focus of strategic planning away from the Soviet Union. However, Joint Staff planners had heard him present his strategic overview elsewhere, and his ideas about the new strategic tasks facing the US were among the factors influencing their attempts to place greater emphasis on regional rather than global planning.

J-8's "Quiet Study"

While these changes in strategic thinking were taking place, the Program and Budget Analysis Division of the Force Structure, Resources, and Assessment Directorate (J-8) had begun to explore the implications of anticipated further budget reductions on force structure, which

consumed the largest portion of the defense budget. From autumn 1988 discussions that they had initiated with Congressional staff members and Office of Management and Budget personnel, PBAD action officers had concluded that DoD could expect an accelerated decline in the growth of its budget amounting to an approximately 25 percent real decline over the next five years. This ran counter to OSD projections that the decline would continue at its current rate, resulting instead in an approximately 10 percent decline over the same period.

In anticipation of an accelerated reduction, PBAD began work in October on a closely held study of force reduction options. This "Quiet Study" proposed criteria for proceeding with force reductions and made specific recommendations for cuts, targeting forces that would not be decisive in a global war, those with aging equipment and therefore limited combat effectiveness, and those whose growth was outpacing the growth of the Soviet threat. On Feb. 24, 1989, J-8 presented its recommendations to [the JCS Chairman, Adm. William] Crowe Jr., requesting his approval of PBAD's guidelines for reductions. However, Crowe believed that to pursue force reductions without a change in strategy, for which he looked to President Bush, would invite further cuts in the defense budget.

Although Crowe did not act on its recommendations, J-8 continued its work. In July, PBAD undertook "Quiet Study II," which it completed in late October 1989, after the arrival of the new chairman [Powell]. Continuing to base its projections on an accelerated decline in defense funding, PBAD believed that DoD must come to terms with fiscal realities. Accordingly, Quiet Study II proposed guidelines for matching long-term force structure and modernization programs to expected resources and then using these guidelines to develop Joint Staff recommendations on the budget cuts to be proposed by the services and OSD during the upcoming budget and program review. Using these guidelines, it also outlined detailed sample cuts for the Chairman's consideration.

Quiet Study I had assumed that there would be no change in strategy. But because of the changes in the strategic environment caused by the continued diminution of the Soviet threat, Quiet Study II postulated a shift in focus from the East-West confrontation in Europe to regional contingencies. It examined the potential impact on force structure of the changed strategic environment as well as the domestic fiscal situation, asking not only what forces the US would be able to fund but also what missions it wished its forces to perform. Basing its choice of conventional missions upon the concept of forward presence, Quiet Study II assumed that, by the next century, land-based forces overseas would be reduced to half their current size. The study based its

recommendations for force cuts on the necessity of assuring superiority against any potential adversary. Its criteria for retention of conventional forces therefore included maintaining quality, mobility, flexibility, and readiness.

Powell's Views on Force Structure

J-8's views on force structure corresponded closely to those of the new Chairman. As President Reagan's assistant for national security affairs, Powell had become convinced in 1988 that the changes taking place in the Soviet Union were fundamental. This perception derived principally from his meetings in the Soviet Union with Soviet leaders. The conviction of Reagan, a staunch conservative, that the changes were fundamental also influenced his thinking.

Powell recognized, too, that these changes, together with budgetary pressures, would produce demands for further reductions in defense spending. Although publicly cautious about the long-term effects of the changes in the Soviet Union and their implications for US-Soviet relations, he believed that, if developments in the Soviet Union continued in the same direction, they would lead eventually to changes in US strategy and its supporting force structure and ultimately in the whole military culture.

However, when he became commanding general of the Army's Forces Command in April 1989, he found that there had been no adjustment in Army thinking. As the commander with responsibility for the Army's US-based ground forces, he thought about what continued changes in the Soviet Union would mean for his command and for the Army....

While at FORSCOM, Powell reached conclusions about the reductions that would be necessary in an era of constrained resources. He also devised the configuration of forces that evolved into his concept of a Base Force—the minimum force necessary for the US to pursue its interests as a superpower. To respond to the changing strategic environment, he conceived of a force structure that was composed of two regional and two functional forces: Atlantic forces and Pacific forces, whose areas of responsibility would extend respectively across the Atlantic and across the Pacific; contingency forces to deal with sudden crises; and strategic forces to meet the threat still posed by the Soviet nuclear arsenal. He concluded that the Army would have to be cut by 20 to 25 percent and the Navy reduced to a maximum of 400 ships.

He discussed his ideas with his Army colleagues, including Chief of Staff Gen. Carl E. Vuono, but found them reluctant to deal with the issues raised by the changed environment. In May 1989, he presented some of his ideas in a speech to a symposium sponsored by the Association of the US Army. Declaring that the Soviet "bear looks benign," he told an audience that included most of the other Army four-star generals that the world had changed and the Army must therefore adjust its thinking. While the reality of the Soviet military threat remained, the public's perception of a lessened threat and its consequent reluctance to fund forces to meet that threat meant that the military must find other bases for its policies and programming. No longer able to count on real growth in the defense budget, the Army would have

to make hard choices when submitting its budget requests.

Powell elaborated on these views in his Sept. 20, 1989, confirmation hearing as Chairman. Major force realignments were necessary, he said, because if funding continued to decline while the size of the armed forces and their missions remained unchanged, the result would be hollow forces. He therefore regarded his principal challenge as Chairman to be reshaping defense policies and the armed forces to deal with the changing world and the declining defense budget....

Powell's Strategic Vision

Soon after becoming Chairman, Powell reviewed the NMS that Crowe had signed in August and realized the extent to which his thinking differed from his predecessor's. In his early discussions with Butler, the J-5 director emphasized J-5's work on the recently issued NMS and its role in the US-Soviet military-to-military exchanges, on which Crowe had focused much of his energy during the last months of his term. Powell believed that the changes in the world required a more radical response than the concept of forward presence articulated in the new NMS, and he concluded from these discussions that J-5 was not moving as fast as he wished to adjust strategic planning to the new environment. When Brig. Gen. John D. Robinson, director of J-8, told him about PBAD's work, that seemed to coincide with his thinking, and he asked to see it.

On Oct. 30, 1989, J-8 briefed Powell on Quiet Study II. Looking for an avenue through which he could begin Joint Staff work on the implementation of his ideas, Powell asked J-8 to work with J-5 to refine its briefing. Strategy Division action officers began working with PBAD to produce a briefing, which they believed would be presented to the service chiefs. The J-8/J-5 working group soon learned that Powell did not wish to brief the service chiefs but planned instead to present his ideas to Dick Cheney, President Bush's Defense Secretary. On Nov. 2, representatives of J-8 and J-5 met with Powell to hear his strategic vision, and on Nov. 6, he provided them with notes of both his overview of what the world would be like in 1994 and his conception of force structure to meet this changed environment.

Powell projected radical changes in the world by 1994. He anticipated the transformation of the Soviet Union into a federation or commonwealth that had adopted a defensive posture, with its military budget cut by 40 percent, its forces withdrawn from Eastern Europe, and its force levels reduced by 50 percent. In addition, he expected the demise of both the Warsaw Pact and the Communist regimes in Central and Eastern Europe, the reunification of Germany, and the consequent recasting of NATO. He also anticipated substantial progress on both conventional and strategic arms control. As a result, warning time in Europe would be six months, and a new strategy would replace that of the forward defense of Western Europe. In the Pacific, relations between the two Koreas would improve, and the US would phase out its bases in the Philippines. In South Asia, India would emerge as a major regional nuclear hegemonic power. Of the major Third World hot spots, the areas of likely US involvement would be Korea and the Persian Gulf. In

Powell's vision and Butler's ideas, together with Quiet Study II, evolved into "A View to the 90s."

response to these changes, the US should not only significantly cut its conventional forces and change the pattern of their deployment but also reduce its strategic nuclear arsenal. Substantially reducing its forward deployments in Europe and Korea, it should cut the Army from its current 18-division active strength of 760,000 to 10–12 divisions totaling 525,000. Instead of the Navy's current deployment of 551 ships, including 15 carriers, it should plan for 400 ships, including 12 carriers, with its active strength reduced from the current 587,000 to 400,000. While Powell had not yet determined the projected size of the Air Force, he wished to cut the Marine Corps's Congressionally mandated three division-wing teams from their current active strength of 197,000 to 125,000–150,000. The reduced threat from the Soviet Union, coupled with progress in arms control, would, he believed, make it possible to cut ICBMs from their current level of 1,000 to 500, and ballistic missile submarines from the current 34 to 18–20.

Preparing To Brief Bush

Using Powell's notes, together with Quiet Study II and Butler's ideas, the J-8/J-5 working group began to expand the PBAD briefing. With Butler now involved, Robinson, who had provided the strategy and policy guidance for Quiet Study II, deferred to J-5 in these areas. The two directors and their staffs worked closely together to translate Powell's vision into a briefing....

On Nov. 13, the J-8/J-5 working group presented the expanded briefing, now called "A View to the 90s," to Powell. There was a further exchange of ideas, after which PBAD did additional work on its recommendations of cuts and the J-5 members of the working group revised the strategy section of the briefing. On Nov. 14, the J-8/J-5 team learned that Powell intended to present the briefing to Bush the next afternoon. Powell had told Cheney about the Joint Staff work, and Cheney wanted him to present his ideas to Bush. They also learned that the briefing did not go as far in recommending reductions as Powell wished to go. He directed a 25 percent manpower cut by 1994, for a total reduction of 300,000 in active strength. The working group continued its revisions. On Nov. 15, there was a meeting of the directors of J-5 and J-8 and PBAD members of the group with the director of the Joint Staff; a presentation of the revised briefing to Powell, followed by a further revision; then another meeting with Powell in preparation for his meeting with Bush.

The result of this two weeks of intensive work was a briefing that presented Powell's recommended strategy and its rationale, the force structure needed to execute that strategy, and the resulting recommendations for force reductions and reconfiguration. The briefing ar-

gued that the drastically different strategic environment projected for 1994 called for a major restructuring of US security policy, strategy, force posture, and capabilities. With a diminished Soviet threat and sharply reduced resources, the focus of strategic planning should shift from global war with the Soviet Union to regional and contingency responses to non-Soviet threats. This strategy could best protect US security interests and maintain US global influence in an era of diminished resources.

US forces must be repostured and restructured to conform with this new strategy. Surveying the projected 1994 world by region, the briefing argued for a reduced but continuing presence worldwide. For regional deterrence, the US should place greater emphasis on overseas presence than on permanently stationed overseas forces, while it should rely primarily on forces based at home to respond to contingencies.

Performing these missions would require ready, flexible, mobile, and technologically superior conventional forces. As for strategic forces, the US must retain its strategic nuclear deterrent as long as the Soviet Union possessed a nuclear capability that could threaten US survival. Therefore a modernized but smaller triad would be an essential component of US strategic force posture.

Protecting essential forces and capabilities in an era of reduced resources would necessitate cuts. Applying the criteria it had outlined, the briefing reviewed programs and forces, evaluated their contributions to the new strategy, and proposed both a force structure to be achieved by 1994 and minimum forces necessary for global deterrence and for countering non-Soviet threats. The resulting recommended force structures were larger than Powell had initially outlined. For an interim force structure to be reached by 1994, the briefing proposed an active strength of 630,000 for the Army; 520,000 for the Navy; 500,000 for the Air Force; and 170,000 for the Marine Corps—a total reduction of 287,000 from current strength, with corresponding cuts to be taken in reserve forces. For the minimum forces required for the US to carry out its superpower responsibilities, it projected an active strength of 560,000 for the Army; 490,000 for the Navy; 490,000 for the Air Force; and 160,000 for the Marine Corps—a total reduction of 407,000 from current strength, again with corresponding cuts to be taken in reserve forces.

Debating the Future

On Nov. 9, while the Joint Staff was preparing Powell's briefing, East Germany opened its borders. Culminating the liberalization that had taken place in the Soviet Union and Eastern Europe during 1989, the fall of the Berlin Wall confirmed for Powell his early assessment of the future direction of Soviet policy. He now considered

that the conflict with the Soviet Union was over. He thought that it was a mistake to assume that once the Soviets withdrew from Eastern Europe, they would maintain their Cold War force structure and pursue an offensive military policy from their own territory.

On Nov. 14, when Powell discussed with Cheney his ideas about the implications of these changes for the US, he found that Cheney did not share his perception of the substantially reduced threat from the Soviet Union. Their discussion therefore centered on the question of the need for a major adjustment in US strategy. This began a series of debates between Powell and Cheney on the appropriate US response to the changes in the Soviet Union. While Cheney did not endorse Powell's views, he gave him free rein to proceed with their development. As noted, he also asked Powell to present his ideas to Bush.

Powell's Nov. 15 presentation to Bush concentrated on the need to shift US strategy from a global to a regional focus, rather than on the force structure implications of such a shift. Bush responded favorably. Powell then turned his attention to winning support for his views not only on strategy but also on force structure. A Joint Staff team that had not been involved in preparing the "A View to the 90s" briefing critiqued it, and it underwent further revision. On Nov. 20, Powell presented the briefing to a Defense Policy Review Board meeting attended by the Commanders in Chief. He outlined his thinking on the changes in the Soviet Union and their implications for overall US force structure and for the armed forces in each theater. Of the CINCs, [Gen. John R.] Galvin [US European Command] in Europe and Gen. H. Norman Schwarzkopf, US Central Command, were the most receptive to his ideas. Then, on Nov. 22, in a Deep Executive Session of the Tank, he informed the service chiefs that he had discussed with Bush his views on the need for a new strategy and emphasized to them that they must accept force cuts....

Emergence of the Base Force

Meanwhile, Powell continued to debate his views on the Soviet Union and the need for a new strategy not only with Cheney but also with [Paul] Wolfowitz [undersecretary of defense for policy], who, like Cheney, did not share Powell's outlook on the likely course of events in the Soviet Union. These discussions reinforced Powell's belief that OSD did not comprehend the depth of the changes taking place in the strategic environment. OSD, in turn, thought that he painted too rosy a picture of the situation....

In February, Powell began working with members of his staff on a further revision of the "A View to the 90s" briefing, which he planned to present to the service chiefs and the CINCs. At his direction, program and

budget analysts checked the briefing's force size recommendations by function and by service. Doing cost analysis, they also examined whether the projected force structure fit within DoD budget guidelines and how further reductions would affect Powell's recommendations. These analyses resulted in some adjustments in recommended force size.

Powell wished to convey his personal views in the hope of eliciting debate and an exchange of ideas that would lead to a resolution of differences at the CINCs Conference in August. He therefore replaced J-5's work on the strategic environment with an elaboration of his November notes outlining his strategic projection for 1994. To gain support for his overall approach, he diluted some of his earlier projections that were likely to provoke controversy and divert attention from the main thrust of his argument.

Powell also adopted the term "Base Force" to designate his recommended minimum force. He believed that this would better convey that his proposed force structure represented a floor, below which the US could not go and carry out its responsibilities as a superpower, rather than a ceiling, from which it could further reduce forces. To emphasize the regional focus of the new strategy and force structure, he introduced the conceptual packages that he had devised while at FORSCOM....

The Base Force would have a total active strength of 1.6 million instead of the current 2.1 million and a reserve strength of 898,000 instead of the current 1.56 million. Its conventional component would be composed of 12 active and eight reserve Army divisions; 16 active and 12 reserve Air Force tactical fighter wings; 150,000 personnel in the three active Marine Corps division-wing teams and 38,000 in the reserve division-wing team; and 450 ships, including 12 carriers. This Base Force would, Powell argued, not only meet US defense needs in the new era but provide an expandable base upon which a larger force could be reconstituted should the need arise.

Reluctant Military Leaders

Powell presented the revised briefing to a meeting of the Joint Chiefs and the CINCs on Feb. 26, 1990. He outlined the ideas he had developed in response to the changed strategic and fiscal environment. As he told the Chiefs and CINCs, he had received no guidance from Bush or Cheney. He emphasized to the military leaders that they must start looking at the *real* future, rather than continuing to request a force structure that would not be funded in current circumstances. He believed that it was necessary to look beyond the programming and budgeting cycle running through 1994 and, instead, aim at 1997 as the target date for achieving his projected force reduc-

Powell adopted the term "Base Force" to designate his recommended minimum force.

tions. He hoped to reach agreement by the end of May on a new strategy that could then provide the basis for both Cheney's responses to Congressional requirements and the US position in ongoing arms control negotiations and upcoming NATO meetings.

Gen. Maxwell R. Thurman, CINC, US Southern Command, challenged Powell's presentation, contending that he had not articulated a strategy and that it was not clear how he had reached his views. What was needed was a strategy and a vision behind which they could all rally, not simply the new programming guidance based on a significantly reduced budget that the services had recently received from Deputy Defense Secretary Donald J. Atwood Jr. In a discussion with Cheney, who attended part of the meeting, Thurman argued that the Defense Policy Guidance provided the best vehicle for presenting this strategy and vision.

Powell emphatically rejected the call of Thurman and Gen. Edwin H. Burba Jr., commanding general, Forces Command, for a strategy based on the CINCs' operational requirements. Powell also argued that threat-based analysis would not meet the requirements of changing world conditions, since it was impossible to predict where the US might become engaged. Instead, the focus needed to be on the forces needed to carry out US superpower responsibilities. To prevent a movement toward isolationism, DoD must convince the American people and Congress that this force structure was essential to US interests. Gen. John T. Chain, CINC, Strategic Air Command, endorsed Powell's opposition to a threat-based strategy, pointing out that, in the past, when the US had reduced its forces in response to the disappearance of specific threats, it had then been unprepared when potential aggressors had challenged US interests.

No longer opposed to the concept of forward presence or to force reductions in Europe, Galvin supported Powell's force concept and agreed that NATO needed a new strategy. But he thought that the strength of 75,000 proposed for post-Conventional Forces in Europe was insufficient. He maintained that despite Soviet President Mikhail Gorbachev's rhetoric, there had been no real change in the objectives of Soviet military policy and little change in Soviet military strength in Eastern Europe. Moreover, even in the aftermath of a Soviet withdrawal from the other Warsaw Pact countries, NATO would still have an important role to play. US forward presence would be necessary to promote European stability.

In contrast to the CINCs, the service chiefs had little to say. Vuono thought that Powell's recommended numbers were so low that they required rethinking. Gen. Larry D. Welch, Chief of Staff of the Air Force, objected to the composition of Strategic Forces, wanting to augment the air leg of the triad. In what was to become the pattern of the Navy's reaction over the next several months, Adm. Carlisle A.H. Trost, Chief of Naval Operations, did not comment, not responding even to the deliberately provocative question of defining the capital ship of the 21st century.

Turning to the Civilians

With the chiefs refusing seriously to address the need for force cuts and only willing to argue their positions individually with him rather than engaging in debate in

a forum where they were all present, Powell focused on gaining the civilian leadership's approval of his proposals before again turning his attention to the service chiefs. In meetings with the director and vice director of the Joint Staff, the assistant to the Chairman, Butler, and Robinson, he planned how to proceed....

Butler and Robinson reported that policy analysts in OSD were seeking their and Powell's guidance in the development of strategy and force options, recently undertaken by Wolfowitz's office. Lt. Gen. Michael P.C. Carns, director of the Joint Staff, believed that OSD was engaged in a competition with the Joint Staff over the formulation of strategy. With the difference in outlook between Powell on the one hand and Cheney and Wolfowitz on the other, knowledge of the OSD work led to an intensification of Joint Staff efforts to win acceptance of Powell's views.

Determined to implement a new and effective way of tackling the problem of reduced funding, Powell wanted to develop a persuasive case for his proposed force structure so that he could convince Cheney and Bush that it was sufficient and Congress that it was the minimum necessary. He also wished to translate his views into a narrative that could be used in speeches and eventually expanded into his NMS. To accomplish these objectives, he turned to J-5. He asked Col. Montgomery C. Meigs III, chief of the Strategy Division's Strategy Application Branch, to rework the briefing so that it would win Cheney to Powell's position and to work with Butler in drafting a narrative version of Powell's strategic vision....

Working directly with Powell, Meigs [assisted by PBAD] recast the briefing. To place the emphasis on force structure and 1994 as the target date for achieving initial force reductions, they retitled the briefing, "A View to 1994: The Base Force." At Powell's direction, the briefing explained that the Base Force took into account the driving factors of fundamental geostrategic change, major budget reductions, and enduring force needs. To illustrate the decline in the threat posed by the Soviet Union, Powell introduced reference points from his own career....

"A View to 1994" placed the Base Force ceiling again at 1.6 million while reducing the force levels for the Army, Navy, and Air Force from those proposed in Powell's February briefing. For the Army, it also reduced the number of divisions, returning to Powell's November 1989 proposal of 10-12 active divisions. Powell would have preferred greater reductions than the briefing proposed, but he did not wish to increase resistance to his proposals. Presenting the Atlantic Force as the largest of the four forces, the briefing increased the number of forces permanently forward deployed in Europe to fewer than 100,000 rather than the specific 75,000 of the February briefing. Powell resisted the advocacy efforts of senior members of his staff on behalf of weapons systems in which their services had a special interest. He refused to sustain two submarine production lines as Adm. David E. Jeremiah, the vice chairman, wished. Although the briefing increased the size of the air leg of the triad over that in the February briefing, Powell refused to increase the number of B-2s to the level advocated by Butler....

While he regarded the civilian leadership as his prin-

cial audience. Powell also hoped to win the support of the service chiefs. The chiefs believed that he was usurping their force planning prerogatives by proceeding with his Base Force plan despite their objections. In the hope of defusing service discontent, Powell asked Butler to present the "A View to 1994" briefing to the operations deputies while it was still being developed. The J-5 director presented an abbreviated version to them on April 13, 1990, with the caveat that it should not be discussed below their level.

In outlining Powell's views, Butler concentrated on explaining the strategic rationale for the Base Force....

Butler informed the operations deputies that Powell expected to reduce the armed forces to 1.6 million by 1997, but he did not delineate the allocation of forces that Powell had in mind, saying that these figures were still being worked out. He emphasized that the Base Force was a floor that would not be reached until 1997 and pointed out the importance of having a plan to submit to Congress in order to deflect criticism that DoD was not responding to the changed strategic situation. But his presentation did not win over the services....

Going Public

Believing that he needed to communicate a "mark on the wall" concept in order to explain to the American people the need for continued US military engagement, Powell publicly unveiled the Base Force concept. On March 23, in a speech to the Town Hall of California in Los Angeles, he cautioned that, despite the changes in the world, the Soviet Union remained the major Eurasian military power with a nuclear arsenal that continued to threaten the US. Moreover, there were other dangers in the world. Therefore the US must remain a superpower engaged worldwide.

While it could gradually reduce the size of its armed forces, there was a "base force" below which it "dare not go."...

Meanwhile, Atwood, who chaired the DPRB, had scheduled for May a series of meetings to review the 1992-97 Program Objective Memorandums that the services were to submit to Cheney by May 1. He had asked Wolfowitz and Powell to open the DPRB sessions with presenta-

tions respectively on policy and force structure. The focus of further work on the "A View to 1994" briefing therefore became Powell's presentation to the DPRB, where he hoped to win Cheney's support for his position....

Over the months, Powell had continued his discussions with Wolfowitz. Although the undersecretary was still not as optimistic as Powell about the future course of the Soviet Union, by April he had become convinced of the magnitude of the changes there and had indicated to Powell his support for the Base Force concept....

On May 14, Wolfowitz presented his strategic overview to the DPRB. He reviewed the changes and the continuities in the strategic environment and their implications for force posture and force structure. Acknowledging the substantially reduced threat from the Soviet Union, he cautioned, however, that the future was uncertain and emphasized that his proposed approach took into account the possibility of a reversal in the strategic environment.

Powell had continued his discussions with each of the service chiefs. With the augmentation of the air leg of the triad, Welch had ceased his strong opposition to the Base Force, but in their POMs, the services had not accommodated Powell's views. He had therefore become increasingly concerned that, if DoD did not agree to his approach to reducing forces, Congress would impose reductions below a level he regarded as prudent and at a rate that would destroy the effectiveness of the all-volunteer force. Hoping to influence both the DPRB discussions and the Congressional debate, he had discussed his own views on force structure with a reporter from the *Washington Post*. A detailed account of his views that appeared in that newspaper on May 7 had disclosed his belief that a 20 to 25 percent reduction in force size and military expenditures carried out over four to five years would not endanger national security. But he had emphasized that to carry out these reductions more quickly would "break" the armed forces. He had expressed his determination to get Cheney's and the services' agreement on a minimum force needed to meet US military requirements into the next century and to win Bush's approval of this force structure.

On May 15, Powell presented his Base Force briefing

End Strength	Cold War	Base Force	2000	Base Force/2000 Difference
Army	781,000	535,500	472,026	-63,474
Navy	587,000	509,700	366,799	-142,901
Air Force	607,000	437,200	353,237	-83,963
Marines	200,000	170,600	170,313	-287
Total	2,175,000	1,653,000	1,362,375	-290,625
Element				
Army divisions	18	12	10	-2
Army reserve divisions	10	8	8	0
Air Force active wings	24	15	12.5	-2.5
Air Force reserve wings	12	11	7.5	-3.5
Navy warships	600	451	316	-135
Navy carriers	15	12	12	0
USMC active divisions	3	3	3	0
USMC reserve divisions	1	1	1	0

The Base Force provided a means to remain a superpower yet respond to pressure to reduce defense spending.

to the DPRB. He underscored that his presentation was not a POM submitted in competition with the service POMs. Nor was the Base Force an alternative to a POM. Rather, he was proposing a strategy and a force concept that prescribed the minimum force necessary for the US to remain a superpower. DoD must adopt this force structure as the floor below which the armed forces could not go and still carry out their responsibilities, and it must fight for the Base Force's acceptance.

Going further than Wolfowitz, Powell argued that the threat from the Soviet Union had disappeared. Therefore the military could not justify continuing to maintain a force structure based upon that threat. Unlike the service chiefs and the civilian leadership, who wished to proceed slowly in response to developments in Eastern Europe, he believed that the Soviet Union was undergoing a lasting structural transformation. Even though Soviet military power still posed a potential threat to the US, Soviet military policy would, in his view, be defensive and deterrent. Therefore, there was little likelihood of superpower conflict anywhere. But, as a result of the changes in the strategic environment, there would be a realignment of alliances, uncertainty, instability, and the likelihood of regional conflict. Hence, the US must remain a military superpower in order to ensure peace.

However, because of the public perception that the end of the Cold War would bring peace and increased stability, there would be unrelenting public and Congressional pressure to reduce defense spending. The Base Force provided the means for remaining a superpower while reducing forces in response to this pressure. As evidenced by Congressional proposals for greater reductions in defense funding, DoD could expect its budget to be cut faster and sooner than originally anticipated. Therefore, Powell concluded that they would have to reach the Base Force by 1994 instead of 1997 so that no service would be forced below its base. While reducing forces, they must also set priorities for investing in weapons systems and insure investment in the capabilities needed both for sustaining the Base Force and for reconstitution.

Initially, Powell believed that his presentation had not gone well. It was clear from what one participant described as the "pained look" on the faces of the service chiefs that they strongly opposed cutting forces below the level of their POMs, which were based on Cheney's guidance of a 2 percent per annum reduction in real growth in the budget over the Six Year Defense Plan. Moreover, having reluctantly—and, they hoped, temporarily—accepted the need for force cuts, they did not wish to restructure the forces that would remain. Because of their resistance, Powell did not present all the details of his force structure recommendations. With Gen. Alfred M. Gray Jr., Commandant of the Marine

Corps, taking the lead, the chiefs countered that Powell's recommendations anticipated the continuation of favorable developments. Although the Navy POM proposed an active strength of 159,000 for the Marine Corps, Gray insisted that it could not reduce its strength below 180,000. The chiefs expressed reservations about Powell's view of the future and advocated proceeding with greater caution. However, Wolfowitz, whose briefing had devoted more attention to the uncertainties of the future, had recommended essentially the same force levels—albeit a different target date. And he had shown how it would be possible, if events warranted, to reverse the process of force reductions.

In response to these initial briefings, Cheney asked for another presentation by Wolfowitz. The expanded briefing that the undersecretary and his staff prepared for Cheney incorporated several of Powell's slides. Recommending a force concept that combined Powell's Base Force and a crisis response—reconstitution strategy, the briefing argued that this force option provided the minimum force structure that the US could adopt without incurring undue risk. Wolfowitz and his staff believed, however, that reducing forces at the rate required to reach this level sooner than 1997 would damage the quality and readiness of the armed forces. Moreover, pacing reductions to reach the Base Force by 1997, rather than 1994, would, as Wolfowitz had shown earlier, allow for a reversal in the process if the strategic environment should change.

Acceptance of the Base Force

Cheney believed not only that Powell's view of the future was too optimistic but also that it did not provide sufficient justification for maintaining the recommended force levels. OSD's having provided for alternative futures gave him greater confidence that the recommended force structure was both adequate and justifiable. Under attack for presenting a budget that failed to respond to the changes that had taken place in the world, he endorsed the Base Force and the crisis response—reconstitution strategy as a package that could be used to establish and justify a floor under force cuts and show that DoD was responding to the altered strategic environment.

On June 6, Cheney for the first time publicly indicated that DoD might be willing to undertake major force reductions. He agreed to prepare for the White House—Congressional budget summit convened by Bush in May a report showing the budgetary impact of a 25 percent reduction in force structure carried out over 1991–95. The illustrative plan that Cheney submitted to the summit on June 19 provided for a force structure by the end of 1995 that was close to the Base Force. However,

The Base Force adopted by DoD was very close to Powell's February 1990 projections.

According to Cheney's notional plan, the 25 percent reduction in force structure would yield only a 10 percent reduction in DoD's budget. Moreover, Cheney cautioned that the projected reductions in force structure assumed a continued diminution in the Soviet threat.

Then, on June 26, Cheney, Powell, and Wolfowitz presented DoD's recommended strategy and force structure to Bush and his national security advisor, Lt. Gen. Brent Scowcroft (USAF, Ret.). Cheney reviewed the options developed by Wolfowitz's office, and Powell presented a briefing on the Base Force without, however, elaborating on the details of force structure. Cheney then endorsed the crisis response-reconstitution strategy and the Base Force, and Bush indicated his support for the new strategy and force structure.

On Aug. 2, at the Aspen Institute in Colorado, Bush announced the new defense strategy and military structure. Bush acknowledged that the Cold War was drawing to a close and declared that the US must reshape its defense capabilities to the changing strategic circumstances....

Over the summer, Powell had continued his efforts to win the service chiefs to the Base Force, and Robinson had worked individually with the service programmers at the two-star level to reach J-8's final force structure recommendations. Butler had then explained the recommendations to each of the service chiefs. *[The lineup of chiefs had changed during the summer. Adm. Frank B. Kelso II had become CNO, replacing Trost. Gen. Michael Dugan replaced Welch as USAF Chief of Staff.]*

Although his programmers were cooperating with J-8, Gray continued to resist reduction of the Marine Corps to the Base Force level. In private meetings with Powell, he argued that there was no justification for cutting his service since geography, not the Soviet threat, had determined its mission and hence its size. To demonstrate that the Base Force's strength of 150,000 was sufficient for the Marine Corps to carry out its role in responding to regional contingencies, the Joint Staff turned to the scenarios being developed by J-5. Despite these efforts, Gray continued to press his case. Just before the CINCs Conference opened on Aug. 20, Powell informed the Commandant that he would increase the Base Force level of the Marine Corps to the POM strength of 159,000. While this was still well below Gray's objective of 180,000, the Marine Corps was the only service to which Powell made such a concession....

Convincing the Chiefs

By the time of the CINCs Conference, it had become clear that the budget was unlikely to permit the force levels in the service POMs. Consequently, with the exception of Gray, the service chiefs were more recep-

tive to the Base Force than they previously had been. ... Powell summed up his position by warning the service chiefs that they would not get their POM forces. His own figures were below the levels of the Army, Navy, and Air Force POMs and at the level of the Marine Corps POM, and he was not optimistic about the outcome of the budget summit negotiations. He believed that, regardless of how the Persian Gulf crisis affected Cheney's thinking, Congressional participants in the negotiations would not agree to funding at the level of the service POMs....

With Powell's and Cheney's approval, J-8 during October and November worked closely with [Comptroller Sean O'Keefe's] office to refine the details of the composition of the Base Force and to be certain that its components were correctly costed. Powell then reviewed the figures with O'Keefe and made some adjustments in composition. Toward the end of November, J-8 presented a briefing to Cheney comparing the funding needed for the Base Force and for various alternatives. ... Cheney decided that he would stand by his endorsement of the Base Force.

Meanwhile, Vuono had accepted the Base Force. After the CINCs Conference, Powell and he had continued their discussions. In response to the Army Chief of Staff's arguments on behalf of the Army PGM figure of 14 active divisions, Powell countered that budgetary constraints might require reduction to 10. In late autumn, Vuono agreed to the Base Force size of 12. Gray, however, continued to resist reduction of the Marine Corps.

At a meeting of DoD's Executive Committee on Nov. 29, Cheney directed the services to implement the Base Force. They were then given an opportunity to respond to his guidance, and their appeals resulted in some adjustments. The force projections submitted with DoD's 1992-93 budget request in December and forwarded by Bush to Congress in February 1991 reflected these adjustments. Aiming to approximate the Base Force by the end of 1995, DoD projected for that date an active strength of 535,500 for the Army; 509,700 for the Navy; 437,200 for the Air Force; and 170,600 for the Marine Corps, for a total active strength of 1,653,000. Reserve strength would be 906,000.

There would be 12 active and six reserve (plus two cadre) Army divisions; 15 active and 11 reserve tactical fighter wings; and 451 ships, including 12 carriers. DoD anticipated that, by the end of 1997, additional reductions in active strength, principally in the Marine Corps and the Navy, would yield a Base Force with an active strength of 1,633,200, while there would be a slight drop in reserve strength to 904,300. Thus, the Base Force adopted by DoD was very close to Powell's February 1990 projections of an active strength of 1.6 million and a reserve strength of 898,000.... ■

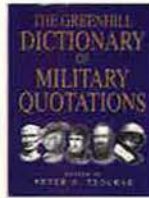
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Compiled by Chanel Sartor, Editorial Associate

A Complete Guide to All United States Military Medals, 1939 to Present. Col. Frank Foster, USA (Ret.), and Lawrence Borts. Stackpole Books, 5067 Ritter Rd., Mechanicsburg, PA 17055-6921 (800-732-3669). 143 pages. \$24.95.



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Prevent War: A New Strategy for America. Maj. Gen. Jack Kidd, USAF (Ret.). BookMasters, Inc., 30 Amberwood Pkwy., Ashland, OH 44805 (800-247-6553). 213 pages. \$12.95.

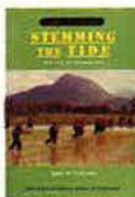
Bloody Ridge: The Battle that Saved Guadalcanal. Michael S. Smith. Presidio Press, 505 B San Marin Dr., Ste. 160, Novato, CA 94945-1340 (415-898-1081). 264 pages. \$27.95.



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He graduated from West Point with three things that stuck: a nickname, a desire to fly, and a reputation for honesty.

Spaatz

By Richard Davis

CARL A. Spaatz, born in Boyertown, Pa., on June 28, 1891, became the first Chief of Staff of the United States Air Force in September 1947. For two years after the end of World War II, he had led the fight to separate the Army Air Forces from the Army and thereby create an independent air service.

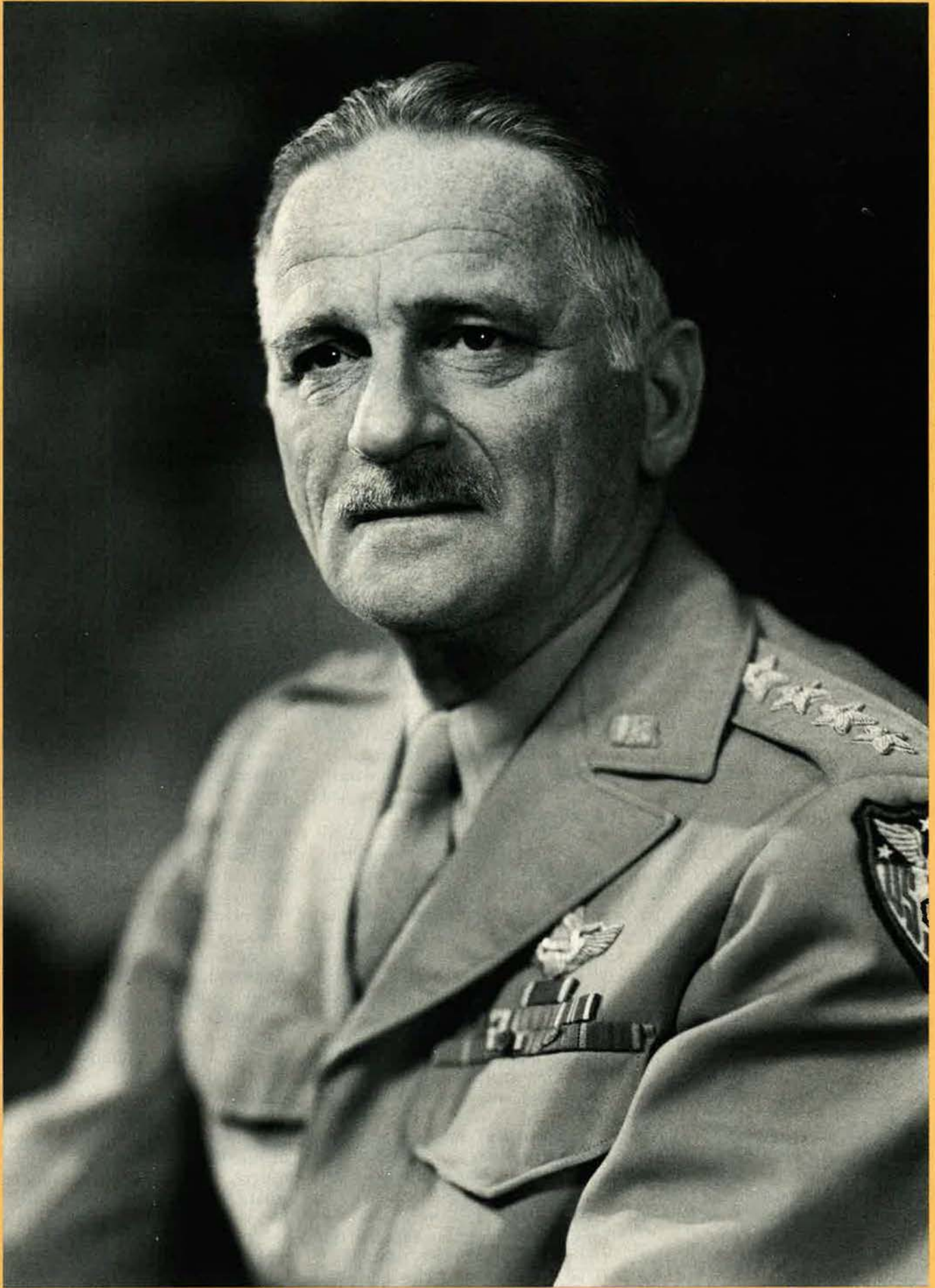
His success in this endeavor was typical of his career: Someone would give Spaatz a tough, thankless job to do, and then he would quietly and relentlessly go about getting it done.

Spaatz was not flashy. Today, few Americans outside the service he helped found would even remember him. Fewer still can correctly pronounce his name, despite his addition of the extra "a" in 1937. (The right way is "spots," as on a leopard, not "spats" as in old-fashioned footwear.)

Spaatz showed his determination early in life. When he was a teenager, his father suffered burns in a fire and could not work at the family



After graduating from West Point, Spaatz served with the infantry in Hawaii. Then he reported for flight training at San Diego, where he posed with this Martin trainer aircraft.





In 1934, Capt. Ross Hoyt (left) and Maj. Carl Spaatz look over Army Air Corps airmail routes. President Roosevelt had canceled domestic airmail contracts because of fraud and gave the AAC the job of carrying the airmail.

newspaper. Spaatz for several months ran the enterprise, doing everything from selling advertising to setting type by hand.

In 1910, the young man entered the United States Military Academy at West Point. His four years there produced a permanent distaste for professional military education. For the rest of his career, Spaatz attended service schools only when unavoidable or as a last resort. His record of demerits at West Point showed his particular antipathy for “bull” and spit and polish. He never earned a cadet rank and remained a “clean-sleeve” throughout his four years.

Spaatz coasted through West Point on wit rather than scholarship, finishing 57th out of 107 class members in academics and 95th in conduct. He excelled at the things that really interested him—bridge, poker, and the guitar. Three things that he acquired at the academy stuck to him for the rest of his life—a nickname, a desire to fly, and a reputation for honesty.

Three Lasting Items

Spaatz had the kind of pale, freckled complexion characteristic of most redheads. It so happened that he shared the trait with a certain upper-classman, Francis J. Toohey. In short order, his classmates stopped using the name “Carl.” Thereafter, he was known as “Tooey” Spaatz.

On May 29, 1910, early aviator Glenn Curtiss flew over West Point

on a trip from New York City to Albany. Spaatz watched him go by and then and there decided that he, too, would learn to fly. And he did.

As for honesty, Spaatz demonstrated it at West Point in a typically damn-the-consequences way. Upon returning to post after an evening out, Spaatz was asked whether he had just come from a specific off-limits drinking establishment. He promptly replied, Yes. However, no one else had seen him there, and, after some scratching of heads, an honor committee refused to punish him. The panel ruled that he had simply told the truth.

After West Point, Spaatz went directly to the infantry. Rules required that he spend one year in a regular branch of the Army before transferring to his chosen specialist branch, the Signal Corps Aviation Section. He wound up in Hawaii, serving as a white officer in a company of the 25th Infantry Regiment, an all-black unit. Spaatz recalled that he “enjoyed that year of service with that outfit as much as any I ever had,” but 2nd Lt. Spaatz made no lasting mark on the 25th, and he was eager to start flying.

At about the same time, he met Ruth Harrison, the 17-year-old daughter of a cavalry officer. The two were married in July 1917.

Spaatz, when his year with the infantry was over, reported for flight training at the North Island field in San Diego. The date was

Nov. 25, 1915. His training consisted of two to five hours of dual instruction, combined with lectures on flight safety and engine maintenance. On his first solo flight, his engine quit, but he managed to land safely.

Spaatz’s first actual flying assignment came in May 1916. He flew as part of the 1st Aero Squadron under Capt. Benjamin D. Foulois. The squadron was attached to a force under Brig. Gen. John J. Pershing, who had embarked on his famous Punitive Expedition into Mexico, an action provoked by the cross-border raids of Mexican guerrilla Francisco “Pancho” Villa. Pershing never caught Villa, and the US force returned within its borders after 11 months in Mexico.

Off to France

In June 1917, Spaatz was promoted to major. (His next promotion would not come for nearly 18 years.) The United States had only a month earlier entered World War I on the side of the Allies, and Spaatz was one of only 65 flying officers in the Army, so there never was any doubt that he would be shipped over to Europe. He arrived in France in September 1917, and by November, he had assumed command of the 3rd Aviation Instruction Center, Issoudun, France. (Spaatz commanded the unit until the arrival of Lt. Col. Walter G. Kilner, then became the officer in charge of training. He took command again in May 1918.) The US had no modern aircraft of its own, and this center trained all US fighter pilots in the use of French fighters.

Spaatz arrived at Issoudun only to find no good roads, a handful of shoddily constructed buildings, a sea of mud, and a veritable mob of dispirited trainees and instructors. When he left in September 1918, Issoudun had become the largest training field in the world. Under Spaatz, Issoudun graduated 766 fighter pilots and suffered 56 training fatalities.

Spaatz gained invaluable experience as a trainer and administrator of a fledgling air force, but like any officer, he wanted to fight at the front. Brig. Gen. William “Billy” Mitchell was impressed with Spaatz’s record and wanted to send him back to the US to help upgrade the training effort. Spaatz, however, resisted

and managed to get two weeks at the front.

He reported to the 2nd Pursuit Group, which had entered combat five weeks earlier, and promptly won the respect of his fellow pilots, mostly first and second lieutenants, by sticking his major's insignia in his pocket and becoming one of them.

He shot down his first German airplane on Sept. 15.

For actions 11 days later, he was awarded the Distinguished Service Cross and made the *New York Times*. The headline read, "Flying Officer Shoots Down Three Planes—Two German and His Own." When Ruth Spaatz saw the headline she said, "That has to be Tooley!" He had concentrated so fiercely on damaging



To publicize the potential of air-to-air refueling, this crew kept the Fokker C-2A Question Mark (in photo at top) flying over California for more than 150 hours. They were, from left, SSgt. Roy Hooe, Lt. Elwood Quesada, Lt. Harry Halverson, Capt. Ira Eaker, and Maj. Carl Spaatz.

the enemy that he had neglected to check his own fuel. He ran out of gas and crashed in no-man's-land. Fortunately for Spaatz, French "poilu" rather than German grenadiers won the race to his airplane.

By that time, Mitchell had had enough. He packed Spaatz off to the US, telling him, "I will be glad to have you command a group at any time under my command." Spaatz arrived home on Oct. 13, 1918, and traveled to Washington, where he first met Col. Henry H. "Hap" Arnold. The two would become fast friends, with great benefit to each of their subsequent careers. At the war's end

Spaatz was in the midst of an inspection trip of training bases in the US. He had finished the war as a recognized expert in training and pursuit aviation.

Spaatz, at that time, believed that the Air Service deserved autonomy within the Army. By 1924, however, he had come around to adopt the more radical belief of his mentor, Mitchell, that the country required an Air Force that would be separate from, and coequal with, the Army and Navy.

When Mitchell was tried at court-martial in late October and November 1925, Spaatz testified for the

defense. He forthrightly told the highest ranking court-martial board in US history that the Air Service had only 59 modern airplanes and that "by dragging all administrative officers from their desks," the service might field 15 pursuit aircraft.

When asked the key question—Was the War Department slowing the development of airpower?—he quickly answered Yes, beating the prosecutor's objection. Spaatz was warned that his testimony might damage his career, but he refused to trim to the prevailing wind. He noted, perhaps naively, "They can't do anything to you when you're under oath and tell them the answers to their questions."

Question Mark

In late 1928, the Army Air Corps needed publicity and to demonstrate the potential of air-to-air refueling. Spaatz's friend Capt. Ira C. Eaker came up with the idea of carrying out a world record endurance flight. Spaatz got the job. During the period Jan. 1–7, 1929, Spaatz, Eaker, Lt. Elwood R. Quesada, Lt. Harry A. Halverson, and SSgt. Roy W. Hooe kept *Question Mark* aloft over southern California for 11,000 miles and a then world record 150 hours, 40 minutes, and 15 seconds.

Early in the mission, an accident caused Spaatz to be drenched with high-octane aviation gasoline. The crew quickly took off his clothes and rubbed him down with zinc oxide to prevent serious burns and injury. He instructed them, "If I'm

burned and have to bail out, you keep this plane in the air." On the next refueling, Spaatz manned his post wearing only skin cream, goggles, a parachute, and a grin.

Spaatz became a lieutenant colonel in 1935, and with the promotion came orders to attend the Army Command and General Staff School, which Spaatz thankfully observed had just shortened its course from two years to one. He went only to get away from Washington and made little attempt to conceal his dislike for a curriculum that lacked an appreciation of modern airpower. He graduated 94th of 121, with an unfavorable recommendation for further staff training.

He went from Leavenworth to Langley Field, Va., home of the 2nd Wing. He stayed until November 1938, when then-Major General Arnold called him to Washington to help plan the air portion of the rearmament program just instituted by President Roosevelt in recognition of war looming in Europe and the Far East. As head of the Air Corps plans section, Spaatz helped to implement an ever-growing program. Pilot training alone increased a hundredfold.

Strategic Bombing

From late May to early September 1940, Spaatz served in Great Britain as an official Air Corps observer. During the dark days of the fall of

France and the Battle of Britain, he remained confident the Royal Air Force would win out. He shared that view with William J. Donovan, Roosevelt's special envoy. Donovan, in turn, convinced the President to continue supplying aid. Spaatz left England, having made many friends within the RAF and still convinced the Air Corps was on track in backing the development of strategic bombardment. In June 1941, when Gen. George C. Marshall, Army Chief of Staff, authorized the creation of the Army Air Forces, Chief of the AAF

Arnold named Spaatz the first chief of the Air Staff.

After the attack on Pearl Harbor brought the US into World War II, Arnold assigned Spaatz to command Eighth Air Force, which was to spearhead the American strategic bombing campaign against Germany from bases in England. Assembling units, completing their training, and taking them across the Atlantic to newly built stations took time. Spaatz, now a major general, could not launch his first heavy bomber raid until Aug. 17, 1942. He had to withstand pres-



In World War II, Spaatz began a bombing campaign against Germany and commanded anti-air and interdiction operations in Tunisia. He then directed strategic and tactical air forces to support the Allied invasion of France.



Spaatz steps from a B-17 on an inspection in England in spring 1944. In preparation for the Normandy invasion, he directed bombing of Germany's synthetic oil industry as well as rail targets and V-1 sites.

sure from Washington to begin operations immediately and from London to defend British airspace and to switch to night bombing operations. By October 1942 the Eighth had dispatched 1,000 bomber sorties. Then grand strategy intervened.

On Nov. 8, 1942, the Anglo-American Allies began their invasion of French North Africa. Gen. Dwight D. Eisenhower, the invasion commander, soon realized that he needed closer coordination between his air and ground units. Spaatz got the job and eventually a third star. First as advisor, next as coordinator, and last as Ike's overall air commander, he smoothed tangled air-ground relations, integrated the AAF and RAF operations, and conducted a devastating anti-air and interdiction campaign against the Axis in Tunisia.

After the Axis surrender in Africa

in May 1943, Spaatz's Northwest African Air Forces paved the way for Allied invasions on Sicily and Italy. The bombing of Rome on July 19, 1943, caused the fall of dictator Benito Mussolini and his replacement by an Italian government anxious for peace.

Spaatz convinced the Combined Chiefs of Staff of the need for establishing a second US strategic air force in Europe. Fifteenth Air Force, established in November 1943 and based in Italy, opened a new air front forcing Germany to spread its defenses and giving the Allies the capability of attacking a new range of targets, especially the Rumanian oil fields, which supplied much of the Nazis' fuel.

Spaatz in December 1943 started the most crucial phase of his wartime service. At Arnold's instigation, Eaker moved from Eighth Air Force to the Mediterranean and Spaatz transferred to England, where he had operational control of the two largest strategic air forces ever fielded—Eighth and Fifteenth—and administrative control, including the power of promotion, over the world's largest tactical air force, Ninth Air Force, which was based in England with the mission of supporting the cross-channel invasion into northern France.

Spaatz, to meet this challenge, organized a headquarters based on the deputy system rather than the traditional G sections. He had two deputies, one for operations and one for logistics. His was the first modern headquarters to place the two on equal footing. He not only gave his deputies wide responsibility, he gave them the authority to go with it.

Target: France

Everything pointed toward the invasion of Europe on the French coast. A key question confronted Spaatz and Eisenhower, the man entrusted with command of the invasion by Roosevelt and Churchill—What was the best use of strategic airpower in helping the invasion?

Strategic air's primary role was to ensure Allied air supremacy over the beachhead and inland. Only the heavy bombers and their escort fighters had the range and capability to carry the fight into Germany, for by this stage in the war the Luftwaffe had ceased stationing strong forces



As commander of US Strategic Air Forces in Europe, Spaatz speaks to Eighth Air Force officers. At his side are Lt. Gen. Jimmy Doolittle, Eighth Air Force commander, and Maj. Gen. William Kepner, 2nd Bomb Division commander.

in forward bases in France and reserved its strength for defense of the cities and industry of the Fatherland.

Spaatz and the new commander of Eighth Air Force, Lt. Gen. Jimmy Doolittle, began to go after the Luftwaffe almost as soon as they arrived. In late January 1944, with Spaatz's permission, Doolittle radically changed the role of the fighter escorts. He told them not to stay glued to their bombers but to hunt down German fighters from the tops of the clouds to the tops of the trees.

Both American airmen knew that, to kill the Luftwaffe, they needed to destroy its trained pilots, the men who provided its fighting leadership. This could only be done by drawing them into a grinding battle of attrition. Spaatz, one of the greatest believers in the information supplied by Ultra (the Anglo-American breaking of high-level German codes), had learned that the Luftwaffe had begun 1944 with a severe shortage of fighter pilots, and he knew that the American pilot replacement system could sustain heavy losses. In the cold logic of war the Germans would have to replace an expert with 20 or more kills with a kid with less than 100 hours' flight time, while Spaatz could replace an American of 250 hours of flight training with an equally skilled flier.

The battle raged through May 1944. Spaatz drove his men and machines relentlessly. When opera-

tions in "Big Week," Feb. 20–25, damaged much of the German aircraft industry, he sent his forces straight at Berlin, knowing that the Luftwaffe would have to fight. Hermann Goering, Luftwaffe commander in chief, admitted later that he knew the Germans had lost the war when he saw Mustangs over the capital.

The Americans won the battle decisively. Spaatz observed, "The concentrated attacks on the Luftwaffe production and product paid the dividends we had always envisioned, the dividend being beyond expectation. During the entire first day of the invasion, enemy opposition in the air, fighter or bomber, was next to nil."

Oil or Railroads?

However, strategic airpower also had to make a direct contribution to clearing the invasion's path. All agreed it would have to expend bombs on German coastal fortifications, but a great controversy arose over the targeting of the remainder of the strategic effort. In a dispute that crisscrossed service and national lines, Spaatz recommended the bombing and destruction of the German synthetic oil industry, which should halt the German war machine in its tracks. His opponents advocated a large-scale attritional attack on the French and Belgian rail network between the German border and the invasion site, which would hamstring Ger-



After Germany's surrender, Spaatz went to the Pacific Theater. He supervised the final strategic bombing of Japan, including the atomic bombing of Hiroshima and Nagasaki. Here, he confers after the war with Gen. George Kenney in Japan.

man logistics and slow reinforcements. On March 25, Eisenhower chose the rail attack plan.

In public, Spaatz loyally accepted the verdict, but he quietly conducted a behind the scenes campaign to further the oil plan. On April 5, the first time since August 1943, Fifteenth began operations against Ploesti, the center of Rumanian oil production. Instead of hitting the town's rail marshaling yard, the bombers "missed" and hit the adjacent refineries—a few days later they returned and "missed" again. Ploesti oil output fell more than 40 percent, making the Nazis more reliant on synthetic production.

By the middle of April 1944 the Eighth had yet to bomb any of its rail targets. At the same time the Luftwaffe failed to contest two large raids over central Germany, leading Spaatz to fear they had begun to conserve their forces for the invasion. In addition, the British chose that moment to insist that Spaatz divert much of his force to bombing launching sites on the French coast for the V-1 jet propelled bomb. Spaatz knew that the Germans would not waste aircraft defending French targets. He went to Eisenhower and, after a session both men kept confidential for the rest of their lives, they hammered out an agreement. Spaatz got permission for two attacks on synthetic oil before the invasion—to test if the Germans would fly to defend it. The next day Eighth bombed V-1

sites and a day after it hit the largest marshaling yard in Europe—Hamm, the gateway to France. In the face of determined aerial resistance, the AAF hit synthetic oil on May 12 and 28. Ultra revealed it struck the enemy in the solar plexus. Consequently, Eisenhower made oil strategic airpower's top priority for the rest of the war.

During the summer of 1944, Spaatz continued the strategic offensive against Germany and at the same time cooperated with the land forces. Three times he sent hundreds of heavy bombers to attack German front lines just prior to ground attacks. Regrettably, the attacks inflicted friendly casualties, but the July 25 Operation Cobra strike paved the way for the decisive breakout from the beachhead. As American ground forces conducted their lightning drive through France, Spaatz converted two groups of B-24s to aerial freighters to haul gas and other crucial supplies for advancing armored units.

Once the Allies reached the German border, the last phase began. Spaatz agreed to make the transportation system second priority after oil. These two target systems received the bulk of the remaining bombing. Although Spaatz had to hand over one-third of the Eighth to the tactical air forces to help fight the Battle of the Bulge, the attacks on oil and transportation proved decisive. Lack of oil grounded the Luftwaffe and stopped the Panzers.

Wrecking the rail system halted the distribution of coal and forced an embargo on the shipment of manufacturer's sub-assemblies. By February 1945, Germany was finished as an industrial power. In March 1945, Spaatz became a full general. On May 7, 1945, he attended the surrender of Germany to the western Allies. The next day, as the official American representative, he attended the German capitulation to the Soviets in Berlin. (May 8 is officially noted as Victory in Europe day.) He noted in a letter, "Germany has been more completely destroyed than any nation since Carthage."

To the Pacific

Spaatz had not completed his wartime service. Arnold wanted the AAF in on the kill for Japan and placed him in overall command of Twentieth Air Force, in Guam, and Eighth, in the process of moving to Okinawa. On July 29, 1945, after a short rest with his family, he arrived on Guam. Upon receiving authorization from President Truman and Army Chief of Staff Marshall, he ordered the atomic bombing of Hiroshima and Nagasaki. Three weeks later, Sept. 2, he stood on the deck of USS *Missouri*, witnessing the final Axis surrender—he was the only American general to attend the three major ceremonies ending the war.

The shooting had stopped, but Spaatz immediately found himself in the midst of the most bruising bureaucratic fight in American history—the unification of the armed services under a single Department of Defense. Arnold had made it possible by gaining Marshall's agreement to a separate air force, but Arnold's bad heart forced him from active duty by November 1945. Someone else would have to do the hard work of fighting it out with the Navy, creating a new service, and presiding over the destruction of the largest aerial armada ever created. Spaatz got the job as the second and last Commanding General of the Army Air Forces. Fortunately for the air service, Spaatz had an excellent and tested working relationship with the new Army Chief of Staff—Eisenhower. During the war at off-duty parties, Eisenhower would sing and Spaatz would accompany him on the guitar. They formed an effective, although not uniformly success-

ful, tag team against the Navy. In March 1946, in the midst of the struggle, Spaatz changed the basic structure of the AAF by creating major commands based on function. The three new operational commands were Air Defense Command, Strategic Air Command, and Tactical Air Command, which formed the combat backbone of USAF for more than 40 years. The formation of a tactical command reassured the Army that USAF would meet its airlift and close air support needs. It also dampened separate Army campaigning for its own air arm.

With the creation of the US Air Force in September 1947, Spaatz made two further contributions to his service. First, he created the Air Staff. As befitted a man who loathed paperwork, the organization chart for his initial staff was the simplest



The President signs a proclamation for Air Force Day—Aug. 1, 1946—with Spaatz, Commanding General of the AAF, and Lt. Gen. Ira Eaker, AAF deputy commanding general, observing. Spaatz had just changed the basic structure of the AAF and was leading the drive for an independent air arm.



During retirement, Spaatz served a term as Air Force Association Chairman of the Board. Here, he reads an AFA Citation of Honor that was presented to retired Army Brig. Gen. Thomas Phillips (right), a military analyst for the St. Louis Post-Dispatch.

in the history of the institution. Perhaps that organization's subsequent expansion reflected the growing complexity of the modern military, perhaps not.

Spaatz's Air Staff reflected his wartime experience with the deputy system. It granted responsibility and

authority to four deputy chiefs of staff: operations, materiel, and to meet the needs of a headquarters of an entire service, personnel and administration, and an air comptroller. Secondly, in March 1948, he met with the other service chiefs and the Secretary of Defense at Key West,

Fla., where, after a good deal of head butting, they reached an agreement defining the roles and missions of each service. This confirmed USAF's primary roles in continental air defense, providing tactical support to the Army, and in conducting strategic air warfare.

A few days later, worn out by almost nine years of unremitting labor, Spaatz retired to enjoy his family and grandchildren. (Spaatz's official retirement date was June 30, 1948.) In the years 1950–51, Spaatz served one term as Air Force Association Chairman of the Board. He worked as a columnist until 1961 and at age 70 retired for good. He died from complications of a stroke on July 14, 1974, and is buried at the Air Force Academy, Colorado Springs, Colo.—whose site he helped to select.

Spaatz stands in the front rank of airpower leaders. He was a man who, when he spoke at all, told the unvarnished truth, often to superiors. He hated paperwork and disliked professional military education. He just got things done.

Eisenhower gave equal billing to Spaatz and Gen. Omar Bradley, calling them the two officers most responsible for victory in Europe. Ike perhaps best summed up the essence of Tooeey Spaatz: "Experienced and able air leader; loyal and cooperative; modest and selfless; always reliable." ■

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Robert Soubiran was attracted to aviation, adventure, and the camera.

The Lafayette Escadrille

Text by Tamar A. Mehuron, Associate Editor

Long before the US entered World War I, pro-France sentiment and lust for adventure caused many American volunteers to join French forces on the Western Front. This was especially true in the air. In April 1916, American pilots serving in the French army were gathered together to form a separate squadron—the Escadrille Americaine, which became the Lafayette Escadrille on Dec. 6, 1916.

Robert Soubiran, a French-born American citizen, served with the escadrille. He contributed not only his skills as an aviator but also his talent as a photographer, capturing on film some of the men, aircraft, and experiences of one of history's most famous military outfits.

We wish to thank Soubiran's daughters, Elizabeth Soubiran Lancer and Jackie Soubiran Rogers, for information about their father's work. The photos are from the Soubiran collection at the National Archives and Records Administration.

Below, Soubiran's camera captured the look of hangars at the Ham aerodrome in 1917. Outside is one of the squadron's Nieuports. Inside is a Spad.





Above, Sgt. Robert Soubiran poses with his Nieuport at the Cachy Aerodrome in 1916. Members of the escadrille adopted the Indian-head insignia as a symbol of the American fighting spirit. Soubiran himself was awarded the French Legion of Honor and the Croix de Guerre and later on commanded the US 103rd Pursuit Squadron, which absorbed many members of the Lafayette Escadrille after the US entered the war.

At left, four escadrille members plan a mission. They are (l-r) Walter Lovell, Edmond Genet, Raoul Lufbery, and James McConnell. In its nearly 23-month existence, the French-commanded squadron flew in combat over the length and breadth of the front. Its American pilots generated more than 3,000 combat sorties and are credited with 39 confirmed victories.

The squadron had a little bit of everything, including two lion cub mascots. This is Soda. (The other, of course, was Whiskey.) When members transferred to US units in February 1918, the lions were packed off to the zoo. Left to right: Sgt. Bert Hall, Lt. William Thaw, Adj. Dudley Hill, Sgt. Kenneth Marr, Sgt. David Peterson, Lufbery, Sgt. Kiffin Rockwell, Sgt. Ray Bridgman, and an unidentified Frenchman. (The Americans used French ranks, which included adjutant, a rank above sergeant.)



Funerals were a reminder, if any were needed, of the dangers faced in battle. Here, an American flag is draped over the coffin of Edmond Genet, killed in action April 16, 1917. Many of the unit's members are buried at the Lafayette Escadrille Memorial outside of Paris.

In this 1916 photo, Sgt. Frederick Prince Jr. stands beside his Baby Scout Nieuport. Note the aircraft is equipped with racks for balloon-straing rockets.

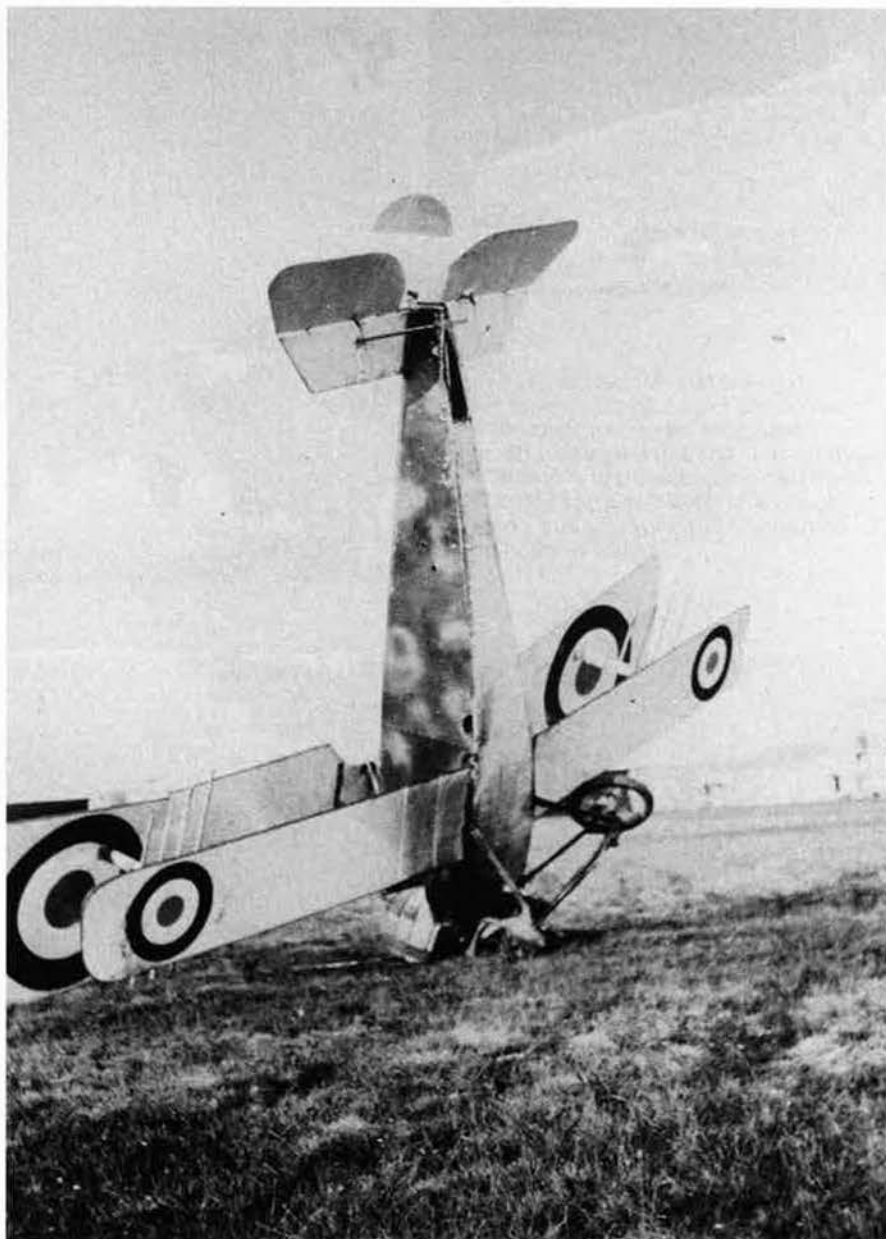




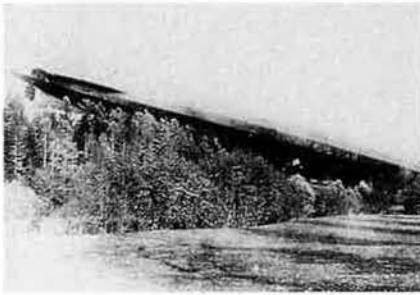
A Maurice Farman aircraft flies above the clouds.

As shown at right, crashes sometimes left aircraft in odd positions, as is the case with this Nieuport's nose-first attitude.

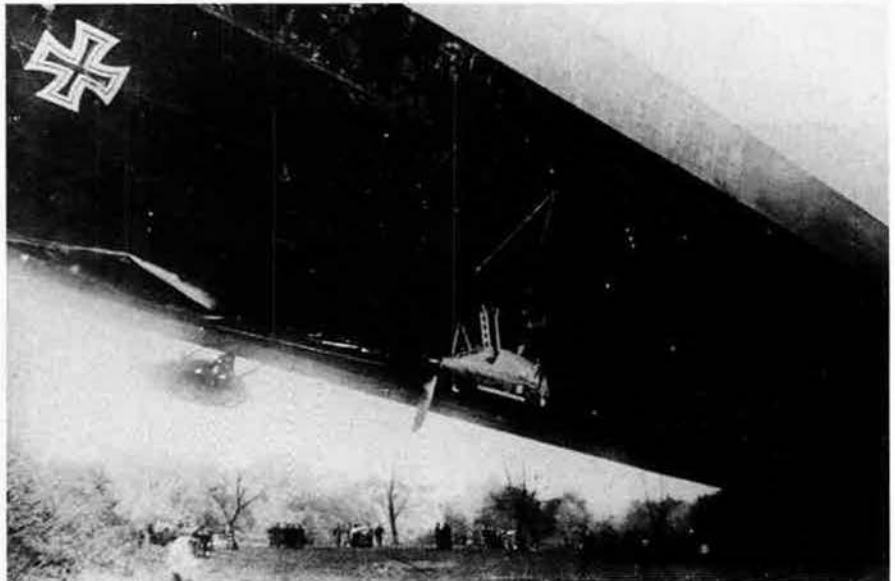
The Spad biplane below suffered an engine failure and flew headlong into a barracks.



Though this Morane aircraft (in photo above) suffered massive damage, its pilot walked away from the crash unharmed.



High-flying German zeppelins terrorized cities. In these photos, Soubiran records images of a zeppelin that has been brought down and rests precariously in a stand of trees. The photo at right offers a clear view of its engines and some sense of its size.



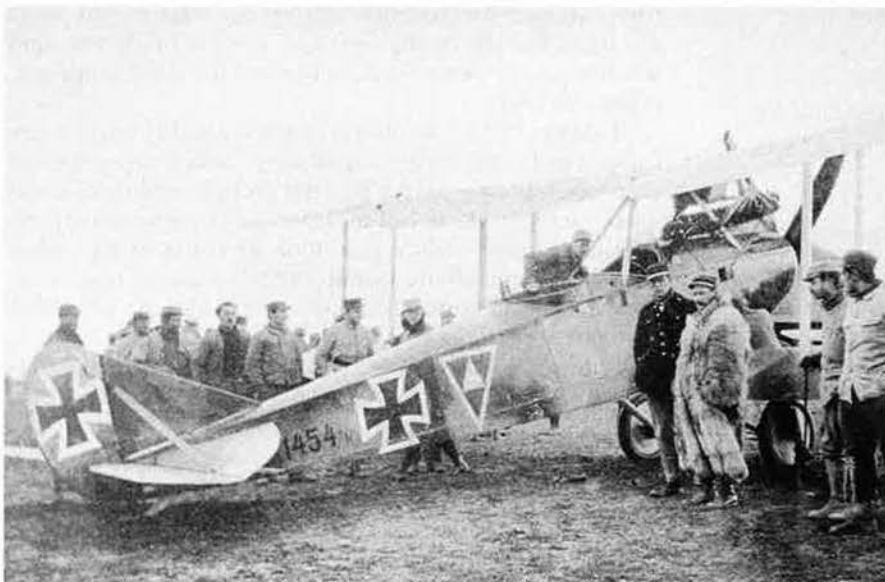
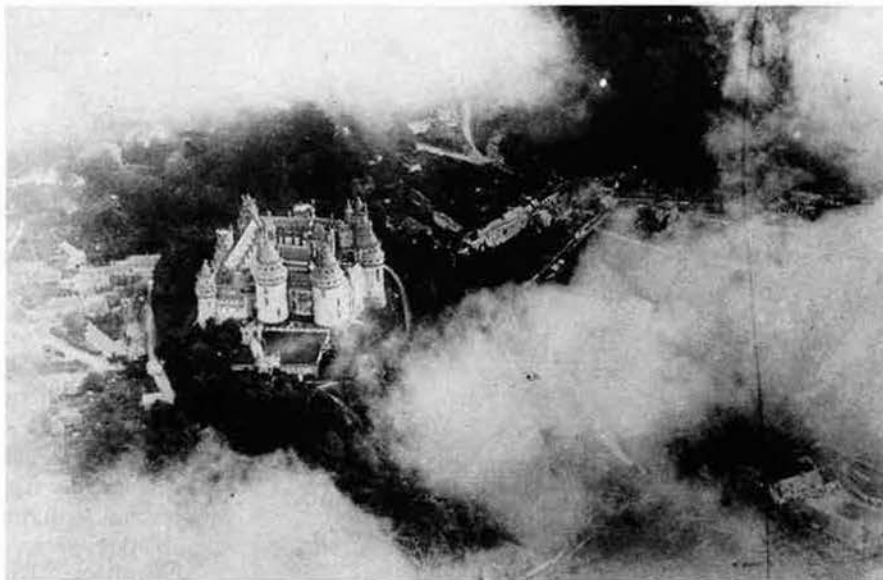
Gas! In this rare aerial view of an actual gas attack, lethal agent sweeps over the Western Front. Mustard, chlorine, and other poisonous gases were among the most horrific weapons of the war, though notoriously unreliable. In this photo, France has launched an attack against German positions.

This sugar refinery at Ham was destroyed by Imperial German forces retreating in the face of a combined French and British offensive in the winter of 1917.



Even amid the general devastation of modern war, Soubiran found grace and beauty. He snapped a postcard-perfect photo (right) of a castle during a brief parting of clouds.

In the photo below, Allied troops surround and inspect a German Rumpler, which was forced down and captured while on a 1917 reconnaissance mission.



A Nieuport, a graceful but nimble aircraft, is shown in flight over the front, below.



This Nieuport flown by Sgt. Andrew Campbell (second from right) lost its lower left wing at 3,000 feet and landed in a beet field. With Campbell are (l-r) Robert Soubiran, Sgt. Robert Rockwell, an unidentified man, Capt. Georges Thenault (French), and William Thaw. ■



The Chiefs Speak Out

The US military chiefs offered sobering testimony on their most recent trip to Capitol Hill. The Chairman of the Joint Chiefs of Staff, Gen. Henry H. Shelton, and the four service chiefs appeared Sept. 27 at separate sessions of the Senate and House Armed Services Committees.

Their testimony indicated that service budgets, taken together, are underfunded by \$48 billion to \$58 billion per year. Shortages reported by the Air Force accounted for \$20 billion to \$30 billion of the total.

The chiefs also agreed that any attempt to carry out the nation's two-war military strategy would be a "high" risk proposition.

What follows are excerpts of comments by Shelton; Gen. Michael E. Ryan, USAF Chief of Staff; Gen. Eric K. Shinseki, Army Chief of Staff; Adm. Vernon E. Clark, Chief of Naval Operations; and Gen. James L. Jones Jr., Commandant, US Marine Corps.

Senate Armed Services Committee

Shelton: "[P]rojected procurement in Fiscal Year 2000 and beyond ... remains at \$60 billion [per year] across the five-year defense plan. ... I do not have the specific dollar figure today, ... [b]ut one thing I think is obvious, and that is that \$60 billion will not be enough to get the job done, given our current strategy and force structure."

Shelton: "There is no doubt in my mind that they can meet that challenge to fight the two Major Theater Wars [in close succession]. However, as I have testified before—in fact, consistently during my tenure—the risks are up. The risk in the first one is now moderate; and when we try to swing forces and carry out the second one, it goes to high."

Shelton: "[O]ur front-line, first-to-deploy units ... are trained and ready to go. ... However, when you go below that, when you get down [to] the second- and third-level units, so to speak, if you look at combat service support, combat support, when you look at some of the other things that contribute to our overall state of readiness, such as en route infrastructure or our strategic lift, there are concerns in many of these areas."

Ryan: "[T]he average age of our forces is accelerating. ... If we had the increases, we could start looking at recapitalizing things like our tanker fleet, which is today 38 years old. ... [F]or us, trying to shore up the near-term readiness has not allowed us to invest in those types of systems for the future."

Ryan: "[T]here are lots of demands for the kinds of things that we've done over the past 10 years. ... But there are also the occasions when a major conflict occurs, ... and we have to make sure that our first-to-engage forces, the kick-down-the-door-forces kinds of folks, are absolutely on the top of their game. That requires an investment in that kick-down-the-door force."

Clark: "We are in a Catch-22 [situation]. If we spend more money on readiness, it takes away from modernization. And so now, when you look at the [procurement] bow wave and what gets pushed out there, it is very, very sobering."

Shinseki: "We do have an end strength problem, and as I indicated in my opening statement, we're in the final stages of analyzing exactly what the numbers are."

Jones: "Earlier this year, ... I identified an approximately \$1.5 billion requirement for unfunded priorities for your Marine Corps. ... I believe that \$1.5 billion still accurately portrays our highest priority unfunded requirements."

Shelton: "I would not recommend that we change that [US national security strategy] standard. ... I think the two-MTW capability—to [be able to] go in two different directions at one time, is one of the things that defines us as a global power."

Service leaders outlined budget shortages and said a two-war military strategy is now “high” risk.

House Armed Services Committee

Shelton: “[O]ur airborne tanker fleet, our strategic airlift fleet, our intelligence, surveillance, and reconnaissance aircraft ... provide critical capabilities to our warfighting forces, as do the training bases ... and combat service support units. These are not as ready and are, in some cases, suffering the consequences of resources that had been redirected to sustain the near-term readiness of the first-to-fight forces.”

Shelton: “Since the 1997 [Quadrennial Defense Review], ... \$153 billion in real dollars has been added to the QDR baseline. ... Most of the increase, you’ll note, went toward our manpower and our operations and maintenance accounts, which directly impact current readiness.”

Shelton: “We collectively are ... robbing Peter to pay Paul, or in this case, robbing modernization or long-term readiness to pay for current readiness.”

Shelton: “My message to you today is that we must accelerate the pace of replacing our rapidly deteriorating ships, aircraft, weapons, and other essential military equipment.”

Shinseki: “Indications are we have an end strength problem. We need more people. Our soldiers believe that the Army is too small for the missions it’s asked to perform and under-resourced for the operational tempo it executes.”

Clark: “Our shipbuilding rate is inadequate to recapitalize the fleet and to sustain ... a 300-ship Navy. We are procuring desperately needed new combat aircraft but not at the rate that is required to sustain the force required for the future.”

Ryan: “I must tell you that the near-term readiness of the United States Air Force has not turned around. At best, it has leveled off. Combat unit readiness has dropped well below 20 percent, and our mission capability rates on our aircraft are down more than 10 [percentage points] over the last decade.”

Ryan: “The average ... United States Air Force aircraft is 22 years old today, and in 15 years it will be nearly 30 years old, even if we execute every modernization program we currently have on the books. We have never dealt with a force this old, and it is taking inordi-



nate time and work and money to keep the force airworthy and ready.”

Ryan: “We’re buying about one-third of the aircraft needed to stop the force aging, and we are on a 250-year replacement cycle for our infrastructure, where our people work and live.”

Shelton: “Obviously, it [military procurement] is going to take a lot more than \$60 billion [per year] in the future.”

Ryan: “[T]he kind of air and space recapitalization [increase] that we need ... to keep the current force structure at an average age that allows it to be viable [is] somewhere between \$10 billion and \$11 billion [per year]. But that doesn’t count what we need to do with our physical plant, and reinvestment in our people, and some of our near-term readiness.”

Jones: “Sir, the Marine Corps share of the [DoD procurement budget] in ’01-’02 will not modernize the Marine Corps. To modernize we need \$1.5 billion per year above current plans, for about seven to nine years.”

Ryan: “Clearly, ... the lift requirements for the future will be greater than they are today. ... [The question] is just how much bigger should it be? Once that decision of the requirement is made, then we’re going to have to look at our different systems and see how they meet that requirement, and what can be done to make sure that we have the lift we need to execute this two Major Theater War strategy. ... What we cannot reach ... will be added risk to our capability to execute these war plans.”

Jones: “Many of our aircraft are approaching block obsolescence. In fact, the majority of our primary rotary wing airframes are over 25 years old. When our first [Marine] KC-130F rolled off the assembly line, President Kennedy was beginning his first year as the Commander in Chief.”

Ryan: “There is no Title 10 authority that says the United States Air Force is in charge of space programs, but we have stepped up to it because we think it’s the important thing to do. There is some funding of those kinds of systems that we need to look at in the future because of the cost of them. When we’re providing a utility, ... those who use it should pay.” ■



AFA / AEF National Report

By Frances McKenney, Assistant Managing Editor

AFA's Capitol Hill Success

It was shoulder to shoulder at the latest educational reception on Capitol Hill, sponsored by AFA and the USAF Office of Legislative Liaison. The October program spotlighted "America's Air Force: Shaping Our Quality Civilian and Military Force."

More than 375 guests, including 16 Congressmen, jammed the Rayburn Foyer of the House Office Building. It was one of the most well-attended in the year-round series of gatherings whose purpose is to educate Congress about USAF issues.

Three members of the House Armed Services Committee attended: Reps. **Ciro Rodriguez (D-Tex.)** and **Gene Taylor (D-Miss.)** and **Del. Robert Underwood (D-Guam)**.

The Air Force Caucus was well represented by Reps. **Sam Johnson (R-Tex.)**, who is co-chair of the group, **Johnny Isakson (R-Ga.)**, and **Ken Lucas (D-Ky.)**. Johnson's Air Force career (1951-79) had been featured at the AFA/LL reception last summer commemorating the Korean War.

Rep. **Collin Peterson (D-Minn.)** of the House Veterans' Affairs Committee was also among the attendees. Other Congressional representatives at the reception: **Bill Barrett (R-Neb.)**, **Joe Barton (R-Tex.)**, **Ed Bryant (R-Tenn.)**, **Thomas Ewing (R-Ill.)**, **Michael R. McNulty (D-N.Y.)**, **Donald M. Payne (D-N.J.)**, **Charles Stenholm (D-Tex.)**, and **Wes W. Watkins (R-Okla.)**.

AFA representatives included National Chairman of the Board **Thomas J. McKee** and National President **John J. Politi**. Joining them were the Air Force Chief of Staff **Gen. Michael E. Ryan**, Vice Chief of Staff **Gen. John W. Handy**, and Lt. Gen. **Donald L. Peterson**, deputy chief of staff for personnel.

Roger M. Blanchard, assistant deputy chief of staff for personnel, headed the group of senior executive service members who circulated among the guests. Air Force personnel specialists and recruiters were available to explain in more detail issues that were illustrated by large storyboards on display at the reception. The storyboards covered



Photo by Susan Kennedy

AFA's latest Capitol Hill educational reception provided members of Congress with updates on Air Force recruiting, retention, and civilian workforce issues. Pausing for a photo are (l-r) Thomas McKee, AFA National Chairman of the Board; John Politi, AFA National President; Gen. Lester Lyles, commander, Air Force Materiel Command; Rep. Sam Johnson (R-Tex.); Lt. Gen. Donald Peterson, deputy chief of staff, personnel; Rep. Cliff Stearns (R-Fla.); and Gen. John Handy, USAF vice chief of staff.

recruiting, retention, and the sizing and shaping of the active duty and civilian force.

Other educational materials included information card handouts to complement the storyboards; a map pinpointing the locations of USAF's many current deployments; and a TV monitor playing the ads that are part of USAF's new TV campaign.

Wings Club

The Aerospace Education Foundation recently unveiled a new program to recognize donors who contribute to AEF all year long through various avenues.

Called the 21st Century Legacy of Flight Wings Club, the program counts all annual contributions from a supporter, whether it's a general contribution to the foundation, buying the AEF calendar or labels, or donations to an AEF fellow program.

Contributors are recognized in seven categories, beginning with an

annual total contribution of \$100, and have their donation permanently recorded in a 21st Century Legacy of Flight Log Book, which will include years of successive giving.

The Wings Club helps AEF recognize those who make it possible for its aerospace education work to continue.

The Kickoff

The Vikings weren't playing football that Sunday, and the weather was cool and sunny: Conditions were ideal for the Visions of Exploration kickoff organized annually by the **Gen. E.W. Rawlings (Minn.) Chapter**.

Visions of Exploration is sponsored jointly by *USA Today* and the Aerospace Education Foundation to encourage schoolchildren to study math, science, and aviation topics. The Gen. E.W. Rawlings Chapter recently signed up to sponsor 220 classrooms for the program—the highest number of classrooms sponsored by an AFA chapter this school



year, as of October. The chapter has also earned the AEF Visions of Exploration Award for the past three years.

One element in this success story is the chapter's kickoff event, this year held in September at Fleming Field in South St. Paul, Minn. With mailing costs paid for by the newspaper, the chapter sent out flyers about the kickoff to local teachers who distributed them to students. Chapter members also telephoned teachers directly. The chapter even bused a group of kids to the site, to ensure transportation wouldn't keep any from attending.

The big draw was rides in light aircraft, flown by volunteer pilots from the local Experimental Aircraft Association organization.

About 135 schoolchildren received airplane rides.

In a Confederate Air Force hangar at Fleming Field, several activities and displays were set up to provide a hands-on aviation experience for the youngsters.

There was an F-4 cockpit provided by the 133rd Airlift Wing (ANG), a training simulator and the chapter's airplane simulator for youth, a B-25, and a PBY fuselage. MaryBeth Garrigan, director of the National Eagle Center in Wabasha, Minn., brought a bald eagle, which was handled by a falconer in a large roped off area in the hangar.

Cadet volunteers from Det. 415 at the University of Minnesota and from Det. 410 at the University of St. Thomas in St. Paul helped run activities: The schoolchildren built "rockets" out of empty film canisters, powered by Alka Seltzer tablets; balsa wood model gliders that they then took up on a hydraulic lift and flew; and balsa airplanes that they flew on rubber band power in the middle of the hangar.

Chapter member Marge Christensen organized this year's Visions of Exploration kickoff. She said they work with different schoolchildren each year, so fortunately, the annual event doesn't need to be reinvented every time, just refined.



Calling themselves Team Chicken Chili, a group of Clearfield High School's AFJROTC cadets were among the entries in Northern Utah Chapter's chili cookoff. They didn't come up with the best chili, but cadets from the school were winners anyway, having earned the Jimmy Stewart Aerospace Education Award for 2000.

Beer Keg Chili

"Poor Man's Chili" from the local Noncommissioned Officers Association chapter earned the top award. A group sporting overalls, plaid shirts, straw hats, and lots of missing teeth (fortunately just blackened out) earned the People's Choice award. Meanwhile, bikers from the Roadhouse Motorsickle Club promised a quart of oil in every bowl.

They were among 19 teams competing in the sixth annual chili cookoff sponsored by the **Northern Utah Chapter** in September at Centennial Park Pavilion on Hill AFB, Utah.

According to SSgt. Jennifer Valderrama, 75th Communications Squadron, "Poor Man's Chili" had several things going for it: The head cook—her spouse, James Valderrama—used authentic spices, 10 types of beans, lean roast, and hamburger—and cooked it all in a beer keg cut in half.

"It's all in the pot," joked Jennifer Valderrama.

Chili judges included Northern Utah Chapter members Maj. Gen. Scott C.

Bergren, commander of Ogden Air Logistics Center at Hill, Col. Carl B. Overall, and Col. Charlotte L. Rea-Dix.

The more than 300 cookoff guests and corporate supporters raised \$4,000 through this event. This year the funds were donated to the Operation Smiley Face program of the base's Family Support Services. The program supports Air Force family members with serious illnesses.

Thunderbirds in Oregon

The **Bill Harris (Ore.) Chapter** helped welcome the US Air Force Air Demonstration Squadron—the Thunderbirds—to the Klamath Airshow 2000 in mid-September.

The Thunderbirds were the premier attraction at the two-day event at Klamath Falls IAP (Kingsley Field), home of the 173rd Fighter Wing (ANG).

The day before the air show, chapter members gathered in the pilots' lounge of the 114th Fighter Squadron (ANG). Brooklyn "Bill" Harris, for whom the chapter was renamed in

Photo by Clayton C. Pyle



At a *Visions of Exploration* kickoff, Gen. E.W. Rawlings Chapter Treasurer and acting Chapter President Steve Winegarden guides a young visitor in trying out the chapter's youth airplane simulator, which has full stick and rudder.

2000, presented each Thunderbird with a copy of his 1995 book, *Bill: A Pilot's Story*. Thunderbird leader Lt. Col. John Venable, in turn, presented Harris with a framed and autographed photo of the Thunderbirds in flight.

Harris was a P-38 pilot with Thirteenth Air Force in the South Pacific during World War II and is credited with 16 aerial victories. A chapter member, he now lives in Macdoel, Calif., just south of Klamath Falls.

On hand to meet the Thunderbirds at this chapter gathering were Army Maj. Gen. Alexander H. Burgin, the Oregon National Guard adjutant general and also a member of the **Portland (Ore.) Chapter**; Curtis D. Ritchie, chapter president; William Lux, treasurer; George A. Wright, vice president for veterans affairs; Misti L. Oyler, vice president for communications; and Daniel K. Bahlman, vice president for membership.

Chapter members manned the base information and welcome booth during the air show. They also distributed name tags, badges, and scrip to 127 Korean War veterans and families, who were honored guests as part of the air show's commemoration of the 50th anniversary of the war.

Ritchie said that as he counted out scrip to buy lunch for a Korean War veteran seated in a wheelchair, the vet reached for his wallet and asked what he owed. Ritchie told him the scrip was free, a small token of appreciation for his Korean War service.

Ritchie said the vet had tears in his eyes and said it was the first time in 50 years that his war service had been recognized.

Full Day in Charlottesville

Gen. John P. Jumper, commander of Air Combat Command, spoke at three venues in Charlottesville, Va., in late September, including a luncheon for the **William A. Jones III (Va.) Chapter**.

In the morning, Jumper addressed an audience of more than 70 guests at the University of Virginia's Miller Center of Public Affairs, a research center that studies the national and international policies of the US.

He covered a wide range of Air Force topics, including managing USAF combat operations in Allied Force, retention issues, and the challenges of improving command, control, communications, and intelligence.

Jumper spoke about USAF's future needs and plans at the AFA chapter's luncheon gathering, held afterward at a country club. Several AFA local leaders attended the event: Thomas G. Shepherd, region president (Central East Region), John E. Craig II, national director, William L. Anderson, state president, and Mary Anne Thompson, AFA Member of the Year.

In a highlight of the meeting, chapter member Col. James D. Allshouse, commander of the AFROTC Det. 890 at the University of Virginia in Charlottesville, accepted the award for the AFA Virginia state outstanding AFROTC unit. It was the fourth consecutive year that his detachment earned this honor.

Jumper made his third presentation of the day to an Air Force-Army-Navy group at an ROTC Leadership Lab. He spoke about what the military expects of its young lieutenants, Allshouse reported.



Thunderbirds commander Lt. Col. John Venable presents Bill Harris of the *Bill Harris Chapter* with an autographed photo of the USAF Air Demonstration Squadron in action. Other Thunderbirds at the chapter gathering were (l-r) Maj. Kevin Mastin, Dean Wright, Scott Bowen, and Jon Greene and Capt. Rick Boutwell.

Jumper could especially identify with his audience, not only because he earned his commission as the 1966 distinguished ROTC graduate of Virginia Military Institute in Lexington, Va., but because his two daughters were once UVA ROTC cadets, Allshouse said.

Convention: New Hampshire

The Granite State held its convention Oct. 1 in Portsmouth, N.H., with Maj. Gen. Joseph K. Simeone, Air National Guard assistant to the commander of Air Mobility Command, as keynote speaker. He spoke about the role of the Guard and Reserve in the Expeditionary Aerospace Force and future USAF operations.

Other speakers at the convention included Col. James Kempf, a member of the USAF National Security Briefing Team, who spoke about the future Total Force.

The convention honored two Korean War heroes who hailed from New Hampshire: Capt. Joseph C. McConnell Jr., who with 16 aerial victories, was USAF's highest scoring ace in that war, and Brig. Gen. Harrison R. Thyng.

McConnell was born in Dover, N.H., in 1922. He was testing an F-86H in 1954 at Edwards AFB, Calif., when he died.

Thyng, for whom an AFA chapter in New Hampshire is named, was born in Laconia, N.H., in 1918 and graduated from the University of New Hampshire. He served in World War II as well as the Korean War and became vice commander of the Northern NORAD Region. He died in 1983.

During the convention dinner, R.L. Devoucoux, a national director emeritus, presented an AFA Exceptional Service Award to Herbert E. Follansbee Jr., who is **Pease Chapter** treasurer; a Medal of Merit to Eric P. Taylor, who is president of the **Brig. Gen. Harrison R. Thyng Chapter**; and an Outstanding Service award to Baldwin Domingo, former Pease Chapter president.

Terry Hardy was re-elected state president during the convention's business session. Robert N. "Mac" McChesney will serve as vice president, with Arthur "Dave" Arrington as secretary and Stephen W. Lawton as treasurer. All are from the Pease Chapter.

Tops at Hill AFB

With Maj. Gen. Scott C. Bergren, commander of the Ogden Air Logistics Center at Hill AFB, Utah, as keynote speaker, the **Ute-Rocky Mountain (Utah) Chapter** held its seventh annual awards banquet to honor top



Maj. Gen. Joseph Simeone (center), ANG assistant to the commander, Air Mobility Command, was guest speaker at the New Hampshire State Convention. Flanking him are R.L. Devoucoux (left), an AFA national director emeritus, and Terry Hardy, state president.

performers at the base. Twenty military and civilian personnel received desktop clocks from the chapter. They were selected for the award by various military organizations on base. The award recipients included chap-

ter member Maj. Deborah J. Marquart, an F-16 system program office branch chief.

Nathan H. Mazer, a national director emeritus, was on hand for presentation of an award named for him.

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G10 (Not shown) Table Banner. 28"x44" (w). See G7 for description. **\$55**

AFA/AEF National Report

Three people received the honor, which recognizes their volunteer work at Hill's aerospace museum.

Chapter President Dennis J. Guymon served as master of ceremonies for the banquet, held at a steakhouse that is a chapter Community Partner. Nine defense contractors and local businesses sponsored tables at the event, attended by more than 150 guests.

More AFA/AEF News

- On completion of his term as

National Secretary, William D. Croom Jr. received the Julian A. Rosenthal Award at the AFA National Convention in September. Croom, a member of the **Colorado Springs/Lance Sijan (Colo.) Chapter**, later traveled to Rosenthal's home in Durham, N.C., to show him the framed certificate, which includes a photo of Rosenthal, taken about the time he served as AFA Chairman of the Board, 1959-60. Rosenthal, now 92 years old and a member of the **Tarheel (N.C.) Chapter**, was one of AFA's 12 original founders and was

among AFA's first group of officers elected at the first National Convention in September 1947. He also served as National Secretary from 1947 to 1959, the longest anyone has held that position.

Have AFA/AEF News?

Contributions to "AFA/AEF National Report" should be sent to *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Phone: (703) 247-5828. Fax: (703) 247-5855. E-mail: afa-aef@afa.org. ■

Unit Reunions

57th ARRS, Lajes Field, Azores. April 24-26, 2001, at the Best Western Branson Towers Hotel in Branson, MO. **Contact:** Jim Grundhoffer (505-437-2526) (coffee-cup@zianet.com).

57th BW Assn of WWII, all B-25 units in the Mediterranean Theater. Sept. 20-25, 2001, at the Holiday Inn Executive Center in Virginia Beach, VA. **Contact:** Bob Evans, 1950 Cunningham Rd., Indianapolis, IN 46224-5341 (317-247-7507).

68th FS, Gp 50-55, Valdosta, GA, and Moody AFB, GA. April 27-30, 2001, at the Comfort Inn Conference Center in Valdosta, GA. **Contact:** Wally Hearon, 7548 University Dr., Shreveport, LA 71105-5421 (318-797-3331) (wvhaze@bellsouth.net).

69th FS, Moody AFB, GA. Feb. 2, 2001. Inactivation ceremony and dining-out for past and present Werewolves. **Contact:** Lt. Amity Tipton, 69th FS, Moody AFB, GA 31699 (phone: 912-257-3169 or DSN: 460-3169) (amity.tipton@moody.af.mil).

324th FG, 314th and 316th Sqs (WWII). May 10-12, 2001, at the Hilton Suites Lexington Green in

Lexington, KY. **Contact:** J.W. Wurmser, 3409 Westridge Cir., Lexington, KY 40502 (859-277-0217) (p47pilot@aol.com).

AFROTC Billy Mitchell Drill Team. September 2001 at the University of Florida in Gainesville, FL. **Contacts:** Capt. Debbie Powell (debbiepow@aol.com) or Patrick Ryder (patrick.ryder@pentagon.af.mil).

Air Corp Cadets, Sq 15. April 21-24, 2001, at the Ramada Airport Inn-Palo Verde in Tucson, AZ. **Contact:** Robert Friske, 5824 N. Camino Esplendor, Tucson, AZ 85718-4506 (phone: 520-299-5848 or fax: 520-747-8561) (bcordt@aol.com).

Angel Flight, Arnold Air Society, and Silver Wings alumni. April 13-16, 2001, in New Orleans. **Contact:** Terry D. Miller (phone: 719-574-9594 or fax: 719-527-1370) (aas-alumni@arnold-air.org).

BAD 2 Assn, Warton, UK. June 27-July 2, 2001, in Blackpool, UK. **Contact:** Ralph Scott, 228 W. Roosevelt Ave., New Castle, DE 19720-2565.

Defense Communications Agency. April 20-23, 2001, in Hampton, VA. **Contact:** C.R. Timms, PO Box 293, Fair Play, SC 29643 (864-888-4133).

F-16 personnel, Hill AFB, Utah (1978-81). March 23-24, 2001, at the Marriott Hotel in Ogden, Utah. **Contacts:** Gary Michels, 26 Sandia Heights Dr. NE, Albuquerque, NM 87122 (505-856-6463) (torch@compuserve.com) or Bill Rutan (brutan1@yahoo.com).

Pilot Training Class 45-B, all commands. April 26-29, 2001, in Montgomery, AL. **Contact:** Paul R. Wildes, 1054 Glen Grattan Dr., Montgomery, AL 36111-1336 (334-263-7590) (prdwildes@aol.com).

Seeking members of **Observer/Navigator Class Ellington 52-09C** (advanced training classes 52-B at Ellington AFB, TX, and 52-D-26 at Mather AFB, CA) for a possible reunion in August or September 2002. **Contacts:** William W. Berkman, 4340 Whispering Cir. N., Colorado Springs, CO 80917 (wgfp@earthlink.net) or Bill Wilkins, 3311 NW Roosevelt Dr., Corvallis, OR 97330-1169 (bwilkins@orst.edu). ■

Bulletin Board

Seeking **David P. "Phil" Jones**, a member of 409th BS, 93rd BG, Eighth AF, during WWII, who bailed out over England on Nov. 5, 1944. **Contact:** Lester Steves, 943 S. Linden Ave., Alliance, OH 44601-3045.

Seeking **Capt. W.S. "Rick" Richardsen**, who was stationed at the US air attaché office in London, 1951-54. **Contact:** Frank MacAllister, 6439 Zinnia St., Panama City, FL 32404 (850-769-1690) (fzmac007@webtv.net).

Seeking a copy of the January 1971 edition of **7th Air Force News**. **Contact:** Greg Swan (grewen@ozemail.com.au).

For model aircraft, seeking information on aircraft markings from former pilots and WSOs or RSOs of the **14th TRS**, Udorn RTAB, Thailand. **Contact:** Michael F. McCullough, 2038 S. 6th St., Arlington, VA 22204 (f4dphan@hotmail.com).

Seeking information on crew members **Bernard H. Brandt, Charles F. Hopper, Oather Gene Meese, and Timothy J. Numan** who bailed out of

their aircraft over Lolland, Denmark, on April 9, 1944, and were captured by Germans. **Contact:** Robert Munson, 7043 Devereux Cir. Dr., Alexandria, VA 22315 (703-822-0555) (pmunsonr@earthlink.net).

Seeking information on **Pfc. Glenn W. Steele**, who served with the 50th Air Service Sq, Fifteenth AAF, in Italy during WWII and also information on the **50th Air Service Sq**. **Contact:** Al Steele, 645 Hazelwood Dr., Vermilion, OH 44089-2480 (440-967-5912) (alsteele@webtv.net).

Seeking contact with **Robert B. Yonker**, Class 43-B, Blytheville AAF, AR, who was a B-24 copilot in the South Pacific and later flew C-54s, evacuating American nurses captured by the Japanese. Also seeking **John C. DePuy**, of Brooklyn, NY, who was a B-24 pilot and twin-engine instructor at Stuttgart in Arkansas and may have flown out of an airfield in southern Italy. **Contact:** Duane U. Woodfield, 4409 Bent Tree Blvd., Sarasota, FL 34241.

Seeking **Thomas P. "T.P." Murphy** of the 605th

Tactical Control Sq, Pope AFB, NC, 1950, and Korea, 1950-52. **Contact:** Theodore E. Waldo Jr., 18 Campbell Rd., Winsted, CT 06098.

Seeking information on the **Fairchild C-82A-15-FA Packet #44-23006** of the 55th and 91st Strategic Recon Gp (SAC), July 1949-July 1952. **Contact:** Robert Lumpkin, 9366 E. Stella Rd., Tucson, AZ 85730-2928.

Seeking the **RF-4C crewman** aboard USAF 658 that had a midair collision with a "Connie" near Tan Son Nhut, South Vietnam, June 22, 1967, and was rescued by an Army UH-1 after the transmission "I am a mile from the moon and a mile from the fire." He was taken to a hospital pad at Tan Son Nhut. **Contact:** Nick J. Primis (817-540-5757) (kinik@earthlink.net).

Seeking a copy of an Air Force publication that featured a photo of the **"shortest man in the military,"** taken in the mouth of an aircraft between 1947 and 1953. **Contact:** B.J. Sumter (bjsunter@sumter.net). ■

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Pieces of History

Photography by Paul Kennedy

Pajama Pursuit



Courtesy US Air Force Museum, Wright-Patterson AFB, Ohio

American servicemen reacted heroically and resourcefully amidst the chaos and destruction of the Dec. 7, 1941, Japanese surprise attack on Pearl Harbor in Hawaii. Among them was 2nd Lt. Philip M. Rasmussen of the 46th Pursuit Squadron at Wheeler Field on the island of Oahu. As shown in this display at the US Air Force Museum, Rasmussen leaped into one of the few

airplanes—a P-36 Hawk—that wasn't destroyed or burning. He was still in his pajamas. Along with three other pilots, Rasmussen engaged 11 enemy fighter aircraft over Kaneohe Bay that Sunday morning. He was able to knock one down before two Japanese Zero fighters shot out his airplane's hydraulic lines and rudder cable. He made it to cloud cover and flew back to Wheeler. He

landed without brakes, rudder, or tailwheel—but with more than 500 bullet holes in the P-36.

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