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AIR FORCE

PUBLISHED BY THE AIR FORCE ASSOCIATION

MAGAZINE



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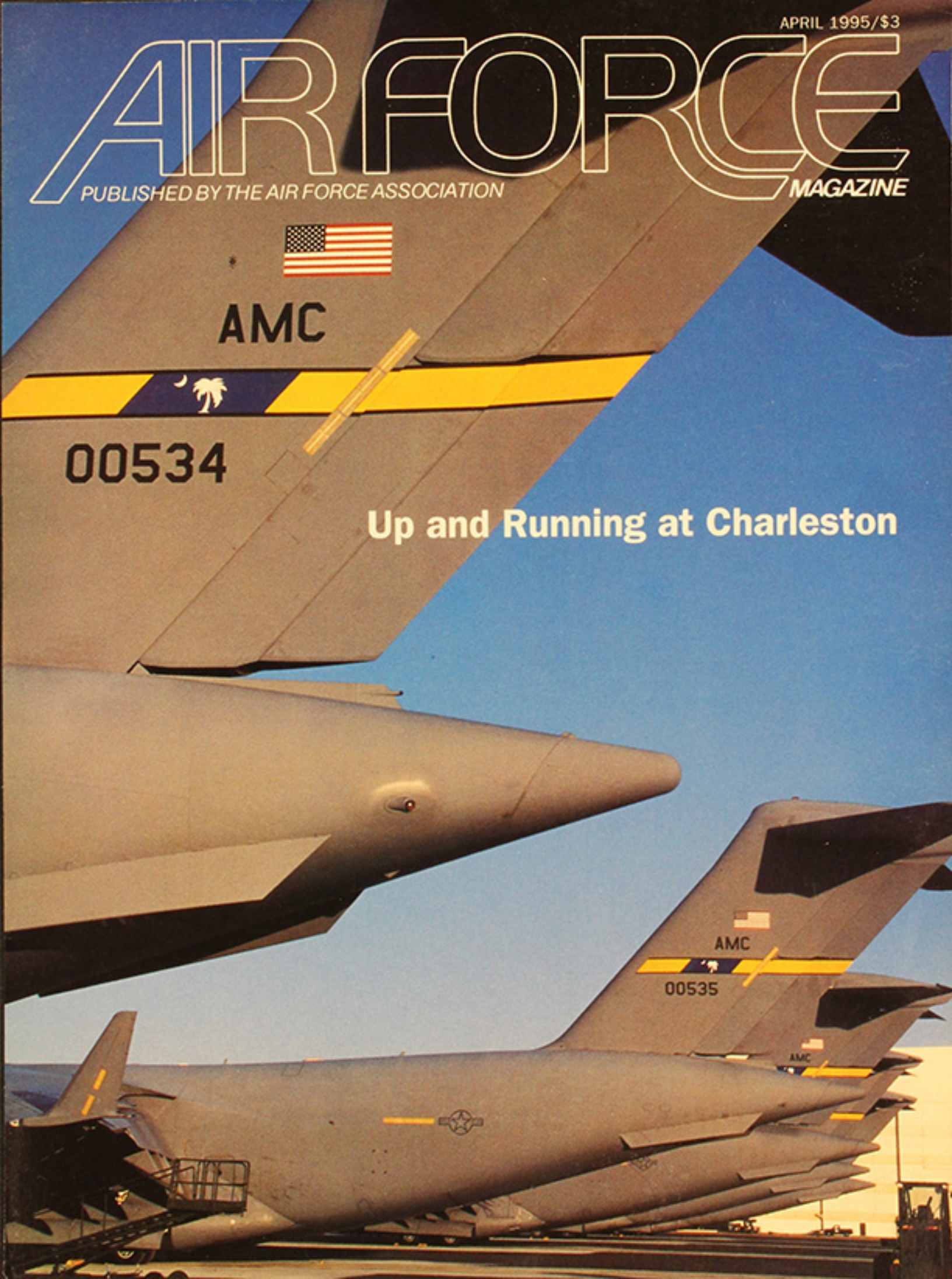
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Up and Running at Charleston

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Dot Hensel, Senior Engineering Specialist, Lockheed Fort Worth Company

"THE LAST TIME AMERICA LAUNCHED A NEW AIR SUPERIORITY FIGHTER WAS 7 PRESIDENTS AGO!"

Go-Go boots. Love beads. 8-track tapes. These relics have passed into the history books. Yet, we continue to rely on a 30-year-old fighter design that is basically just equal to current foreign models for our national defense. But the F-22 fighter brings a new era. An era of assured air superiority. Dominion through stealth, supercruise, thrust vectoring and advanced avionics. And technology that will allow an F-22 squadron to be supported, maintained and deployed at 30% less cost than current squadrons.

F-22. So America will still rule the skies many Presidents from now.



AIR FORCE

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MAGAZINE

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About the cover: Emblazoned with the South Carolina flag, C-17s at the 437th Airlift Wing, Charleston AFB, await the day's operations. See "Up and Running at Charleston," p. 44. Photo by Paul Kennedy.



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By John T. Correll, Editor in Chief

Bottoming Out

THE DEFENSE budget has been falling now for ten straight years. It long ago crashed through the safety net configuration, called the "Base Force," established by the Bush Administration. Military and civilian personnel strength is diminishing at the rate of 15,000 a month. Top Pentagon officials insist that the smaller force can do the job, but their optimism is not universally shared. The operational ranks are looking thin.

Air Force fighter forces, for example, have been knocked down by almost fifty percent and the bomber forces by seventy percent. USAF active-duty strength is dropping toward 382,000, thirty-seven percent below the Cold War peak. The Air Force has not purchased a combat aircraft of any kind since 1994. It will not purchase another one until 1998. A shortage is developing in the attrition reserve. Without more aircraft, the Air Force will not be able to maintain its reduced complement of twenty fighter wing equivalents beyond the turn of the century.

A war-gaming exercise called "Nimble Dancer" says that despite the reductions, US armed forces will be able, as prescribed by national defense strategy, to fight and win two near-simultaneous conflicts. As it turns out, Nimble Dancer assumed some capabilities the armed forces do not have yet. It also assumed that some risky parts of the plan—such as shuttling critical aircraft from one conflict to the other—will work as well in battle as in a war-gaming exercise.

Clinton Administration officials tell us the decline in the defense program is nearly over. The budget will begin to level out in 1998, having fallen, after inflation, by forty-one percent over a period of thirteen years. Military personnel reductions will finally end in 1999. At the turn of the century, the United States will spend 2.8 percent of its Gross Domestic Product on defense, compared with 11.9 percent of GDP for defense in the 1950s.

The bottom may be in sight, but we are not there yet. The defense budget submitted in February is \$6.6 billion less than the previous one. It would have been lower still except that the Administration, crowded by the new Republican majority in Congress, has added \$25 billion—most of it in delayed spending—to the defense program over the next six years.

**The Administration
says the defense
cuts are nearly over.
The fact is, the
reductions have gone
too far already.**

The issue is not an absence of requirements. As Rep. Floyd D. Spence (R-S.C.), chairman of the House National Security Committee, says, "We are using our military forces in more places for more purposes than ever before." Responding to a critical editorial in the *New York Times*, Secretary of Defense William J. Perry said the nation cannot back away from the two-conflict standard. "In fact, twice last year, President Clinton was prepared to commit troops against well-armed adversaries to protect foreign policy goals," he said.

Nor is it a matter of general frugality in government. As the defense budget drops another notch this year, overall federal outlays will rise by 4.7 percent. Total outlays have increased every year since 1965. It is a matter of priorities—and perhaps one of attitude. Chairman Spence makes the point that "this Administration needs and uses the military, yet it is unwilling to pay for it."

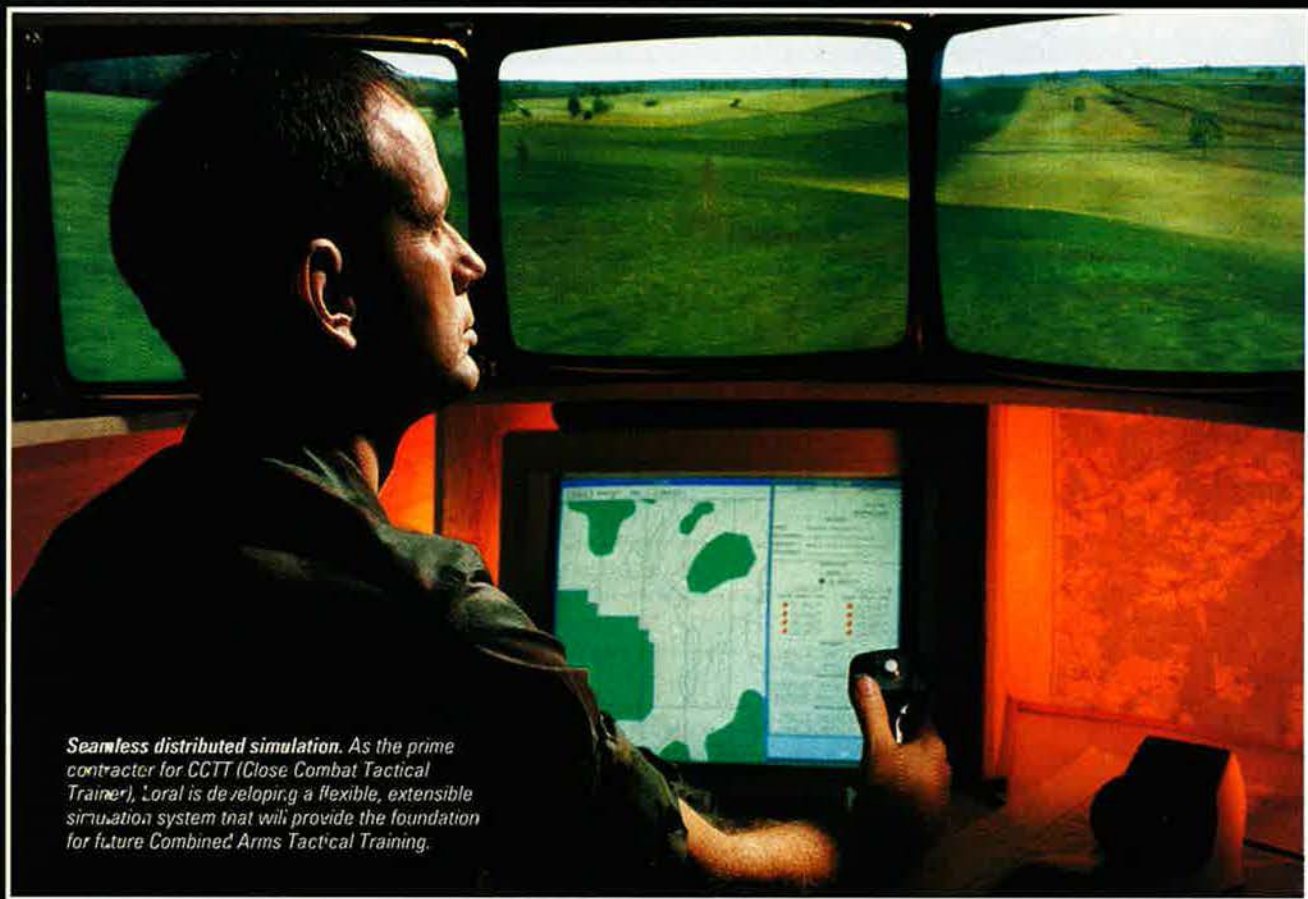
The President declares his regard for the armed forces, but his policies do not bear him out. Always, it seems, the grand gesture is reserved for someone else. Although Pentagon programs are underfunded and US troops are using food stamps to subsist, President Clinton wanted to give \$25,000 housing vouchers to 5,000 Russian military officers as an inducement to leave the Baltics and go back home. The Administration pushed that proposal until the new Congress summarily stripped away the money for it.

Rep. Curt Weldon (R-Pa.) charges that at a time when the United States was paying for the salaries, housing, and benefits of troops from Bangladesh, Guatemala, and Nepal on duty in Haiti, US armored crews at Fort Hood, Tex., conducted exercises on foot for economy reasons, pretending ("Clank, clank, I'm a tank") they were operating real armored vehicles.

The proposition that military reductions will bottom out in a few years is not selling all that well. On February 25, a bipartisan group of eighty-seven congressmen wrote to Speaker of the House Rep. Newt Gingrich (R-Ga.) expressing their concern about the gaps between defense funding and mission requirements and saying that the decline in defense expenditures "must be reversed."

It has been a long time coming, but the realization is setting in that defense cuts have gone too far. The end of the Cold War did not make the world benign, nor did it eliminate the need for a strong US defense program. Only the foolish believe that our troubles all lie behind us.

Gen. John M. Shalikashvili, the Chairman of the Joint Chiefs of Staff, testifying to the Senate a few months ago, observed that "No man or woman has ever completed a twenty-year military career when this nation did not engage in armed conflict at least once. In the past eight years, no man or woman has even completed a term of enlistment without this happening." ■



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Getting Airlift Off the Shelf

Your article on the Nondevelopmental Airlift Aircraft (NDAA) acquisition program was extremely informative [*"Off-the-Shelf Airlift," February 1995, p. 32*]. It provided an accurate synopsis of the NDAA actions leading to possible procurement of an alternative airlifter to meet our nation's airlift shortfall.

Two changes in the program have recently surfaced. The first is the operational requirement to carry the Army's Family of Medium Tactical Vehicles (FMTV). This is not a hard requirement in the operational requirements document (ORD) supported by the Air Force and Joint Requirements Oversight Council. The ORD states a threshold (must have) to carry the Army's $\frac{5}{4}$ -ton trucks and High-Mobility Multipurpose Wheeled Vehicle with an objective (desired capability) to carry the Army's FMTV. The second is the C-17 breakpoints that contractors will bid against to propose the best cost for the capability to satisfy the airlift shortfall. The correct breakpoints are forty, fifty-eight, seventy-two, eighty-six, 100, and 120 C-17 aircraft.

This information is important to keep the public properly informed about our airlift modernization efforts.

Maj. Paul A. Curlett,
USAF
Washington, D. C.

After reading "Off-the-Shelf Airlift," I was reminded of the recent television commercial in which a man is berated by his wife for buying a generic brand, which he says is "the same thing, only cheaper." . . . This commercial works because most Americans understand that there are qualities in a product that go beyond the basic name of the product. This is also the case with airlift.

In John A. Tirpak's article, he mentions the Air Force's use of the principle of "best value." He describes that concept only in terms of cost. In this procurement, the issue of best value is not one of cost alone. Because all the candidates for this procurement were designed to meet

different requirements and because it is the desire of the Air Force to buy a nondevelopmental product, the issue of best value becomes critical. The Air Force will weigh the operational capability provided by each candidate as well as the life-cycle costs of each to determine the best value for the Air Force.

For example, a certain candidate's difficulty in loading a particular type of cargo may be more significant than its lower operating cost. On the other hand, the added flexibility of an overall larger fleet may be the deciding factor. No commercial aircraft can provide the capabilities provided by military airlifters simply because of the design limitations of high-wing vs. low-wing aircraft.

The Air Force must not fall into the trap of basing its decision on the criteria it can assign a number to and discounting the operational considerations, which become paramount in conflict. Using a scenario to assist in the understanding of these considerations is helpful, but we must guard against making a scenario-dependent decision, especially when we have decided that the newly restructured armed forces are focused on response to contingencies that threaten US national interests.

Col. Henry G. Hamby III,
USAF (Ret.)
Burke, Va.

I thoroughly enjoyed "Off-the-Shelf Airlift." I was instantly reminded of a similar article I read in 1982 in the *Armed Forces Journal*. The article

Do you have a comment about a current issue? Write to "Letters," AIR FORCE Magazine, 1501 Lee Highway, Arlington, VA 22209-1198. Letters should be concise, timely, and preferably typed. We cannot acknowledge receipt of letters. We reserve the right to condense letters as necessary. Unsigned letters are not acceptable. Photographs cannot be used or returned.—THE EDITORS

covered the proposal to buy Boeing 747 aircraft as a substitute for the planned C-5B purchase and the still developmental C-X (today's C-17). A cartoon accompanying the article portrayed a 747 struggling to unload a tank at a remote desert location, using a mobile ramp that according to the caption "could only be airlifted by a C-5!" Unfortunately, the arguments that saved the C-5B will not help the C-17 program, given the success of the Civil Reserve Air Fleet's airlift effort in Operations Desert Shield and Desert Storm, not to mention the end of the Cold War.

Regardless of which aircraft is selected as the NDAA winner, serious consideration should be given to purchasing six to ten used DC-10 freighters through a separate program. These aircraft—let's call them C-10Bs—could be split between the major airlift centers (McGuire and Travis AFBs) and assigned directly to KC-10 units already operating there.

Commonality between the two types would keep operating costs low. The new models would ease the burden on the aging C-141 fleet and increase the life expectancy of the latter. Wingtip refueling pods could be added at minimum cost to provide a limited refueling capacity for USN/USMC/NATO aircraft. The airframes may even have enough hours remaining to warrant future conversion to full KC-10 standard when the KC-135s begin to retire.

One final note: The RAND study results on p. 36 refer to the C-17's inability to use soft runways. In the same issue, on p. 15, you report on a C-17 operating successfully from unpaved runways. Compared to concrete or even asphalt, "unpaved" sounds pretty "soft" to me.

Anthony E. Wessel
Atwater, Calif.

I read "Off-the-Shelf Airlift" with a great deal of interest. It seems that the leadership of the Air Force is determined to buy the C-17 regardless of the problems this program has had and still has. If the strategic



SOMETIMES IT TAKES A COMPETITION TO PROVE YOU HAVE NO COMPETITION.

Once again, the multirole F-16 did what it does best - dominate the competition. This time, it was William Tell, the definitive USAF air superiority competition. The F-16 teams captured every major event - Overall, Operations, GCI, Maintenance, and Loading.

Demonstrating its multirole talent, the F-16 also consistently dominates Gunsmoke, the premier worldwide air-to-

WILLIAM TELL '94 FINAL RESULTS					
PLACE	OVERALL	GCI	MAINTENANCE	LOADING	OPERATIONS
1st	F-16	F-16	F-16	F-16	F-16
2nd	CF-18	F-16	F-16	F-16	CF-18
3rd	F-16	CF-18	F-15	F-15	F-15
4th	F-15	F-15	F-15	F-15	F-16
5th	F-15	F-15	F-15	CF-18	F-15
6th	F-15	F-15	CF-18	F-15	F-15
7th	F-15	F-15	F-15	F-15	F-15
8th	F-15	F-15	F-15	F-15	F-15

ground competition, sweeping all events. The F-16 is the only aircraft ever to win both weapons competitions.

The F-16 is also undefeated where it counts most - in the real world. It has a 69-0 record in aerial combat and the world's

only three combat AMRAAM kills. With this capability and a \$20 million price tag, what's left to tell?



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Letters

airlift shortfall that the Air Force has complained about for many years persists, then why not buy a mix of military and civilian off-the-shelf aircraft?

The advantage to this mix would be that the Boeing 747-400 is a proven asset and has worldwide logistical support. The C-5D would also be based on a proven airframe. These airframes have been around a long time, and the operational and logistical data are available for both. I have flown on both and was impressed with their freight-hauling and passenger-hauling capacity. With the proper ground crew training, both aircraft can be turned around and launched on another mission quickly. . . .

The C-17 may be one of the best military transports that the Air Force has bought in a long time, but it is very expensive and will take a long time to get on line. Because of the expense of the C-17, I doubt that any commander will put it in harm's way. It will not be able to operate from a dirt strip, so it will land on an improved airstrip. The same applies to the 747-400 and the C-5D, so why not have a mix of transports? Most cargo delivered by either machine must be transhipped to the forward area by the trusty C-130.

Depending on whose figures you use, ten or twelve 747-400s could be bought for the price of one C-17. . . . I would recommend that some 747-400s and C-5Ds be assigned to the Air National Guard and Air Force Reserve. I don't understand why the Air Force has never stretched some of its C-130s as the civilian industry and the RAF did many years ago. You can get more passengers and freight moved without buying more airframes.

Col. George D. Brooks,
AFRES (Ret.)
Ashland, Ohio

Backlash to the Backlash

With regard to "Air and Space Museum Hit by Academic Backlash" [*January 1995 "Aerospace World," p. 13*], I find it preposterous that Smithsonian Secretary I. Michael Heyman finds his organization "squarely in the middle" of arguments for and against the proposed display of the *Enola Gay* and its role in World War II. In his view, it takes only forty-eight scholars who favor the Smithsonian's original version on one end of the teeter-totter to balance hundreds of thousands of veterans and citizens who oppose it on the other end to justify the Smithsonian's position.

That makes about as much sense as a small band of neo-Nazis balancing the bulk of world opinion on the Holocaust.

Lt. Col. Homer J. Merfeld,
USAF (Ret.)
Rapid City, S. D.

As a member of AFA and a veteran of Korea, I find it amusing that these "historians and scholars" refer to the Air Force Association as a "special interest group" even as they act as a special interest group in trying to force their politically correct and factually incorrect bias on the Smithsonian Institution and the National Air and Space Museum.

There was nothing so "unique" about the Japanese culture that gave it carte blanche to attack and invade other cultures for a decade before Pearl Harbor. Its unique culture also could not save Japan from its well-deserved fate. The Japanese were fortunate it was the United States that stopped them and not some culture like their own with its unique *bushido* code.

While accusing the Smithsonian of subjecting the exhibit to "historical cleansing" under pressure from AFA and others, the academic cabal that wrote the letter pressures the museum to stick to its historical cleansing of the Japanese empire both before and during World War II. By ignoring the otherwise well-documented inhumanity of Japan's march into mainland China and southeast Asia, these "historians and scholars" evince the shabbiest standards of historical scholarship, meriting a grade of F.

However, if these quaint gentlemen would really like the museum to speculate further on whether the bomb was necessary, let them speculate on what the Japanese would have done to us if they had had the bomb first. I rest my case.

Gordon D. Sharp, Jr.
Allentown, Pa.

"Air and Space Museum Hit by Academic Backlash" is a prime example of how people can develop tunnel vision without realizing it. They talk as if *only* 46,000 US troops being killed were a no-sweat proposition. If 46,000 deaths were expected, 150,000 wounded could have been anticipated, bringing US casualties of an invasion of Japan to nearly 200,000.

Put yourself in President Truman's position. He could have said, "We could drop a nuclear bomb or two and end this war without any more casu-

alties on our side, but being the humanitarians that we are, we'll not do that. Instead, we'll invade and suffer only 200,000 casualties."

It is easy to sit here fifty years downstream and forget the mood of the American people (and the world, for that matter) in 1945. Pearl Harbor was still fresh in our minds. The Bataan Death March was still a vivid reminder of what would have happened if the Japanese had won the war. Any President in his right mind would have made the decision to end the war as quickly as possible.

If we had invaded Japan, the Japanese would also have suffered casualties. These probably would have been much higher than ours. Let's say the Japanese would have suffered 70,000 killed and 200,000 wounded. That's another 270,000. When we consider the civilian casualties (if our academic friends think no civilians would have been hurt, they never fought house-to-house combat), let's be kind and say only 10,000 civilians would have been killed or wounded. This brings us to 480,000 killed or wounded by the invasion of Japan.

Please, ladies and gentlemen of academia, keep things in proper perspective. . . .

David Napoli
Kansas City, Mo.

Kudos to the AOC

As a product of both AFJROTC and the Air Force Academy, I would like to thank the Air Force Association and AIR FORCE Magazine for their years of support for these institutions and for promoting the welfare of aerospace education.

Congratulations go to the 33d Cadet Squadron (CS-33) of the Air Force Academy for its recent success as Squadron of the Year. This is a remarkable achievement and a testimonial to hard work and unit pride. Yet, I believe there was a critical omission in your article documenting the success of the unit [*"The 33d Finds the Winning Formula,"* October 1994, p. 75]. Not once was the name of the Air Officer Commanding mentioned.

Some of your readers may not be familiar with the overwhelming responsibilities this individual shoulders. The well-being, motivation, satisfaction, and success of many cadets is quite dependent on the leadership and example set by this officer. This is no easy task. Many relatively young officers have taken on this tough job and succeeded. The AOC of CS-33 must be one of these individuals. My personal congratulations to this leader. Who is this Stealth AOC?

By the way, I have not been an AOC, but many of my friends have. Some have achieved great successes, while others had their careers redefined in less-than-optimal ways owing directly to the AOC experience. . . .

Maj. Michael J. Opatowsky,
USAF
Osan AB, South Korea

■ *Army Capt. Gary D. Langford was AOC for the 33d Squadron.*—THE EDITORS

The Black Hawk Shootdown

The 1994 accidental shootdown of two Army UH-60 Black Hawk helicopters over northern Iraq was a horrifying tragedy and a military blunder of terrible proportions. However, it would serve no useful purpose for the Air Force to court-martial anyone, much less Capt. Jim Wang, a junior nonrated officer who was hundreds of miles from the downing.

If the court-martial against Captain Wang proceeds, it will be the most outrageous act perpetrated against a US military officer since the US Navy pressed court-martial charges against Capt. Charles B. McVay III, the skipper of the ill-fated USS *Indianapolis*, which was torpedoed in 1945. That court-martial sullied not only the reputation of an outstanding naval officer but the US Navy as well.

In a supreme twist of irony, the Air Force's chief witnesses against Captain Wang will undoubtedly be Lt. Col. Randy May and Capt. Eric Wickson, the same pilots who made the fateful decisions to launch their missiles and dispatch those poor souls in the Black Hawks to oblivion. . . .

Secretary of the Air Force Sheila E. Widnall has always impressed the troops as a level-headed individual. I hope that level heads will prevail over the ill-advised decision to court-martial Captain Wang and that Secretary Widnall will intervene to stop the Air Force from tarnishing itself further.

Douglas Walker
Ocala, Fla.

Leave Nothing to Chance

I appreciated the paragraph about the 55th Fighter Squadron's conversion to night vision goggles that appeared in February's "Aerospace World" [*"News Notes,"* p. 22]. I would like to add that the 55th used NVGs while providing night close air support for the 75th Ranger Regiment during an Air Warrior II training exercise at the Joint Readiness Training Center in January.

This was a significant milestone in the history of the A/OA-10 because it

marked the first time operational A/OA-10 pilots used the goggles while supporting ground forces.

In the item, Capt. Rob Givens, a weapons school graduate and an Operation Desert Storm veteran with forty night combat sorties in the A-10, was indirectly quoted as saying that the goggles enable "the squadron to provide close air support twenty-four hours a day with a better chance to distinguish an enemy position from a friendly one." Captain Givens was misquoted. When it comes to distinguishing enemy positions from friendly ones, ground commanders trust us to not leave anything to *chance*. Captain Givens correctly stated that the goggles provide better *capability* to distinguish the enemy from friendlies.

Also, our friends in the Sumter community appreciate that Shaw AFB is located in South Carolina—not North Carolina as the article indicated.

Lt. Col. John A. Neubauer, USAF
Commander, 55th Fighter
Squadron
Sumter, S. C.

"Archers" Not "Aphids"

The two outboard-mounted small air-to-air missiles on the MiG-29 pictured on p. 52 of the October 1994 issue are AA-11 "Archers," not AA-8 "Aphids" [*"The Third Largest Nuclear Power,"* p. 52]. The AA-11 has four movable sets of vanes just aft of the seeker and just fore of the rectangular fins. On the AA-8 the rectangular fins extend almost up to the seeker.

Capt. Thomas P. Burke,
USAF
Robins AFB, Ga.

Sharp-Eyed Madhatters

What a pleasure it was to see the world's greatest fighter squadron's patch next to one of our F-15Es in your article about the Farnborough Air Show [*"Flying High at Farnborough,"* November 1994, p. 48]. We were honored to participate and proud to display the world's best fighter aircraft—the F-15E.

You displayed the colors of the world's greatest fighter squadron on one of the Air Force's best, Capt. Matt Moeller. But perhaps you lacked the eyesight that the 492d FS Madhatters possess. Despite the patch being clearly displayed, you misidentified it as some other unit's. . . .

Capt. Douglas R. Reynolds,
USAF
RAF Lakenheath, UK

■ *This letter was also signed by thirty-five of Captain Reynolds's squadronmates. They are, of course, correct.*—THE EDITORS

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The Chart Page

By Tamar A. Mehuron, Associate Editor

The New Budget at a Glance

In February, President Clinton presented his proposed defense budget for Fiscal Year 1996. The document requests \$246.0 billion in budget authority and \$250.0 billion in outlays for the direct program (DoD activities only). The budget request for the total national defense program (DoD activities and defense activities in the Department of Energy and other federal agencies) is \$257.8 billion in budget authority and \$270.7 billion in outlays.

Fiscal 1996 marks the eleventh straight year of real decline for the defense budget.

Funding levels can be expressed in several ways. Totals are most frequently stated in **budget authority**, which is the value of new obligations that the government is authorized to incur. These include some obligations to be met in later years. Figures can also be expressed in **outlays** (actual expenditures, some of which are covered by amounts that were authorized in previous years).

Another difference concerns the value of money. When funding is in **current or then-year** dollars, no adjustment for inflation has taken place. This is the actual amount of dollars that has been or is to be spent, budgeted, or forecast. When funding is expressed in **constant dollars**, or **real dollars**, the effect of inflation has been factored out to make direct comparisons between budget years possible. A specific year, often the present one, is chosen as a baseline for constant dollars.

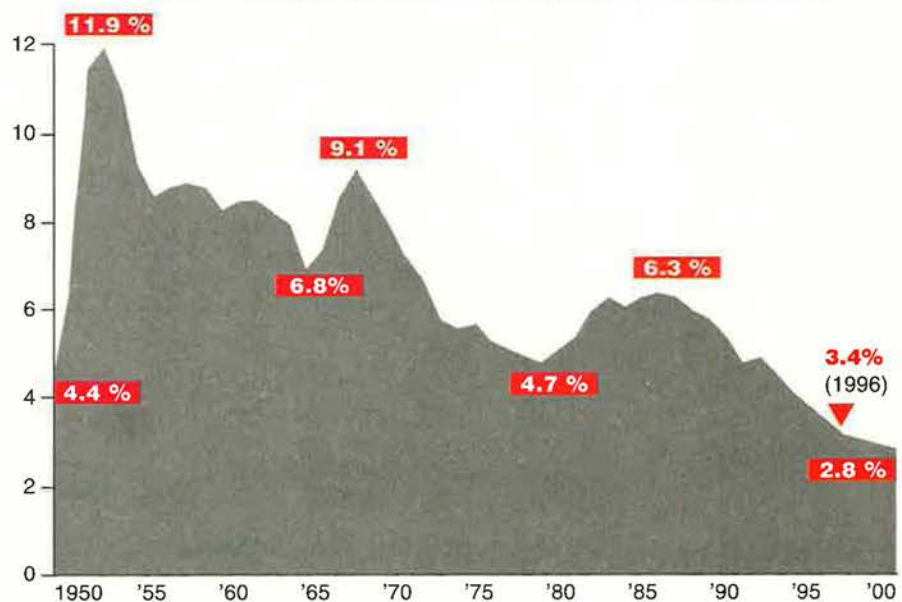
The following charts address only the Defense Department program. In some instances, numbers on the charts in this section may not sum to totals shown because of rounding. Years indicated are Fiscal Years.

Budget Topline

(\$ billions)

	1995	1996	1997	1998	1999	2000	2001
Budget authority (current \$)	252.6	246.0	242.8	249.7	256.3	266.2	276.6
Budget authority (constant FY 1996 \$)	259.7	246.0	235.9	235.7	235.1	237.8	240.6
Outlays (current \$)	260.2	250.0	246.1	244.2	249.6	257.9	261.6
Outlays (constant FY 1996 \$)	267.5	250.0	239.0	230.5	229.0	230.4	227.7

Defense Outlays as a Share of Gross Domestic Product



Source: US Department of Defense.

Cutting the Pie: Who Gets What

(Budget authority in current \$ billions)

	1994	1995	1996	Change 1995-96
Military personnel	71.4	70.4	68.7	-1.7
Operations & maintenance	88.3	92.1	91.9	-0.2
Procurement	44.1	44.6	39.4	-5.2
Research, development, test, & evaluation (RDT&E)	34.6	35.4	34.3	-1.1
Military construction	6.0	5.5	6.6	+1.1
Family housing	3.5	3.4	4.1	+0.7
Other	3.4	-0.6	1.0	+1.6
Total	251.4	250.8	246.0	-4.8
FY 1995 supplemental		+2.6		
Proposed rescissions		-0.7		
Total		252.6		

Service Shares

(Budget authority)

	1995	1996
Current \$ billions		
Air Force	73.5	72.6
Army	61.6	59.3
Navy	77.7	75.6
Defense agencies, DoD-wide	38.0	38.5
Total	250.8	246.0
Proposed rescissions	-0.7	
FY 1995 supplemental	+2.6	
Total	252.4	

	Percentages	
Air Force	29.1	29.5
Army	24.4	24.1
Navy	30.7	30.7
Defense agencies, DoD-wide	15.1	15.7

Fiscal 1996 figures are those contained in the Clinton Administration's budget request.

Total Funding of Major Programs

(Current \$ millions, including RDT&E and procurement funding)

	1996
Air Force	
C-17 transport	2,612.7
Strategic airlift	183.8
F-22	2,150.8
B-2 bomber	987.2
E-8 Joint STARS aircraft	732.9
Milstar satellite	693.2
Joint Primary Aircraft Training System	102.0
Joint Advanced Strike Technology	151.2
Army	
AH-64 helicopter	378.4
RAH-66 helicopter (RDT&E only)	199.1
Navy	
DDG-51 destroyer	2,425.5
F/A-18C/D/E/F fighter	1,769.0
Trident II ballistic missile	541.7
E-2C early warning aircraft	269.6

Manpower

(End strength in thousands)

	Change 1987-93	1994	1995	1996	1997	Change 1994-97
Total active-duty	-446	1,611	1,523	1,485	1,464	-147
Air Force	-162	426	400	388	385	-41
Army	-206	540	510	495	495	-45
Marine Corps	-18	174	174	174	174	0
Navy	-61	471	439	428	409	-62
Selected reserves	-56	1,025	965	927	901	-124
Civilians	-169	923	867	829	799	-124

Force Structure Changes

	Cold War Base 1990	Base Force	1996	Bottom-Up Review Plan
Air Force				
Active fighter wings	24	15.3	13	13
ANG/AFRES fighter wings	12	11.3	7	7
Army				
Active divisions	18	12	10	10
ANG/AFRES brigades	57	34	47*	42*
Navy				
Battle force ships (including carriers)	546	430	365	346
Aircraft carriers				
Active	15	13	11	11
Reserve	1	—	1	1
Carrier air wings				
Active	13	11	10	10
Reserve	2	2	1	1
Marine Corps divisions (three active, one Reserve)	4	4	4	4

*Includes fifteen enhanced readiness brigades (equivalent to 5+ divisions)

Operational Training Rates

	1985	1995	1996	1997
Air Force				
Flying hours per crew per month, fighter/attack aircraft	19.1	19.7	19.7	19.7
Army				
Flying hours per crew per month	13.1	14.5	14.5	14.5
Annual tank miles	850	800	800	800
Navy				
Flying hours per crew per month	25	24	24	24
Ship steaming days per quarter				
Deployed fleet	53.6	50.5	50.5	50.5
Nondeployed fleet	27.4	29	29	29

Procurement of Major Air Force Systems

(Current \$ millions)

	1995	1996	1997
Aircraft procurement			
B-1B bomber	\$ 138	\$ 56	\$ 77
B-2 bomber	337	280	217
C-17 transport	2,342	2,402	72
C-130J transport	0	89	93
E-8 Joint STARS aircraft	655	492	506
F-22 fighter	0	0	53
Joint Primary Aircraft Training System	93	55	109
Strategic airlift	0	184	2,568
Missile procurement			
Advanced cruise missile	0	2	2
AGM-130 powered GBU-15	69	69	3
Advanced Medium-Range Air-to-Air Missile	287	191	178
Sensor-Fuzed Weapon	113	166	158
Other procurement			
Airborne Warning and Control System	137	230	270
Space boosters (Titan)	379	465	510
Global Positioning System	189	175	215
Defense Support Program	361	103	87
Medium launch vehicle	135	190	216
RDT&E			
Milstar	598	650	745
B-2 bomber	384	624	446
Spacebased Infrared satellite	216	283	325
Titan	151	141	149
Evolved Expendable Launch Vehicle	30	39	57
F-22 fighter	2,325	2,139	1,957
Joint Advanced Strike Technology	85	151	200

What makes the S211A the most suitable primary trainer aircraft? It's a jet for one. And it's the smallest, most agile, least expensive of any proposed JPATS jet. But that's only one part of our Total Training System. We prepare students through a program of academics and computer-based instruction, simulator and procedures training, and of course, S211A flight training. Each is designed to teach critical piloting skills.

WE TAKE STUDENTS THROUGH COMPUTERS,



SIMULATORS, CLASSROOMS, AND CLOUDS.

We've spent the last six years preparing for a mutually supportive, interactive and completely integrated Total Training System. The simple fact is, a well integrated training program will be key to a successful JPATS solution. And no one has more experience integrating systems than we do.

NORTHROP GRUMMAN

By Brian Green, Congressional Editor

"Quality of Life" Draws Support

Secretary Perry gets good marks from Congress for his initiatives on military pay, housing, and programs.

KEY CONGRESSIONAL leaders almost universally approve of initiatives proposed by Secretary of Defense William J. Perry in the latest defense budget to address pay, housing, and other quality-of-life problems facing military members. Early in the Fiscal 1996 budget cycle, however, many warned that other deficiencies in the US defense posture also will require additional funds. Others maintained that even with the quality-of-life additions, the Administration's budget fails to correct deficiencies that could end up hurting recruiting, retention, and readiness.

Secretary Perry identified readiness and quality of life as the top priorities in the budget, "not for any sentimental reason . . . [but] because I think it is crucial to maintaining the capability of our forces. And the absolute key to readiness is people—the highly trained, experienced, competent, motivated people in the military forces."

Senior defense committee leaders, however, noted shortfalls in modernization programs—programs critical to future readiness, according to the Secretary and Chairman of the Joint Chiefs of Staff Gen. John M. Shalikashvili—and increasing short-term readiness problems that will compete for budget dollars with the quality-of-life programs.

Senate Armed Services Committee (SASC) Chairman Sen. Strom Thurmond (R-S. C.) commended Secretary Perry for "funding the pay raise of the uniformed people and the actions you have taken to protect the medical benefits of the uniformed people." But, he said, "I am still concerned about our readiness and modernization."

Sen. Sam Nunn (D-Ga.), the ranking Democrat on the committee, expressed concern that "future defense budgets are not sufficient to both maintain the readiness of our forces and . . . provide the standard of liv-

ing that military personnel and their families expect and deserve" while supporting the necessary force structure and modernization. "I think the modernization is where I have my greatest concern now," he said.

House leaders also expressed concern. National Security Committee Chairman Rep. Floyd D. Spence (R-S. C.) and Appropriations National Security Subcommittee Chairman Rep. C. W. "Bill" Young (R-Fla.) noted that the Fiscal 1996 budget cuts procurement funding by \$5.4 billion from the 1995 level and almost \$9 billion from last year's projection for FY 1996. "To the extent that 'modernization is the key to future readiness,'" the chairmen wrote, the budget is "penny-wise [and] pound-foolish."

The proposed military pay raise of 2.4 percent, the maximum permitted by law, is one of the key quality-of-life initiatives. (Current law limits raises to a half percent less than private-sector pay increases.) Secretary Perry testified that the six-year defense budget plan funds full annual pay raises. In each of the last two years, Congress overturned previous Administration policy to freeze pay or provide smaller raises.

Congressional critics point out that the raise still falls short of keeping pace with civilian pay and may be less than the rate of inflation. "The budget still fails to recognize the widening gulf between military and civilian pay, estimated to be as high as twenty percent," according to Rep. Robert K. Dornan (R-Calif.), chairman of the Military Personnel Subcommittee of the House National Security Committee.

Mr. Dornan intends to revisit the pay issue with a view toward eventually eliminating the pay gap. That is a goal, he concedes, that cannot be achieved any time soon.

The Administration's budget provides for a thirteen percent increase for military housing. "The number one issue that I hear when I go to bases is, 'Our housing is inadequate,'" Secretary Perry testified. "It is dramatically inadequate." The funding will go toward building new housing for

married couples, barracks, and dormitories and refurbishing older units.

An increase in the basic allowance for quarters is also intended to decrease the percentage of housing costs absorbed by service members living off-base. It would drop from about twenty percent today toward the congressional intent of fifteen percent.

Members of Congress were supportive of the housing programs, but several noted that the initiative would not solve the problem of aging and inadequate military housing. "This is an important step forward as a stopgap, but it would take us decades to solve the housing problem at this rate of increase," Secretary Perry conceded. He plans to come forward later this year with another housing initiative, possibly involving private developers to build and lease housing on military lands. This plan, he hopes, "will not require additional appropriated funds."

Sen. Dan Coats (R-Ind.), chairman of the SASC Personnel Subcommittee, pegged the quality-of-life effort as his top priority and improved housing as one of the central focuses of that effort. He also noted that pressure to delay might come from many who want to focus on improving combat capability. "People will likely raise the question of 'Why can't we wait another year or two on the housing initiative that you're talking about?'"

Secretary Perry insisted that he would resist moves to cut the housing initiative and, if necessary, would trade off other parts of the budget to maintain it. He contended that a delay would lead to an exodus of experienced personnel. "We would be squandering the most precious asset we have now, which is the competence and the dedication and the morale of the people," he said.

SASC member Sen. Trent Lott (R-Miss.), however, complained that the budget is incomplete. "You're looking for innovative ways to provide that housing. I commend you for that, and I want to help you make that happen if you can. But you're going to have to—maybe—come back for more money for . . . housing. Are we seeing the real budget here?" ■

By Suzann Chapman, Associate Editor

BRAC '95 Offers Greatest Savings

Defense Secretary William J. Perry released the 1995 Defense Base Closure and Realignment Report on the last day of February, stating that the proposed closure of 146 US military installations "will save the taxpayers and the department some \$18 billion over the next two decades."

He added that although there are fewer actions included in the 1995 list, the savings are greater than any of the previous rounds of closings.

In an unusual move, the Air Force decided not to close any of its depots. Instead it will consolidate and reduce activity at its five air logistics centers; this, according to the DoD report, "will be significantly more cost-effective than closure." The Air Force projects that this action will save about \$2.9 billion compared to the \$699 million savings from closing two depots.

The proposed major base closures for the Air Force are North Highlands Air National Guard Station, Calif.; Ontario International Airport/ANG Station, Calif.; Rome Laboratory, Griffiss AFB, N. Y.; Roslyn ANG Station, N. Y.; Springfield-Beckley Municipal Airport/ANG Station, Ohio; Pittsburgh IAP/Air Reserve Station, Pa.; Bergstrom ARS, Tex.; Brooks AFB, Tex.; and Reese AFB, Tex.

C-17 Wins Collier Trophy

The C-17 Globemaster III transport aircraft has won the 1994 Collier Trophy, the annual National Aeronautic Association award signifying the top aeronautical achievement of the year.

The Air Force, McDonnell Douglas Corp. (the C-17's prime contractor), and the C-17 industrial team of sub-contractors and suppliers share the trophy.

In its nomination of the C-17, the Air Force Association lauded the government-industry team for creating and bringing into operational service "the linchpin of airlift modernization," an aircraft that AFA said has "the versatility to create a new era in military airlift."



Staff photo by Guy Acelio

The Air Force's first C-17 Globemaster III unit, the 17th Airlift Squadron at Charleston AFB, S. C., became operational January 17. The following month, the second C-17 squadron, the 14th AS, received its first aircraft. During development testing, completed in December, the C-17 set twenty-two world performance records in three aircraft weight classes. For more on the C-17, see "Up and Running at Charleston," p. 44.

The NAA presented the award to the team for "designing, developing, testing, producing, and placing into service the C-17 Globemaster III," which it called "the most versatile airlift aircraft in aviation history."

USAF Chief of Staff Wants to Balance Work Load

Now that the Air Force has reached its Bottom-Up Review force structure, Air Force Chief of Staff Gen. Ronald R. Fogleman wants to review better ways to use the Total Force. However, General Fogleman said he doesn't intend to make big changes before studying how the current force structure supports its taskings over the next two years.

The General said that when he was commander of Air Mobility Command, he saw the value of using the Guard and Reserve. Although AMC handled several worldwide operations, its primary weapon systems—KC-10s, KC-135s, C-5s, and C-141s—never exceeded the recommended

maximum 120 days of temporary duty (TDY) last year. The General credited this to several factors:

- Guardsmen and Reservists fly roughly twenty-five percent of AMC's day-to-day missions.

- More than sixty percent of all strategic airlift pilots are in the Guard and Reserve.

- About fifty percent of the tanker pilots are in the Guard and Reserve.

- The Guard and Reserve make up about sixty-five percent of the aerial port troops.

General Fogleman noted that in 1994 the average active-duty F-16 unit was TDY less than forty days, indicating that there may be too many F-16s in the active-duty force and not enough in the Guard and Reserve. On the other hand, he said, the Guard and Reserve may have too many HC-130s because active-duty troops with HC-130 search-and-rescue and special operations spend a lot of time on TDY.

While General Fogleman wants to

maximize the use of the Guard and Reserve, he believes the active-duty force can help itself with some asset adjustments. He said that last year, for example, F-16s, F-15s, and A-10s within USAFE exceeded the 120-day TDY rate, while the TDY rate for their counterparts in the Pacific was lower. To rectify that, the General said, the Air Force will study possible deployments of crews from the Pacific to replace USAFE squadrons.

Concern Over Reduced UN Participation

Five retired flag and general officers wrote House Speaker Rep. Newt Gingrich (R-Ga.) to relay their "serious reservations" about the House Resolution 872 provision restricting the President's ability to provide US forces for United Nations operations.

The letter, signed by Gen. David C. Jones, USAF (Ret.), Adm. David E. Jeremiah, USN (Ret.), Gen. Glenn K. Otis, USA (Ret.), Gen. W. E. Boomer, USMC (Ret.), and Lt. Gen. B. E. Trainor, USMC (Ret.), urged rejection of that portion of HR 872 as "unnecessary, unwise, and militarily unsound."

Throughout US history, the retired officers said, presidents have found it "advantageous and prudent" for US forces to participate in coalition operations to advance national security. "In the post-Cold War world, it will remain essential that the President retain the authority to establish command arrangements best suited to the needs of future operations," they added.

House Weakens "Contract" Stand on Missile Defense

The GOP's National Security Revitalization Act (NSRA), or HR 7, passed the House in mid-February but without the provision requiring the Secretary of Defense to present a plan for a national missile defense within sixty days of enactment.

Based on a Democratic amendment, the NSRA now only calls for national missile defense development and deployment "at the earliest practical date." Twenty-four Republicans who voted for the amendment cited concerns about the budget.

However, a week later, sixteen of those Republicans voted for a Republican pro-missile defense amendment calling for "deployment of affordable, highly effective national and theater missile defense systems" as "an essential objective of a defense modernization program that adequately supports the requirement of the national military strategy."

The House also changed the makeup of the NSRA's national commis-



USAF photo by SSgt. Stan Clark

Four Polish military officers visited Incirlik AB, Turkey, in December, as part of the USEUCOM Joint Contact Team Program to establish positive relationships between US military officers and those of former Soviet bloc countries. Getting a look at the F-15 Eagle is Col. Wladyslaw Dabkowski.

sion to assess defense needs from a Republican-appointed majority to an even split between both parties.

F-22 Design Review Rates High

Comparing the F-22 to previous new fighter development programs, officials at the Aeronautical Systems Center, Wright-Patterson AFB, Ohio, said the F-22 is extremely mature and has unprecedented design fidelity at this stage of development.

The new air-superiority fighter passed its Critical Design Review (CDR) in late February after a year of reviews of its subsystems and software. The CDR, which covered such items as aircraft configuration, structures, materials, manufacturing processes, propulsion, and flight performance, ensures that the program meets all necessary criteria to proceed into the next phase—fabrication and assembly. During the CDR, officials also evaluated recent wind tunnel, material, and structural tests.

F-22 chief engineer John Ogg credited the fighter's integrated product team, which "allowed the design issues to be worked far in advance of the actual CDR." Under the IPT concept, government and contractor teams manage "products," such as avionics, cockpit, airframe, utilities, and subsystems

Reserve Associate Units Praised

The Air Force Chief of Staff pointed to Reserve Associate Programs—which merge Reserve and active-duty units at active-duty bases throughout the United States—as providing

"very high leverage in the strategic air mobility business."

Nine Reserve Associate units—four tanker and five air mobility—have already been established. General Fogeman said other weapon systems showed potential for benefiting from the support of the Guard and Reserve.

He said the key to proper use of the Guard and Reserve is flexibility because it's difficult for individual members to leave home for two months. "You might be able to assign a unit a job for sixty days and then let that unit rotate [its] people in and out."

Congress Funds B-2 Production Base

Congress provided \$100 million to preserve the B-2 bomber production base for one year while the Pentagon completed its new 1995 heavy bomber force study. The Department of Defense set aside about \$4.5 million of that sum to conduct the study, which Congress has required, with the rest going to the B-2 contractor base.

Paul Kaminski, under secretary of defense for Acquisition and Technology, announced February 7 that he planned to release \$94.7 million of Fiscal 1995 appropriated funds to reestablish critical B-2 industrial base capabilities and to establish sources or capability for critical, unavailable parts.

He added that the Pentagon could not use any of the money to "initiate any long-lead or advanced procurement for additional B-2s." Production currently is capped at twenty bombers.

He also announced a change in B-2 maintenance. The work will be split between Northrop Grumman Corp., providing maintenance of the unique bat-winged airframe at Air Force Plant 42 at Palmdale, Calif., and the Oklahoma City Air Logistics Center, providing software and avionics support at the ALC at Tinker AFB, Okla.

Better to B-2 or Not B-2?

Discussing the study, Dr. Kaminski said DoD will address several options available to the Air Force in fielding realistic bomber forces to meet the two major regional conflict scenarios. Among those options:

- Keeping the bomber force at the present levels of twenty B-2s, ninety-five B-1Bs, and sixty-six B-52Hs through 2014.

- Doubling the B-2 force to forty and dropping the B-1B while keeping the B-52Hs through 2014.

- Doubling the B-2 force and keeping the same number of B-1Bs and B-52Hs through 2014.

He added that there are three possible approaches to meeting future strategic needs: Buy more B-2s, define a totally different bomber concept, or develop a strike asset that is different from a bomber.

Northrop Grumman's proposed recurring flyaway cost for each additional B-2 is about \$570 million. Air Force officials project that this cost could be more than \$630 million.

Officer Assignment System Changes

The Air Force instituted the Officer Assignment System in February to ensure that qualified people fill critical jobs not filled under the former Officer Volunteer Assignment System.

Following changes recommended by a special study group headed by

Lt. Gen. John S. Fairfield, PACAF vice commander, the new OAS program continues to advertise job openings and accept volunteers. However, USAF officials said that if there are no volunteers, the Air Force will assign the most eligible qualified officers to the positions.

What Quality of Life Is Not

When asked to define what quality of life is and how it relates to readiness, CMSAF David J. Campanale in February gave the House Appropriations Subcommittee on Military Construction some poignant examples of what it is *not*.

Unlike his counterparts in the other services, Chief Campanale focused on the down side of downsizing.

He said, for example, that quality of life isn't one-third of the USAF work force holding part-time jobs to make ends meet. It isn't waiting for on-base housing for months, even years. It isn't people mortgaging their futures and their children's futures by borrowing money and using credit cards to pay for housing. It isn't spouses failing to pursue careers because of a lack of on-base child care or seeing most of their income absorbed by expensive off-base care. It isn't when people serve honorably for twenty years only to find military medical facilities turn them away because they can't afford to treat them.

Responding to a statement that implied that weapon systems were more important than people programs, Chief Campanale said, "People are weapon systems."

The Chief also told the subcommittee that Air Force Stateside housing is thirty-two years old on average and that 60,000 homes require improvement or replacement. "At the current funding levels, it will take twenty-four years to buy out that backlog," he said.

Chief Campanale said there are 39,000 people on waiting lists for on-base housing and 8,000 children waiting to get into on-base child-development centers.

Perry Calls Housing Inadequate

Defense Secretary Perry told the Senate Armed Services Committee in February that he would give up other items in the defense program in order to maintain quality-of-life proposals, including a thirteen percent increase in spending on military housing during the next six years.

DoD plans over the next six years to provide more than 49,000 new or renovated living spaces for single

Smithsonian Continues the Cleanup

The course correction at the Smithsonian Institution continues. In January, Smithsonian Secretary I. Michael Heyman—hard-pressed by the Air Force Association and other veterans' groups—canceled a politically distorted exhibition planned by the National Air and Space Museum of the *Enola Gay*, the B-29 that dropped the first atomic bomb on Hiroshima in 1945.

On February 23, Secretary Heyman announced that he had ordered major changes to another Smithsonian exhibition and put yet another planned exhibit on hold. His announcement came a day after the House Appropriations Interior Subcommittee proposed cutting \$32 million from the Smithsonian's annual allocation, which would otherwise amount to \$371.1 million.

Revisions are under way, Secretary Heyman said, to "Science in American Life" at the National Museum of Natural History. After spending seven hours in that exhibit, Mr. Heyman found merit in the complaints of scientists that it "degrades science and is unbalanced in the sense that it views science's failures to a much greater extent than science's triumphs."

Placed on hold for "a time uncertain" is an exhibit on Vietnam that was scheduled to open in 1997 at the National Air and Space Museum. Secretary Heyman said the program will be postponed "until we [get] through with the *Enola Gay* and see what kind of ground rules we come up with."

The *Enola Gay* exhibit has been the most controversial in the history of the Smithsonian Institution. Politically committed curators designed it initially in a way that came close to portraying Japan as the victim rather than as the aggressor in the Pacific war. Under relentless fire from Congress and veterans' groups, the museum revised the script four times before Secretary Heyman scrapped the plan in January in favor of a smaller show, presenting the forward fuselage of the famous bomber without political commentary. The new program is expected to open in June.

In January, eighty-one members of Congress called for the resignation or replacement of Dr. Martin O. Harwit, director of the Air and Space Museum, under whose leadership the *Enola Gay* exhibit plan took a wrong turn and went over the edge. Secretary Heyman defused that call by canceling the exhibit and denies that Dr. Harwit's departure is imminent. "You don't punish people for a single mistake, and you certainly don't punish people in the midst of emotional stress and political heat," Mr. Heyman said.

Rocked by cancellation of memberships and subscriptions as well as by the drying up of corporate funding sources, the Smithsonian commissioned a poll by Peter Hart Research Associates to determine how badly it had been hurt by the *Enola Gay* controversy. The poll found that sixty-one percent of the public had heard of the controversy; of those who had heard, twenty-three percent said their views of the Smithsonian were less favorable, eight percent said their views were more favorable, thirteen percent said it "made no difference," fifty-one percent said it had no effect, and five percent didn't know.

—John T. Correll

service members and more than 28,000 new or renovated family quarters. Funding these plans requires \$4 billion for new construction and \$2 billion for renovation.

Secretary Perry linked quality of life to readiness by emphasizing the length of time it takes to develop high-quality military personnel. He said a major part of retention is "reenlisting families."

"If we have them living in slums or off food stamps," said the Secretary, "it's very unlikely that our best enlisted personnel will reenlist when the time comes."

Vision 2020 Plans Better Dorms

The Air Force came closer to realizing its Vision 2020 plan to provide better dorms for airmen when the Army, Navy, and Marine Corps agreed in January to adopt a common construction standard. The standard provides for single-occupancy rooms in enlisted dormitories.

The plan, which the Air Force first introduced in early 1993, awaits approval from the Secretary of Defense. It will replace the existing DoD "two-plus-two" scheme, which puts two enlisted members in one room with a bathroom shared with two people in adjacent quarters.

Only about seventy-two percent of Air Force single enlisted people live in this type of dormitory. The other twenty-eight percent still live two people to a room with "gang latrines," said Maj. Gen. James E. McCarthy, the Air Force Civil Engineer.

General McCarthy said the first priority would be to replace the gang latrine dorms and expects the Air Force to spend about \$100 million to \$120 million each year. "At that rate, implementing the new standard will take from eight to ten years," he said. "The cost would be about \$1 billion."

Some F-16s on Stand-Down

After the third crash of an F-16 in five months, Air Force officials ordered a precautionary stand-down of about 225 F110-GE-129 engines on January 17.

According to Air Force Materiel Command, the stand-down affected about 140 Block 50 F-16 Fighting Falcons assigned to Air Combat Command, USAFE, and PACAF.

Maintenance workers at each base inspected the jet engine fan blades for cracks, using a blue dye and a fluorescent light. The inspection takes only about three hours for each engine. According to an AFMC spokesman, the Air Force has tightened limits on the blades, which will undergo



Air Force instructor pilots from Vance AFB, Okla., picked up the 100th T-1A Jayhawk from Raytheon Aircraft Co., Wichita, Kan., in January. USAF pilots on the airlift/tanker training track will fly T-1As at Vance and at Reese, Randolph, and Laughlin AFBs in Texas.

more frequent inspections with less tolerance for nicks and "dings."

Restrictions Lifted for C-141s

The C-141 "weep-hole crisis" ended a month ahead of schedule, Air Force officials announced at a January 25 ceremony celebrating the conclusion of more than a year of flight restrictions for the fleet of 243 C-141B StarLifters.

Each aircraft has some 1,500 weep holes that ensure the free flow of fuel to fuel pumps. Cracks originating from the weep holes in the risers of C-141B lower wing panels proved so serious that the Air Force grounded forty-five of the aircraft and severely restricted flying for the rest in August 1993.

A three-month inspection of the fleet revealed that the aircraft needed to have the weep holes redrilled and either composite patches made to the lower wing panels or the entire panels replaced.

Warner Robins Air Logistics Center and Lockheed Aeronautical Systems Co., Marietta, Ga., completed repairs on nearly 194 aircraft within one year.

Opportunities for Commissions Increase

The Air Force has started the Leaders Encouraging Airmen Development program to get more enlisted members to enter the Air Force Academy and Air Force ROTC.

Wing commanders may select fifty airmen each year for the Air Force Academy Preparatory School. The nominees must be single, have no

dependents, and be under twenty-one years of age by July 1 of the year they enter the school. Roughly eighty-five percent of enlisted prep school graduates receive academy appointments.

Commanders may also nominate fifty enlisted people each year for Scholarships for Outstanding Airmen to ROTC (SOAR). Nominees must have less than six years of service, meet academic qualifying criteria, and pass a fitness test. On acceptance, SOAR requires them to separate from the Air Force while earning a bachelor's degree.

Under a third option, commanders may nominate twenty-five airmen and twenty-five civilians per year for civilian prep schools and community colleges. According to personnel officials who are working out the details of this offer, graduates of these programs will receive full ROTC scholarships—for tuition and fees—to complete their bachelor's degrees.

B-2s Drop Live Bombs

In their first participation in an operational exercise, B-2 bomber crews from the 509th Bomb Wing, Whiteman AFB, Mo., came in with a perfect bombing score.

The B-2 crews, flying their new stealth aircraft during a recent Red Flag exercise at Nellis AFB, Nev., conducted ten live bomb drops and hit ten targets. Pilots Lt. Col. John Belanger and Maj. Rich Vanderburgh completed the first two successful live Mk. 84 releases on February 7, 1995, during the fifth of eight scheduled B-2 Red Flag sorties.

The sortie marked the first live munitions drop from the bomber since B-2 operations began at Whiteman on December 17, 1993, and was also the first night sortie for a B-2 in the exercise.

The Air Force also announced that *Spirit of Kansas* will be the name of the fifth operational B-2 stealth bomber and that Whiteman AFB, Mo., received the sixth B-2 on February 17.

undergraduate pilot training positions to the US Air Force Academy Class of 1995, seventy more than the slots authorized for the previous class. Undergraduate navigator training slots also increased from twenty-seven to seventy-seven.

According to Academy officials, current projections anticipate the number of pilot training slots to increase by fifty each year for subse-

quent market than [the one] experienced through most of the '80s."

Uniform Board Makes Recommendations

The Air Force Uniform Board met for the last time on January 24-25 under General Fogleman. It received 125 times as many suggestions as had any of the ninety-three previous uniform boards.

Maj. Beverly Wright, chief of the Air Force Uniform Board Division, said the panel condensed 2,500 ideas into 363 proposals, to which the board added another four. Other boards had normally reviewed about twenty proposals.

Before the board review, Major Wright's office sent the proposals to each major command for evaluation at wings and bases. Each command then had voting members on the board. The board submitted the proposals to General Fogleman in early February. They await final action.

Senior NCO Promotions to Increase

According to personnel officials, the promotion rate for senior NCOs in the 1995 cycle will be greater than last year. The Air Force expects to promote seven percent of those eligible for senior master sergeant and thirteen percent of eligibles for chief master sergeant, compared to 4.6 and 11.99 percent, respectively, last year.

These levels mark a return to those outlined by the Total Objective Plan for Career Airman Personnel, although Brig. Gen. Andrew J. Pelak, director of Military Personnel Policy, said that promotions to the top three enlisted ranks during the drawdown were "well within TOPCAP windows."

Ideally, under TOPCAP, senior master sergeants pin on the rank in about nineteen years but less than twenty-two, and chief master sergeants in about twenty-two years but less than twenty-six. During the most recent cycles, the average rates were 19.1 for seniors and 22.2 for chiefs.

General Pelak said USAF also met TOPCAP promotion rates for staff, technical, and master sergeants during the drawdown. However, the point at which staff and technical sergeants pinned on their ranks was slightly delayed, primarily because of the large number of people eligible and selected for these grades, he added.

Under TOPCAP, a staff sergeant should pin on in about 5.5 years but less than seven, technical sergeants in about ten years but less than twelve, and master sergeants in about fif-

USAF photo by SrA. Martin Simson



Col. Stephen Connelly, 352d Special Operations Group commander, unfurled the unit flag February 17 to mark the 352d's move from RAF Alconbury to RAF Mildenhall, UK, as part of a 1992 USAF force restructure and realignment action.

B-1s Fly Global Power Mission

B-1 bombers from the 28th Bomb Wing, Ellsworth AFB, S. D., flew a twenty-four-hour mission to Sicily as part of Air Combat Command's global power training.

Two B-1s flew from Ellsworth across the Atlantic and over Spain, the Balearic Islands, and Sardinia. Then one released a BDU-50 inert training bomb over the Pachino Bombing Range off the southern tip of Sicily. The bombers refueled twice on the way across the Atlantic and once on the return trip.

Each ACC bomb wing now flies four global power missions per year.

Capt. Eric Pharris, pilot of the lead B-1, said, "The primary lesson I learned on this mission was getting into and out of a foreign country in the air—communicating with foreign controllers." Both crews said that this is the only way to train realistically for long-duration missions.

Academy UPT/UNT Openings Increase

The Air Force has allocated 295

quent classes, reaching 550 for the Class of 2000.

USAF Needs Volunteers

For the first time in quite a while, the Air Force is having trouble finding young, qualified men and women to fill Air Force job openings.

Gen. Henry Viccellio, Jr., commander of Air Education and Training Command, said the service is "about 3,800 people behind the numbers in our delayed-enlistment pool that would make us comfortable at this point in the year."

In Fiscal 1995, the Air Force plans to hire 31,500 enlisted members, 3,800 officers, and 1,000 health-care providers in more than 200 specialties.

USAF offers four-year ROTC scholarships to about 2,000 high school seniors and has funds for 800 each year. However, last year only about 550 prospective freshmen took the offer.

General Viccellio said he will ask all active-duty personnel to help recruiters in what he terms "a very dif-

teen years but less than seventeen. During recent cycles, the average rates were 7.8 years for staffs, 13.2 years for techs, and sixteen years for masters.

USAFE Deploys Integral Tanker Unit

Deploying as a unit for the first time, the 100th Air Refueling Wing, RAF Mildenhall, UK, sent 122 people to Istres AB, France, January 9 for two months to refuel NATO aircraft taking part in Operation Deny Flight over Bosnia-Herzegovina.

Under an Air Mobility Command Integral Tanker Unit Deployment (ITUD) initiative, one unit provides all the support and operations people needed to conduct a major operation. Formerly, the Air Force would draw on a mix of people from different units.

The 100th ARW has been the "leading edge in setting up all the KC-135 forward operating locations throughout USAFE's area of responsibility [for Deny Flight] during the past two years," said Lt. Col. Ernest E. Felts, 351st Air Refueling Squadron and detachment commander. "Mildenhall set up the Istres location [in February 1994], the first US presence in France since 1962."

Colonel Felts added that the ITUD method puts mobility training into action. "This is the kind of operation we train for every day. It proves we can handle any NATO, JCS, and USAFE mission given to us."

Reserves Deliver Relief Supplies

The 934th Airlift Wing, based at

Minneapolis-St. Paul IAP/ARS, Minn., prepared 44,000 pounds of humanitarian supplies, which were then flown to Paraguay by a C-5 Galaxy from the 433d AW, Kelly AFB, Tex.

In another relief effort, a C-130 Hercules from the 911th Airlift Wing, Pittsburgh IAP/ARS, Pa., flew 30,000 pounds of supplies to Haiti. Both flights fell under the Denton Amendment, which allows DoD organizations to transport relief supplies on a space-available basis without charge to the donor or receiver.

C-5s in Formation Flying?

In view of planned retirement for the C-141, Congress wanted to know if the C-5 could airdrop an Army brigade. To answer the question, C-5 air and maintenance crews from the 436th Operations Group, Dover AFB, Del., carried out six-ship formation flying in February during tests at Pope AFB, N. C.

The group's 3d Airlift Squadron flew nine missions with six C-5s taking off at thirty-second intervals. During each flight, the formation made up to eleven passes over the drop zone, releasing two 150- to 300-pound dummies from the fourth, fifth, and sixth aircraft.

The Army studied the effects of wake turbulence on parachutes attached to the dummies. The C-5s also dropped heavy equipment platforms weighing 3,000 to 5,000 pounds each. No results have been released yet.

DoD Lists New Closures and Reductions

The Department of Defense an-

nounced in late February that it plans to cease or reduce operations at eight additional military facilities to help bring the US European theater force structure down to about 100,000 troops. They include six facilities in Germany, one in Italy, and one in the Caribbean nation of Antigua and Barbuda. The only Air Force facility on this list is the Wiesbaden Hospital, Lindsey AS, Germany, which will be returned to Germany.

With this announcement, DoD has identified 879 US installations in Europe where operations will end, be reduced, or be placed on standby, for a sixty-two percent reduction in facility infrastructure. Overall, the Defense Department reductions include 953 overseas sites for a fifty-seven percent reduction in infrastructure.

US Takes Top Scope '95

North American Aerospace Defense Command (NORAD) held its Top Scope '95 competition in mid-February to test the skills of air defense weapons controllers in directing fighter resources against unauthorized aircraft.

The Alaskan NORAD Region team from Elmendorf AFB won, followed by the Northeast Air Defense Sector (ADS) team, Griffiss AFB, N. Y., and the Canadian NORAD Region team, which won last year's competition. The Alaskan team included Capt. Kristan Dolan, Sgt. Paul Bergerson, SrA. Sean Jaehn, and SrA. Michelle Carey.

Other competitors came from the Northwest ADS at McChord AFB, Wash., the Southeast ADS at Tyndall AFB, Fla., and Iceland.

Retirement Home Study Slated for 1995

DoD officials said that the fifty-cent monthly deduction paid by active-duty enlisted members and warrant officers to support Armed Forces Retirement Homes will remain in effect until DoD completes a study of the homes' operations later this year.

Congress had authorized an increase to \$1, requested by DoD to support the Naval Home in Gulfport, Miss., and the Soldiers and Airmens Home in Washington, D. C. Because the homes' annual \$59 million in operating costs exceed current income, Armed Forces Retirement Board officials said they have tapped a \$162 million trust fund. The fund could fall to \$95 million by 2000 unless the homes gain additional financing.

Based on a benefit dating back to the early 1800s, the homes house 2,300 residents. Funding also comes from fines and forfeitures from mili-



The EC-135 advanced range instrumentation aircraft will receive more black boxes—Storehouse instrumentation recorders from Racal Recorders Ltd., UK—to help them monitor spacecraft, satellite, and missile telemetry and relay the information to their base at Edwards AFB, Calif., and sites around the world.

tary disciplinary actions, interest earned on the trust fund, and a twenty-five percent fee paid by each resident on all federal annuities, including Social Security.

About seventy percent of the homes' financing comes from pay deductions and fines and forfeitures. Force reductions to date and projected over the next few years will reduce that financing by about one-third, officials said.

Toll-Free Persian Gulf Help Line

The Department of Veterans Affairs established a toll-free number in February to inform Persian Gulf War veterans and their families of available medical care and other benefits: (800) PGW-VETS (800-749-8387).

VA specialists staff the help line from 7:30 a.m. to 8:30 p.m. (Central Time) weekdays. It also includes a series of recorded messages to help callers obtain information twenty-four hours a day, seven days a week.

OES Improprieties Corrected

Less than a year after finding improprieties in the Officer Evaluation System, the Air Force has surveyed 1,700 senior raters and found thirteen possible OES violations and has received another forty-four through Inspector General channels.

In February, the IG office was still investigating eleven of those allegations and had completed work on forty-six. It has substantiated twenty-two complaints. As a result, four officers have been promoted by special selection boards and have received back pay and allowances.

For substantiated cases, the Air Force appointed a new senior rater at each location to reevaluate affected records, which totaled 1,703. The senior rater results and all the records then went to a new management-level evaluation board for validation.

Based on these new reviews, USAF upgraded sixty-nine promotion recommendation forms (PRFs) to "definitely promote" status and downgraded sixty-three forms, officials said. Personnel officials instructed those officers with upgraded PRFs on how to apply for supplemental promotion consideration. Those with downgraded PRFs retained their original higher rating.

Deutch Flies AWACS Mission

Deputy Secretary of Defense John M. Deutch decided to find out about the E-3 mission by joining the professionals aboard an Airborne Warning

and Control System aircraft for a joint training mission with F-15s, KC-135s, and F/A-18s.

Following the January flight, Mr. Deutch said that the 552d Air Control Wing, Tinker AFB, Okla., is a "high-leverage unit, which influences the entire effectiveness" of the US military. He added that the "ops tempo needs to go down to the place where it's livable and reasonable," referring to deployments that have many wing people on the road for six months each year.

USAF and Navy Form Composite Wing

Joint Task Force Exercise 95-2 combined more than fifty Air Combat Command and Air Force Reserve air-

craft with Navy jets from the USS *Theodore Roosevelt* battle group in early February to test their combined ability to handle low- to mid-intensity conflicts.

The Air Force flew F-111F, EF-111A, B-1, B-52, F-15, F-16, A-10, EC-130, E-3, and supporting KC-135 aircraft. USAF participants said that joint service coordination is difficult but should improve through such exercises.

Nominee Sets Safety Record

Air Mobility Command's 21st Air Force, McGuire AFB, N. J., nominated the 1st Helicopter Squadron, Andrews AFB, Md., for the 1994 Air Force Maintenance Effectiveness Award.

According to Capt. Kimberlee Zor-

Senior Staff Changes

RETIREMENT: B/G Thomas D. Gensler.

PROMOTIONS: To be **Major General:** Kurt B. Anderson, William J. Begert, Frank B. Campbell, Paul K. Carlton, Jr., John P. Casciano, James S. Childress, Roger G. DeKok, John A. Gordon, Marcelite Jordan Harris, William S. Hinton, Jr., Walter S. Hogle, Jr., Clinton V. Horn, Ronald T. Kadish, George P. Lampe, Eugene A. Lupia, David J. McCloud, George W. Norwood, Richard R. Paul, Donald L. Peterson, Ervin C. Sharpe, Jr., Eugene L. Tattini, Arthur S. Thomas, David L. Vesely, John L. Welde.

To be **Brigadier General:** Patrick O. Adams, Theodore C. Almquist, Robert P. Bongiovi, Roger A. Brady, Hugh C. Cameron, John H. Campbell, Bruce A. Carlson, Howard G. DeWolf, Daniel M. Dick, Lawrence P. Graviss, David A. Herrelko, Robert C. Hinson, Stephen E. Kelley, Tiiu Kera, Michael S. Kudlacz, Arthur J. Lichte, William R. Looney III, Earl W. Mabry II, David F. MacGhee, James E. Miller, Jr.

Glen W. Moorhead III, Larry W. Northington, Everett G. Odgers, Ralph Pasini, William A. Peck, Jr., Gerald F. Perryman, Jr., Harry D. Raduege, Jr., Leonard M. Randolph, Jr., Randall M. Schmidt, Norton A. Schwartz, Ronald T. Sconyers, Arthur D. Sikes, Jr., Lance L. Smith, William E. Stevens, Todd I. Stewart, Linda J. Stierle, Philip G. Stowell, Charles F. Wald, Olan G. Waldrop, Jr., Tome H. Walters, Jr., Herbert M. Ward, Joseph H. Wehrle, Jr., Michael E. Zettler.

CHANGES: L/G Billy J. Boles, from DCS/Personnel, Hq. USAF, Washington, D. C., to Vice Cmdr., Hq. AETC, Randolph AFB, Tex., replacing L/G Eugene E. Habiger . . . B/G (M/G selectee) Frank B. Campbell, from Dir., Modeling, Simulation, and Analysis, DCS/P&O, Hq. USAF, Washington, D. C., to Dir., Forces, DCS/P&O, Hq. USAF, Washington, D. C., replacing M/G John B. Sams, Jr. . . . B/G Thomas R. Case, from Cmdr., 3d Wing, PACAF, Elmendorf AFB, Alaska, to Dir., Modeling, Simulation, and Analysis, DCS/P&O, Hq. USAF, Washington, D. C., replacing B/G (M/G selectee) Frank B. Campbell.

M/G Lawrence P. Farrell, Jr., from Principal Dep. Dir., DLA, Cameron Station, Va., to Vice Cmdr., Hq. AFMC, Wright-Patterson AFB, Ohio, replacing retiring L/G Dale W. Thompson, Jr. . . . L/G Eugene E. Habiger, from Vice Cmdr., Hq. AETC, Randolph AFB, Tex., to DCS/Personnel, Hq. USAF, Washington, D. C., replacing L/G Billy J. Boles . . . B/G Peter F. Hoffman, from Command Surgeon, Hq. AMC, and Command Surgeon, Hq. USTRANSCOM, Scott AFB, Ill., to Command Surgeon, Hq. ACC, Langley AFB, Va., replacing retired B/G Thomas D. Gensler.

M/G John B. Sams, Jr., from Dir., Forces, DCS/P&O, Hq. USAF, Washington, D. C., to Dir., Plans & Policy, J-5, US Atlantic Command, Norfolk, Va. . . . Gen. Henry Viccaglio, Jr., from Cmdr., Hq. AETC, Randolph AFB, Tex., to Cmdr., Hq. AFMC, Wright-Patterson AFB, Ohio, replacing retiring Gen. Ronald W. Yates.

SENIOR EXECUTIVE SERVICE CHANGES: Richard T. Eckhardt, to Dep. Dir., Financial Mgmt. and Comptroller, Hq. AFMC, Wright-Patterson AFB, Ohio, replacing Donna Back . . . Jimmy G. Dishner, to Dep. Ass't Sec'y (Installations), OSAF, Washington, D. C., replacing James F. Boatright. ■

ich, 1st HS chief of maintenance, the squadron had the best flying safety record of any Air Force rotary wing unit. At the time of the award, the unit had flown more than 106,700 safe flying hours. Captain Zorich added that the unit "mission capable rate averaged 85.7 percent, which is above the AMC standard of eighty-three percent."

AFRES Checks Munitions

AFRES Ammunition Teams are inspecting and refurbishing USAF munitions stored in Army depots in Kentucky, Indiana, Oklahoma, and Utah to ensure the munitions remain serviceable. The Army stores about twenty-five percent of USAF munitions but has been unable to keep pace with maintenance because of decreased funding, base closures, downsizing, and a glut of munitions returned from southwest Asia.

In one five-month period, an AFRES team returned to service 1,976 laser-guided bomb computer control groups (smart bomb brains), valued at \$10.2 million, at a cost of only about \$23,000.

"Readiness Challenge" Teams Named

The latest "Readiness Challenge," a biennial competition designed to

sharpen the wartime capabilities of civil engineer and services people, will be held this month at Tyndall AFB, Fla.

Competitors in Readiness Challenge V: 554th Support Group (ACC), Nellis AFB, Nev.; 97th Air Mobility Wing (AETC), Altus AFB, Okla.; 96th Air Base Wing (AFMC), Eglin AFB, Fla.; 341st Missile Wing (AFSPC), Malmstrom AFB, Mont.; 16th Special Operations Wing (AFSOC), Hurlburt Field, Fla.; 437th Airlift Wing (AMC), Charleston AFB, S. C.; 354th Fighter Wing (PACAF), Eielson AFB, Alaska; 100th Air Refueling Wing (USAFE), RAF Mildenhall, UK; 932d Airlift Wing (AFRES), Scott AFB, Ill.; 130th Airlift Group (ANG), Yeager Airport, W. Va.; US Air Force Academy, Colorado Springs, Colo.; 11th Support Wing, Bolling AFB, D. C.; and 4th Airfield Engineer Flight (Canadian Forces), Cold Lake, Alberta.

Hammer Award Goes to MESA

The Air Force Operational Test and Evaluation Center's Modeling Effort for Suitability Analysis team won Vice President Al Gore's Hammer Award in January for developing computer software tools that have a no-cost capability to analyze performance of systems undergoing Air Force tests.

One of the team's tools has already produced documented savings of \$940,000 in contract costs, according to AFOTEC officials. The Air Force estimates that the same tool will save an additional \$750,000 annually.

The AFOTEC Systems Analysis Directorate team members are Maj. Mike Carpenter; Capts. David Blanks, Steve Brown, Paul D'Agostino, Tim Gooley, Andrew Hachman, Jeff Jacobs, and Terence Mitchell; 1st Lt. Casey Britain; and Herb Morgan.

The Hammer Award is part of the National Performance Review and honors people who find ways to make the federal government more efficient and cost-effective.

AMC Clarifies Space-A Policy

According to Air Mobility Command officials, the policy allowing people to fly space-available in unused seats aboard command aircraft remains in effect. Maj. Gen. James F. Hinkel, AMC director of Operations and Transportation, said that AMC aircraft commanders will release the maximum number of seats possible on all missions, commensurate with aircraft configuration, cargo or airlift requirements, mission taskings, and flight safety.

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Officials noted that hazardous cargo, safety, unusual training requirements, customs and immigration limitations, or a defined need for security could keep seats from being released.

News Notes

■ The 630th Air Mobility Support Squadron, Yokota AB, Japan, worked 600 hours of overtime to prepare eighty-two pallets containing 47,299 blankets, five pallets for twenty tents, and forty-eight pallets carrying 37,170 gallons of water. The 135 pallets, weighing more than 347 tons, went to aid earthquake victims in Japan.

■ The Air Force Reserve activated the 931st Air Refueling Group at McConnell AFB, Kan., January 31. The group is the first KC-135 associate unit. Its members will fly and work alongside their active-duty counterparts from McConnell's 22d Air Refueling Wing.

■ Air Mobility Command units began returning Cuban refugees from Panama to the US Navy base at Guantanamo Bay, Cuba, February 1, under a joint US Atlantic Command and US Southern Command operation called Safe Passage. AMC will move about 500 of the 7,500 refugees per day aboard C-141 StarLifters and commercially contracted Boeing 727 aircraft.

■ AMC aircrews and support troops flew to the mountainous nation of Nepal in late January to airlift 410 Nepalese Army troops and their equipment to Haiti to join United Nations forces there. Charleston AFB, S. C., McChord AFB, Wash., McGuire AFB, N. J., and Travis AFB, Calif., each provided two C-141s for the airlift.

■ Using a new voice-mail system, fighter/bomber aircrew members can leave messages for their assignment officers twenty-four hours a day, according to personnel officials. Military personnel flights have a complete phone listing for some twenty assignment personnel.

■ The Air Force Office of Special Investigations made more than \$375 million in financial recoveries for Fiscal 1994, more than twice the amount recovered in Fiscal 1993. According to AFOSI officials, most of the money retrieved came from civil settlements or criminal judgments against defense contractors, their employees, or others engaged in schemes to defraud the Air Force.

■ Second Lt. Kelly Flinn made history in late March as the first woman to enter B-52 bomber training, which she requested because "it's a combat aircraft with a worldwide mission, and it's involved in almost all our defensive and offensive actions."

■ The Air Force plans to hold a Selective Early Retirement Board for Nurse Corps colonels and lieutenant colonels next month.

■ SMSgt. William J. Archambeau, 439th US Air Force Clinic, Westover ARB, Mass., won the Air Force medical readiness NCO of the year award for 1994.

■ The 928th Support Group Security Police, O'Hare IAP/ARS, Ill., is the AFRES Outstanding Department of Defense Police Unit for 1994.

■ SSgt. David Parker of the 95th Reconnaissance Squadron, RAF Mildenhall, UK, submitted thirty-three suggestions in one year. The Air Force has adopted twenty-two, has

disapproved three, and is still reviewing eight. So far, Sergeant Parker's suggestions, which primarily have been job-related improvements, have earned him \$4,455 and nomination as USAFE Suggester of the Year.

■ Winners of the 1994 ACC bio-environmental engineering awards are Maj. Matthew R. Chini, Hq. ACC, Langley AFB, Va.; Capt. Theresa R. Orcutt, 4th Medical Group, Seymour Johnson AFB, N. C.; SMSgt. Stephen G. Newell, 554th MG, Nellis AFB, Nev.; SSgt. Melissa C. Deguin, 4th MG; and SrA. Brian K. Seal, 4th MG.

■ Capt. Gary O. Essary, 39th Security Police Squadron, Incirlik AB, Turkey, won the 1994 Lance P. Sijan USAF Leadership Award, junior officer category. MSgt. Sonny W. Tompkins, then assigned to the 100th Mission Support Squadron, RAF Mildenhall, UK, won the 1994 Lance P. Sijan USAF Leadership Award for senior enlisted.

■ Flying F-15Cs on a NATO training mission, Lt. Col. Michael P. Fennessy, 53d Fighter Squadron commander, Spangdahlem AB, Germany, and Capt. Craig R. Jones, 53d FS flight leader, became the first USAF pilots to fly an unrestricted military sortie over the former East Germany in more than forty-five years.

■ Capt. Sheila Zuehlke, an Individual Mobilization Augmentee at Air Intelligence Agency, Kelly AFB, Tex., is the Air Force Reserve's junior officer of the year for 1994.

■ The 116th Maintenance Squadron, Georgia ANG, Dobbins ARB, Ga., won the 1994 ANG Maintenance Effectiveness Award.

■ Tinker AFB, Okla., won recognition from Renew America, a consortium of sixty environmental groups, for its efforts to decrease the amount of lead-based paint used on base. The award honored Tinker for having one of the most effective environmental programs in the nation.

■ McChord AFB, Wash., won the Quality Certificate of Merit from Washington state, which presented only three such awards last year.

■ Lt. Col. Doug Fry, a USSTRATCOM space operations manager, Offutt AFB, Neb., has won the National Soccer Coaches Association of America's national youth girls soccer coach of the year for 1994.

■ F. E. Warren AFB, Wyo., hosted 20th Air Force's Guardian Sword missile exercise in mid-February. Six previous exercises resulted in improvements worth more than \$4.3 million per year. ■

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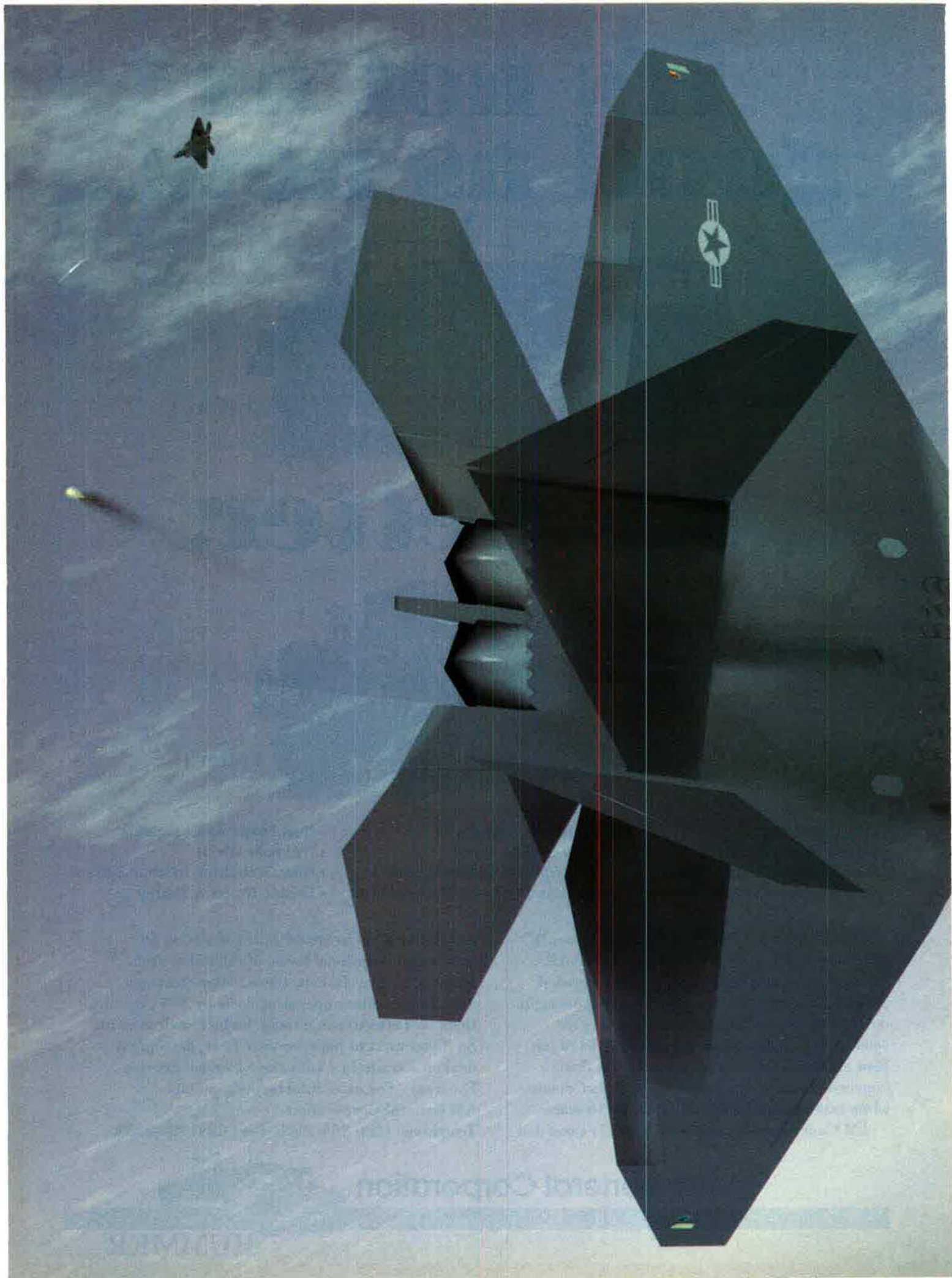
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Who Needs the F-22?

The US Air Force does. Here's why.

By John A. Tirpak, Senior Editor

CRUISING at Mach 1.5 over a virtual landscape, a simulated F-22 fighter spots a flight of four Su-27 "Flankers." Beyond them lies the target—a command-and-control bunker—further defended by several batteries of surface-to-air missile sites.

Inside the cockpit, a color display shows the SAM sites as small red circles. Their diameter represents their approximate detection range against the F-22. The Flankers are small red triangles, now off to the

right. So far, none of the defenders seems aware of the intruder.

As the target comes into range, a small ellipse appears in front of the F-22 on the pilot's display. As the ellipse overtakes the bunker, the pilot presses a button on his sidestick controller, and two Joint Direct Attack Munitions fall through cyberspace toward earth. Still undetected, the F-22 begins a gentle turn away, making for a path between the circles. It looks like a clean getaway.



The technologies used in the development of the F-22's cockpit will aid in the development of future combat aircraft. ACC Commander General Loh points out that every system used in the F-22 "earned its way" onto the aircraft.

The spell is broken as the instructor leans into the cockpit. "OK, now toggle the switch and see what happens if you're an F-15," he directs.

The pilot fingers a sliding switch on the side controller which turns the simulated F-22, with all its stealth capabilities, into a nonstealthy, simulated F-15.

Suddenly, the displays all go red. The small circles have ballooned and overlapped, with the F-15 in the middle.

There is a piercing tone. "Multiple missile launch," says an insistent female voice in the headset. Red arrows are rising toward the F-15 icon. Off to the right, the Flankers have turned, and red arcs representing the detection range of their radars wash over the F-15. They fire missiles as well.

"Now," says the instructor, "do you still want to be an F-15, or do you want to live?"

The scenario above—played out in a Lockheed simulator at the company's Marietta, Ga., facility—illustrates not only the realities of a future air battle but also the validity of the Air Force's claim that the requirement for the stealthy F-22 is as great as ever.

"The F-22 is needed more now than it was five years ago," asserted Gen. John Michael Loh, commander of Air Combat Command. "It is vital to implement the Bottom-Up Review strategy."

Without the F-22, General Loh

said, the Air Force will gradually lose its ability to guarantee control of the skies in any conflict. That, he said, would bring down the national military strategy of fighting two near-simultaneous major regional conflicts like a house of cards.

"Air superiority is not an optional mission," he said.

Going for the Slam-Dunk

"It's not the kind of mission where you want to take a chance on only winning 100 to ninety-nine in double overtime. It's a mission you want to win 100 to zero; slam-dunk, do it efficiently and effectively, and with few casualties."

He shakes his head at the argument that the F-15 is "good enough" for the foreseeable future.

"That's the last thing you want," he said. "Being 'just as good' means you lose."

"Don't get me wrong," General Loh said. "The F-15 is a great airplane, a magnificent airplane. But it lacks stealth. And we're not going to send our pilots and crews into combat with an unstealthy airplane if we can avoid it. We learned that lesson well in the Gulf War."

The F-15 scored a dramatic no-losses victory in the Persian Gulf War, against one of the most formidable integrated air defense systems in the world. The US Air Force outnumbered all of its potential adversaries. The next generation of for-

eight fighters has been delayed, and most of these fighters are being developed by allies or friendly nations anyway. In the face of all this, ask some critics, why spend some \$53 billion on the F-22?

The argument that the Air Force will outnumber any potential adversary—or that the F-15 of today can hold its own against fighters of a decade from now—misses the fact that the US military has become a purely expeditionary force and not a forward-deployed force, said Lt. Gen. Richard E. Hawley, principal deputy, Office of the Assistant Secretary of the Air Force for Acquisition.

"When we are asked to go engage in combat in support of US national interests, it is going to be on someone else's turf," General Hawley explained.

Under the two-MRC strategy, the Air Force's job will be to arrive quickly and halt an aggression until US naval and ground forces can arrive in the theater.

"We are going to have to move our forces there, perhaps in the face of hostile airpower," he said. Any enemies "will have their entire force structure available as we build up," so the prime US fighter "needs to have a much-superior technical capability." Initially, at least, "we will be outnumbered."

To beat those numerically superior forces quickly, said General Hawley, the F-22 will need "cosmic" capabilities, such as stealth, the ability to cruise supersonically without afterburner, and highly sophisticated avionics.

The F-22 will be "extremely important to the viability of surface forces in the twenty-first century," said Air Force Chief of Staff Gen. Ronald R. Fogleman. "It will deny the other guy the opportunity to operate in your airspace. More importantly, because of its stealth capabilities, it will allow us to penetrate deeply into that guy's airspace and take on fighter aircraft [and] cruise missile launchers and to negate the effect of relatively cheap but increasingly lethal surface-to-air missile launchers."

Without control of the air, "nothing else works," General Hawley insisted. "You can't get your forces in place, you can't deploy them in combat, they can't fight effectively because they are suffering from at-

tack, and you can't gain the knowledge of the battlefield you need to fight the war."

Silver Bullets Are Not Enough

General Hawley thinks the lack of "unquestioned air supremacy" would have a chilling effect on national leaders fretting over a military operation. "In our view, it will be very difficult for the US to use a military option to further its interests if we cannot assure the leadership" of air superiority, he said.

The Bottom-Up Review also drove the F-22 buy down to 442 aircraft, the General said.

"Our force structure is not out of a hat," he said. "We have looked at this long and hard . . . and concluded that twenty-five percent of our fighter force," or four of USAF's twenty fighter wings, "needs to be dedicated" to air superiority.

That adds up to "two wings to each of two major regional contingencies . . . and that's not a lot."

Buying only a handful of F-22s as a "silver bullet" weapon "would give you essentially a one-wing capability," General Hawley said. "That's not enough to do the job on anybody's calculator."

World Fighter Fleet

Current Generation

F-14
F-15
F-16
F/A-18
MiG-29
Mirage F1
Mirage 2000
Su-27
Tornado

At 200 aircraft per contingency, the F-22 is "already a 'silver bullet,'" General Loh argued.

In addition, there are concerns that even 442 may not be enough.

Lt. Col. Jeff Brown, an F-15 pilot with the 1st Fighter Wing at Langley AFB, Va., last served as Air Combat Command's F-22 requirements chief. During that tour, the Air Staff asked him "what was the very least we could get away with" in terms of buying F-22s, he said.

"After we gamed it out, . . . the number we came up with was 5.5 fighter wing equivalents," he said.

Next Generation

Eurofighter 2000
French Rafale
Indian Light Combat Aircraft
Japanese FSX
New Chinese Fighters
Russian Multirole Fighter-Interceptor
Russian Su-35
Swedish JAS 39 Gripen
Taiwanese Indigenous Defense Fighter

That was considered unaffordable, so Colonel Brown's shop cut down or cut out the F-22s needed for non-combat functions, such as testing or training. They also, reluctantly, calculated a higher combat survivability rate against the plausible threat.

The number offered to the Air Staff was still higher than 442. "Clearly . . . we'd be a lot more comfortable with more" than four wings, Colonel Brown said.

Assuming no more schedule slips, the first F-22 squadron will be ready for action in 2005. Last year, the General Accounting Office issued a report claiming that USAF could save \$12 billion by delaying the F-22 ten years while stretching the F-15 with some minor enhancements.

However, "we've already delayed [the F-22] a decade" from its original planned service date of 1995, General Hawley said. The F-15, now a twenty-five-year-old design, wouldn't benefit much from even expansive modifications, he argued.

General Hawley went on to say that the Air Force has "very carefully, as you might expect," looked at whether some sort of "bolt-on stealth" for the F-15 could be developed that would prolong its usefulness, but "there are severe limits on how much stealth you can retrofit in an airplane. You cannot add enough stealth to an existing aircraft like the F-15 to get above the break-even point. . . . It costs a lot of money and produces an airplane that is very close to the F-22 in cost and far deficient in terms of performance."

Airframe Life vs. Obsolescence

GAO also pointed out that the F-15 would still have a lot of airframe life left ten years from now,

F-22: General Characteristics

Primary function: Fighter, air-superiority

Airframe builder: Lockheed Aeronautical Systems Co., Boeing Military Airplanes Division, and Lockheed Fort Worth Co.

Power plant: Two Pratt & Whitney F119-PW-100 turbofans with afterburners and two-dimensional thrust-vectoring nozzles

Thrust (each engine): 35,000 pound class

Length: 62 feet, 1 inch

Height: 16 feet, 5 inches

Wingspan: 44 feet, 6 inches

Speed: Mach 2 class (approximately 1,500 miles per hour at sea level)

Ceiling: Above 50,000 feet

Empty weight: 40,000 pound class

Range: More than 2,000 miles

Armament: One M61A2 20-mm multibarrel cannon; internal stations can carry AIM-9 infrared (heat-seeking) air-to-air missiles and AIM-120 radar-guided air-to-air missiles or 1,000-pound Joint Direct Attack Munitions; external stations can carry additional stores

Crew: F-22A: one; F-22B: two

Initial operational capability: 2005

Projected inventory: Active: 442

but airframe life and usefulness aren't synonymous, General Hawley said.

An aircraft designed to withstand nine-G forces has "good, strong bones in it," he continued. "If that were all you were worried about, we could fly it a good, long time. In that regard, we could still be flying the F-4; it was built like a truck."

The Air Force, General Hawley maintained, "has never retired a fighter because it ran out of airframe life. We've retired our fighters because they became obsolescent against the threats they faced."

In ten years, the F-15 will become "very expensive" to maintain, said General Hawley. GAO failed to take into account all the extra costs of keeping the F-15 capable—such as a reengining or the installation of a more sophisticated jamming suite, he added.

Some have suggested that all the

comes up with magic technology that we don't see." With each "nibble" at the program's funding and schedule, "you just gulp a little harder because it costs so much more."

Though there is a new fighter program on the books—the Joint Advanced Strike Technology project—it won't yield an F-22-class aircraft, General Loh said. Instead, JAST will focus on an F-16/F-18/AV-8B replacement around 2010. Planned to be built in very large quantities, JAST aircraft "have to be low-cost" and will, as the "low end . . . of the high-low mix," lack the power of the F-22, he said.

Moreover, General Loh said, postponing the F-22 would put it into direct funding conflict with the F-16 replacement, dubbed the Next-Generation Fighter. The Air Force can't afford to buy both at the same time. "You get the bow wave effect . . . around 2012," he pointed out.

end of the program—again worsening the funding "bow wave."

Though he agreed with GAO and others who contend that many of the "threat" aircraft the F-22 was designed to counter have been delayed or reduced in scope, General Hawley noted that "we will have less, too. We were going to buy 750 F-22s; now we're down to 442. Not only have we slipped the airplane ten years, we are going to buy one-third less. We think that is an adequate adjustment to the realities of the post-Cold War era."

General Loh pointed out that there's nothing "gold plated" on the F-22.

"We have taken out" or deferred installing such capabilities as an infrared search-and-track system, he noted. Everything else on the F-22 "earned its way" onto the airplane.

Maintaining the Edge

All the Air Force's arguments for the F-22 work if it's true that the F-15 will be outclassed in the coming decade. Does the F-22 really need to be, as General Hawley called it, a "cosmic" airplane?

When conceived in the early 1980s, the F-22 was to do two things: provide a sharp advantage over the Soviet Su-27 and MiG-29, then on the verge of deployment, and hold at least some edge over the Advanced Soviet Fighter (ASF), which intelligence painted as a stealthy successor to the Flanker.

The Su-27 and MiG-29 both are now deployed in significant numbers in Russia and client nations and should be respected as equivalents to the F-15, F-16, and F/A-18, General Fogleman said.

"I've had the opportunity to fly both aircraft," he reported, and "my judgment was that the F-15 and Su-27—in terms of engine/airframe interface—are comparable airplanes. I think in the near term we have an advantage in avionics, but that advantage . . . could be offset rather rapidly if the other side were to make a quantum leap forward in its air-to-air missiles."

In the case of the F-16 and MiG-29, he found the airframes "very comparable."

General Loh is less sanguine about a potential F-15 vs. Su-27 contest.

While the F-15 "is quite good today," the Flanker's larger radar can detect the F-15 first, "and it can

Cost of the F-22 Program

Base-year = FY 1996 dollars, Then-year = actual dollars

Demonstration and validation.....	\$ 4.5 billion base-year (Dem/val was completed in FY 1991 at \$3.8 billion)
Engineering and manufacturing development	\$ 15.6 billion base-year (of which about \$12 billion has already been spent)
Production (442 aircraft)	\$ 38.7 billion base-year (\$52.5 billion then-year)
Total program cost	\$ 58.8 billion base-year (\$71.6 billion then-year)
Unit flyaway	\$ 72.7 million base-year (\$98.7 million then-year)

delays in the F-22 program mean it's already obsolete and that the Air Force should skip it and go on to the next step in air combat technology, but "there is no 'next thing,'" General Loh said. "If we were to cancel the F-22, we'd sit down and write a requirement for the F-22. Because those capabilities, in those combinations, are what we need in the time frame of 2005 and beyond."

In fact, "the economics will almost never favor giving up on the current airplane to start a new one," General Hawley said.

"The new effort is not going to take any less time than the one you just gave up on . . . unless somebody

General Loh has put forward plans to adapt the technologies in the F-22—if not the airframe design itself—into variants for deep attack and even carrier aviation.

"The \$19 billion of development funding that we will spend on the F-22 . . . has ushered in a family of technologies—in engines, avionics, flight controls, and stealth—that clearly have more application than a single air-superiority fighter," he said.

He still can't say how such variants can be afforded on the current spending plan. Derivatives would have to be either built alongside the F-22A fighter or "tacked on" at the

launch a missile before the F-15 does," he said. "So, from a purely kinematic standpoint, the Russian fighters outperform the F-15 in the beyond-visual-range fight."

In the within-visual-range fight, the Russian AA-11 "Archer" missile, with its off-boresight capability, "is better than the best American IR [infrared] missile," meaning the F-15 is outperformed at close range as well.

Already at a disadvantage, then, the F-15 will have to be kept respectable "with smarter tactics, smarter and better-trained crews, and countermeasures," General Loh conceded.

The ASF fell by the wayside in the turmoil of the second Russian revolution, but it has been replaced on the drawing board by a still-formidable successor called the Multirole Fighter-Interceptor. The MFI, now in development in Russia, "will have some stealth," General Hawley reported. "Not as good as the F-22, but far more stealthy than any front-line fighters that are operating today," he said. "It will have very powerful and capable radar." The MFI's missiles are expected to be "equivalent to AM-RAAM" and will probably have "long-burn variants," giving them more range.

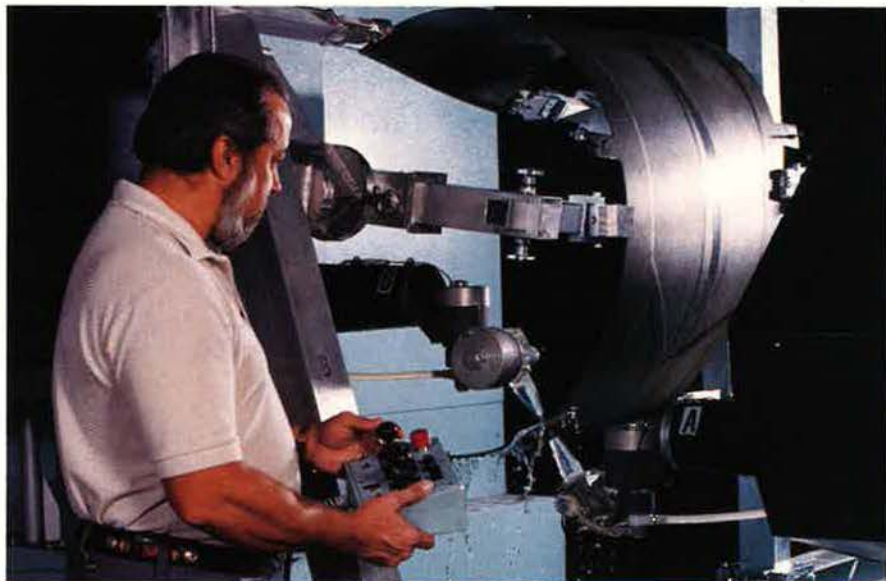
"We think it will have very good maneuverability—comparable to the MiG-29—so it will be a very worthy adversary."

Despite Russia's economic problems, "the best estimates say that they will field an advanced fighter somewhere between 2005 and 2010," or just about the same window in which the F-22 will reach the tarmac, General Hawley continued.

"Aerospace is one of [Russia's] singular strengths," he noted. "I think they will continue to put priority on that" for funding, and Russian leaders frequently declare "their interest in maintaining a competitive aerospace" capability.

As for the current crop of fighters in Europe, such as the EFA 2000, the French Rafale, and the Swedish Gripen, all have a degree of stealth greater than the F-15's plus superior avionics.

Though GAO complained last year that these aircraft aren't legitimate "threats" because the US is unlikely to get into a war with the nations developing them, General Hawley



Lockheed Fort Worth Co. technician Jerry Ulmer monitors an inspection machine as it scans a graphite-composite inlet duct skin. Such radar-foiling composites will allow the F-22 pilot to "see" enemy fighters long before they can "see" him.

noted that all will be for sale to third parties.

"Maybe there won't be as many of them, and maybe they won't come along as quickly as we once thought, but they're still coming along," he said, adding that "we have never been very good at forecasting" where, when, or with whom the US would get into a fight.

Top-line fighters aside, General Hawley said upgraded older planes are starting to cause concern.

Beware of SAMs

"Something seemingly as 'innocent' as a MiG-21 that has been upgraded with a BVR [beyond-visual-range] missile . . . can complicate your problem," he said. "You have to respect that threat, too. . . . There are a number of upgrades available from the Russians, the Israelis, and even US companies that are selling that kind of capability."

General Loh pointed out, though, that adversary fighter aircraft are only one part of the F-22 equation.

Air superiority is no longer "one-on-one, aircraft vs. aircraft," General Loh said. "It's defeating an integrated air defense system that consists of early warning radars, surface-to-air missiles and their acquisition and tracking radars, and interceptors."

It is probably SAMs that will pose the worst threat as time goes on. They will proliferate, General Haw-

ley said, because "while not cheap, . . . they are cheaper than airplanes" and require far less sophistication to operate than does a modern air force.

Last fall, the F-22 survived the most stringent top-level scrutiny yet, emerging as one of a handful of programs officially "blessed" by Pentagon leaders as a critically needed program. But the debate continues.

"The nation . . . has lost sight of how valuable air superiority is, and for some reason there are large numbers of people who think air superiority is a God-given right of Americans," General Fogleman observed. Such a notion is "absolutely not true," he said.

One of USAF's toughest jobs in the years ahead, he predicts, will be overcoming the nation's complacency about its military prowess. Control of the skies "has to be earned . . . over many years of training and investing in your technology," he said.

General Loh thinks the F-22 will survive because he feels Congress has been convinced that "without air superiority, you can't do anything" in battle.

"The more expensive a system is, the more you have to fight for it, naturally," he said. "We have to get up every morning and fight for the F-22. I don't mind. That's the nature of this business. Taxpayer dollars are scarce. We want to spend them in a responsible way. And so we have to make our case." ■

The Secretary seeks to build on past accomplishments to ensure the success of the smaller, busier Air Force.

Widnall Assesses the Force

By Sheila E. Widnall

THE UNITED States Air Force remains the premier air and space force in the world and a critical contributor to our national security. Today's Air Force is simpler, more flexible, tougher, less expensive to operate, and focused on the tasks ahead. In a world defined by contingencies, we have set our sights on four objectives to help guide us in these turbulent times: remaining engaged, supporting our people, preserving combat readiness, and building for the future.

Remaining Engaged

The new world environment required a new National Security Strategy aimed at providing stability for the emergence of new democracies. The Air Force is fully engaged in support of that strategy. While personnel strength has fallen by one-third across the force and fifty percent overseas, the number of people on temporary duty overseas is up fourfold since the Berlin Wall fell. Our global-reach forces operated in nearly every country in the world this year. We delivered 75,000 tons of relief supplies to Bosnia-Herzegovina and 15,000 tons to Rwanda

and Zaire. Our airlift and tanker forces continue to support contingency operations in Europe, southwest Asia, and the Caribbean and conduct humanitarian missions in these and other areas around the globe.

Our combat components are also charting new territory. Almost fifty percent of our active-duty fighter force is continuously engaged overseas. These forces support alliances, promote stability, and provide sustained combat power on demand throughout Europe, Asia, and the Middle East. We have flown 18,000 sorties over Bosnia. In February 1994, our F-16s downed four jets attacking targets in a prohibited zone.

In the Persian Gulf, we have flown more than three times as many missions since Operation Desert Storm as we did during the war itself. Within ten days of Iraq's provocation last fall, 122 combat aircraft had augmented the sixty-seven already deployed, and we had flown 1,000 sorties in support of Operation Vigilant Warrior. To drive the point further, four bombers on a power projection mission punctuated American resolve by flying nonstop from the United

States to deliver 55,000 pounds of bombs within audible range of Iraqi forces. As Secretary of Defense William J. Perry said, "The Air Force has really deterred a war. When we deployed F-15s, F-16s, and A-10s in large numbers, I think they got the message very quickly."

Another increasingly important vehicle for Air Force engagement involves expansion of our military-to-military contacts. Since 1993, our security assistance personnel have worked in 101 countries to foster stability, sustain hope, and provide relief. Air Force training reached 4,900 international students in 1994. In fact, twenty-nine graduates of our schools are now their nations' Air Force Chiefs of Staff.

Contacts with states of the former Soviet Union and Eastern Europe are also thriving. We have held exercises with Russian, Polish, and Lithuanian militaries. We have sponsored CINC counterpart visits and base and unit exchanges. Thirteen US states have partnerships with new nations as a result of our Air National Guard's Building Bridges to America program.

ence—what it is, why we do it, and how best to support joint requirements. Our concept of presence includes all peacetime applications of military capability that promote US influence. Correspondingly, the way we exert presence is changing. We are augmenting a reduced permanent presence overseas with information-gathering systems linked to joint military capabilities that can be brought to bear either proactively or just in time.

Our space and airborne collection platforms help provide global situational awareness. Sometimes this information, by itself, can promote US influence. In other cases, information linked to forces that can react swiftly with the right mix of joint capabilities anywhere on the globe reduces the need for traditional physical presence.

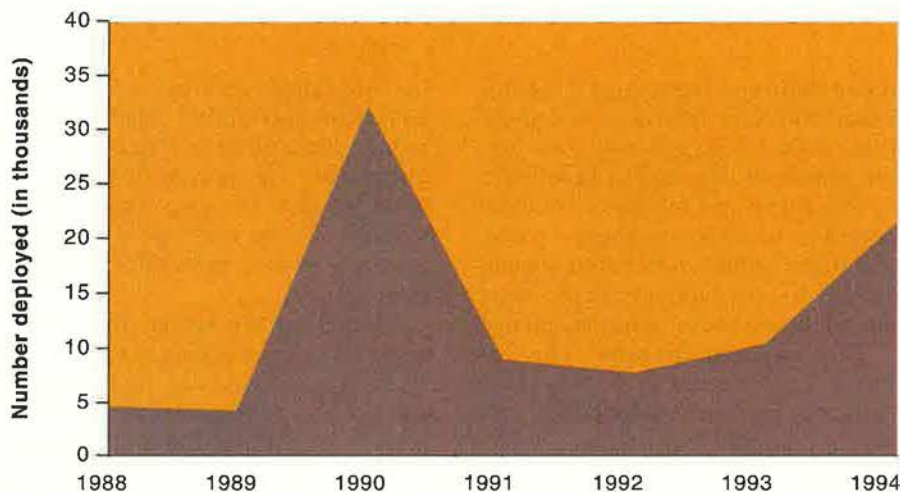
Permanent presence is still imperative in many areas. Even where it is not, we routinely verify our global commitments through deployments. But we do not need and cannot afford to be everywhere at once. We can exercise more influence in more places

retaining quality people depends on providing a reasonable quality of life. This means three things: providing acceptable standards of living, treating people with dignity and respect, and managing stresses associated with high deployment tempos.

Acceptable standards of living. The Air Force boosted quality-of-life funding by five percent this year. We are focusing on such key areas as child care, housing, and family support. We provide child care for 45,000 families each day at substantially less cost to our personnel than commercial care-givers. We are arresting growth of deferred maintenance for housing; exploring privatization to improve access to quality units; and working toward private rooms for unaccompanied enlisted personnel. Family support activities, such as parenting, chaplaincy, and abuse-prevention programs, are reaching more people. Finally, in response to an increasing number of families citing financial strains, we have doubled financial training for new recruits.

We have accomplished much, but much remains to be done. President

Contingency Deployments



Today's Air Force is highly mobile. Since the fall of the Berlin Wall, end strength has dropped by one-third, but the absolute number of troops deployed overseas on temporary duty has risen fourfold. In 1994, airlift and tanker forces were engaged in operations in Europe, southwest Asia, and the Caribbean. Combat components are also deeply engaged overseas, deploying on temporary duty to the Persian Gulf and over the Balkans.

Source: US Air Force

Our liaison teams in twelve host states provide expertise on everything from civil-military relations to chaplaincies. Through these contacts, we share American military skills, insights, and values—so foreign militaries can better help themselves and so we can operate better with them.

Finally, in response to the burgeoning requirements of engagement, the Air Force has reconceptualized pres-

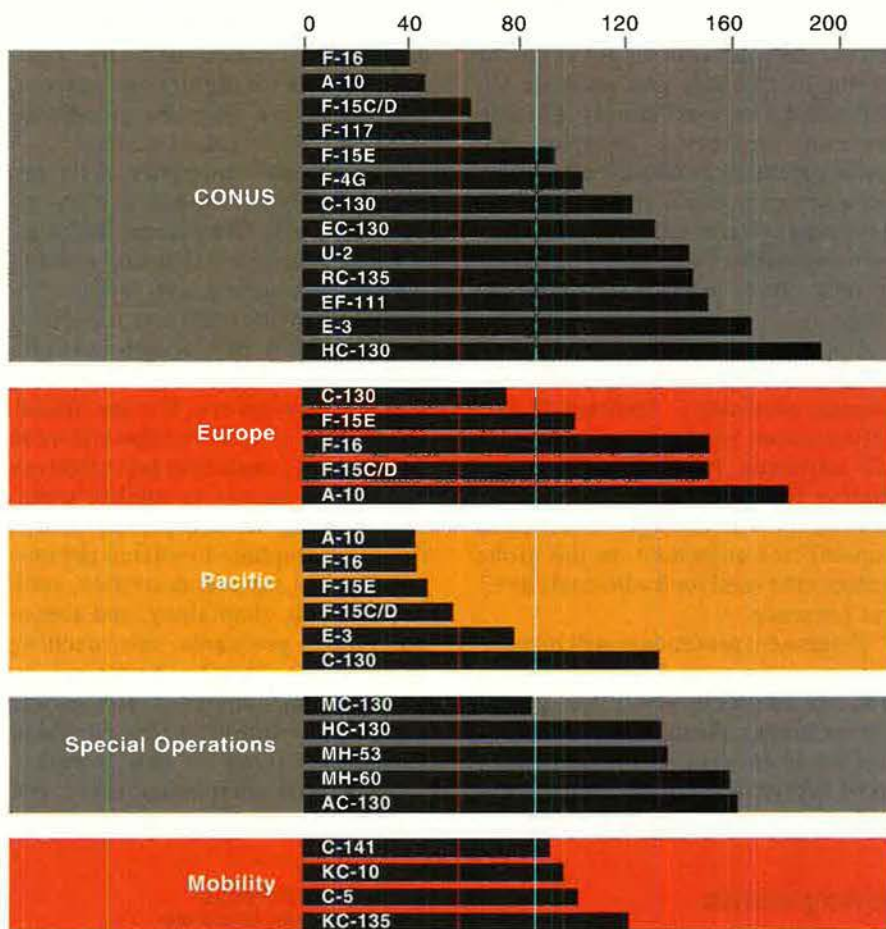
by providing assistance, assurance, or deterrence either periodically or on demand. This allows for maximum effective use of our air and space forces to help build US influence jointly and globally, while controlling risks and minimizing costs.

Supporting Our People

People are the ultimate guarantors of combat readiness. Attracting and

Clinton's recent commitment to raise military pay to the highest level permitted by law will help stop the fall in military pay against that of the private sector, but the gaps generated in past years will continue to grow (albeit at a much slower rate). Therefore, we must continue to look for opportunities to improve the lot of those who serve in today's Air Force and their families. DoD's re-

Days TDY by Mission Design and Series



The Air Force is working to reduce the stress of high deployment tempos. Average annual deployment rates for special-mission and support aircraft are particularly high, far surpassing USAF's goal of 120 days per year or less. The deployments place corresponding demands on aircraft support personnel.

Source: US Air Force

newed commitment to a better quality of life, through investments totaling \$2.7 billion, is an important step in our efforts to counterbalance that pay gap and to achieve needed retention levels. At the same time, we will continue to pursue ways to reduce the substantial out-of-pocket housing and moving expenses now absorbed by military families.

Recruiting also remains a top priority. In recent years American youth have been turning away from military service. The propensity to enlist is down thirty-five percent since 1990, and some speculate that young people doubt our ability to provide career opportunities that are challenging yet stable. The recently enacted defense bill boosts our advertising appropriation and should help correct that misperception, but some concerns remain. We aggressively monitor recruiting trends and stand ready to pursue the resources necessary to achieve excellence in this area so vital to long-term readiness.

In sum, 1994 signaled a year of

rededication to members of the Air Force and their families—a dedication to more equitable pay, to a better quality of life, and to excellence in recruiting and retention. We will continue to build on these accomplishments and recognize our responsibility to move quickly in arresting any adverse trends that might emerge.

Treatment of people. The Air Force is setting new standards in the equitable treatment of people to enhance unit effectiveness and cohesion. Our focus is on two areas: eliminating discrimination and harassment and enhancing professional opportunities. Air Force leaders at all levels are getting the word out—discrimination and harassment have no place in our profession and will not be tolerated. Our policy is clear, educational processes are continuously being improved, and local commanders are empowered to deal with incidents in a frank, open, and proactive way. Correspondingly, opportunities for professional growth have been clarified and expanded. “Year of Train-

ing” initiatives resulted in life-cycle education and training objectives that reduce uncertainties concerning requirements for advancement. New opportunities are also available to women, who now compete for more than ninety-nine percent of all positions.

Managing the stress of deployments. We are working to reduce the stresses associated with high deployment tempos. Personnel deployment tempos are up fourfold in five years. Average annual deployment rates for special-mission and support aircraft are particularly high: HC-130—194 days; EC-130E—187 days; E-3—165 days; U-2—148 days; AC-130—146 days; MH-60G—145 days; RC-135—143 days; F-4G—135 days; C-130—126 days, with corresponding demands on support personnel.

To reduce stress on our people, we are broadening support bases for affected platforms, targeting family support for affected units, distributing deployment burdens through our “Palace Tenure” program, and work-

ing with our Air National Guard and Air Force Reserve partners to balance mission loads across the Total Force.

Preserving Combat Readiness

Resource management. “Year of Readiness” initiatives produced three critical enhancements to Air Force readiness. First, we strengthened readiness forecasting. Our improved Status of Resources and Training System ensures that all units provide

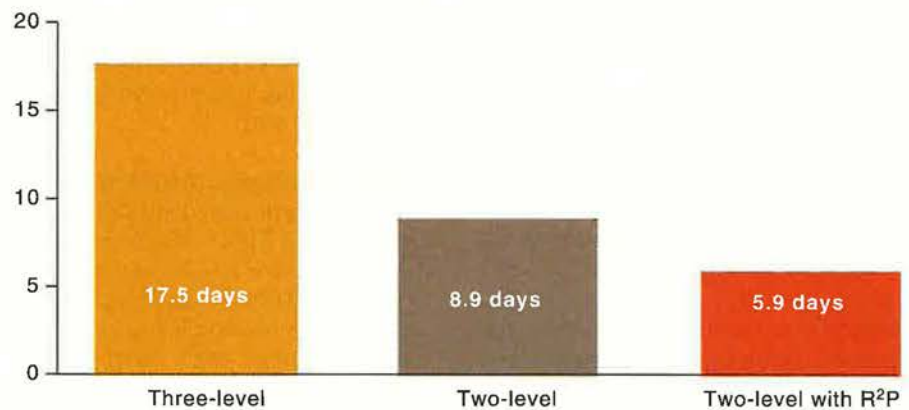
world-class capabilities of the Air National Guard and Air Force Reserve. These affordable, accessible, and highly capable partners are integral to our warfighting strategy. They are also making decisive contributions in peacetime contingency operations around the world. We have expanded their mobility roles and introduced bombers; we are funding key upgrades that reflect our increasing dependence on these citizen-airmen in front-line roles. In a simi-

Underpinning this, of course, is the realistic day-to-day training that prepares our people for these large exercises. Thus, we maintain high day-to-day training tempos across the force, and daily operations increasingly emphasize composite and joint force operations to build on basic formation skills. We continue to enhance combat training through simulation, primarily as a supplement to flight operations. Teamwork and uncompromising standards mea-

Weapon system support is undergoing fundamental change. Under the “lean logistics” concept, USAF is removing one of three tiers of maintenance support and reducing depot maintenance time for such major items as avionics. An even more advanced form of two-level maintenance—return-and-repair packaging, or R²P—shaves avionics repair time by more than sixty-six percent.

Source: US Air Force

Avionics Maintenance Pipeline Times



readiness snapshots not only of current health but forecasts looking three, six, and twelve months ahead. This system helps predict the impact of resource decisions as well as uncover weaknesses before readiness erodes.

Second, the way we support weapon systems is being fundamentally altered. “Lean logistics” is an integrated effort among maintenance, supply, and transportation systems to provide the right part, at the right time, at the best price to the user. Lean logistics selectively removes one whole tier of maintenance support for highly reliable weapon systems, reduces depot maintenance time, and uses transportation procedures like those of commercial package carriers. The results are impressive. In the avionics area, for instance, repair pipeline times have been cut by more than sixty-six percent.

Third, we are enhancing readiness through better distribution of mission tasks across the force. The Air Force is increasing its use of the

lar vein, the Civil Reserve Air Fleet has been expanded to provide thirty-four percent of our cargo and ninety percent of our passenger capability. We are obtaining authority to use US air forces assigned to NATO on a temporary basis outside the region when required.

Combat training. Realistic combat training is not a luxury but a necessity. We have insisted on strong funding profiles for all combat training programs. What began twenty years ago as a modest exercise known as Red Flag has since become the backbone of USAF readiness. As one commander put it, “What we did in Desert Storm would have been impossible if the entire Air Force didn’t have flag exercise experience.” Now all Air Force flag exercises are joint or combined. Similarly, the Air Force is a full partner in all major Army exercises at the National Training Center and Joint Readiness Training Center. We bring our high training standards to more than fifty major joint and combined exercises around the globe each year.

ured in a realistic flight environment are the touchstones of warfighting excellence. We will continue to arm our people with experiences that mimic the crucible of war in its most demanding phases.

Challenges. Stability in our operations and maintenance (O&M) budget is key to maintaining Air Force readiness, and that stability depends on timely funding for contingency operations. If future funding is delayed, the balance between force structure and readiness support could easily be upset. We would have less ability to deal with spot-readiness setbacks in such systems as AWACS, F-117s, EF-111s, B-1Bs, C-5s, C-141s, and AC-130s and in engines for the F-15 and F-16. These problems are manageable, but there is little margin for error.

A related concern is the impact of contingency operations on combat training. Heavily tasked units have fewer opportunities to hone their complete repertoire of combat skills. We need continued stability in our

O&M accounts, including timely funding for contingencies, in order to manage these problems.

Building for the Future

Planning savvy. As Chairman of the Joint Chiefs of Staff Gen. John M. Shalikashvili said, "The combination of slower modernization rates and a rapidly changing threat environment makes long-range planning more difficult and more important." The Air Force has set standards in this area, developing twenty-five-year roadmaps across forty mission areas to make educated decisions about modernization needs. These plans link future tasks to deficiencies, to candidate solutions, and to laboratory programs for an end-to-end view of each mission area. We evaluate alternatives ranging from nonmaterial options to changes in force structure, systems modifications, science and technology applications, and new acquisitions. Correspondingly, we continue to evolve and reform the manner in which we conduct the acquisition of systems and capabilities. Through numerous initiatives, we are streamlining the process, reducing the paperwork, and adopting commercial practices, standards, and processes, all aimed at more effectively and efficiently placing the required capabilities into warfighters' hands.

Essential foundations. Air Force scientific and technological prowess remains the fulcrum for future readiness, but our strategies to maintain preeminence are changing. In prior decades, we produced the most critical technologies. Now we must harness commercial applications in many areas. Hence, in addition to funding our Science and Technology program at the maximum authorized level, we have revitalized the Air Force Scientific Advisory Board as a nexus linking the Air Force to other government agencies, commercial sectors, universities, and our allies. Through the Air Force Office of Scientific Research, we support about 3,000 senior researchers and 2,000 graduate students at universities, in industry, and in laboratories. We have also developed international data exchanges, research agreements, engineer/scientist exchanges, and Foreign Comparative Test and Nunn Amendment programs and are committed to NATO research activities.

These efforts keep us at the cutting edge of technological advancements and promote affordable solutions to aerospace problems. Our approach to research, development, test, and evaluation is also changing. Vigorous growth in modeling and simulation capabilities is promoting better RDT&E at reduced cost.

Regional warfighting requirements. Modernization objectives to meet two major regional conflict (MRC) requirements must be understood in their strategic context. Decisions made today have thirty-year implications. Regional threats may change radically. We probably will not have the luxury of a Desert Shield-type buildup. Next time, we may be fighting our way in, racing for control of footholds in one (or two) theaters. If we lose the race, the result will be a *fait accompli* or a long, costly war.

MRCs, Missions, and Systems

With these points in mind, Bottom-Up Review (BUR) conclusions depended on key modernization efforts to field highly leveraged forces early on. These forces would secure a lodgment in-theater, blunt enemy progress, and thereby lay abutments for a sea and air bridge over which follow-on forces would propagate initial success. Portions of the lead cadre must be prepared to swing to help reproduce decisive results in a second theater or deter a second aggressor. BUR conclusions depend on leveraging the capabilities of airpower, at sufficient operations tempos and with the right munitions, to defeat two enemies on opposite sides of the globe in less than two months. Within this context, we are focusing on the following priorities.

Rapid global mobility. The C-141 is tired! It will continue to serve through this decade, but it makes better economic sense to modernize with C-17s rather than extend the life of this aging workhorse. The once-troubled C-17 is now a success story—replacing the C-141 at lower operating costs while delivering C-5-type payloads into C-130-size airfields. This core airlifter underpins the nation's two-MRC strategy and is US Transportation Command's highest priority. C-17 production is ahead of schedule, and the aircraft made its operational debut in Vigilant Warrior.

We are evaluating augmentation using a nondevelopmental airlift aircraft, with a decision pending in 1995. We are also upgrading our air refueling and theater airlift fleets to increase flexibility, better support our sister services, and enhance viability in the next century.

Air superiority. The initial battle for air superiority may well determine the course of the next MRC. Our early deploying fighter forces may arrive outnumbered to engage the full weight of the enemy's air forces, missile forces, and surface-to-air defenses—all supported by robust command and logistical infrastructures. This is why the F-22 is our top modernization objective. Modern air battles tend to be cataclysmic. An initial disadvantage can quickly cascade into outright defeat, with profound consequences for the progress of a war. Air superiority provides freedom of maneuver so that ground, air, and naval forces can operate with impunity to end conflicts quickly and decisively. It is fundamental to the safe arrival and resupply of forces. It is essential for protection of high-value aircraft that help achieve information dominance, such as Joint Surveillance and Target Attack Radar System and AWACS. To ensure success of all other offensive operations, it must extend deep into enemy territory.

The Air Force has ensured that American fighting forces have had air superiority since Kasserine Pass in February 1943. We must continue this record in the twenty-first century. Many foreign fighters are now at parity with the F-15. The F-15 is vulnerable to surface-to-air missiles, and it may not win the air battle beyond the next decade. The F-22's stealth characteristics, supersonic cruise, high maneuverability, and advanced avionics all provide the qualitative edge required to fight outnumbered against future opponents and win. The ability to penetrate at the time and place of our choosing, and to achieve first-look/first-shot/first-kill decisions, underwrites the capabilities of all follow-on forces in an MRC. The F-22 will penetrate enemy defenses unassisted in a strike role once the contest for air superiority is decided.

A second essential component of air superiority is Suppression of Enemy Air Defenses, which protects

aviation forces that do not possess stealthy characteristics. By upgrading a portion of our F-16s with High-Speed Antiradiation Missile targeting systems, we will more than offset the retirement of the aging F-4G "Wild Weasel."

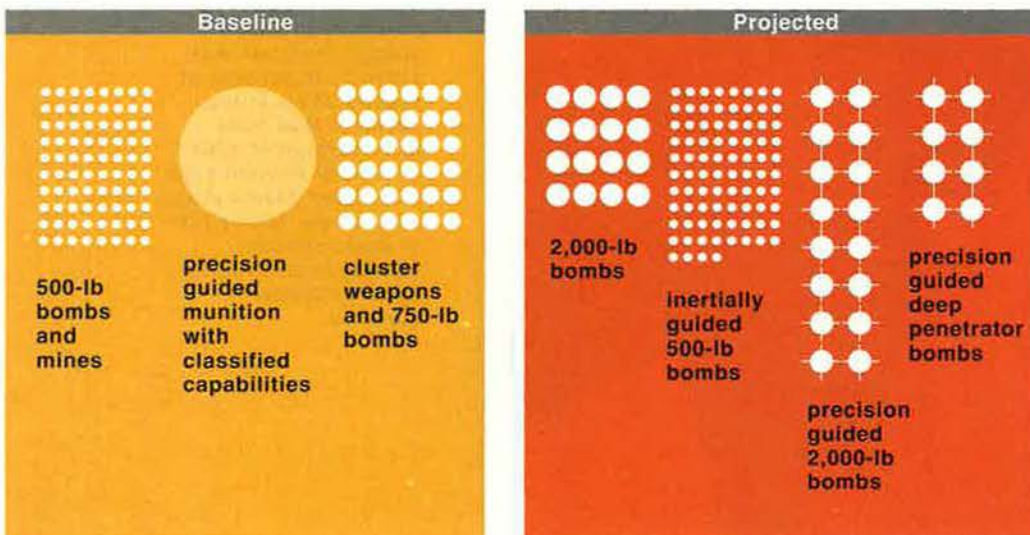
Finally, proliferation of missiles and weapons of mass destruction (WMD) presents the most serious long-term threat to aerospace superiority. Our modernization objectives

able than all the landbased and sea-based airpower used during the 1986 Libya raid.

While the B-2 is the head of the fleet, the B-1B is the backbone—with its greater numbers, larger payload, and higher speed. The B-1 recently demonstrated its capability to sustain wartime operating rates in an operational readiness assessment, greatly surpassing the required mission capable rate. The venerable

generation strike aircraft a reality. The ultimate success of JAST is closely tied to the F-22. F-22 production will provide technological leverage to help ensure that JAST technologies come into the force in a timely and affordable way. Conversely, F-22 delays would create a fiscal bow wave in the next century as the nation attempts to field new fighter and strike aircraft simultaneously.

B-2 Conventional Delivery Potential



The B-2's stealth and large payload give it flexibility and enormous striking power. Under current improvement plans, the bomber will be able to carry up to sixteen 2,000-pound bombs, eighty-four inertially guided 500-pound bombs, twenty-four precision guided deep penetrator bombs, or a combination of these.

Source: US Air Force

aim at neutralizing these weapons before launch and very early in flight. This will reduce stress on midcourse and endgame systems provided by our sister services. Moreover, by neutralizing the WMD force on enemy territory, we can create powerful incentives not to use it in the first place, better protect our forces if it is used, and thus shift our emphasis from deterrence by threat of punishment to deterrence by defense.

Surface attack. The third vital requirement in an MRC is denying enemy power projection on land—and again, early successes reduce the costs of all subsequent operations. Our modernization objectives are centered in three areas.

First, we must deliver massive firepower in the opening hours of a war through a balanced approach to bomber modernization. The B-2's stealth and large payload will significantly improve flexibility and offensive striking power. Six B-2s, for example, are more lethal and surviv-

B-52H will continue to provide an economical means to conduct stand-off precision attacks or direct attacks.

Acting in concert, the bomber force will provide critical leverage in an MRC and a responsive swing capability to deter or respond to a second conflict. By downsizing the bomber force to an acceptable level in the near term, we have generated savings to help fund upgrades that will enable us to deploy 100 bombers with enhanced capabilities by the end of the decade.

Second, we are modernizing theater strike and multirole platforms. The principal strength of these forces is their ability to sustain high combat tempos over long periods to maximize fire and steel on target. We are upgrading subsystems to extend life and enhance capabilities, but no new acquisitions are planned for a decade. Soon after, we must transition Joint Advanced Strike Technology (JAST) programs to make the next-

Third, the Air Force has made a precision commitment. In 1944 it took 108 B-17s dropping 648 bombs to destroy a target. In Vietnam, similar targets required 176 bombs. Now a single precision guided munition (PGM) can do the job. This is how the F-117 destroyed forty percent of all strategic targets while flying only two percent of all strategic sorties during Desert Storm. Consequently, the Air Force has tripled the number of precision-capable platforms since the war, boosted PGM inventories twenty-five percent above prewar levels, and is developing new generations of PGMs with enhanced accuracy, standoff, and adverse weather capabilities.

Dominating the information environment. Global reach and global power are synonymous with Air Force operations worldwide, but the 1990s have seen the ascent of another Air Force role—dominating the information environment—by providing the US with global situational aware-

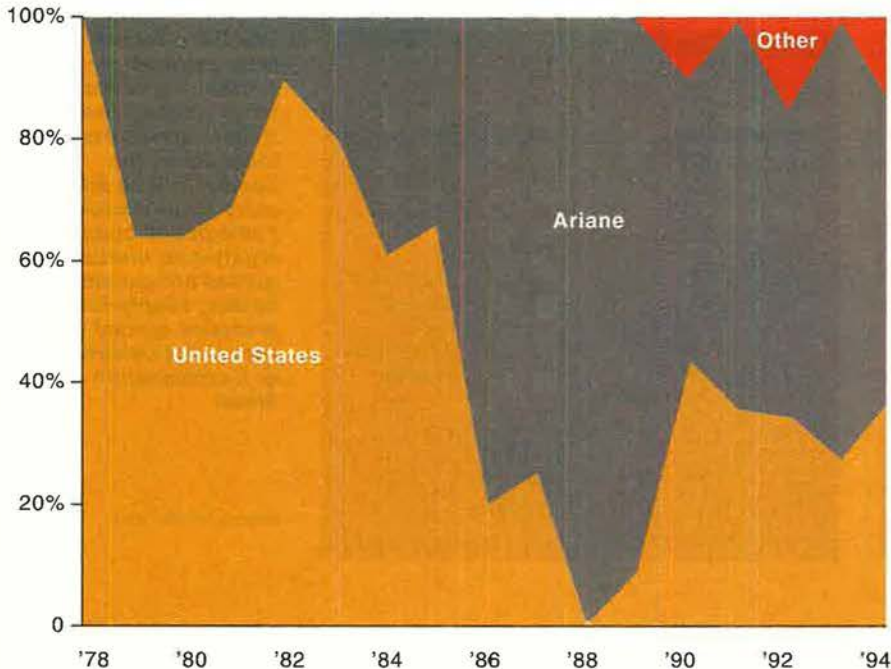
ness and denying or corrupting our adversary's. Information operations are no longer a cost of doing business but presence and warfighting methods in their own right. They substitute for force in some cases and increasingly serve as a multiplier when force is required. As principal operator of our nation's air and space information-gathering systems, we have stepped up to moderniza-

fighter routine. We glimpsed what we are looking for in Haiti, where our space teams deployed in support of the Joint Force Commander (JFC). For the first time, the JFC, National Military Command Center, and Service Operation Centers viewed a common tactical picture—displaying everything from readiness data to imagery and weather at the click of a button. The Air Force is making simi-

modernized, netted to each other and to ground and space systems to produce large force-multiplying effects.

Space launch. Information dominance depends on affordable access to space. We turned the corner in space launch in 1994. Last year saw more than twenty successful launches, continuation of our Delta launch vehicle's 100 percent success story, and Titan IV's return to flight. We

Commercial Launch Market Share



US leadership in commercial space launch declined from almost 100 percent of market share in the 1970s to less than forty percent in 1994. Secretary Widnall says the United States must strengthen its position or face "serious" economic and military security consequences.

Source: US Air Force

tion challenges on behalf of joint warfighters.

This year saw development of an objective C⁴I environment for the twenty-first century and a map to get there. Our proposal is not a grand design but a set of nested strategic plans that will allow rapid migration toward the goal—harmonizing efforts throughout the Defense Department. The objective is a global network with a worldwide information plug-in, common tactical pictures, and bandwidth on demand for any application, in any form, to and from anywhere, allowing all warfighters to access the information they need.

This vision is already coalescing in the field. Our Space Warfare Center is bringing operations and support together from all services to make space support to the joint war-

lar strides in developing conceptual, doctrinal, and legal positions on information warfare (IW); incorporating IW into education, training, and exercise programs; and developing operational capabilities. One important step was establishment of the Air Force Information Warfare Center in 1993.

Modernization of information systems proceeds apace. Our Space Test Program successfully flew on twenty-three research experiments in 1994. We now have a fully operational constellation of twenty-four Global Positioning System (GPS) satellites, and the first Milstar supported joint operations in Haiti. Our airborne information systems are also being

also submitted a space-launch plan to the President and Congress to evolve our expendable launch systems and received funding for the first booster replacement in thirty years. Finally, we are enhancing national capabilities through cooperation with industry at Vandenberg AFB, Calif., and Cape Canaveral AFS, Fla. This progress represents an essential beginning only. America's leadership in commercial space launch has declined from close to 100 percent of market share in the 1980s to less than forty percent in 1994. We must continue to build on recent successes, or consequences for military and economic security could be serious. ■

Sheila E. Widnall has served as Secretary of the Air Force since August 6, 1993. This article is a condensed version of her 1994 annual report.

CMSAF David J. Campanale is the eleventh NCO leader to wear the special stripes.

The Top Chief

By Suzann Chapman, Associate Editor

THE NONCOMMISSIONED officers who have held the position of Chief Master Sergeant of the Air Force have been achievers—and leaders—throughout their careers. They've been aircraft mechanics, air (now security) police, and personnel specialists. Most were first sergeants and senior enlisted advisors at unit, division, wing, or command levels.

They also have been captured by the particularly demanding challenge of representing the US Air Force enlisted force. In the words of new CMSAF David J. Campanale, "I've seen it throughout my career. Enlisted people have always wanted more responsibility. . . . They [have] wanted to be out front, leading."

He added, "I think that's what separates our services, all of our services, in our country from those in the others—the strength and capabilities of our enlisted people."

While the drawdown has focused increased attention on the role of the NCO, Chief Campanale believes Air Force NCOs would have continued to seek greater responsibility anyway.

"For a long time, enlisted people were specialists, and leadership was not perceived to be part of their day-



to-day regimen," said the Chief. Now, he said, "we have leaders everywhere. We have leaders with one stripe. We have leaders [with] two stripes. And they are technically brilliant and superior in their fields. They didn't join the Air Force to kick back and relax."

Chief Campanale emphasized that today's enlisted people are motivated and not afraid to accept challenges. "We have smarter people, better educated, and better trained people," he said. "They joined the Air Force to get an education and to fulfill a very, very responsible role in what the Air Force does."

The Chief Master Sergeant of the Air Force believes that education, technical ability, and "being a good community servant" are the keys to performance. "I think some people have gotten that a little out of kilter," he explained. "Some people think it's only the educated people who get promoted because they have an education, or it is only the civic-minded people who get promoted because they have a desire to volunteer. That is not true. People who do those types of things usually are your strong performers."

The Chief also believes that continued professional military education opportunities are needed to meet the demands of the enlisted force. "The people who come in [today] don't want to be just tradesmen and technicians," he said. "They want to have some of that, but they also want to be professionals, and [they] understand that what we do today is not just a job. It's a duty, an obligation. It's a feeling of service to one's country."

Echoes From the Past

Several years ago, the seventh CMSAF, Arthur L. Andrews, described military life this way: "Our military career is not just a job. It calls for self-discipline, not self-indulgence. In more concrete terms, it calls for alerts, deployments, worldwide airlift missions, and PCS [permanent change of station] moves. National defense is not a business that opens its doors at 8:00 a.m. and closes at 5:00 p.m."

The "concrete terms" have changed only slightly in the dozen years since Bud Andrews was the top enlisted man. Today, the Air Force does not routinely pull alerts, but the deployments and airlift missions are still major factors. Chief Campanale,

along with Air Force Chief of Staff Gen. Ronald R. Fogleman, checks the statistics on operations tempo daily. Chief Campanale said that recently only about two percent of the force was deployed on worldwide contingency operations. The problem appears to be that the Air Force has to use the same job categories, essentially the same people in some cases, again and again.

According to the Chief, some people are working hard and some are working too hard. When he goes out to talk with the troops, he reminds them that no one said the job was going to be easy. He believes they have accepted present-day challenges: "I think our people are doing OK."

For those pockets of Air Force troops that have been hit hardest by the operations tempo, he added, "we have to be smarter internally in the Air Force and put some more resources in those areas."

The Air Force has been looking at ways to reallocate some resources. These options include continued use of Guard and Reserve forces and tapping Stateside units to replace some European units. Chief Campanale mentioned that another method under consideration is cross-utilization training, essentially having some people move from one weapon system to another.

"A Done Deal"

He also said that it's obvious with the drawdown that the Air Force has fewer people, dollars, and resources to accomplish a given set of tasks. However, he pointed out, those tasks were never "exact and predetermined year in and year out. The military responds to the needs of the nation, to the needs of the world."

The Chief believes that the enlisted troops can now put the drawdown behind them. Though the Air Force may have some sort of early-out program for next year, according to the Chief, the numbers will be very, very small. "As something to worry about, or a sword dangling over your head—forget about it. Because SERBs, drawdown, and all that are done—that's a done deal," he said.

The Chief now wants to concentrate on helping to restore stability to the force. "We're coming out of a time of great, rapid, and turbulent change," he said. "Some of that was internal. . . . Some was external—

BRAC [the Base Realignment and Closure process] and those types of things. The changing world situation has changed our mission, where our focus is.

"Now we're getting to a point where a lot of this internal change we need to put to rest—uniform, enlisted evaluation system, promotion system, 'Year of Training'—to create, to the greatest extent possible, a sense of stability for our people, so they can take a deep breath and start looking ahead instead of looking over their shoulders."

He is quick to point out that he doesn't have a list of his five or ten most important tasks. The Chief did say that his overarching concern is communication. "People can call me any time, I'll go visit anyone any time, I'll do anything to help anybody," he said.

Like his predecessors, who logged hundreds of thousands of miles to reach their constituencies, Chief Campanale said that to ensure he can present "the pulse" of the enlisted people to the Chief of Staff and Secretary of the Air Force, he must go out and gather data. He does that by "opening the lines of communication," creating "a sense of ease" with his position, and making his own observations. He also gives everyone his phone number. The objective, he said, is to create "a feeling that anyone can speak up and voice [an] opinion."

Like the fifth CMSAF, Robert D. Gaylor, Chief Campanale said he is amazed at the authority of his position. Anyone who thinks the Chief Master Sergeant is a mere "figurehead" should "come on up to the Pentagon and work a few days and walk a few miles in my shoes," he suggested. A figurehead is "somebody who sits behind a desk [and] has no authority, responsibility, or accountability to anybody. I have all three, . . . and [they're] quite substantial."

He had no real preconceived notion of what the position entailed, the Chief said. "I only thought it would be a . . . larger . . . extension of what I was already doing at a command level. [He was Air Mobility Command Senior Enlisted Advisor.] It's a lot of work, I don't mind telling you. I've never been afraid of work, but I . . . have probably never worked so hard."

Changes Are Made

Judging from his record, Chief Campanale is not one to sit around doing nothing. He understands the demands being placed on troops today because he lived the life—most recently while in AMC with its worldwide airlift responsibilities and during his early career as a participant in Operation Arc Light during the Vietnam War.

As a B-52 crew chief at Barksdale AFB, La., he spent most of his tour at Andersen AFB, Guam, working the Bullet Shot segment of Arc Light. He said that people went on temporary duty (TDY) for six months and came back for perhaps thirty days, but they had to leave a contact phone number for instant recall.

"Then they'd call and say, 'Come back,' and we'd go [TDY] again," the Chief said. "That was a time, unfortunately and regrettably, when many families had separations, divorces, problems for children, . . . [and] problems for military members who just said they'd had enough and they flat out left the service. Living conditions were extremely poor." Bullet Shot lasted for about two and a half years.

Although the Chief and his wife Barbara survived, he said, they did discuss the possibility of his leaving the service. "Barbara had wanted me to get out of the Air Force, but I told her, 'It has been pretty tough, but I really like what I'm doing, and I like the people I do it with. So let's give it one more shot, and if it really turns out to be that bad, then we'll make a change.' That was the agreement."

He credits past leadership with recognizing the hardships and making needed changes. "Now when we deploy, we do a much better job of taking care of our people," said Chief Campanale. "The support agencies were nonexistent then." He has also said that the Air Force could do a better job of marketing those support agencies to ensure that people feel comfortable turning to them for help.

While the pain of deployment has eased over the years for most troops, each of the top enlisted men has been unable to find a solution to one problem. Chief Campanale said that single-room occupancy for young airmen is very important. Over the years, the Air Force has moved to dual-occupancy rooms from open-bay barracks, which all the early

Chiefs experienced firsthand as young airmen. As with his predecessors, Chief Campanale sees the issue in terms of recruiting and retention.

He also says that today's young airmen "are far smarter than I ever was."

Chief Campanale will tell anyone that it is unwise to leave the Air Force because of some "little thing nagging at them." According to the Chief, "There are only two reasons to leave the Air Force. One is that you just hate the whole Air Force. I mean you hate everything about it. You don't like the people; you don't like one thing about military life in the Air Force. The second reason is, you've got something better to do with your life. That's not easy because this is a pretty good life." He advises people to stay in unless their decision to leave satisfies one of those two criteria. He also advises them to make a contribution and not to listen to people who say, "Don't volunteer."

Earlier Chiefs held that philosophy as well, including the sixth, CMSAF James M. McCoy, who said, "The top NCO in an organization today is not the company boxer or the commander's boy. He got there because of hard work, dedication, involvement, professionalism, and education."

Chief Campanale credits "liking the life" and an NCO who doesn't fit Chief McCoy's vision of today's NCO with helping to motivate him to stay in the Air Force. In fact, Chief Campanale called this NCO a "bad example."

"When I first came in, there was a staff sergeant who had a game for everything and a way to get out of everything," he said. "Every time I would complain about dormitory rooms, or bad chow at the chow hall, or insensitivity at the commissary or BX, or not enough money, or anything, he always gave me the same answer, 'Hey, if you don't like it, get out or get promoted and do something about it.'"

"I started thinking about that one day. . . . I said, 'I could get out, but I don't want to, and I volunteered to come here.' Having said that, my two choices [were] to do something about it or have faith in those [who were] trying," he said.

The Chief said that along the way he never forgot where he came from and what he believed in. He also "discovered that a lot of the things

we were doing were in fact the right way to do it. But I also found out that some of my convictions and concerns as a young enlisted troop [are] still valid today, and now I've got my shot to do something about it."

Suggestions From the Field

Listening to the troops was a large factor in the decision to conduct a review of the enlisted promotion system (a similar review has also taken place for officers).

Chief Campanale has asked for and received many suggestions, some of which he said are very focused. Others simply want to change the system, not necessarily making it fair for everyone. Some have suggested a manipulation of points used and how the points get calculated and a change in the weighted factor. Chief Campanale wants to know, "Why put more points in this area or another? What is the value added?" The Chief said he is not up for any "wild changes," but he is "optimistic for some changes that are going to be value-added changes to our system."

The Weighted Airman Promotion System (WAPS), instituted during the tenure of the first CMSAF, Paul W. Airey, greatly improved the equitability of the process. Before the WAPS, people had to be widely known around the base to be promoted, according to the third CMSAF, Richard D. Kisling, who was once passed over for master sergeant.

Chief Campanale has said that to get promoted today, people should concentrate on their test scores—something they have direct control over. That advice has stood the test of time since CMSAF Thomas N. Barnes, the only Chief ever to be appointed twice to one-year extensions, said much the same about the WAPS almost twenty years ago: "It places the responsibility directly on the shoulders of the individual; [with few exceptions, the weighted factors] are directly [in] the control of the individual."

Like the other top enlisted men who saw the Air Force through many changes and improvements, Chief Campanale said that on the whole the Air Force promotes and has promoted the right people, but "there are probably some things we can do better—because every now and then you need to reevaluate how you're doing business." ■

Only disabled military retirees are required to forfeit their pensions to receive VA compensation.

The Special Penalty for Disabled Veterans

By Tom Philpott

To care for him who shall have borne the

THE MORTAR round struck as Air Force MSgt. James Norris, an aircraft electrician, stood on the ramp of Da Nang AB, South Vietnam. The explosion tossed him into the air. When he landed, his back was broken in several places.

Until that moment in March 1968, Sergeant Norris had been planning a "beautiful" second career, earning good money in the airline industry. He already had put in more than twenty years on active duty. Rather than retire, he had accepted a second tour in Vietnam. Now his working life was over.

After undergoing multiple surgeries and almost three years of painful rehabilitation at Wilford Hall Medical Center, Lackland AFB, Tex., Sergeant Norris finally did retire. The Veterans Administration, as expected, rated him 100 percent disabled for life. What he learned next, however, was totally unexpected.

VA officials explained to him that in order to receive tax-free disability compensation, he would have to waive his military retirement—a benefit he had earned through three wars and more than two decades of service.

Sergeant Norris was stunned.

"I had no idea I'd lose my retirement if I got injured. 'You must be kidding,' I said. 'I served my country twenty-some years, and I have to take a dollar out of my retirement for each dollar you pay me for pain and suffering? I have to buy my disability?' It was devastating."

Sergeant Norris, who is now sixty-nine, lives in Pensacola, Fla., where he has been wheelchair-bound since 1982. Despite five spinal surgeries over the last five years, his condition continues to deteriorate. Two years ago, he lost the use of his right arm. He needs constant personal care. His pain is chronic. For this, he said, the VA pays him \$2,500 a month. In return he loses his retirement, about \$1,900 a month. No matter what the numbers show, said Sergeant Norris, it's a bad deal.

"If I weren't in pain seven days a week, twenty-four hours a day, I'd take my retired pay and give them back their disability pay," he said. "I served my country. I deserve my retirement."

"Gross Inequities"

Sergeant Norris's experience illustrates how current law gives rise



battle and for his widow and his orphan —A. Lincoln

to what Sen. John McCain (R-Ariz.) describes as “gross inequities” in the treatment of disabled military retirees. Sergeant Norris is not alone. Each year, almost 350,000 military retirees must waive at least a portion of their retired pay to receive tax-free compensation from the Department of Veterans Affairs for service-connected disabilities.

The solution, say veterans’ groups, is the passage of new legislation that would permit “concurrent receipt,” wherein the retiree would be permitted to receive both retired pay, earned through long service, and VA disability pay, to compensate for service-related injuries or illness.

This concurrent-receipt concept has attracted more attention and support on Capitol Hill in recent years than ever before; the hopes of disabled retirees have soared on occasion. Still, no administration, Democrat or Republican, has supported retirees on the issue. Moreover, there are signs that political interest might have peaked in the last Congress and may now be receding, without a single disabled retiree having gained a dollar in lost retired pay.

Stephen Wolonsky, president of

Uniformed Services Disabled Retirees, a nonprofit organization formed fifteen years ago to lobby Congress for concurrent receipt, remains hopeful that new Republican majorities in the House and Senate will get behind the issue. He noted, for example, that Rep. Newt Gingrich (R-Ga.), the new Speaker of the House, “has always been supportive,” often cosponsoring concurrent-receipt legislation.

Rep. Floyd D. Spence (R-S. C.), the new chairman of the House National Security Committee, not only backs previous legislation but also once signed a discharge petition that would have brought the measure to a floor vote.

“So we had their support,” Mr. Wolonsky said, “but will they support us now that they are in top positions?”

Senator McCain, the Senate’s standard-bearer on concurrent receipt for several years, believes the legislation needs fresh primary sponsors. “No one read it last year except me,” the Arizona Republican recently told his staff.

This year, according to one of his staff members, Senator McCain has two higher priorities: bigger pay

raises for active-duty members and restoring cost-of-living allowance (COLA) equity between military and federal civilian retirees.

Many lawmakers who either backed concurrent receipt or were at least familiar with the term lost in the 1994 elections. Many new faces on Capitol Hill have no idea what is at stake or why they should care. Moreover, Defense Department officials strongly oppose concurrent-receipt legislation and are beginning to sense that pressure from Congress has eased.

“I’d be surprised,” one Pentagon official dryly noted, “if [members of Congress] are waiting in line to sponsor legislation that doubles a person’s compensation.”

Still, proponents say concurrent receipt is an equity issue. That alone should maintain a political pulse until the money can be found. Money is the biggest hurdle. Understanding is another.

A Range of Disability

Most Americans—even veterans—are usually surprised to learn how permanent injury or illness affects a service member’s retired pay. Not

every case draws the same amount of sympathy, however. At one end of the spectrum are several thousands of retirees like Sergeant Norris who are totally disabled as a result of wounds or illness sustained in the line of duty. At the other end are persons with relatively minor disabilities, some rated as low as thirty percent—many the victims of diseases unrelated to service life.

Retired MSgt. Alfred Gonzalez, of Tucson, Ariz., contracted an eye infection while stationed in France more than forty years ago. He retired in 1966. For the next ten years, he fought the Veterans Administration for compensation related to the effects of diminished vision in his eye.

"I figured I can always use some kind of tax break," he said. "I had four boys depending on me."

Persistence paid off. He won a thirty percent rating and now receives about \$292 a month in tax-free disability compensation. But his taxable retired pay is reduced by the same amount. Sergeant Gonzalez believes the offset is unfair.

"I'm comfortable [financially], but it's at the point now where it's the principle of the thing," he said.

Proponents of concurrent receipt say the inequity becomes clear when one compares the treatment of military retirees with that of federal civilian retirees. Anyone with a service-related disability who takes a federal civilian job can receive VA compensation and have his or her service years apply toward federal civilian retirement. Once retired, one can continue to receive VA payments plus full civil service retirement.

Disabled military retirees similarly can protect retired benefits from offset if they go to work for the federal government and apply service years toward civilian retirement benefits. A retiree with twenty years' service typically can use those years to boost civil service retirement by forty percent, said Ted Newland, a retirement benefit specialist at the Office of Personnel Management.

Once retired from the civil service, the military retiree can receive full retirement benefits plus VA disability compensation. The offset disappears.

The loss of retired pay "wouldn't bother me as much if the equity element weren't present," said Col. Bill

Delaney, USAF (Ret.), who works in the retired affairs office at Bolling AFB, D. C. Colonel Delaney retired in 1974 with a low disability rating from the VA. It has been adjusted as his medical problems worsened. While on active duty, Colonel Delaney fell through the hatch of a transport plane. The fall injured his knees and jarred his hip bones. He has had one hip replaced since retirement and may have the second replaced, along with both knees. His disability rating is seventy percent, and his retired pay is offset accordingly.

"The only advantage to receiving VA compensation is that payments are not subject to federal or state taxes," he said. Yet if he had left service after his fall and gone to work for the federal government, he might already be receiving his "entire retirement plus VA payments."

Too Much Money

In the past, the all-inclusive nature of concurrent-receipt legislation has doomed it. The estimated cost of providing full retired pay to any retiree receiving VA disability compensation runs from \$1.2 billion to \$2.1 billion annually. This is too much for lawmakers to countenance.

In the 103d Congress (1993-94), Senator McCain tried another approach. He introduced a bill to allow concurrent receipt for a narrow group of retirees—those rated 100 percent disabled within four years of retirement and whose disability occurred in the line of duty. That cost estimate was only \$50 million a year.

The Senate came close to passing the bill. At the eleventh hour, however, senators decided merely to threaten the Department of Defense with enactment if it failed to provide a detailed report on concurrent receipt, including fresh estimates of cost. When the deadline passed without a report, Congress merely extended it, leaving some to doubt the sincerity of lawmakers' support.

Mr. Wolonsky doesn't support Senator McCain's call to limit concurrent receipt to retirees with 100 percent disabilities. It leaves out veterans like him who have lower disability ratings yet are deemed "unemployable"—which means compensation stops if they find employment.

Mr. Wolonsky, an Army enlisted retiree, lost hearing in one ear—the result, he said, of years spent near firearms. Much of the vision in one eye is gone, the result of a jeep accident. He also has permanent disabilities to his arm and leg that require him to walk with a cane. Mr. Wolonsky returned to active duty for a brief stint after working for the US Postal Service in the early 1970s. When he retired a second time, he said, the US Postal Service declined to rehire him, citing his disabilities.

"I lost the opportunity for a second career," he said, adding that in return for disability pay, "I had to give up retirement [pay]."

A law prohibiting concurrent receipt of military retirement and disability pay has existed in some form for more than 100 years. According to a 1993 report by the Congressional Research Service, Congress first imposed the ban in 1891 after learning that some veterans of the Mexican War (1846-48) were receiving both retired pay and disability pensions.

Sen. Francis Marion Cockrell of Missouri successfully argued for an end to the dual payments: "The salary we pay the officers of the Army is intended to be in full for all military services." If Congress was going to allow dual benefits, Senator Cockrell warned, "I want the taxpayers of the country to know it." The prohibition now on concurrent receipt is found in Public Law 78-314, passed more than fifty years ago.

A Lack of Fairness

Retired Army Col. William E. Weber doesn't care how old the law is or what some senator argued a century ago. What Colonel Weber believes is that disabled retirees are treated unfairly and the law should be changed.

In February 1951, Colonel Weber commanded a rifle company in Wonju, South Korea, that fought to keep Chinese troops from moving down the central highlands in what became known as "The Big Turkey Shoot." One night during a Chinese counter-attack, Colonel Weber lost his right arm to a hand grenade. A few hours later another grenade, or perhaps a mortar round, took his right leg. Colonel Weber recovered sufficiently to complete a thirty-eight-year Army career, retiring in 1980.

Unlike Sergeant Norris, Colonel Weber understood while still on active duty that he would have to forfeit his retired pay to receive tax-free disability compensation. Still, he stayed in. He explained, "It was my career, what I chose to do."

In retirement, he said, he joined the fight for concurrent receipt not for himself—he's comfortable financially—but for severely disabled retirees, most of them enlisted, who "live on the margin."

"The principle behind VA compensation," Colonel Weber said, "is the nation's desire to acknowledge individuals who have lost capability as a result of being injured in service. That should have nothing to do with whether you make it a career or not. Military retirement, on the other hand, is granted on the length of time served. The two are separate and distinct forms of compensation."

Most disabled service members "salute smartly" when told about the offset at retirement, Colonel Delaney said. "But deep down inside," he maintained, "most feel, like I do, that this is a fairness issue that should be addressed."

In 1985, disabled military retirees filed a lawsuit against the government, claiming that unequal treatment between military and federal civilian retirees over veterans' compensation violated their Constitutional right to equal protection.

The US Court of Claims rejected the argument, ruling that Congress had a legitimate purpose in denying concurrent receipt—to reduce spending and the "amount of compensation certain classes of individuals could receive" as a result of military service. The court further ruled that unlike federal civilian retirees, military retirees receive other special benefits, such as commissary privileges, use of recreational facilities, discount travel, and health benefits.

Defense Department officials privately acknowledge at least the appearance of inequity. The proper remedy, they suggest, might be to offset civil service retirement by amounts received in VA compensation, rather than double payments to disabled service retirees.

The standard practice "throughout the government and the private sector is to pay disability compen-

sation only during the normal working life of an employee, replacing it with retired pay when the disabled worker attains retirement eligibility," said Edwin Dorn, under secretary of defense for Personnel and Readiness, in a report to Congress opposing concurrent-receipt legislation.

"In other words, the two programs normally are mutually exclusive," continued Secretary Dorn. "Military retired pay and VA disability compensation differ in that, rather than apply in mutually exclusive periods of life, one is offset against the other, effectively achieving the same result, only better, because the higher benefit is always payable."

Retired Air Force Col. Ignatius DeCicco, secretary of Uniformed Services Disabled Retirees, has watched Congress run hot and cold on the issue for more than a decade. Some lawmakers don't understand the issue. Some are sympathetic but believe the nation has more pressing concerns, such as reducing the budget deficit. Some who publicly support concurrent receipt privately criticize the legislation as a budget buster.

"Explain it to any House member or senator and they'll say it's unfair," said Colonel DeCicco, "but they do nothing about it. Some will even sign on as cosponsors, then they'll come around to the back door and ask the committee chairman not to let it go to the floor."

Congress won't back concurrent receipt, Colonel Weber said, because the constituency is too small and the cost too high.

Said AFA Director of National Defense Issues Kenneth Goss, "As military experience continues to decline in Congress, . . . the battle for concurrent receipt is more difficult. The Air Force Association will continue to work for enactment of legislation to correct this long-standing inequity."

Joseph Violante, legislative counsel for Disabled American Veterans, predicts that concurrent receipt won't get serious consideration until lawmakers are satisfied spending is under control. That won't happen any time soon.

Furious Attacks Are Coming

"I'm not sure it makes a difference whether it's a Republican Congress or a Democratic Congress," said Mr. Violante. "The real problem is the effort to cut the budget and reduce the deficit. . . . I don't see Congress in the mood to increase benefits. In fact, we're going to be fending off some furious attacks on veterans' benefits in the coming year."

Proponents on Capitol Hill are only a bit more optimistic. Rep. Michael Bilirakis (R-Fla.) again has introduced two concurrent-receipt bills. One would allow all eligible retirees to receive full retired pay and VA compensation, at an annual cost of about \$1.2 billion; the second would cut that cost in half using a reverse offset formula. For example, retirees rated 100 percent disabled would lose none of their retired pay; those with a ninety percent disability rating would lose ten percent; an eighty percent rating would trigger a twenty percent offset, and so on.

Even in the last Congress, when the legislation had more than 300 cosponsors, the support was shallow. Cosponsors never felt strongly enough on the issue to force the bill to the House floor for a vote.

"It's an injustice as far as I'm concerned," said Representative Spence in an interview. Disabled retirees should "be entitled to both" retired pay and disability compensation. Still, concurrent receipt clearly is not a priority for his committee.

"I don't even know what it would cost right now—\$2 billion?" Representative Spence said. "If it were in my power to just say it and it'd be done, I would, but it goes beyond that."

In the Senate, McCain still considers the retired pay offset "a major screwup," says a staff member. "But we have some other things we want to move quicker on. Concurrent receipt becomes a smaller story."

That is certainly not true for James Norris.

"Thousands in this country served with their bodies, their hearts, and their minds to wind up disabled," Sergeant Norris said. "To have to go through all this and then give up their retirement—that's hard. ■"

Tom Philpott writes Military Update, a syndicated weekly news column for service people. This is his first article for Air Force Magazine.

The first C-17 squadron is operational, and the 437th Airlift Wing already has customers lining up.

Up and Running at Charleston



Photographs by Paul Kennedy and Guy Aceto, Art Director





Controversial, capable, and now operational, the C-17 has garnered much attention as it enters USAF's transport fleet. The spotlight often falls on Air Mobility Command's 437th Airlift Wing, Charleston AFB, S. C., where most C-17 crew training is currently conducted. At left, students in the C-17 logistics training facility use a simulated flight deck, tail, and wings that sit at the same position and height as in the real aircraft. Out of the elements and able to focus on their tasks using life-size equipment, students learn in an ideal training environment.

As the first C-17 squadron, the 17th Airlift Squadron is writing the book on crew procedures. Aircrew, ground crew, crew chiefs, and technicians—input from them all has improved the plane. "We just need to make sure it's right before we buy this airplane and cause our guys to have to work on it on the ground in Somalia, Rwanda, or even Bosnia," explained Lt. Col. Norman Cole, C-17 logistics and maintenance chief. Having technical representatives from McDonnell Douglas on site allows comments to reach the aircraft's manufacturer directly. "If it's a paper change, we can make a pen-and-ink change to the TO [technical order] right now and fix it on the spot," said Colonel Cole.

Maintenance specialists (center photo) examine part of the C-17's electrical system, while at the loadmaster's station (bottom), crew chief SrA. John Taylor studies airplane specifications.



Photo by Paul Kennedy



Staff photo by Guy Aceto



Staff photos by Guy Aceto

Lined up and ready to go, nine new C-17s make an impressive sight at Charleston AFB (top photo). USAF's newest transports handle the same demanding missions as the C-141s across the taxiway. The 437th AW also juggles multiple tasks: serving as the C-17 schoolhouse (until other facilities open), qualifying aircrews and ground crews, evaluating equipment with such customers as the US Army's 7th Transportation Group, and flying training missions. Three months before AMC Commander Gen. Robert L. Rutherford officially declared initial operational capability (IOC) for the C-17, the airlifter flew a contingency mission, transporting troops and equipment from Langley AFB, Va., to Kuwait for Operation Vigilant Warrior in October. The 17th AS, also declared ready for worldwide missions in January, has already used the Globemaster III for missions to Howard AFB, Panama; RAF Mildenhall, UK; Ramstein AB, Germany; Guantanamo Naval Base, Cuba; and Yokota AB, Japan.

In March, the 14th Airlift Squadron of the 437th AW became the second squadron to make the transition to C-17s, and AFRES squadrons at Charleston are not far behind.



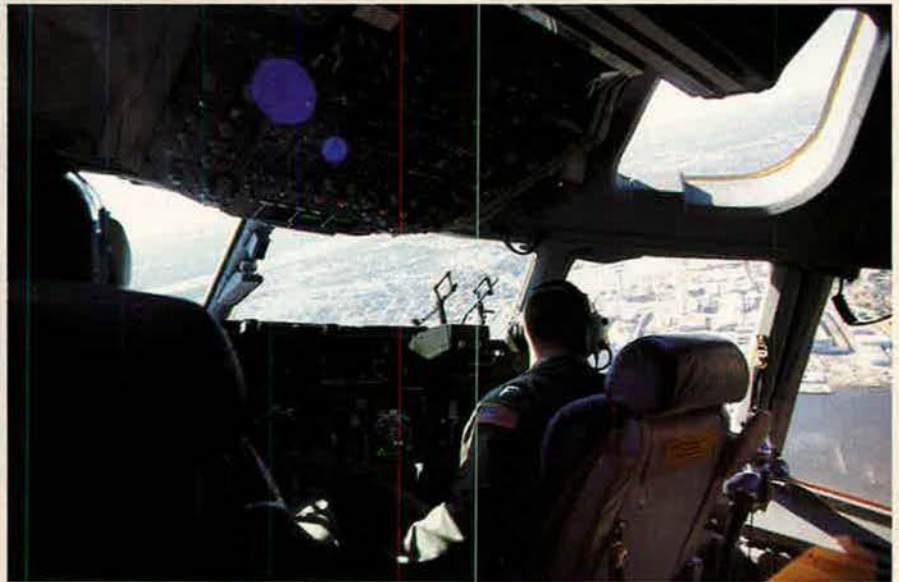


An airman standing on the wing gives some idea of the C-17's dimensions: almost 170 feet between wingtips, 174 feet long, and just over fifty-five feet high. It has military versions of the Pratt & Whitney 2040 engines found on civilian Boeing 757s. Its Global Positioning System and high-tech cockpit with head-up display are already used in other aircraft, but the C-17 adds another dimension to airlift, according to Lt. Col. Ron Ladnier, 17th AS commander. "I think you could call this a swing lifter," he said. "The C-17 will swing from low-level, direct delivery or just plain strategic lift. [It] will swing between the different missions. We see it as another dimension."



The C-17 is preparing to take on many of the duties of the C-5, C-130, and C-141 transports. The 17th AS specifically tapped pilots with experience on these older aircraft, using their expertise to help integrate the Globemaster III into the transport fleet. The biggest challenge has not been the aircraft itself, noted Colonel Ladnier; it is that the C-17 requires only a crew of three. "Automation is the fourth crew member," he said. "We don't have the flight engineers. We don't have the navigator. We don't have the extra loadmaster, so we've . . . had to take the . . . crew duties and distribute them to four areas—not people but areas—either pilot, copilot, loadmaster, or computer." Cockpit resource management is vital on a C-17, even in minor tasks. For example, the copilot now signs for meals from the in-flight kitchen, something once done by the loadmaster.

Center right and bottom photos: Two-thirds of a C-17 crew, pilots Capt. Sean Sullivan and Maj. Carlton Everhart (on the left), take to the skies over Charleston.





Photos by Paul Kennedy

Some say that once you leave the cockpit, the rest of the airplane belongs to one person—the loadmaster. Along with this “big office” comes what 437th AW Commander Brig. Gen. Walter Hogle, Jr., describes as a “quantum leap in responsibility.” The loadmaster’s station on the C-17 is where the aircraft’s flexibility is most evident. Col. Jim Evans, C-17 program integration manager for the 437th AW, explained that when a C-141 is scheduled for a mission, maintainers may have to prepare the plane the day before. In contrast, he said, “Our [C-17] loadmaster could configure the airplane while he’s flying the thirty-five minutes to Pope [AFB, N. C.]” Efficiency has been increased by many small but significant equipment changes, such as a plastic saddle that makes it easier to turn over two sections of rollers at a time.

On a training mission, 17th AS loadmaster TSgt. Bill Paradis (center photo) prepares a simulated heavy load for a drop. Once on target, Sergeant Paradis, the pilot, and the copilot coordinated the exact moment for him to punch out the load and landed it about twenty-five feet from the center of the drop zone.





When it comes to airlift, the keyword is "throughput," General Hogle said. "The more throughput we can provide, the more airlift we can provide. That is the quintessential measure of the aircraft." At Charleston, crews have demonstrated the ability to turn the C-17 in two hours and fifteen minutes, completing all steps from blocking the aircraft in position to unloading and loading cargo, and taking off.

"Bigger is not always better," Colonel Evans pointed out, "because if I can get more airplanes on the ground for a shorter period of time, even if [they] only [carry] half or seventy-five percent of a larger airplane's payload, then in fact I may be able in two days to deliver more people and stuff. That really is what the guy wearing the fatigues and carrying the gun is concerned about."

The newer generation of transport owes much to its predecessors.

General Hogle noted that the backbone of the airlift fleet is still the C-141. "It's difficult for people who fly the airplane to watch this new one come on line," he said, but "it's just a matter of generational continuity."



Staff photos by Guy Aceto





With Fort Sumter in view (upper left corner of photo), a pair of C-17s chase each other through the pattern as they return to Charleston AFB. "Our mission success rate right now, looking at departure reliability since IOC [was declared], is 100 percent," said Colonel Cole. This July, the 17th AS will undergo a thirty-day reliability, maintainability, and availability evaluation. Colonel Evans said the crews look forward to working hard over the next few months to meet the test.



The tweaking and learning that are part of breaking in a new aircraft do not happen only in the air. Back on the ground, SSgt. Jeff Durrence checks out an auxiliary power unit on a C-17 (at right). "These young guys are the experts," Colonel Cole said, "because they are more finely attuned to what's happening on a day-to-day basis with the airplane. . . . They don't have that benefit of having very senior master sergeants, chiefs, [being] able to help with the situation. . . . The [mission capable rates] you see, the launches you see, are all being done by the young guys."

Versatile and efficient, the C-17 has proven a worthy addition to USAF's transport fleet. General Hogle said, "I think it provides us with tremendous capability that I certainly didn't even imagine would exist when I started to fly."



Photos by Paul Kennedy

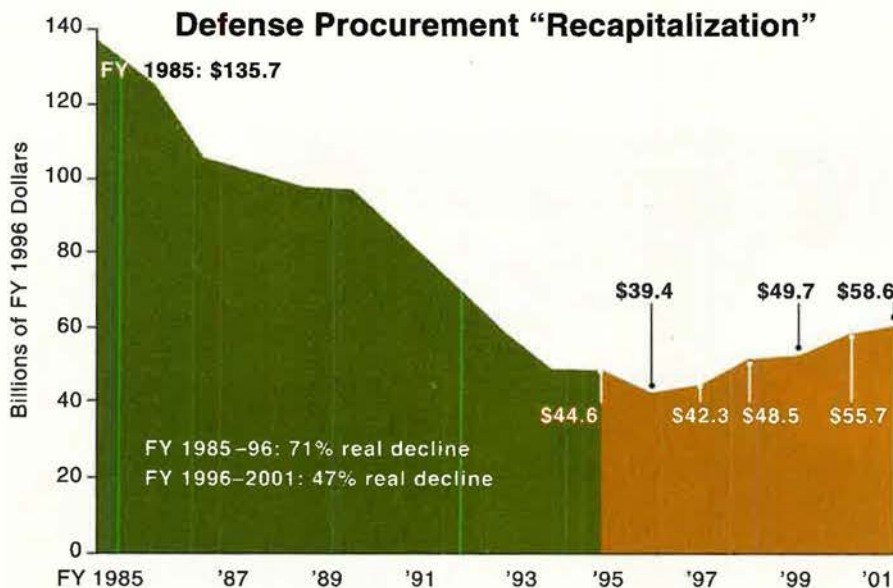


Staff photo by Guy Aceto

The Air Force last bought a combat aircraft—an F-16—in 1994. It won't buy another one—an F-22—until 1998.

The Zero-Warplane Budget

By Robert S. Dudley, Executive Editor



From a post-Vietnam peak of \$135.7 billion in Fiscal 1985, defense procurement funding has plunged to historic lows. Under current Pentagon plans, the decline will continue one more year—through Fiscal 1996—and then begin a steady rise into the next century.

WHEN THE Pentagon sent its Fiscal 1996 budget request to Congress, it included no money to buy new combat aircraft for the Air Force. This marked the second straight year that USAF had to pass up buying fighters, bombers, or other types of warplanes, and more lean years are in store.

In 1994, the Air Force made a final purchase of the multirole F-16 fighter, which was the last combat aircraft of any type still being procured. The service will not buy another warplane until 1998. In that year, it is to order its first few models of the F-22 fighter, barring further production delays.

The four-year drought isn't a sur-

prise; it was planned as part of the effort to cope with dramatically contracting Pentagon budgets. Still, the gap makes some USAF leaders uneasy.

"Where we're hurting is in the near term," said Gen. Ronald R. Fogleman, USAF Chief of Staff. "We quit producing F-15s and F-16s and, quite frankly, from a force-structure standpoint, . . . if we had more money in the near term, we ought not to have stopped those production lines."

General Fogleman didn't disagree with the decision, but he added that the US in the next few years probably needs to worry more about modernizing its equipment and less about readiness, which the Pentagon has deemed sacrosanct in recent budgets.

"We made this decision to cut modernization back so far in order to fund readiness," the General told the Defense Writers Group in Washington, D. C. "I don't say that was a bad decision. I just say that if you had to make that tradeoff—and we made it—then the next place you spend more money is not necessarily on readiness. It's probably on modernization."

General Fogleman is not alone. The chiefs of all the services, he stated, "are very concerned about the modernization accounts." Defense Department officials themselves are starting to plan for a resumption of modernization.

"We're not buying fighters in the Air Force any longer," warned a se-

nior Pentagon executive. "It's going to take us a couple of years before we get any real production. We're going to get aging in our forces across the board. . . . We've taken care of people and readiness. We think the force structure is about right, but we do have a longer-term problem with modernization."

"I Have Concerns"

General Fogleman pointed out that the Air Force slashed modernization and lived off Cold War stocks in anticipation that a major, forty percent increase in procurement would materialize at the turn of the century. He worries that an increase of that scope and magnitude will make a tempting target for budget-cutters. If the budget increases don't happen, or fall significantly short of the goal, the Air Force could be left with very serious problems, he said.

"I don't have major doubts," he said of Pentagon plans to provide the funds, "but I have concerns."

As the Clinton Administration began its third year, the Defense Department unveiled a budget request of \$246 billion for Fiscal 1996, which starts on October 1. The single-year budget was accompanied by a 1996-2001 Future Years Defense Program, a six-year blueprint projecting cumulative defense spending of \$1.4 trillion, as measured in 1996 dollars.

The Administration, echoing General Fogleman's concerns, announced that the Fiscal 1997 budget would be the first step in what was to be a gradual defense "recapitalization" project, during which the US would provide increasingly large sums of money for weapon modernization. In addition, the Administration moved to protect a select group of weapons and programs. Favored systems included the Air Force's F-22 air-superiority fighter.

"We have to get on with that," said Defense Secretary William J. Perry, "because the drawdown is essentially over now, so we will now have to start getting that modernization ramped up again."

It looks as if the services will have to wait a few more years, however. The Fiscal 1996 budget continues to be dominated by concerns about the troops and force readiness, with little or no real emphasis placed on weapons. Made public on February 6, the Pentagon's requested budget would:

- Fund maximum military pay raises for six years, the first time this has happened in the era of the All-Volunteer Force.

- Zealously guard force readiness, with Congress asked to grant DoD authority to divert money from other accounts to cover unexpected readiness shortages.

- Funnel significant amounts of money into the care and welfare of troops and their families.

In the early going, congressional critics warned that the budget was not sufficient to meet US national security needs. Senate and House Republicans argued that the spending plan should be increased by \$12 billion-\$15 billion in order to offset inflation and prevent further erosion of the military.

The latest defense spending plan proposes a real, one-year decline of \$13.7 billion, or 5.3 percent, from the level approved for 1995. That marks the eleventh straight year of real cuts in national defense spending. In addition, current plans call for the budget to drop three more times—in 1997, 1998, and 1999—before spending turns up slightly in 2000.

The 1996 request is, in real terms, thirty-nine percent lower than the inflation-adjusted sum of \$403 billion allocated to defense in Fiscal 1985, the peak year of defense spending in the post-Vietnam era. By the end of Fiscal 1999, the defense budget is expected to have dropped by forty-two percent.

As a share of US Gross Domestic Product, defense spending will have dropped to 2.9 percent in Fiscal 2001, a figure that is less than half the 6.2 percent of GDP allocated to defense in the mid-1980s.

Two-Thirds for Today's Needs

The new blueprint reaffirms the Pentagon's priorities of recent years. In 1996, the biggest Pentagon spending accounts are those that fund everyday activities—training exercises, daily operations tempo, repairs, payroll, health care, and the like. The operations and maintenance account is projected to hit \$91.9 billion, consuming 37.4 percent of the budget. The military personnel account will eat up another \$68.7 billion, 27.9 percent of the budget. When combined, these two here-and-now spending categories

account for two-thirds of the new Pentagon budget.

The remaining third of the budget will go to long-term military investment. Funding for weapon procurement comes to only \$39.4 billion in Fiscal 1996, or just sixteen percent of Pentagon spending. That represents a whopping decline of about seventy-one percent since the peak Reagan year and a drop to the lowest level since 1950, before the Korean War broke out. Research and development funding comes in at \$34.3 billion, 13.9 percent of the budget. The rest—\$11.7 billion, or 4.8 percent—goes to construction, family housing, and other investments.

Service shares have remained relatively constant. In the coming year, approximately \$207.5 billion of the Pentagon budget will be allocated to the three military departments. Of this total, USAF receives \$72.6 billion, or thirty-five percent; the Navy Department (the Navy and Marine Corps) gets \$75.6 billion, or 36.4 percent; the Army gets \$59.3 billion, or 28.6 percent. The Defense Department agencies and defense-wide activities get the other \$38.5 billion, which is 15.7 percent of the total Pentagon budget.

From a budgetary standpoint, the drawdown will continue for the Air Force. USAF's budget will fall from \$75.6 billion in Fiscal 1995 to \$72.6 billion in 1996, measured in constant 1996 dollars. USAF's funding plan devotes \$12.6 billion to research and development, \$16.6 billion to hardware procurement, \$22.5 billion to operations and maintenance, \$19.1 billion to military personnel, and \$2.1 billion to construction, family housing, and other activities, with offsetting receipts of \$300 million.

The Pentagon's overall military contraction continues, but at a slower pace.

Since the big drawdown began in the late 1980s, the US military has shed 650,900 active-duty troops, dropping from 2,174,200 in Fiscal 1987, the post-Vietnam peak year, to 1,523,300 in 1995. That's a decline of about thirty percent.

During the next four years, the uniformed military will shrink by another 78,000 active-duty troops, with the force leveling off in size at 1,445,000 in 1999. The force that is left at that time will be thirty-four percent smaller than it was in 1987.

Down Another 15,000

The Air Force's active-duty strength now stands at roughly 400,000, but plans call for the service to shrink by another 12,000 troops in 1996 and 3,000 in 1997, leaving USAF at 385,000 troops, very close to its post-drawdown goal of 382,000 troops. At the end of its downsizing, the Air Force will be 37.1 percent smaller than it was at its Reagan-era peak.

For the Air Force and the Army, no more force-structure reductions are openly contemplated. USAF has settled in at roughly twenty active and reserve fighter wing equivalents and a fleet of about 100 deployable bombers, the size envisioned in the Pentagon's 1993 Bottom-Up Review of defense forces. The Army is down to ten active divisions.

The Navy deploys only eleven active carriers—the goal of the Bottom-Up Review—but still must lay up another nineteen warships to reach its planned level of 346 ships.

Much of the money in the 1996 budget has been allocated to keeping the force combat-ready. Flying hours for active Air Force tactical aircrews will hold at 19.7 hours per month. There is no change in flying hours for bomber and transport aircrews.

The same situation holds true of the other services. The active Army's ground and air training operations are kept at 800 miles per year for combat vehicles and 14.5 tactical flying hours per month for helicopter aircrews. Navy warship steaming days remain at 50.5 days a quarter for deployed fleets and twenty-nine days a quarter for nondeployed fleets. Navy aircrews will continue to fly their aircraft for twenty-four hours per month.

The new budget contains many new initiatives aimed at acquiring or holding on to high-quality personnel. Secretary Perry declared flatly, "People come first," adding, "We based the budget on that. We acted on that judgment, and it profoundly affected the allocation of resources in this budget."

Nowhere is this fact more evident than in military pay accounts, where the Administration proposed a 2.4 percent hike effective January 1, 1996, and a 3.1 percent raise effective January 1, 1997. In his first year, President Clinton proposed to freeze military pay. In his second, he

asked for a pay raise well below the legal maximum.

By contrast, the Air Force's funding for procurement and R&D was set at a combined \$29.2 billion, which is sufficient to cover only highest-priority investment programs and systems.

The prime case in point is the F-22 fighter, set to become the replacement for the F-15 in the air-superiority role. The new budget contains \$2.1 billion for the continued development of the F-22. Current plans call for a Lockheed-led contractor team to build 442 of the advanced, stealthy new fighters over a decade or more. The program is in the engineering and manufacturing development phase. The first long-lead procurement and production work is to begin in 1997, with the first true aircraft purchase to take place the following year.

The only other fighter program in Air Force plans is the Joint Advanced Strike Technology effort, a combined project of the Air Force, Navy, and Marine Corps to produce modern attack systems. The Air Force gets \$151 million in 1996 for its part in that program, which is not expected to produce aircraft for at least a decade.

Bomber Requirements

The budget also includes \$904 million to continue work associated with the B-2 bomber and its systems, though none of the funds can be used to procure additional aircraft. The Defense Department in April was to complete a study of bomber requirements for the national strategy and to decide whether to procure additional B-2s beyond the twenty operational models already purchased.

Also getting a boost in the budget is the Air Force's C-17 advanced transport. The new plan includes \$2.5 billion for six of the C-17s as well as spare parts and research. The Air Force's Nondevelopmental Airlift Aircraft (NDAA) program, which is examining prospective wide-body commercial or military aircraft alternatives to the C-17, gets only \$183.8 million in 1996.

However, USAF has plugged into the budget some \$2.6 billion for Fiscal 1997 for strategic airlift, money that can be used to purchase either C-17s or NDAAAs. The Pentagon must

decide in November whether to buy more C-17s, opt for the NDAA, or buy a combination of the two.

The Air Force also will spend \$89 million to procure two new C-130J tactical transports.

The Air Force plans to spend \$662 million in FY 1996 to continue developing and purchasing the E-8A Joint Surveillance and Target Attack Radar System (Joint STARS) aircraft. The budget approves procurement of two more aircraft, building toward a fleet of twenty.

Other well-financed Air Force systems include the Advanced Medium-Range Air-to-Air Missile (\$233 million for 291 missiles), space boosters (\$857 million), the Spacebased Infrared satellite program (\$283 million), Global Positioning System satellites, (\$219 million), and Milstar satellites (\$722 million).

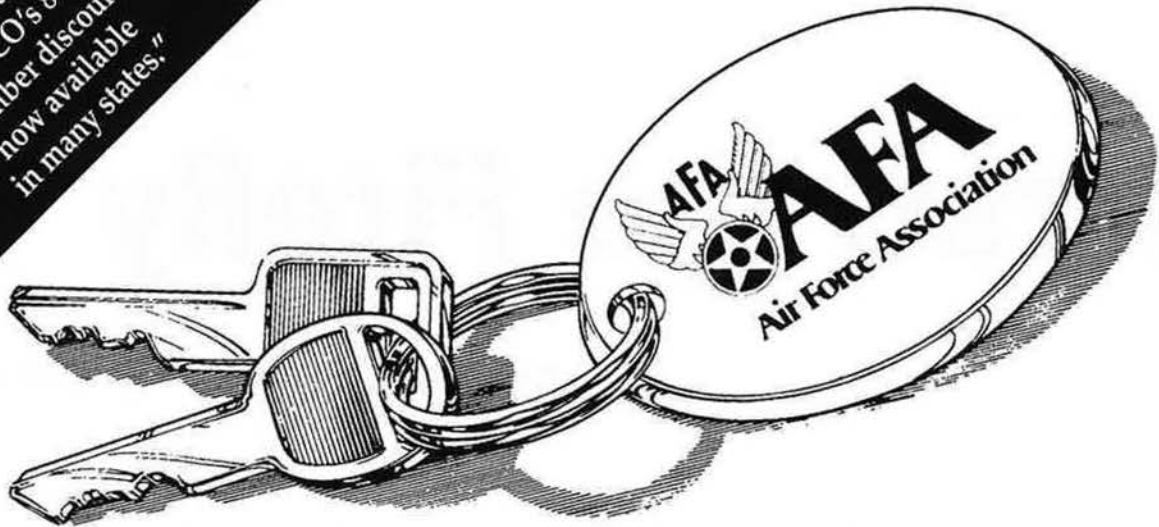
Among the Air Force systems terminated during the 1996 budget scrub was the Triservice Standoff Attack Missile, which was canceled due to high costs.

The new budget includes nearly \$3.4 billion for Navy and Marine aircraft. The Navy will get about \$1 billion to continue development of its stretched F/A-18E/F strike fighter, the first twelve of which are to be procured next year. The allocation also includes funds for the last twelve F/A-18C/D models, two more E-2C Hawkeye early warning aircraft, and R&D work on the V-22 Osprey aircraft.

The defense program commits money for new construction of warships. Programmers approved \$2.2 billion to buy two more DDG-51 AEGIS destroyers, and plans call for spending another \$3 billion in 1997 to buy three more of the *Arleigh Burke*-class ships. In addition, the Navy will spend \$1.2 billion this year and \$811 million next year to continue work on its so-called "New Attack Submarine," a replacement for existing *Los Angeles*- and *Seawolf*-class boats. Production is to begin in 1998.

The Ballistic Missile Defense Program, which encompasses a robust theater missile defense effort and a less aggressive national missile defense program, seeks \$2.9 billion in Fiscal 1996, up slightly from \$2.7 billion in 1995. The figure is expected to rise to \$3 billion for FY 1997. ■

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The T-3A Firefly program uses a new approach in training USAF's next generation of aviators.

First, the Firefly

Photographs by Paul Kennedy and Guy Aceto, Art Director

For most Air Force pilots, it all begins in a T-3A Firefly at Hondo Municipal Airport, Tex., or at the USAF Academy in Colorado. At Hondo, the 3d Flying Training Squadron conducts the Air Force Flight Screening Program to prepare pilot candidates—including ROTC students, Air National Guard personnel, and active-duty officers—for undergraduate pilot training (UPT). In twenty-four training days, the intense flight screening program teaches students the basics of takeoffs and landings, stalls, slow flight, ground operations, mission planning, military-style traffic patterns—even how to take the T-3A to the top of a loop (opposite). The Firefly's aerobatic capabilities give students more rigorous training than is possible with USAF's older trainer, the T-41 Mescalero, and earn a thumbs-up from Capt. Jim Peppler and Eric Savage (bottom photo, this page), 3d FTS instructor pilots.



Photos by Paul Kennedy

Photo by Guy Aceto





Civilian pilots from Doss Aviation provide most of the instruction for the flight screening program. Their numbers include former U-2 pilots, Navy instructor pilots, even Air Force Reservists who fly the two-seat Fireflies during the week and massive C-5s on weekends. "They bring a wealth of knowledge of military flying," commented Lt. Col. Bill Morris, commander of the 3d FTS. At left, a USAF instructor and his civilian counterpart at the operations center monitor students taxiing out for the day's class. "You have some people who thought all their lives that they wanted to fly," said Colonel Morris. "They go out here, and you turn them upside down three times and spin them, and they say, 'This is not a good time.'"

Slingsby Aviation Ltd. builds the Firefly's fuselage, wings, and tail section in the UK and ships the parts to Texas, where they are assembled, given a 260-hp Textron Lycoming engine, and flight tested at Hondo Airport. Air forces in the UK, Canada, and the Netherlands use less powerful versions of the T-3A. With the retirement of the T-41, which has moved on to aeroclubs as far afield as Okinawa and Alaska, the T-3A becomes the only USAF aircraft with a reciprocating engine. It has been selected as the lead-in aircraft for the Joint Primary Aircraft Training System program.

The 3d FTS now has twenty-six of the fifty-seven Fireflies it is scheduled to receive. (The other Firefly squadron, at the US Air Force Academy, has begun receiving the first of its fifty-six aircraft.) Screening began at Hondo Airport, about forty miles west of San Antonio, Tex., in early 1994. The program has graduated 157 students over the past year. Most have returned to their college ROTC programs or Guard units or gone on to Officer Training School; they will progress to UPT later. Thirty-three graduates have gone directly to UPT. According to Colonel Morris, none has washed out so far. A lot of the credit belongs to the instructors, who can evaluate pilot ability even while hanging in the straps.



Photos by Guy Aceto





Photo by Guy Aceto

Above, in a pattern over the airport, Captains Peppler and Savage demonstrate how the T-3A's wraparound canopy makes it easy to see traffic when flying under visual flight rules. The screening program is a completely VFR operation, and with a local operational ceiling of about 7,000 feet, there is ample room to "air out" both the students and the Firefly. "It's a good performer," said Colonel Morris. "You can do a loop in about 500 feet. . . . It's got a lot of power, so it's very forgiving in stalls. It's got a nice, wide footprint, so when you set it down, it feels very comfortable."

"There's a lot of gratification from teaching somebody," continued Colonel Morris, "particularly somebody who walks in off the street with no flying experience at all and in fifteen hours they're soloing the airplane."



Photos by Paul Kennedy



In the Persian Gulf region, the job goes on.

Watch on the Gulf

By Michael Collins Dunn

US OFFICIALS like to say that Air Force units will remain in the Persian Gulf region for as long as it takes. That could be a long time.

In public statements, the Air Force acknowledges only one unit as permanently stationed in the Persian Gulf region—a twenty-four-plane squadron of A-10 tank-killers now bedded down at Al Jaber AB, Kuwait. In fact, the United States keeps in that region some 6,500 Air Force personnel and more than 100 USAF combat aircraft, regularly flying missions over Iraq.

US Air Force units, mostly flying F-15 and F-16 fighters, rotate through their Gulf deployments at ninety-day intervals. Also on hand are electronic warfare, early warning, and intelligence aircraft, not to mention heavy bombers and long-range transports that pay regular visits to the area.

Neither the US nor the Gulf states would characterize this as a permanent military presence, but officials concede that US airpower will remain in the area at least as long as Saddam Hussein runs Iraq. There is no sign he will be leaving anytime soon.



USAF photo by MSgt. Ed Drohan

Opposite, aircraft of the 4th Composite Wing (Provisional) fly over blazing Kuwaiti oil fields at the end of the Persian Gulf War. Today, USAF A-10s are based in Kuwait. Capt. Tom Deale (above) of the 75th Fighter Squadron, Pope AFB, N. C., was part of the first A-10 squadron dispatched to Kuwait.



USAF photo by MSgt. Fernando Sierra

President Clinton has, if anything, strengthened the commitment, declaring flatly during an October 28, 1994, speech to US troops in Kuwait, "The United States and the international community will not allow Baghdad to threaten its neighbors now or in the future. That is not our threat. That is our promise."

When Saddam again threatened Kuwait last October, the US response was primarily a strengthening of the US Air Force contingent, serving notice that the US is there to do more than merely monitor Iraqi activities. Since the end of the Gulf War, US Air Force presence has been continuous. Between September 1992 and September 1994, the Air Force flew seventy-one percent of Operation Southern Watch sorties, compared to twenty-nine percent by the Navy.

The Biggest Ever

The October demonstration of US airpower (Operation Vigilant Warrior) that forced Saddam's troops back from the Kuwaiti border was followed by the arrival of additional aircraft. US Central Command (CENTCOM) calls the 4404th Composite

Wing (Provisional) in the Gulf region "the largest composite wing in the history of the US Air Force."

The 4404th, headquartered at Dhahran AB, Saudi Arabia, serves as the Air Force's watch on the Gulf, aimed at preventing new Iraqi adventures and defending Kuwait and Saudi Arabia. It is the leading edge of US deterrence against Iraq and Iran.

Saddam's renewed challenge and the US response raised long-term questions about the nature of the US presence in the Gulf region, its implications for readiness elsewhere, and, in a time of shrinking resources for US defense and severe debt problems in Saudi Arabia, how best to pay for it.

Most of the costs of Operations Desert Shield and Desert Storm were underwritten by the countries being protected, and Kuwait indicated last fall that it would pay a significant part of the cost of Vigilant Warrior. But the Gulf states are not as rich as they once were. Saudi Arabia's debt has grown at alarming speed; about \$50 billion of that debt comes from its agreement to pay most of the costs of the Gulf War. Kuwait is also facing many challenges, not the least

of which is rebuilding from the devastation of the Iraqi occupation. The US may not be able to count on the host countries to foot so much of the bill in the future.

The military dynamics of the region, however, could not be simpler. The Gulf is a rich but dangerous neighborhood. Local US allies are militarily weak, with small populations. Their neighbors are bigger and tend to be extremely greedy.

Iraq seeks to be a regional power in the Gulf and, despite its recognition of Kuwait's sovereignty in late 1994, is unlikely to have completely given up its designs on that country or on the oil riches of Saudi Arabia, which borders on Kuwait.

On the other side of the Persian Gulf, revolutionary Iran—no less than Saddam Hussein's Iraq—has ambitions toward the smaller Gulf states. The goal is to spread Islamic revolutionary fervor among the Shiite Muslims of the region, if necessary by military force, as well as to advance Iran's own interests in various territorial disputes.

Some of the states have sought to improve their defense situations with airpower, and the Royal Saudi Air

Force (RSAF) is that country's elite service, a well-equipped and well-trained, if never fully tested, force. However, no small regional air force, no matter how elite, can deter the sort of massive ground force invasion Saddam launched into Kuwait in 1990. That is a job for the United States and its Western allies.

Providing deterrence has never been easy. The problem of protecting the Gulf dates to the 1978-79 Iranian Revolution and the development of the Rapid Deployment Joint Task Force. This force evolved into CENTCOM, which had no permanent bases in the region.

Lacking the ability to base forces in the region permanently, the US concentrated on prepositioning equipment for rapid intervention. Its main prepositioning base, the British-owned atoll of Diego Garcia in the Indian Ocean, was still too far from likely battle areas, so the US worked through the 1980s to develop an infrastructure that could support a US intervention force. Washington worked particularly closely with those countries that already employed US-built combat aircraft or main battle tanks in their own force structures.

Overbuilding the Bases

The prime case in point was Saudi Arabia, which built huge air bases with capacities that far exceeded the RSAF's own needs and with the com-

munications and other infrastructure needed for sophisticated early warning, surveillance, and battle management. The Saudi purchase of US-made E-3 Airborne Warning and Control System aircraft in the early 1980s and the deployment in the kingdom of US AWACS in subsequent crises allowed the nations to gain experience in intelligence gathering and battle management in the Gulf region.

Then came Iraq's August 2, 1990, invasion of Kuwait. The US and coalition response—Desert Shield and Desert Storm—proved that the system worked, though at great cost and needing the luxury of time to build up forces in-theater.

At the end of the 1991 war, some expected Gulf security policies to change dramatically. Saudi and other Gulf officials spoke of building up significant ground forces. The Gulf states issued the "Damascus Declaration" envisioning the use of Egyptian and Syrian ground forces for their defense.

Four years later, this talk is forgotten, and the Damascus Declaration is dead. The RSAF and other elite units may help deter minor incidents, but it is the US commitment that deters the adventurism of Iraq, Iran, or any other large state.

The 1991 war transformed the US presence in the Gulf region. Washington now has defense and security agreements with most of the Gulf

states, and several have agreed to the prepositioning of ground-force equipment in their countries. (The notable holdout is Saudi Arabia.) The US hopes to preposition enough equipment for a division-sized force in the Gulf.

Western airpower has never left the Gulf. Air Force and Navy fighters have been flying missions over Iraq since the end of the war. They have done so, ostensibly, in support of United Nations resolutions.

When Iraq's Kurds and Shiites—who together make up perhaps eighty percent of Iraq's population—rose up in northern and southern Iraq, respectively, Saddam moved to crush these risings brutally. The coalition would not support either uprising, but it did take action to protect the Kurds in the north, creating the first no-fly zone over northern Iraq.

Operation Provide Comfort, the effort to protect the Kurds, began in April 1991 and implements UN Security Council Resolution 688. US, British, and French aircraft operating out of Turkey patrol the skies of Iraq north of the thirty-sixth parallel. Under this protective umbrella, Iraq's Kurds have established an autonomous government.

Southern Watch

Only later did the coalition open a similar protective umbrella over the Shiites of southern Iraq. The crushing of the Shiite uprising in 1991 was particularly harsh and included destruction in the Shiite holy cities of Najaf and Karbala. In addition, the Iraqis have waged a long campaign against the "marsh Arab" population of the south. Finally, in August 1992, the United States, Britain, and France declared a second no-fly zone, barring Iraqi aircraft from flying south of the thirty-second parallel. In December 1992, the US shot down an Iraqi aircraft in this prohibited area. Iraq responded by deploying surface-to-air missile batteries in the southern zone. The US launched two major raids to destroy these sites, and other incidents continued throughout 1993.

The operation was dubbed Southern Watch. It remains the focus of air operations in the Gulf region. Based out of Dhahran, Saudi Arabia, it involves US, British, and French aircraft (with naval air elements participating as well). Of course, US

USAF photo by SrA Christopher Tiunius



A-10s from the 354th Fighter Squadron, Davis-Monthan AFB, Ariz., recently relieved the 75th FS, which had been in place since the beginning of Operation Vigilant Warrior. Above, 354th FS crew chief SrA. Tom Kellar covers an engine.



Above, SSgt. Keith Kmecik marshals in another of the 75th FS's A-10s at Al Jaber AB in Kuwait. The 4404th Composite Wing (Provisional) is headquartered in Saudi Arabia (below, US airmen on a Saudi street).

aircraft had been operating over southern Iraq on occasion since the war, to monitor compliance with UN resolutions on dismantling Iraq's nuclear, biological, and chemical warfare programs and for general intelligence gathering. The creation of the southern no-fly zone gave further justification for these operations.

Operation Southern Watch gave UN and coalition cover to the continued operation of US forces from Saudi air bases. The Saudis have never formally agreed to a long-term US presence in the kingdom; they insist that they oppose any foreign bases on their soil or foreign use of Saudi bases, except in emergencies.

However, US AWACS aircraft have been operating out of Saudi Arabia since 1990 without letup. In addition, US combat aircraft fly the Southern Watch missions out of Saudi bases, and certain Air Force units have pulled numerous tours in the Gulf region. Southern Watch gave continuing experience to quick-reaction units, AWACS crews, and other forces that would be crucial players in any repetition of Desert Storm.

Before the October 1994 crisis, the US Air Force had an estimated 3,500 troops in the Gulf region at any given time. The Air Force had actually been scaling back its presence, withdrawing a number of F-111 and F-15E units that had been in the region since the war. One apparent



USAF photo by Sgt. Angela Starford

reason: Saudi officials were nervous about the growing appearance that the US military was settling in for a long stay at Saudi bases.

Rapid Growth

When Saddam moved Republican Guard divisions near the Kuwaiti border, the US quickly responded, launching Vigilant Warrior on October 10. On October 14, Lt. Gen. John P. Jumper, 9th Air Force commander and commander of US Central Command Air Forces, left his US headquarters at Shaw AFB, S. C., to boost the command element in the region.

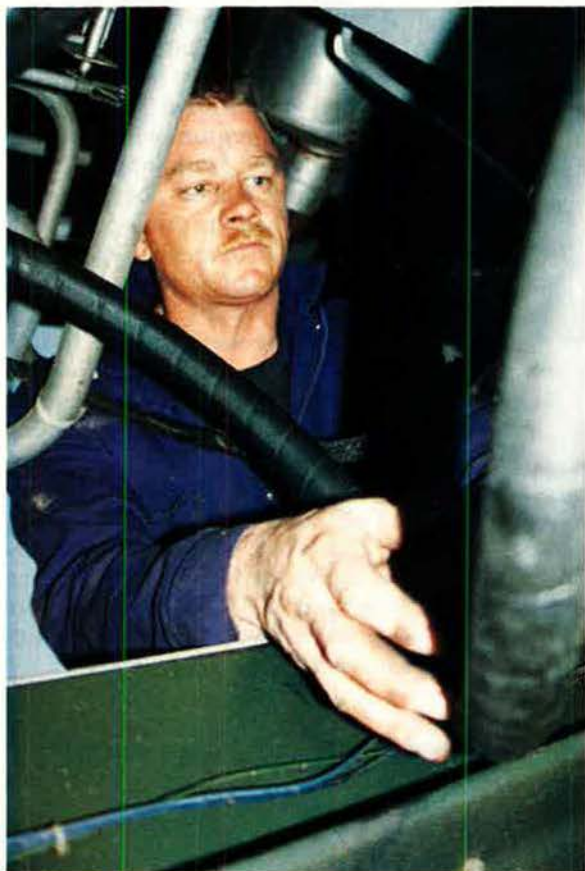
About ten days after the beginning of the deployment, the Air Force contingent had grown to some 6,300 personnel and around 300 combat aircraft in the region, with as many as 5,200 more personnel and 600 more aircraft slated for potential deployment had the crisis persisted.

The 4404th Composite Wing (Provisional) expanded from 1,800 to about 5,000 troops. Air Mobility Command became similarly involved. Although the Air Force's first C-17s were not due to become operational for several more months, the new aircraft were called on to carry troops and cargo to the Gulf in the C-17's first contingency mission. The 23d Wing, based at Pope AFB, N. C., provided F-16s as well as A-10s and C-130s, while various other aircraft were dispatched from bases around the US.

By late October, Air Force presence in the Gulf region had increased from seventy-seven to almost 300 aircraft, including squadrons of F-15E, F-16, and A-10 ground-attack aircraft.

Until Saddam backed down, the Air Force had been pursuing a deployment plan that would have produced a much larger in-theater force. The fighter package would have included twenty-four F-4Gs, nine F-15s, thirty-six F-15Es, sixty-six F-16s, forty-two A-10s, twelve F-117s, and thirty F-111s.

Planned deployments also included six B-52 bombers, four E-3A



SSgt. William Eager of the 355th Equipment Maintenance Squadron, Davis-Monthan AFB, is on ninety-day TDY at Al Jaber. Sergeant Eager, a single parent of two, works twelve- and fourteen-hour days supporting the 354th FS "Bulldogs," fixing broken equipment and performing routine maintenance.

AWACS aircraft, two RC-135 Rivet Joint aircraft, four U-2 spy planes, one E-8 Joint STARS aircraft, and fifty-seven C-130 transports. When Saddam backed away, the United States stood down many of its deployment forces.

In the wake of the crisis, a new United Nations resolution was added to the pile: Security Council Resolution 949. It condemned the Iraqi feint towards Kuwait, demanded withdrawal of all units to their precrisis positions, and demanded that Iraq "not redeploy to the south" those same units (that is, the Republican Guard) "or take any other action to enhance its military capacity in southern Iraq."

On November 1, two B-1 and two B-52 bombers, flying nonstop from US bases, arrived at the Uday-Ri Range in Kuwait and dropped live bombs in a demonstration of US-based firepower and short-notice deployability. The two B-1s came from the 28th Bomb Wing at Ellsworth AFB, S. D. The two B-52s came from the 5th Bomb Wing at Minot AFB, N. D.

Then came the deployment of A-10s to the newly refurbished Al Jaber facility. Al Jaber was already

one of the Gulf air bases used for Southern Watch—US and French aircraft reportedly fly from the base. A CENTCOM statement said that the A-10s "give us a forward presence which can quickly engage hostile ground forces" and "provide escort for our rescue forces, perform on-scene commander duties, . . . and air-to-ground protection for downed airmen."

Admitting the Obvious

Kuwaiti officials, still shaken by Saddam's October threat, are far less reticent than before in discussing the long-term presence of US forces. The A-10s at Al Jaber are officially acknowledged. By contrast, Riyadh continues to describe the long-running deployment of forces in Saudi Arabia as a "temporary" situation.

CENTCOM still cites the 1991 Security Council Resolution 688—with its call for the protection of the

Iraqi people—as its primary justification for taking action in the Persian Gulf region. However, Resolution 949 clearly spells out another mission: to monitor Iraqi actions for any sign of a renewed threat to Kuwait. That is a larger order and promises to extend greatly the US military stay in the area.

As of early February, CENTCOM indicated that total US personnel deployed on the ground in the Gulf region was about 7,000 troops. Most of these forces belong to the US Air Force, and most can be found in Kuwait and Saudi Arabia. The Joint Task Force Southwest Asia, CENTCOM's command for Operation Southern Watch, coordinates US Air Force and US Navy and British and French air operations over southern Iraq.

The 4404th Composite Wing and a carrier wing in the Gulf regularly operate Air Force F-15s, F-16s, and A-10s, Navy F-14s and F/A-18s, and Marine AV-8B Harriers.

The Riyadh-based AWACS and Navy E-2C Hawkeyes provide surveillance and battle management, while EF-111s and EA-6Bs provide the electronic warfare component. RC-135 Rivet Joint aircraft have also been operating in the area. At the beginning of 1995, USAF's F-4G "Wild Weasel" contingent was withdrawn from the Gulf, replaced by F-16s equipped with High-Speed Antiradiation Missiles. U-2s are used in the reconnaissance role, and a variety of support, transport, search-and-rescue, and other elements are present.

How long will the Air Force and Navy continue to carry out Southern Watch with its expanded role of helping deter renewed threats to Kuwait? Few envisage an early departure so long as Iraq remains hostile. The presence greatly facilitates CENTCOM's overall mission of defending the Gulf and provides valuable intelligence as well as operational experience for the units rotated through. The mission is likely to be a long one unless someone intervenes to remove Saddam. Even then, the departure of the US force would greatly depend on the successor regime. ■

Michael Collins Dunn is a Middle East specialist who has written extensively on Gulf security. He is senior analyst of The International Estimate, Inc., and editor of the biweekly newsletter The Estimate. His last article for Air Force Magazine was "Chinese Airpower Revs Up" in the July 1993 issue.

"No" to Star Wars

I am opposed to premature deployment of a national missile defense system before the continental United States faces a real threat. Such premature deployment would divert money from more pressing needs: readiness, theater missile defense, and force modernization. . . . I believe our current research and development program, which will allow us to begin deployment before the turn of the century, is adequate. We are seeking congressional support for our program and schedule. I will resist congressional attempts to accelerate our prudent schedule. I will also resist deployment of space-based interceptors, which would be a costly diversion of funds from the threats we face today.

William J. Perry, Secretary of Defense, in a February 15, 1995, official statement regarding an attempt by congressional Republicans to compel near-term deployment of a national missile defense system.

Clanks in the Ranks

Rep. Curt Weldon, Pennsylvania Republican, was spotted sporting the flags of three nations on his lapel—Bangladesh, Guatemala, and Nepal.

Where was the Stars and Stripes? The Clinton Administration, explained Mr. Weldon, using Defense Department dollars, is currently paying full salaries, housing costs, and benefits for troops from Bangladesh, Guatemala, and Nepal while they are stationed in Haiti.

"At the same time," he pointed out, "600 troops from the 2d Armored Division of Fort Hood, Tex., had to conduct ten training exercises in the range, walking together pretending they were in tanks because we do not have enough money for fuel and maintenance.

"The new slogan of that battalion of 600 troops," he disclosed, "is to march together and say, 'Clank, clank, I'm a tank.'"

The Washington [D. C.] Times, February 22, 1995, in the "Inside the Beltway" department.

Smaller Than McDonald's

That America's defense industrial base is becoming increasingly tenuous is becoming increasingly evident. The major firms making up that industry sell at a thirty percent discount to the S&P 500 index, and the discount was closer to eighty percent until a few mergers raised hopes that part of the industry might yet survive and prove viable. The combined market value of the top four aerospace firms is less than that of McDonald's, meaning that Big Macs and Egg McMuffins are judged by the market to have greater immediate reward than stealth aircraft and "smart" weapons.

Norman R. Augustine, chairman and CEO of Martin Marietta, in January 19, 1995, remarks to the House National Security Committee.

Doctor Luttwak Is In

"Jointness" is the virus that gives you the acquired strategic deficiency syndrome.

Defense analyst Edward N. Luttwak, in January 17, 1995, remarks to an AFA symposium in Washington, D. C.

A Theoretical Alternative

There was an alternative—a theoretical alternative—of going in and taking out the [North Korean] nuclear reactor. We considered that option. We looked very carefully at what would be required to do that.

Secretary of Defense Perry in January 24, 1995, testimony before the Senate Foreign Relations Committee, revealing that the US last spring seriously examined and then rejected taking military action against North Korea's nuclear weapons program.

\$65 Billion, Maybe More

CBO has concluded that the Administration's planned force structure, level of operations, and modernization programs are likely to cost about \$65 billion more than the funding provided in the FYDP [Future Years Defense Program], which translates into a shortfall of about five percent for the 1995-

1999 period. That calculation takes into account only those factors that have already changed or those risks that are likely to occur. . . . If CBO includes factors that are less certain, DoD's shortfall could be more than \$100 billion . . . through 1999, or about nine percent of planned funding.

The Congressional Budget Office, in a January 1995 report, "An Analysis of the Administration's Future Years Defense Program for 1995 Through 1999."

What the CIA Sees Ahead

Crisis warning will continue to prove critical in operations other than a classic war scenario, such as the 1991 Gulf War. We estimate that threats to peace stemming from ethnic, religious, or national conflicts can flare up in more than thirty countries over the next two years.

R. James Woolsey, then CIA director, in January 10, 1995, testimony presenting the CIA's worldwide threat assessment to the Senate Select Committee on Intelligence.

The Peace Powers Act

A major provision is section five of the bill, which . . . [would] prohibit the President from placing any element of the US armed forces under the command or operational control of any foreign national in any UN peacekeeping operation. This is a matter that commands strong support [from] the American public, who do not want to see our service personnel placed willy-nilly under the control of non-Americans, exposed to dangers in operations that may have little if any relation to American interests. . . . As President Clinton has shown himself more and more willing to delegate his Constitutional power to international bureaucrats at the United Nations, the wisdom of this prohibition has become more and more apparent.

Sen. Don Nickles (R-Okla.), co-sponsor of the Peace Powers Act of 1995, in a January 5, 1995, floor speech about the bill's major provisions. ■

The Congressional Defense Establishment

(Members arranged by seniority in committee)



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Chairman
South Carolina

Republicans



Bob Stump
Arizona



Duncan Hunter
California



John R. Kasich
Ohio



Herbert H. Bateman
Virginia



James V. Hansen
Utah



Curt Weldon
Pennsylvania



Robert K. Dornan
California



Joel Hefley
Colorado



Jim Saxton
New Jersey



Randy Cunningham
California



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Peter G. Torkildsen
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Tennessee



Joe Scarborough
Florida



Walter B. Jones, Jr.
North Carolina



James B. Longley, Jr.
Maine



Todd Tiahrt
Kansas



Richard Hastings
Washington

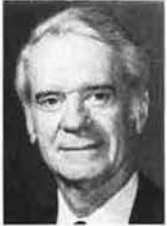
National Security Committee

(formerly House Armed Services Committee)

Democrats



Ronald V. Dellums
Ranking Minority Member
California



G.V. "Sonny" Montgomery
Mississippi



Patricia Schroeder
Colorado



Ike Skelton
Missouri



Norman Sisisky
Virginia



John M. Spratt, Jr.
South Carolina



Solomon P. Ortiz
Texas



Owen B. Pickett
Virginia



Lane Evans
Illinois



John Tanner
Tennessee



Glen Browder
Alabama



Gene Taylor
Mississippi



Neil Abercrombie
Hawaii



Chet Edwards
Texas



Frank Tejeda
Texas



Martin T. Meehan
Massachusetts



Robert A. Underwood
Guam



Jane Harman
California



Paul McHale
Pennsylvania



Pete Geren
Texas



"Pete" Peterson
Florida



William J. Jefferson
Louisiana



Rosa L. DeLauro
Connecticut



Mike Ward
Kentucky



Patrick J. Kennedy
Rhode Island



Strom Thurmond
Chairman
South Carolina

Republicans



John Warner
Virginia



William S. Cohen
Maine



John McCain
Arizona



Trent Lott
Mississippi



Daniel R. Coats
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Bob Smith
New Hampshire



Dirk Kempthorne
Idaho



Kay Bailey Hutchison
Texas



James M. Inhofe
Oklahoma



Rick Santorum
Pennsylvania

Armed Services Committee



Sam Nunn
Ranking Minority Member
Georgia

Democrats



J. James Exon
Nebraska



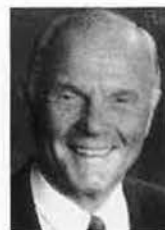
Carl Levin
Michigan



Edward M. Kennedy
Massachusetts



Jeff Bingaman
New Mexico



John Glenn
Ohio



Robert C. Byrd
West Virginia



Charles S. Robb
Virginia



Joseph I. Lieberman
Connecticut



Richard H. Bryan
Nevada

Republicans



C. W. "Bill" Young
Chairman
Florida



Joseph M. McDade
Pennsylvania



Bob Livingston
Louisiana



Jerry Lewis
California



Joe Skeen
New Mexico



David L. Hobson
Ohio



Henry Bonilla
Texas



George Nethercutt
Washington



Mark W. Neumann
Wisconsin

National Security Appropriations Subcommittee

(formerly House Defense Appropriations Subcommittee)

Democrats



John P. Murtha
Ranking Minority Member
Pennsylvania



Norman D. Dicks
Washington



Charles N. Wilson
Texas



W. G. "Bill" Hefner
North Carolina



Martin O. Sabo
Minnesota



Julian C. Dixon
California



Peter J. Visclosky
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Ted Stevens
Chairman
Alaska

Republicans



Thad Cochran
Mississippi



Arlen Specter
Pennsylvania



Pete V. Domenici
New Mexico



Phil Gramm
Texas



Christopher "Kit" Bond
Missouri



Mitch McConnell
Kentucky



Connie Mack
Florida



Richard C. Shelby
Alabama



Mark O. Hatfield
ex officio, Oregon

Defense Appropriations Subcommittee



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Ranking Minority Member
Hawaii

Democrats



Ernest F. "Fritz" Hollings
South Carolina



J. Bennett Johnston
Louisiana



Robert C. Byrd
West Virginia



Patrick J. Leahy
Vermont



Dale Bumpers
Arkansas



Frank R. Lautenberg
New Jersey



Tom Harkin
Iowa

Arctic Cannibalism



Photo courtesy C. V. Glines

The Air Force used Ice Station Bravo (also known as T-3, Fletcher's Ice Island) as an Arctic Ocean weather and scientific research station from 1952 until 1961. For this C-47, it also served as a spot for an emergency landing. Once on the floating ice island, hundreds of miles north of the Arctic Circle, the transport could not

be flown out. It was cannibalized for parts until only the shell remained, propped on a wind-eroded mound of ice. The Air Force deactivated Ice Station Bravo when its 2,500-foot runway began to break up and drift away.

By John L. Frisbee, Contributing Editor

Col. Hubert "Hub" Zemke

A superb tactician, top-ranking ace, and inspirational commander of 9,000 POWs, he was among our great combat leaders.

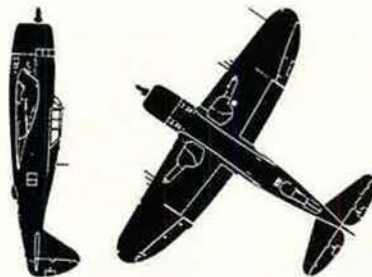
COL. HUB Zemke was one of the preeminent World War II fighter commanders in the European theater. His 56th Fighter Group, the "Wolfpack," was credited with 665 air-to-air victories, leading all fighter groups in the European Theater of Operations. Zemke alone had 17.75 confirmed victories in 154 combat missions, putting him in the top twenty-five of all Army Air Forces World War II fighter pilots. He once said that if he had been a better shot, he would have had twice as many.

Zemke was a professional fighter pilot before the US entered the war. His insistence on discipline in the air and on the ground earned him the respect of all his men but not always the love of some high-spirited pilots. A superb tactician, he originated The Zemke Fan and other tactical innovations. The Zemke Fan drastically changed Eighth Air Force policy that had required escorting fighters to stay with the bombers at all times. Colonel Zemke was convinced that if some fighters fanned cut well ahead of the bombers, many enemy fighters could be shot down as they were forming up to attack the bomber stream. Lt. Gen. William E. Kepner, who headed VIII Fighter Command, bought the idea. Bomber losses declined significantly as fighter victories increased.

The Zemke Fan was first tried on May 12, 1944. On that mission, Hub Zemke's element lost one of its four P-47s to an abort. The remaining three were attacked by seven Messerschmitt Bf-109s. Zemke immediately ordered them to form a Lufbery circle. The Luftwaffe leader cut across the circle and, in a dazzling display of deflection shooting, downed one P-47. A few moments later, he repeated his performance, leaving Zemke alone in an unfriendly sky.

With no recourse, Zemke went into a barrel-rolling vertical dive at full throttle and escaped. (Years later, he learned that the German sharpshooter was Maj. Günther Rall, the Luftwaffe's third-ranking ace with 275 victories.)

A somewhat shaken Zemke headed for home, escaping another formation of Bf-109s en route. Near



Koblenz, Germany, he saw many -109s forming up below. The aggressive spirit that had made him an outstanding college and semipro boxer took over. He contacted two members of the 56th FG who arrived as the number of -109s grew to thirty. Zemke told his men to fly top cover while he went down alone to take on the enemy fighters. He shot down one before his fuel ran low and he had to break off for home.

In August 1944, after commanding the 56th FG for two years, Zemke volunteered to take over the 479th Fighter Group, equipped with P-38 Lightnings but about to convert to P-51 Mustangs. The 479th's record had not been good. Zemke soon restored the group's morale while earning three more victories himself.

As October drew to a close and his combat hours passed 450, Zemke knew his days as a group commander were about to end. He was ordered to 65th Fighter Wing headquarters as chief of staff. With his bags packed, he decided to fly one more mission before taking over a desk.

On that mission he ran into the worst turbulence he had ever encountered. He ordered his formation to turn back, but before he could do so, his P-51 lost a wing. Parachuting from the wreckage, Zemke was soon taken

prisoner and ended up in Stalag Luft I at Barth, Germany, on the Baltic Sea.

Newly arrived, Colonel Zemke found himself senior officer in command of 7,000 Allied prisoners, some of whom had been there for several years. Conditions were deplorable: insufficient food, inadequate clothing and medical attention, a lack of military discipline among some POWs, and indifferent or hostile German officials.

Zemke quickly established his leadership of the POWs, who numbered about 9,000 by V-E Day. Gradually he developed working relations with the prison commandant and staff and achieved some improvements in living conditions.

As it became apparent that their war was lost, the Germans became more cooperative, especially as Soviet armies approached from the east. Zemke and his staff negotiated an arrangement with the camp commandant for the Germans to depart quietly at night, bearing only small arms, and turn the camp over to the Allied POW wing.

To avoid conflict between some POWs and the hated guards, Zemke's staff kept the arrangement secret until the morning after the German departure. Zemke then nurtured friendly relations with the arriving Soviets. (In 1941, he had spent several months in the USSR teaching Russian pilots to fly the P-40. He spoke some Russian and fluent German.) Ultimately, Zemke arranged for the POWs to be flown to Allied territory. His strong leadership saved the lives of many POWs.

Col. Hub Zemke retired from the Air Force in 1966 and died August 30, 1994, at Oroville, Calif. He was an extraordinary man, outspoken, courageous, and of unflinching personal integrity and conviction. These qualities, which made him one of our greatest wartime leaders, did not endear him to some of his military superiors and probably denied him the rank and responsibilities he deserved. Nevertheless, he will remain a symbol of military excellence long after others are forgotten. ■

The Air Force Association declares its views on five key issues.

AFA on Roles and Missions

WITH ITS papers on Long-Range Airpower and Space, the Air Force Association has provided its views on two critical issue areas being addressed by the Commission on Roles and Missions of the Armed Forces. [See "Airpower at Center Stage," October 1993, p. 60, and "Facing Up to Space," January 1995, p. 50.] The following represents AFA's position on additional areas of special interest to airpower advocates.

Overseas Presence

Issue: Although the United States has reduced the number of forces permanently stationed abroad, it is still imperative that we maintain a global US military presence and theater awareness—that we have available the capabilities for rapid responses and sustained combat capability in all theaters.

Facts and considerations: Various claims and press reports in the past year have contributed to the incorrect perception of "presence" solely as a Navy mission. In fact, as the Pentagon's 1993 Roles and Missions report said (before presence became a heated issue): "In addition to forces stationed overseas and afloat, forward presence includes periodic and rotational deployments, access and storage agreements, combined exercises, security and humanitarian assistance, port visits, and military-to-military contacts."

■ The Air Force has flown 223,000 operational sorties overseas since the end of the Persian Gulf War in 1991, including sixty-nine percent of the Operation Deny Flight sorties over Bosnia-Herzegovina. Last year, there were only seven independent nations in the world where US Air Force

aircraft did not operate—and two of those do not have runways.

■ In the Persian Gulf area, "presence" lately has meant primarily the Air Force, which has been on the scene constantly. Carrier presence in the Gulf has been periodic and at costs nearly double those of land-based tactical airpower.

■ Air Combat Command force packages from US bases were deployed abroad *fifty-seven times* in 1994. All ACC fighter and bomber wings can deploy their first squadron to any theater in twenty-four hours and close all their squadrons in seventy-two hours. Air Force units in the United States can put considerable airpower into any base in the world in less than two days.

■ On the first night of the Gulf War in 1991, seven heavy bombers took off from Barksdale AFB, La., on a thirty-five-hour round-trip mission, struck communications and power facilities deep in Iraq, and returned to Barksdale. This capability has been

This article is adapted from a recent report of the Air Force Association Advisory Group on Military Roles and Missions. Principal authors were Gen. Russell E. Dougherty, USAF (Ret.), Gen. Charles A. Gabriel, USAF (Ret.), Gen. Michael J. Dugan, USAF (Ret.), Gen. William V. McBride, USAF (Ret.), Gen. Robert T. Marsh, USAF (Ret.), and Maj. Gen. John R. Alison, USAF (Ret.).

improved and practiced and is present in today's US bomber force.

■ Navy carriers cannot and do not keep all sectors covered constantly. When the Gulf crisis began in 1990, the closest carrier was on station in the Indian Ocean and took three days to reach the Gulf. On the other hand, USAF forces can access any sector, anywhere, in a matter of hours and for any purpose.

■ As a rule of thumb, the Navy must possess between four and five carriers for each one operationally present abroad. One carrier, therefore, provides for less than three months of presence per year.

■ Presence is one element of the nation's capability to project power and to respond to global crises. In

some instances, long-range aircraft from the United States will be the first US forces to reach a crisis area.

AFA's position: Presence is a shared mission. There is more than one way to achieve it. When presence is required in an overseas location, one of the options (the better option) will be the use of Air Force aircraft deployed or deploying from the United States or other points around the world rapidly to establish US presence.

Crisis Response

Issue: What relative contributions can the services make to the capability, prescribed by strategy, to respond to global crisis and win two major regional conflicts (MRCs) that occur almost simultaneously?

Facts and considerations: Among the stated assumptions of the two-MRC strategy are (1) that crises will occur in locations where the US does not have sufficient forces and (2) that the initial forces to deploy (chiefly airpower) will have to stop or disrupt an invasion already in progress and stabilize the front until decisive land, sea, and air forces can arrive. Frequently, the fastest and most effective initial force will be landbased bombers and strike aircraft, deploying from bases in the theater, elsewhere abroad, or in the United States. The preferred aircraft will be stealthy systems—such as the B-2 with its long range and heavy payload, the F-117, and the F-22—that can penetrate enemy defenses and survive.

■ RAND Corp. predicts that in the early phases of a major regional conflict, air attack against high-value targets would be performed mainly by landbased airpower (ninety-one percent of the precision ordnance against fixed targets, seventy-seven percent of the precision ordnance against moving targets.)

■ Carriers make their best contribution when a crisis occurs within air reach of safe waters, when a limited amount of force is sufficient, and in the early phases of a conflict when seabased airpower may be in position to provide an initial response force.

■ At most, a carrier air wing has fifty to sixty tactical aircraft. Some of them must be dedicated to fleet defense because of the significant vulnerability of carriers. (In the Gulf

War, thirty percent of the naval air sorties were flown for fleet defense.)

■ A carrier's capability is limited by the process of launching, recovering, and rearming aircraft. According to a Marine Corps study cited by the Congressional Research Service, it takes 366 carrier-based F/A-18s to generate the same number of sorties as seventy-five shore-based aircraft.

■ In the Gulf War, the US Air Force flew 59.3 percent of the total sorties, and the Navy—which had six carriers on station—flew sixteen percent. The Air Force delivered eighty-eight percent of all the precision guided munitions and seventy-nine percent of the unguided bombs.

■ In a conflict of any significant scope and duration, the preponderance of the air effort would be and should be performed by the US Air Force.

■ While early deploying airpower will normally be part of a joint response, there is a strong possibility that the Air Force will arrive first and alone. For that reason, the Air Force must preserve the capability to conduct air operations independent of land forces.

AFA's position: With genuine respect and regard for the contribution of other force components, we believe that response to conflicts of the future will be heavily dependent on landbased airpower and that our planning should be directed to that end. Global and theater awareness, responsiveness, and sustained combat power are core competencies the Air Force can bring to the joint crisis response team.

Deep Attack

Issue: There are two essential questions within this issue: (1) Will the deep battle be controlled by the land force commander or by the Joint Force Air Component Commander (JFACC), and (2) Should Army forces be equipped with the Army Tactical Missile System (ATACMS) to attack deep targets?

Facts and considerations: Currently, the land component commander plots the fire support coordination line on the battlefield. The FSCL essentially divides the battlefield area, with the land component commander controlling fire between the forward line of his forces and the FSCL, which is the area within which Army artillery is capable of attack-

ing targets. Air strikes in that area must be approved by the land commander. Beyond the FSCL is the JFACC's responsibility, and aircraft provide the primary means of attacking targets. The Army wants to deploy ATACMS with an almost seventy-nautical-mile range and an advanced version with a range of more than 130 nm and extend the FSCL to those ranges. This would effectively limit the joint force commander's flexibility and severely constrain the ability of air forces to attack targets in a large and critical portion of the battlefield.

■ The Army further asserts the need to extend the FSCL to these ranges to ensure effective control in areas of maneuver.

■ Targets at these ranges include some that have high strategic value but are not priorities for the land commander. The JFACC is constrained from achieving the greatest advantage from airpower's capabilities to accomplish the joint commander's strategic goals. Delays caused while achieving coordination with the land commander limit the capability and flexibility of airpower.

■ In artillery firing zones during Operation Desert Storm, artillery trajectories had a ceiling of 20,000 feet. Aircraft operated above 20,000 feet to preclude fratricide. Adding ATACMS to the Army's inventory extends that "safe" altitude to more than 100,000 feet throughout the range of the weapon system—which could be more than 130 nm with the improved system.

■ The utility of air strikes against targets in the deep battle area was well demonstrated in Desert Storm.

■ In the closing days of Desert Storm, the FSCL was drawn too far forward, providing retreating Republican Guard forces with a sanctuary. The Army couldn't reach them, and the Air Force wasn't allowed to.

■ Affordability is a key concern. Air Force, Navy, and Marine Corps investment in deep-battle munitions—including joint programs—over the Future Years Defense Program is about \$20.5 billion. ATACMS and its munitions would add almost \$6 billion to that figure.

AFA's position: The land commander must control fire in the close battle area. Achieving maximum effect requires JFACC control of areas beyond immediate proximity of troops.

The joint force commander should draw the FSCL. ATACMS solely as a land force commander's weapons choice in deep attack is redundant to the existing capabilities of the joint warfighting team.

Close Air Support

Issue: Should all of the services perform close air support (CAS), as they do now? Specifically, should the Air Force continue to provide CAS for troops on the ground?

Facts and considerations: Close air support is defined as air action against hostile targets in close proximity to friendly forces. As a practical matter on the fluid modern battlefield, however, it is often difficult to say where CAS ends and where battlefield air interdiction begins. At present, all four of the services maintain full CAS capability. The Air Force does so primarily with A/OA-10 attack aircraft and F-16 multirole fighters, although other aircraft (such as AC-130 gunships) may be employed.

■ As a portion of total Air Force ground-attack sorties, pure CAS has dropped from thirty-two percent in World War II to six percent in the Gulf War. Success in deep interdiction can preclude an enemy's ability to close on US ground forces, reducing the need for CAS. Attack helicopters now handle most individual targets closest to friendly troops, while the Air Force hits the enemy on the flanks and in the rear.

■ The 1980s saw a clamor for the "Mudfighter," a notional Air Force CAS aircraft that would be slow and simple, loitering above the battlefield to attack targets by ones and twos. Analysis of battle requirements found that the Mudfighter was not survivable and that fast movers on the flanks were more effective.

■ The concept used with success in the Gulf War was "Push CAS." Rather than holding attack fighters on the ground awaiting a call, Push CAS kept a stream of aircraft up and headed for targets beyond the FSCL, diverting them as needed for CAS targets.

■ Last year, Gen. Merrill A. McPeak, Air Force Chief of Staff, proposed that the CAS mission be assigned to the Army and Marines and that the Air Force and Navy withdraw. The declining requirement for fixed-wing CAS does not justify the expense of these forces, he said.

■ In December, the Pentagon downgraded the RAH-66 Comanche to a technology program with no helicopters to be produced. The attack helicopter of the foreseeable future will be the AH-64 "Longbow" Apache.

■ As Push CAS demonstrated, airpower tends to elude narrow operational definitions. In the Gulf War, "tactical" fighters frequently struck "strategic" targets and heavy B-52 bombers on occasion flew missions that resembled CAS.

■ The Army clearly wants the Air Force to continue to provide CAS. The Air Force regards fixed-wing CAS as a declining requirement but has agreed to continue to provide CAS.

AFA's position: The Air Force should continue to provide fixed-wing close air support for ground combat forces. As with all tactical air assets, operational control belongs in the hands of the JFACC, who is in turn responsible to the joint force commander.

Theater Air/Missile Defense

Issue: Should the theater air/missile defense mission be divided, as it is now, or consolidated for reasons of coordination, cost, and effectiveness?

Facts and considerations: Contrary to the practices of most nations, the United States divides up the theater air defense mission. The Air Force provides the interceptors, the airborne and spaceborne C⁴I, and most of the funding. The Army operates the surface-to-air missile (SAM) batteries. (This paper does not cover fleet air defense, in which interceptors, SAMs, and C⁴I are fully integrated.)

■ For many years, the Air Force has held air superiority over the battlefield, pushing the air defense fight into the enemy's territory. We must preserve this vital advantage by fielding an improved air-to-air fighter before aircraft and munitions from other nations overtake present US systems. Unless we replace the F-15 with the F-22 by early in the next century, the predicted "exchange rate" in aerial engagements will worsen by a factor of five.

■ The new—and unresolved—threat is theater ballistic missiles. The Desert Storm air boss has called this the "sucking chest wound of our defense program" and "the one thing

we can't cover on the battlefield." Without question, theater ballistic missiles will proliferate. Their range and accuracy will improve.

■ Additionally, more nations, perhaps as many as seventy—including Third World nations—could instantly pose a serious cruise missile threat at least within limited ranges. The presence of a substantial cruise missile capability can be masked and obscured. Infrastructure requirements are minimal, and a virulent threat can defy detection. Theater defenses must take account of this threat.

■ The emphasis today is on terminal defenses, knocking down incoming missiles. That is clearly the second best way. The emphasis on terminal defense must not obscure or diminish the better alternative of attacking launch sites—locating the launch sites and attacking the missiles on the ground or soon after they launch.

■ The Army regards SAMs as maneuver elements to be held under corps command. This position prevailed in the 1992-93 roles and missions review, which said that "full integration of groundbased theater air defense assets into Army maneuver forces was key to providing for their protection." We believe that coordinating the utilization of SAMs should be part of theater-wide defense and that such defenses should be employed in defending not only maneuver forces but also fixed assets like airfields.

■ Coordination of air/missile defense *must* be improved, not only for reasons of effectiveness but also because of the danger of fratricide as lethal envelopes of high- and medium-altitude SAMs overlap the operating airspace of friendly aircraft.

AFA's Position: We support the Air Force commitment to work the issue of air/missile defense integration "under existing ownership arrangements." At the same time, these functions must be brought into line with the realities of modern combat. At minimum, we believe that (1) integration of some sort is an absolute necessity, (2) follow-on air superiority must be assured, and (3) more priority should go toward attack on theater missiles at their source, a capability in which air and space systems will be central. ■

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This symposium will provide in-depth discussions on diverse aspects of aerospace acquisition and logistics. Continuing pressures on DoD budgets present many challenges, but there are opportunities as well. Major focuses will include the F-22, the C-17, the lean approach to future logistics, and pollution prevention issues. For more information, call Jim McDonnell at 703 / 247-5810 or Elizabeth Smith at 703 / 247-5838, or call 800 / 727-3337, ext. 2030, for updated recorded information.

★ **Golf Tournament**

AFA's Wright Memorial Chapter is sponsoring a golf tournament on Monday afternoon, May 1. For more information, please call Ron Goerges at 513 / 429-6070.

★ **Exhibits**

Exhibits will be on display at the convention center during the two-day symposium. Call Pat Teevan at 703 / 247-5836 for additional information.

★ **Hotel Information**

We have a block of rooms at the Stouffer's Center Plaza Hotel, 5th and Jefferson Streets, across from the Dayton Convention Center. To make your reservation, call 513 / 224-0800. Identify yourself as an attendee of the AFA symposium. Rates are \$89.00 a night for a single and \$99.00 for a double.

Registration Form

Advance registration closes Friday, April 21, 1995. No refunds can be made for cancellations after this date.

Mail this form to:
Air Force Association
Attn: Elizabeth Smith
1501 Lee Highway
Arlington VA 22209-1198

Phone: 703 / 247-5838
Fax: 703 / 247-5853

1995 Air Force Association Dayton Symposium

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Symposium fee for AFA Individual or Industrial Associate member is \$350.00. Fee for nonmember is \$375.00. Fee includes sandwich lunch, reception/buffet, and continental breakfast.

— Mark here to request an extra reception/buffet ticket and/or lunch ticket. Enclose \$60.00 for the additional reception/buffet ticket, \$12.00 for the extra lunch ticket.

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Books

Compiled by Frances McKenney, Editorial Associate

American Institute of Aeronautics and Astronautics. *Theater Missile Defense: Systems and Issues—1994.* American Institute of Aeronautics and Astronautics, 370 L'Enfant Promenade S. W., Washington, D. C. 20024-2518, 1994. Including diagrams, 397 pages. \$79.95.

Breuer, William B. *The Great Paid on Cabanatuan: Rescuing the Doomed Ghosts of Bataan and Corregidor.* John Wiley and Sons, Inc., 605 Third Ave., New York, NY 10158-0012, 1994. Including photos, notes and sources, and index, 258 pages. \$27.95.

Breuninger, Michael S. *United States Combat Aircrew Survival Equipment: World War II to the Present, A Reference Guide for Collectors.* Schiffer Publishing Ltd., 77 Lower Valley Rd., Atglen, PA 19310, 1995. With photos, diagrams, and references, 201 pages. \$29.95.

Bruce, Lt. Cmdr. Roy W., USNR (Ret.), and Lt. Cmdr. Charles R. Leonard, USN (Ret.). *Crommelin's Thunderbirds: Air Group 12 Strikes the Heart of Japan.* Naval Institute Press, 2062 Generals Hwy., Annapolis, MD 21401, 1994. Including photos, appendices, bibliography, glossary, and index, 228 pages. \$26.95.

Bruegmann, Robert, ed. *Modernism at Mid-Century: The Architecture of the United States Air Force Academy.* The University of Chicago Press, 11030 S. Langley Ave., Chicago, IL 60628, 1994. Including photos and index, 200 pages. \$70.00.

Chinnery, Philip D. *Any Time, Any Place: A History of USAF Air Commando and Special Operations Forces.* Naval Institute Press, 2062 Generals Hwy., Annapolis, MD 21401, 1994. Including photos, appendices, and index, 303 pages. \$29.95.

Cockrell, Alan. *Tail of the Storm.* The University of Alabama Press, Box 870380, Tuscaloosa, AL 35487-0380, 1995. Including illustrations and glossary, 231 pages. \$24.95.

Cordesman, Anthony H. *Iran & Iraq: The Threat From the Northern Gulf.* Westview Press, 5500 Central Ave., Boulder, CO 80301-2847, 1994. Including

notes, selected bibliography, and index, 380 pages. \$24.95.

Drier, Harry N. *Out of Uniform: A Career Transition Guide for Ex-Military Personnel.* NTC Publishing Group, 4255 West Tcuhy Ave., Lincolnwood, IL 60646-1975, 1995. Including appendices, 258 pages. \$12.95.

Dyakov, Yuri, and Tatyana Bushuyeva. *The Red Army and the Wehrmacht: How the Soviets Militarized Germany, 1922-33, and Paved the Way for Fascism.* Prometheus Books, 59 John Glenn Dr., Amherst, NY 14228-2197, 1995. Including photos and index, 348 pages. \$24.95.

Ethell, Jeffrey L. *How to Fly the B-29 Superfortress: The Official Manual for the Plane That Bombed Hiroshima and Nagasaki.* Stackpole Books, 5067 Ritter Rd., Mechanicsburg, PA 17055-6921, 1995. Including drawings, 400 pages. \$39.95.

Ethell, Jeffrey L. *Wings of War: Fighting WW II in the Air.* Naval Institute Press, 2062 Generals Hwy., Annapolis, MD 21401, 1994. Including photos, 136 pages. \$39.95.

Gailey, Harry A. *The War in the Pacific: From Pearl Harbor to Tokyo Bay.* Presidio Press, 505 B San Marin Dr., Suite 300, Novato, CA 94945-134C, 1994. Including photos, maps, bibliography, and index, 528 pages. \$24.95.

Goldstein, Donald M., Katherine V. Dillon, and J. Michael Wenger. *Nuts! The Battle of the Bulge—The Story and Photographs.* Brassey's, Inc., 1313 Dolley Madison B. v.d., Suite 401, McLean, VA 22101, 1994. Including photos, maps, appendix, and index, 191 pages. \$30.00.

James, D. Clayton, and Anne Sharp Wells. *From Pearl Harbor to V-J Day: The American Armed Forces in World War II.* Ivan R. Dee, Inc., 1332 N. Halsted St., Chicago, IL 60622-2637, 1995. Including maps and index, 227 pages. \$24.95.

Lester, Lt. Col. John R., USAF (Ret.). *Frontline Airline.* Sunflower University Press, 1531 Yuma (Box 1009), Manhattan, KS 66502-4228, 1994. Including

photos, appendix, and index, 192 pages. \$17.95.

Lloyd, Alwyn T. *Liberator: America's Global Bomber.* Pictorial Histories Publishing Co., Inc., 713 S. Third St. W., Missoula, MT 59801, 1994. Including photos, appendices, references, and index, 548 pages. \$39.95.

Logan, Don. *Rockwell B-1B: SAC's Last Bomber.* Schiffer Publishing Ltd., 77 Lower Valley Rd., Atglen, PA 19310, 1995. With photos, appendices, glossary, and index, 255 pages. \$49.95.

Lundh, Lennart. *H-4 Choctaw in Action.* Squadron/Signal Publications, Inc., 115 Crowley Dr., Carrollton, TX 75011-5010, 1994, 50 pages. \$8.95.

Margiotta, Col. Franklin D., USAF (Ret.), ed. *Brassey's Encyclopedia of Military History and Biography.* Brassey's Inc., 1313 Dolley Madison Blvd., Suite 401, McLean, VA 22101, 1994. Including photos and index, 1197 pages. \$44.95.

Mason, Air Vice Marshal Tony, RAF (Ret.). *Air Power: A Centennial Appraisal.* Brassey's, Inc., 1313 Dolley Madison Blvd., Suite 401, McLean, VA 22101, 1994. Including notes, bibliography, and index, 320 pages. \$40.00.

McClain, Sally. *Navajo Weapon.* Books Beyond Borders, Inc., 188th Ninth St., #1C8, Boulder, CO 80302-5149, 1994. Including photos, maps, appendices, bibliography, and index, 304 pages. \$29.95.

McConnell, Malcolm, with Theodore G. Schweitzer III. *Inside Hanoi's Secret Archives.* Simon & Schuster, Inc., 1230 Avenue of the Americas, New York, NY 10020, 1995. With photos, source notes, and index, 462 pages. \$25.00.

McIntosh, William A. *Guide to Effective Military Writing.* 2d ed. Stackpole Books, 5067 Ritter Rd., Mechanicsburg, PA 17055, 1994. Including index, 239 pages. \$14.95.

Moody, Sidney C., Jr., and the Photographers of the Associated Press. *War Against Japan.* Presidio Press, 505 B San Marin Dr., Suite 300, Novato, CA

94945-1340, 1994. Including photos and index, 192 pages. \$19.95.

Scales, Robert H., Jr. *Firepower in Limited War.* Presidio Press, 505 B San Marin Dr., Suite 300, Novato, CA 94945-1340, 1994. Including photos, maps, and notes, 336 pages. \$22.95.

Scutts, Jerry. *Mustang Aces of the Eighth Air Force.* Specialty Book Marketing, 443 Park Ave. S., Suite 801, New York, NY 10016, 1994. Including photos, drawings, and appendices, 96 pages. \$14.95.

Stroud, Carsten. *Iron Bravo: Hearts, Minds, and Sergeants in the US Army.* Bantam Doubleday Dell Publishing Group, Inc., 1540 Broadway, New York, NY 10036, 1995. Including glossary, 326 pages. \$22.95.

Thompson, Fred, and L. R. Jones. *Reinventing the Pentagon: How the New Public Management Can Bring Institutional Renewal.* Jossey-Bass Inc., 350 Sansome St., San Francisco, CA 94104, 1994. Including notes, references, and indexes, 298 pages. \$29.95.

Van der Vat, Dan. *Stealth at Sea: The History of the Submarine.* Houghton Mifflin Co., 215 Park Ave. S., New York, NY 10003, 1995. Including photos, appendix, bibliography, and index, 374 pages. \$30.00.

Walsh, Lt. Cmdr. Michael J., USN (Ret.), and Greg Walker. *SEAL: From Vietnam's Phoenix Program to Central America's Drug Wars: Twenty-Six Years With a Special Operations Warrior.* Simon & Schuster Inc., 1230 Avenue of the Americas, New York, NY 10020, 1994. Including photos, 292 pages. \$5.50.

Welch, John F., ed. *Van Sickle's Modern Airmanship.* 7th ed. McGraw-Hill Inc., 13311 Monterey Ave., Blue Ridge Summit, PA 17294-0850, 1995. Including photos, diagrams, and index, 1026 pages. \$44.95.

Winborn, Byron R. *Wen Bon: A Naval Air Intelligence Officer Behind Japanese Lines in China in WW II.* University of North Texas Press, P. O. Box 13856, Denton, TX 76203, 1994. Including photos and index, 253 pages. \$29.95. ■

Industrial Associates



Listed below are the Industrial Associates of the Air Force Association. Through this affiliation, these companies support the objectives of AFA as they relate to the responsible use of aerospace technology for the betterment of society and the maintenance of adequate aerospace power as a requisite of national security and international amity.

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Analytic Services Inc. (ANSER)	GE Aircraft Engines	Lockheed Missiles & Space Systems Group	Smiths Industries, Aerospace & Defense Systems Co.
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National Report

News-Talk Radio Another Way to Reach Your Community

News-talk radio was one of the little-known dimensions of the successful battle to prevent the National Air and Space Museum from displaying the *Enola Gay* in a politically biased manner.

Among AFA's national and grassroots efforts in the year-long fight, AFA spokesmen took to the airwaves 36 times, reaching virtually every region of the country. By discussing the *Enola Gay* controversy on popular talk radio programs, AFA spokesmen made more people aware of the issue, and more wrote their Congressmen and let the Smithsonian Institution know where they stood.

News-talk radio presents many opportunities for AFA chapters to spread the word about their activities as well. For example, a chapter aerospace education vice president could enlist a teacher from one of the "Visions of Exploration" classrooms the chapter is supporting and then approach a local talk radio program about explaining "Visions" to the local community. Chapter interaction with Air Force ROTC, special events commemorating World War II, and other activities of local interest are also areas that might appeal to a local radio audience.

Here are some tips:

- Assess your market. Listen to talk radio programs and get a sense of what interests the host and whether the program is pro-military or anti-military.
- Make a pitch to the producer of the radio program you are interested in appearing on.
- Translate your topic and messages into simple terms the host and the public will understand.
- Prepare yourself and other participants by considering tough questions and by assembling facts and supporting materials (you can have notes in front of you whether at the radio station or at home in front of your telephone).
- Be natural, keep your audience in mind, and keep focused on your basic messages.

C-17 Team Wins Collier Trophy

AFA congratulates the United States Air Force, McDonnell Douglas Corp., and the C-17 industrial team for winning the 1994 Robert J. Collier Trophy. The National Aeronautic Association award, the most prestigious in American aviation, recognizes the "greatest achievement in aeronautics or astronautics in America, with respect to improving the performance, efficiency, and safety of air or space vehicles, the value of which has been thoroughly demonstrated by actual use during the preceding year."

AFA nominated the Air Force-Industry C-17 Team for designing, developing, testing, producing, and placing into service the C-17

Globemaster III, whose performance and efficiency make it the most versatile airlift aircraft in aviation history.

AFA cited the McDonnell Douglas C-17 as "the linchpin of airlift modernization" and said that it "demonstrated in 1994 that it had the versatility to create a new era in military airlift." The nomination also pointed out that the C-17 landed four times the payload of the C-130 on less than 3,000 feet of runway and carried large Army equipment that previously only the C-5 could carry.

The AFA nomination was endorsed by the Association of the United States Army and by retired Sen. Barry Goldwater.



AFA National President R. E. Smith (left) meets with Sen. Thad Cochran (R-MS) of the Senate Appropriations Committee. Smith also met with newly elected members of the House National Security Committee and Senate Armed Services Committee.



By Daniel M. Sheehan, Assistant Managing Editor

President Smith Outlines Goals

National President R. E. Smith has an ambitious agenda to help the Air Force Association accomplish its mission. That agenda rests on five pillars: redefine the target audience; reach out to the active-duty Air Force, Air National Guard, and Air Force Reserve; communicate better with Congress; work harder to develop new leadership; and increase AFA's effectiveness through continual evaluation of how the Association does business.

Mr. Smith addressed these goals at a recent South Central Regional Workshop in Jackson, Miss., with particular emphasis on the first. In order to inform the American people about the value of airpower, he said, individual chapters should establish speakers' bureaus or get involved in the "Visions of Exploration" program. This would ensure a wider audience for AFA's message—and, Mr. Smith stressed, AFA's "mission is *not* to brief each other once a quarter but to reach out to the community."



ACC Commander Gen. John M. Loh (right), shown here speaking with former SAC Commander in Chief Gen. John T. Chain, USAF (Ret.), and his wife Judy, addressed the seventh annual "Evening in Fort Worth," cosponsored by the Fort Worth Chapter. AFA Board Chairman James M. McCoy and former Board Chairman and current National Director O. R. Crawford also attended the event, which benefits the chapter's aerospace education programs.



National President R. E. Smith (center) recently outlined his 1995 goals to (from left) Tennessee President Dan F. Callahan III, Mississippi President Leonard R. Vernamonti, Arkansas President Marleen Eddlemon, National Vice President (South Central Region) Henry W. Boardman, Alabama President William B. Divin, and Louisiana President Ivan L. McKinney at a South Central Regional Workshop.

Mr. Smith urged National Vice President (South Central Region) Henry W. Boardman, Alabama President William B. Divin, Arkansas President Marleen Eddlemon, Louisiana President Ivan L. McKinney, Mississippi President Leonard R. Vernamonti, Tennessee President Dan F. Callahan III, and others attending the workshop to help disseminate the new agenda at the regional, state, and local levels.

Chapter News

Even before Mr. Smith outlined his agenda, the **Tulsa (Okla.) Chapter** was reaching out to the community. The chapter, led by former President Joe Turner, initiated contacts with a local AFJROTC squadron at Booker T. Washington High School in Tulsa. The chapter provides lecturers on Air Force heritage and the chance to see some of it—in the form of three AT-11s now being restored by former Chapter President John Loerch—up close. Chapter President Harry Burt

serves as liaison between the chapter and the AFJROTC squadron.

Alabama President Bill Divin was on hand at a meeting of the **Montgomery (Ala.) Chapter** to present a national President's Award to Susan Broderick, runner-up for the 1994 Christa McAuliffe Memorial Award. Though Ms. Broderick was edged out by Carole Denicole of Florida for the award, which gives national recognition to outstanding math and science teachers, AFA felt that her accomplishments as vice principal of Head Elementary School deserved attention. CMSAF David J. Campanale [see "The Top Chief," p. 37] was guest speaker at the awards luncheon.

Also at the luncheon, Chapter President Roy A. Boudreaux and Vice President Tom Albrecht picked up an award recognizing the Montgomery Chapter as the top chapter in the state for its work with Community Partners.

New England Meeting

Chapter and state presidents from around New England gathered in Newport, R. I., in January for a regional meeting. National Vice President (New England Region) Dr. Phillip J. Sleeman pronounced the meeting a success and thanked those who attended, including Connecticut President Donald R. Graves, Massachusetts President Winston S. Gaskins,

George D. Hardy (1923-1995), Donald D. Adams (1925-1995), and Bayard L. Nicholas (1929-1994)



George D. Hardy

With sadness, AFA reports the deaths of two of its most dedicated supporters and one of its longest-serving, most industrious employees. George D. Hardy and Donald D. Adams together gave almost a century of loyal voluntary service to AFA at the local, state, and national levels, and Bayard L. Nicholas worked for *Air Force Magazine* for more than two decades before his retirement as US Advertising Sales Manager in 1994.

George D. Hardy became a charter member of AFA after serving as a gunner in Twelfth Air Force during World War II. During his forty-eight-year membership in AFA, he held virtually every elective office at every level, including forty-five years as a National Director, seven years as National Secretary, and two separate stints as Chairman of the Board. He was AFA's Man of the Year for 1957. While National President during two

turbulent years of the Vietnam War (1969-71), he traveled 200,000 miles around the US, spreading the word about the plight of US POWs held in North Vietnam. The Air Force bestowed its Exceptional Service Award on Mr. Hardy in recognition of his tireless work on behalf of the prisoners. When the POWs returned, they requested Mr. Hardy's presence at the White House ceremony honoring them.

Mr. Hardy later devoted a great deal of attention to getting the Aerospace Education Foundation off the ground, serving as treasurer, secretary, president, and (twice) chairman of the Board of Trustees. He was instrumental in the success of AEF's "Partners in Education" program, which brought business and aerospace industry expertise into classrooms around the country.

Mr. Hardy is survived by his wife Frances, his daughter Caroline, and his son Robert. He served AFA and AEF with distinction for almost five decades. He will be missed.

Donald D. Adams was a powerful voice for AFA's goals in the Midwest Region, twice serving terms as National Vice President. He also spent five years on the National Board of Directors. A retired Air Force colonel and former commander of the 7th Bomb Wing, Mr. Adams was president and vice president of the Ak-Sar-Ben (Neb.) Chapter, one of AFA's largest and most successful. He also was Nebraska President. Active in local elected politics, he was a Sarpy County Commissioner at the time of his death. He survived by his wife Betty.

Bayard L. Nicholas's name first appeared on the masthead of *Air Force Magazine* in 1973 and remained there until his retirement last year. During the course of his career, he sold hundreds of pages of advertising, took part in almost two dozen conventions (for which he sold exhibit space), and enrolled scores of new members in the Industrial Associates program. His loyalty and dedication were unsurpassed, and his tangible contributions to *Air Force Magazine* will be difficult to duplicate.

Coming Events

April 29, **Massachusetts State Convention**, Boston, Mass.; May 5-6, **Mississippi State Convention**, Columbus, Miss.; May 12-13, **Louisiana State Convention**, Baton Rouge, La.; May 12-13, **South Carolina State Convention**, Columbia, S. C.; May 19-20, **Alabama State Convention**, Prattville, Ala.; May 19-21, **New Jersey State Convention**, Absecon, N. J.; June 9-10, **Missouri State Convention**, Branson, Mo.; June 16-18, **New York State Convention**, Melville, N. Y.; June 23-25, **Ohio State Convention**, Wright-Patterson AFB, Ohio; July 7-8, **Arkansas State Convention**, Jacksonville, Ark.; July 7-9, **Washington/Oregon State Convention**, Tacoma, Wash.; July 21-23, **Kansas State Convention**, Wichita, Kan.; July 21-23, **Pennsylvania State Convention**, Harrisburg, Pa.; July 21-23, **Texas State Convention**, Wichita Falls, Tex.; July 28-30, **Florida State Convention**, Tampa, Fla.; July 28-30, **Iowa State Convention**, Sioux City, Iowa; August 4-5, **New Mexico State Convention**, Alamogordo, N. M.; August 10-12, **California State Convention**, Santa Clara, Calif.; August 12, **North Carolina State Convention**, Greenville, N. C.; August 18-19, **Colorado State Convention**, Colorado Springs, Colo.; August 25-27, **Michigan State Convention**, Petoskey, Mich.; September 18-20, **AFA National Convention and Aerospace Technology Exhibition**, Washington, D. C.

Northern Connecticut Chapter President John Calve, **Metro Rhode Island Chapter** President John A. Powell, and **Sergeant Charlton Heston (Conn.) Chapter** President Joseph A. Gosselin.

Brosky Honored

Former National President and Board Chairman and current National Director Judge John G. Brosky was honored as Pittsburgh's Man of the Year for Law and Government by a western Pennsylvania business and professional organization. Judge Brosky, who sits on the bench of the Superior Court of Pennsylvania, served as AFA National President from 1981 to 1982.

Have AFA/AEF News?

Contributions to "AFA/AEF Report" should be sent to Dave Noerr, AFA National Headquarters, 1501 Lee Highway, Arlington, VA 22209-1198. ■

Unit Reunions

Air Force Navigators/Observers Ass'n. October 5-8, 1995, at the Doubletree Hotel in Arlington, Va. **Contact:** Paul A. Butler, 6917 Rawhide Ridge, Columbia, MD 21046. Phone: (410) 997-3277.

Air Forces Escape & Evasion Society. September 21-23, 1995, at the Royal York Hotel in Toronto, Canada. **Contacts:** Clayton David, 19 Oak Ridge Pond, Hannibal, MO 63401, Paul Kenney, 5400 Post Road Pass, Stone Mountain, GA 30088.

B-26 Marauder Historical Society (World War II). June 7-10, 1995, in Akron, Ohio. **Contact:** H. H. Walker, 4613-B Pinehurst Dr. S., Austin, TX 78747. Phone: (512) 282-4597.

B-52 Stratofortress Ass'n. September 22, 1995, at Barksdale AFB, La. **Contact:** Col. Wayne C. Pittman, Jr., USAF (Ret.), 498 Carthage Dr., Beavercreek, OH 45434-5865.

B-58 Hustler crews. Reunion cruise, October 29-November 5, 1995, to the eastern Caribbean. **Contact:** Bob Herwig, 3218 Paseo Adelanto, #3A, San Juan Capistrano, CA 92675. Phone: (800) 777-8794. Fax: (714) 661-9436.

F-86 Sabre Pilots Ass'n. September 17-20, 1995, at the Sands Hotel in Las Vegas, Nev. **Contact:** Col. Charles C. Carr, USAF (Ret.), 4464 Rheims Pl., Dallas, TX 75205. Phone: (214) 526-4039.

George Field (Calif.) Ass'n. September 7-9, 1995. **Contacts:** George Field Association, P. O. Box 301, Lawrenceville, IL 62439-0301. Phone: (618) 943-2307 (Allie DeLoria) or (812) 383-4771 (Merton Wheeler).

Ground Electronics Engineering Installation Agency (GEEIA) and Mobile Depot Activity (MDA) Personnel. June 15-17, 1995, at the Radisson Inn in Oklahoma City, Okla. **Contact:** Sophia Bronson, 2203 White Oak Cir., Norman, OK 73071. Phone: (405) 329-6991.

P-47 Thunderbolt Pilots Ass'n. May 24-29, 1995, at the Excelsior Hotel in Little Rock, Ark. **Contacts:** Edward J. Palovich, 910 W. Kaler Dr., Phoenix, AZ 85021. Phone: (602) 943-5684. David R. Eldridge, 604 Zuni Trail, 17340 San Carlos Blvd., Fort Myers Beach, FL 33931. Phone: (813) 882-8902.

Roswell Army Air Field/Walker AFB (N.M.) Veterans Ass'n. September 22-24, 1995, at the Roswell Inn in Roswell, N.M. **Contact:** TSgt. Alfred H. Wilbur, USAF (Ret.), P. O. Box 2744, Roswell, NM 88202.

RAF Chicksands Alumni Ass'n, including all personnel who have served at RAF Chicksands, England. August 18-20, 1995, in Fort Meade, Md. **Contact:** William C. Grayson, P. O. Box 4053, Crofton, MD 21114.

Santa Ana Army Air Base Wing. April 22, 1995, at Orange Coast College in Costa Mesa, Calif. **Contact:** Alvin E. Anderson, P. O. Box 1764, Costa Mesa, CA 92628. Phone: (714) 631-5918.

USAF Medical Service Corps Ass'n. October 1-5, 1995, at the Gold Coast Hotel in Las Vegas, Nev. **Contact:** Don Schindel, P. O. Box 61151, Durham, NC 27715-1151. Phone: (919) 383-6934.

Women in the Air Force (WAF). June 8-12, 1995, at the Holiday Inn-Fairlane in Detroit, Mich.

Contact: Josievet Moss, 9000 E. Jefferson Ave., #69, Detroit, MI 48214-2959. Phone: (313) 331-7966.

2d Aerial Port Squadron, Sewart AFB, Tenn. September 22-24, 1995, in Murfreesboro, Tenn. **Contact:** Richard E. Vaught, 2399 Old Plank Rd., Newburgh, IN 47630. Phone: (812) 853-5679.

4th Emergency Rescue Squadron. October 15-18, 1995, in Las Vegas, Nev. **Contact:** Chet Gunn, 237 Franklin St., Reading, MA 01867-1030. Phone: (617) 944-6616.

7th Photoreconnaissance Group Ass'n, 8th Air Force, including personnel stationed at Mount Farm and Chalgrove, England, and the 325th Photoreconnaissance Wing. October 5-8, 1995, at the Omni Hotel in Norfolk, Va. **Contact:** George Lawson, 4390 14th St. N. E., St. Petersburg, FL 33703. Phone: (813) 526-8480.

14th Air Force Ass'n "Flying Tigers," including veterans of the American Volunteer Group (1941-42) and China Air Task Force (1942-43). May 25-28, 1995, at the Marriott-Crystal Gateway Hotel in Arlington, Va. **Contact:** Robert Lee, 717 19th St. S., Arlington, VA 22202-2704. Phone: (703) 920-8384.

14th Fighter Group. V-E Day fiftieth-anniversary celebration, May 12-13, 1995, at Columbus AFB, Miss. **Contact:** Capt. Jeff Brett, USAF, 14th Operations Group/CCE, 166 Liberty, Suite 203, Columbus AFB, MS 39710-2001. Phone: (601) 434-7157 or (601) 434-7158.

17th Bomb Wing/47th Bomb Wing. October 19-22, 1995, in Fort Walton Beach, Fla. **Contact:** Bob Mendonca, 513 Paddock Lane, Montgomery, AL 36109. Phone: (205) 271-1343.

27th Fighter Squadron, 1st Fighter Wing. May 5-6, 1995, at Langley AFB, Va. **Contact:** Capt. Thomas A. Bussiere, USAF, 151 Eagan Ave., Langley AFB, VA 23665. Phone: (804) 766-3763 or DSN 574-5684.

Pilot Class 43-A-1, Mather Field, Calif. August 30-September 3, 1995, at the Marriott-Airport Hotel in San Francisco, Calif. **Contact:** Jesse J. Craddock, 1448 Fallen Leaf Lane, Los Altos, CA 94024-5809. Phone: (415) 968-0446.

Pilot Class 43-F, Luke Field, Ariz. (World War II). September 14-17, 1995, at the Embassy Suites in Colorado Springs, Colo. **Contacts:** Ed Pawlak, 629 Delano, Prescott, AZ 86301. Phone: (602) 445-5746. Russell Kaufman, P. O. Box 513, Mentone, CA 92359. Phone: (909) 794-4906.

44th Air Refueling Squadron, Chennault AFB, La., and Selfridge AFB, Mich. April 28-30, 1995, at the Chateau Charles Hotel in Lake Charles, La. **Contact:** John Vaughan, 2112 Tammy Dr., Sulphur, LA 70663.

44th Bomb Group Ass'n, including the 44th Bomb Wing and the 44th Strategic Missile Wing. October 19-22, 1995, in San Antonio, Tex. **Contact:** Jim Clements, 4124 Calculus Rd., Dallas, TX 75244. Phone: (214) 243-4657.

Pilot Class 44-K. September 21-24, 1995, in San Diego, Calif. **Contacts:** George Normington, 31 Rainbow Falls, Irvine, CA 92715. Phone: (714) 854-1487. William H. Gibson, 952 Gardenia Way, Corona Del Mar, CA 92625-1546. Phone: (714) 721-4190.

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49th Fighter/Fighter-Interceptor Squadron Ass'n. October 10-12, 1995, in Indianapolis, Ind. **Contact:** Sheril D. Huff, 3200 Chetwood Dr., Del City, OK 73115-1933. Phone: (405) 677-2683.

Pilot Class 50-G. September 28-30, 1995, in Oklahoma City, Okla. **Contacts:** Jim Alexander, 224 Hilltop Rd., Poteau, OK 74953. Phone: (918) 647-9478. George F. Barker, 3510 Carter Hill Rd., Montgomery, AL 36111. Phone: (334) 288-4056.

51st Fighter Squadron, 6th Air Force (World War II). September 27-30, 1995, in Washington, D. C. **Contact:** Joseph S. Benham, 1405 Langley Dr., Sun City Center, FL 33573. Phone: (813) 634-3094.

Class 54-10 (navigators/observers), Harlingen and Ellington AFBs, Tex. April 21-24, 1995, in San Antonio, Tex. **Contacts:** Frank McNiff, 430 Crestwind Dr., San Antonio, TX 78239. Phone: (210) 654-6638. Ben Kirkland, 607 7th Ave. N. E., Jacksonville, AL 36265. Phone: (205) 435-5230.

56th Fighter Group/Wing, including 56th Fighter-Interceptor Wing/Special Operations Wing and 56th Tactical Fighter Group (1941 to present). June 23-25, 1995, at the Best Western-Northwoods Atrium Inn in Charleston, S. C. **Contact:** Leo Lester, 600 E. Prospect, Kewanee, IL 61443. Phone: (309) 856-6826.

84th Bomb Squadron, 47th Bomb Wing, assigned to Langley AFB, Va., and Sculthorpe, England, in the 1950s. June 1995 in St. Louis, Mo. **Contact:** Clarence A. Rhines, 140 S. Main St., O'Fallon, IL 62269-2933. Phone: (618) 632-5838.

85th Bomb Squadron, 47th Bomb Wing. October 11-16, 1995, in Miami, Fla. **Contact:** Walter E. Collier, 12940 S. W. 74th Ave., Miami, FL 33156. Phone: (305) 233-1853.

89th Attack Squadron, including the 3d Bomb Group and 8th, 13th, and 90th Attack Squadrons. April 26-30, 1995, at the Holiday Inn-Executive Center in Virginia Beach, Va. **Contact:** Rev. E. B. Smith, Rte. 2, Box 613, Hickory, NC 28601. Phone: (704) 256-5981.

90th Bomb Group "Jolly Rogers," 5th Air Force. October 25-29, 1995, at the Sheraton World Resort Hotel in Orlando, Fla. **Contact:** Bob Wildermuth, 410 Eagle Cir., Casselberry, FL 32707. Phone: (407) 695-2512.

96th Air Refueling Squadron, Altus AFB, Okla. October 12-15, 1995, in Bossier City La. **Contact:** Col. Richard F. Lyon, USAF (Ret.), 1054 Woodlore Cir., Gulf Breeze, FL 32561. Phone: (904) 932-0124.

246th Signal Operations Company. Fiftieth-anniversary reunion, August 1995, in Gatlinburg, Tenn. **Contact:** Marie Huggins, 30031 S. W. 169th Ave., Homestead, FL 33030. Phone: (305) 247-0150.

306th Bomb Group Ass'n. September 14-16, 1995, at the Hyatt Regency Hotel in Knoxville, Tenn. **Contact:** Russell A. Strong, 5323 Cheval Pl., Charlotte, NC 28205. Phone: (704) 568-3803.

310th Bomb Wing. September 28-October 1, 1995, in Portland, Ore. **Contact:** Stan Luther, P. O. Box 648, Manzanita, OR 97130. Phone: (503) 368-7443.

314th Composite Wing, 5th Air Force, V Bomber Command, 5th Station Hospital, and Headquarters/Headquarters Squadron. September 20-25,

1995, in Springfield, Ill. **Contact:** Louis J. Buddo, P. O. Box 270362, St. Louis, MO 63126-0326.

317th Troop Carrier Group, 41st Troop Carrier Squadron, 5th Air Force (World War II). October 13-15, 1995, in St. Louis, Mo. **Contact:** James B. Collier, Jr., 1109 Van Ave., Port Neches, TX 77651-5709. Phone: (419) 727-1912.

324th Fighter Group, 314th, 315th, and 316th Fighter Squadrons. May 31-June 3, 1995. **Contact:** Mark Mellinger, 45 Kerwood Dr., Massapequa, NY 11758.

331st Bomb Group, 461st and 464th Bomb Squadrons (military and civilian personnel), Casper Field, Wyo. Fiftieth-anniversary reunion, July 11-12, 1995. **Contact:** Jean Ludwig, Casper Area Chamber of Commerce, P. O. Box 399, Casper, WY 82602. Phone: (307) 234-5311.

337th Fighter-Interceptor Squadron (1955-60). September 29-October 1, 1995, in Springfield, Mass. **Contact:** William Bradley, P. O. Box 520, Norway Hill, Hancock, NH 03449. Phone: (603) 525-3541.

344th Bomb Group. August 23-26, 1995, in San Antonio, Tex. **Contact:** Lambert Austin, 5747 Darnell St., Houston, TX 77096. Phone: (713) 774-3030.

352d Fighter Group Ass'n, 1st Service Group. October 5-8, 1995, in Myrtle Beach, S. C. **Contact:** Richard J. DeBruin, 234 N. 74th St., Milwaukee, WI 53213-3629. Phone: (414) 771-0744.

355th Fighter Group Ass'n, Steeple Morden, England, 8th Air Force (World War II). October 5-8, 1995, in Baltimore, Md. **Contact:** Robert E. Kuhnert, 4230 Shroyer Rd., Dayton, OH 45429. Phone: (513) 294-2986.

366th Fighter Group/Fighter-Bomber Wing/Tactical Fighter Wing and support units, 1943 to present. September 7-9, 1995, in Seattle, Wash. **Contact:** John F. Peterson, P. O. Box 392, Harrodsburg, KY 40330. Phone or fax: (606) 734-7912.

368th Fighter Group Ass'n (World War II). May 25-28, 1995, at the Doubletree Hotel in Arlington, Va. **Contact:** Randolph Goulding, 2000 Clearview Ave. N. E., Atlanta, GA 30340. Phone: (404) 455-8555.

380th Bomb Group "Flying Circus," 5th Air Force. July 17-23, 1995, in Oshkosh, Wis. **Contact:** Helen Thompson, 2401 Lakeview Dr., Heber Springs, AR 72543. Phone: (501) 362-2891.

442d Troop Carrier Group. September 28-30, 1995, at the Grand Hotel in Milwaukee, Wis. **Contact:** Marvin A. Ledbetter, 102 Sheffield Lane, Taylors, SC 29687-3926. Phone: (803) 244-5861.

444th Fighter-Interceptor Squadron. April 14-15, 1995, at the Folly Beach-Holiday Inn in Charleston, S. C. **Contact:** Lt. Col. Wallace E. Mitchell, USAF (Ret.), 535 Mimosa Rd., Sumter, SC 29150. Phone: (803) 469-3297 (home) or (803) 775-1281 (work).

446th Bomb Group Ass'n, 8th Air Force (World War II). May 4-7, 1995, at the Embassy Suites in Boca Raton, Fla. **Contact:** Bill McMahon, 5126 S. W. Third Ave., Cape Coral, FL 33914. Phone: (813) 542-4837.

449th Bomb Group Ass'n (World War II). September 5-9, 1995, in Williamsburg, Va. **Contact:** Lee F. Kenney, 149 Augusta Way, Melbourne, FL 32940. Phone: (407) 242-8654.

450th Bomb Group "Cottontails" Ass'n. September 28-October 1, 1995, in Rockford, Ill.

Contact: Doid K. Raab, 5695 Ireland Rd. N. E., Lancaster, OH 43130. Phone: (614) 536-7635.

455th Bomb Squadron Ass'n, 323d Bomb Group, 9th Air Force (World War II). September 21-23, 1995, in Natchez, Miss. **Contact:** Robert Mims, 615 State St., Natchez, MS 39120.

492d Bomb Group (World War II). July 3-6, 1995, at the Marriott Griffin Gate Resort in Lexington, Ky. **Contact:** Willis H. Beasley, 1525 S. Garfield St., Denver, CO 80210-3022. Phone: (303) 756-4766.

507th Fighter Group, including the 463d, 464th, and 465th Fighter Squadrons. September 28-October 2, 1995, at the Town & Country Hotel in San Diego, Calif. **Contact:** Herb Gabriel, 1023 Leonard Ave., Oceanside, CA 92054. Phone: (619) 722-8821.

622d Air Refueling Squadron. May 3-6, 1995, in Alexandria, La. **Contact:** Daniel Sloan, 1507 Hwy. 1204, Pineville, LA 71360. Phone: (318) 640-4208.

671st Bomb Squadron, 416th Bomb Group. August 31-September 3, 1995, at the Clubhouse Inn in Nashville, Tenn. **Contact:** Robert E. Lee, Jr., 301 Glendale Dr., Pulaski, TN 38478. Phone: (615) 363-5311 (work) or (615) 363-4601 (home).

809th Air Police Squadron, MacDill AFB, Fla. June 3-5, 1995, in Tampa, Fla. **Contact:** Clayton Briggs, 7041 Land O'Lakes Blvd., Land O'Lakes, FL 34639. Phone: (813) 996-2286.

839th Engineer Aviation Battalion (SCARWAF), Korea (1951-54). June 22-24, 1995, in Dayton, Ohio. **Contact:** Jim McCoy, 4216 65th St., Des Moines, IA 50322-2814. Phone: (515) 276-5345.

1409th/1415th USAAF Base Units who participated in Operation Ball in northern Sweden and Norway (1944-45). June 14-17, 1995. **Contact:** Captain Agren, F 21/Sb, S-97173 Lulea, Sweden. Phone: (46) 9203-8479.

1611th Air Transport Wing, McGuire AFB, N. J., 1955-63. April 23-27, 1995, at the Riviera Hotel-Casino in Las Vegas, Nev. **Contact:** Dale Hardin, 433 Water St., Suite A, Kerrville, TX 78028. Phone: (210) 257-5000. Fax: (210) 257-5002.

1901st Engineer Aviation Battalion (World War II/Korea). October 5-7, 1995, in Branson, Mo. **Contact:** W. J. Curwood, 1504 Pine Ave., Lake Placid, FL 33852. Phone: (813) 465-5006.

3080th Aviation Depot Group, military and civilian personnel. October 3-6, 1995, at the Holiday Inn-Midtown in Albuquerque, N. M. **Contact:** Col. Robert J. Wicke, USAF (Ret.), 5223 Jomar Dr., Concord, CA 94521-2341. Phone: (510) 676-2528.

3910th Bomb Group, 7th Air Division, Strategic Air Command, including 4th AAA (US Army) satellite stations and all permanent parties assigned to RAF Stations Wyton, Upper Heyford, Mildenhall, and Lakenheath (1950-53). July 24-28, 1995, in Hampton, Va. **Contact:** Bill G. Parkhurst, P. O. Box 2881, Tulsa, OK 74101. Phone: (918) 446-6400.

4060th Air Refueling Wing, including the 71st and 341st Air Refueling Squadrons. August 24-26, 1995, in Bangor, Me. **Contact:** Roy Martin, R. R. 1, Box 1882, Pushaw Rd., Glenburn, ME 04401. Phone: (207) 942-3996.

6910th Security Group/Wing, Detachments 1 and 2. June 23-25, 1995, in Kingwood, Tex. **Contacts:** Jack W. Sellman, 408 S. Woods Rd.,

Belle Mead, NJ 08502. Phone: (908) 359-7674 or (713) 358-1888 (John Bradshaw).

7167th Special Air Missions Squadron and associated air evacuation personnel. September 28–October 1, 1995, at the Howard Johnson Lodge in Fort Walton Beach, Fla. **Contact:** Tom Neiss, 210 Country Club Rd., Shalimar, FL 32579-2216. Phone: (904) 651-5877.

Goodfellow Field, Tex. Seeking personnel assigned to Goodfellow Field (1944–45) who are interested in a reunion. **Contact:** Dan Fogard, 15358 Nancy Way, Grass Valley, CA 95949. Phone: (916) 273-5131.

10th Troop Carrier Group. Seeking former members of the 10th Troop Carrier Group, which included 1st, 2d, 3d, 4th, 5th, 27th, 38th, 307th,

and 308th Troop Carrier Squadrons, to plan a reunion. **Contact:** O. C. Wilkins, 2329 Maben Ave., Palm Harbor, FL 34683. Phone: (813) 785-7764.

32d Tactical Fighter Squadron. Seeking contact with officers who served in the 32d Tactical Fighter Squadron, Camp New Amsterdam, the

Netherlands, 1970–82, for a reunion in 1995. **Contact:** Peter E. van Oest, 9027 Couwenhoven, 3703 GB Zeist, the Netherlands. Fax: (31) 3404-19099.

Bombardier Class 43-11, Roswell, N. M. Seeking contact with former members to start a newsletter or plan a reunion. **Contact:** William Hanak, 303 Poplar Dr., Falls Church, VA 22046-3811.

720th Fighter-Bomber Squadron, Eielson AFB, Alaska. Seeking former members interested in a reunion in 1995 or 1996. **Contact:** Kenneth D. Ohman, 4565 W. Lake Hazel, Meridian, ID 83642. (208) 888-5925.

779th Aircraft Control and Warning Squadron, Opheim, Mont. Seeking contact with former members, 1955–60, for a reunion. **Contact:** Jerry Nestor, 21-73 46th St., Astoria, NY 11105-1333. Phone: (718) 728-4681. ■

Mail unit reunion notices well in advance of the event to "Unit Reunions," AIR FORCE Magazine, 1501 Lee Highway, Arlington, VA 22209-1198. Please designate the unit holding the reunion, time, location, and a contact for more information.

Bulletin Board

Seeking contact with an F-102 pilot from Naha AB, Japan, who escorted Jack Layton's damaged **Lockheed A-12** to Kadena AB between May and August 1967. **Contact:** Stéphane Cochin, 2940 Barclay, Apt. B, Montreal, Quebec H3S 1J9, Canada.

Seeking information on B-24 pilot **Fred M. Hughes, Jr.**, 24th Combat Crew Mapping Squadron, 10th Air Force, who departed from Soerabaja AAF, India, and vanished along with his aircraft and crew March 27, 1944. **Contact:** Bill Lund, 43757 Fern Ave., Lancaster, CA 93534.

Seeking contact with members of headquarters staff, **Atlantic Division MATS**, Westover AFB, Mass., 1951–55. Also seeking MATS memorabilia from that era. **Contact:** James J. McKeever, 261 Boston Post Rd., Cos Cob, CT 06807-2703.

Looking for someone? Comprehensive telephone books are now available on CD-ROM. They list eighty million residential phone numbers from every directory in the US. Your local library may have this resource to help put you in contact with your friends and relatives.

Seeking contact with members of Craig AFB, Ala., **Undergraduate Pilot Training Class 69-04.** **Contact:** Claude E. Branscome, 523 W. 14th St., Del Rio, TX 78840-7742.

For a unit history, seeking contact with those who served with the **487th Bomb Group**, 8th Air Force, at AAF 137, Lavenham, UK, between April 1944 and August 1945. **Contact:** Tim Dean, 24 Marfield Close, Ingol, Preston, Lancashire PR2 7AL, UK.

Seeking contact with anyone who knew **Lt. Raymond H. Palon, Jr.**, of Air Cadet Class 52-D in Texas, killed in an F-51 crash near Duluth, Minn., in February 1953. **Contact:** Lyndee A. Lapin, 143 Flying Cloud Isle, Foster City, CA 94404.

Seeking contact with members of **Pilot Class 45-B**, Moody Field, Ga. **Contact:** Elwood R. Leibfritz, 3539 May Lane, San Jose, CA 95124-2506.

Seeking information on **Capt. Jack Letourneau**, killed in action in February 1962 while flying a C-47 mission. **Contact:** Marcelline Letourneau, 5233 Keystone Dr., #16, Sacramento, CA 95841.

Seeking information on and photos of **RB-69As** and their units. **Contact:** Wayne Mutza, 2400 W. Henry Ave., Milwaukee, WI 53221.

Seeking **patches** for Tactical Air Command's 15th Tactical Reconnaissance Squadron (Photo-

graphic), Kadena AB, Japan. **Contact:** Cliff Miller, 1349 Mitchell Rd., Modesto, CA 95351.

Seeking the whereabouts of **Col. John E. Emmons**, whose last known assignment was Maxwell AFB, Ala. **Contact:** J. E. Stockstill III, 4386 Richwood Pl., Memphis, TN 38125.

Seeking a copy of the **Williams AFB, Ariz.**, newspaper *Wings* for October 8, 1948, containing an article on Pilot Class 48-C's graduation.

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Contact: William F. Ricketts, Jr., 11650 E. Calle Aurora, Tucson, AZ 85748-8319.

For an F-105 history, seeking photos and information from pilots and support personnel of the **36th and 49th Tactical Fighter Wings**, Germany. **Contact:** Theo W. van Geffen, 598 Romerostraat, 3573 AW Utrecht, the Netherlands.

Seeking contact with personnel from the **3917th Air Base Group**, RAF Stations Manston and East Kirkby, UK, and the **3931st Air Base Squadron**, RAF Station East Kirkby. **Contact:** MSgt. George J. McNally, USAF (Ret.), 123 School Rd., Bethel, PA 19507-9410.

Seeking poems, reminiscences, and newspaper articles on the **54th Troop Carrier Squadron**. **Contact:** Harry Yonkman, Box 907, Leland, MI 49654.

Seeking the whereabouts of **Maj. Doug Easterday** whose last known address was in Oklahoma. **Contact:** Tony Nichini, 2-15129 Marine Dr., White Rock, British Columbia V4B 1C5, Canada.

Seeking contact with former members of the **5th Troop Carrier Squadron**, formerly the 5th Transportation Squadron. **Contact:** O. C. Wilkins, 2329 Maben Ave., Palm Harbor, FL 34683.

Seeking the whereabouts of **SMSgt. Frank Henry Averett**, who was stationed at RAF Bentwaters, UK. **Contact:** Madeline Louise Averett, 25 Upprove Manor Way, Tulse Hill, London SW2 2QU, UK.

Seeking information on **Cmdr. John Joseph Davis, Jr.**, a pilot in VF-17 on USS *Enterprise* during

World War II. **Contact:** Christopher John, 95 Pontcanna St., Pontcanna, Cardiff CF1 9HS, UK.

Seeking the whereabouts of **Bill Crawford**, from Lubbock, Tex., who was shot down over Belgrade, Yugoslavia, in World War II. **Contact:** George Stojanovic, 1860 E. Florence Blvd., Suite H, Casa Grande, AZ 85222.

Seeking the whereabouts of **Vicki Ann Bernas**, stationed at RAF Alconbury, UK, 1989-91. **Contact:** Clive Allison, Flat 8, Roscrea Ct., Huntingdon, Cambridgeshire PE18 7JY, UK.

Seeking the whereabouts of **Larry Land** or **James Land**, sons of Capt. Bill Land, who befriended the

Harold Roberts family in Warrington, UK, in the 1950s. **Contact:** Anne Roberts Howard, 25 Westleigh, Bingley, West Yorkshire, BD164LX, UK.

Seeking information on **SSgt. Benedict A. Andrew**, 836th Bomb Squadron, 487th Bomb Group, killed in action over Germany on December 24, 1944. Also seeking information on, patches for, and UK location of **AAF Station 137**, APO NY 559, and information on a B-17G (aircraft #43-38926). **Contact:** Col. Gus Wedin, USAF (Ret.), Benedict A. Andrew American Legion Post 296, 6200 Main St., Queenstown, MD 21658.

Seeking contact with anyone who has knowledge of **Horten flying wing gliders** captured by Allied forces in Germany during World War II. **Contact:** John M. Fitzpatrick, 1811 Briar Ridge Ct., McLean, VA 22101.

Seeking an **F-105F/G Dash One**. **Contact:** Lt. Col. George C. Connolly, USAF (Ret.), 8670 Norman Dr., White Plains, MD 20695.

Seeking contact with the family of **Sgt. "Ozzi" Ozzmanski** and his wife, Anna. He was a fireman based in High Wycombe, UK, in the 1950s. **Contact:** J. Hiller, Valley Farm, Valley Close, Studham, Dunstable, Bedfordshire LU6 2NN, UK.

Seeking contact with 731st Bomb Squadron, 452d Bomb Wing, or 3d Bomb Wing veterans who knew **James E. Christie** in Korea in 1951. **Contact:** Bill Christie, 22314 196th St. E., Orting, WA 98360.

Seeking Explosive Ordnance Disposal unit patches from any unit. **Contact:** Phil Philcox, 131 N. Bay Dr., Lynn Haven, FL 32444.

Seeking contact with veterans of USAF missions to **Haiti and Nicaragua** in the 1940s and 1950s. **Contact:** Dan Hagedorn, P. O. Box 682, Centreville, VA 22020-0682.

Seeking information on and contact with Swedish, Norwegian, British, and US personnel involved in **Operation Ball**, 1944-45, including **Capt. C. G. Hollyman, Roy F. Allemeier, Leonard C. Calloway, Wilbur L. Cowley, Dempsey J. Duprie, and Richard C. Stone**. **Contact:** Tord S. Eriksson, Övralidsg. 25:5, S-422 47, Hisings Backa, Sweden.

Seeking information on **Maj. Clair W. Roberts**, former commander of the 92d Airborne Missile Maintenance Squadron, Fairchild AFB, Wash., and former commander of the 19th AMMS, Homestead AFB, Fla. Also seeking contact with **A2C Bill Reese**. **Contact:** John A. de Sousa, 35 Gates Ave., Montauk, NY 11954.

Seeking names of crew members for **A-26 #434440**, assigned to the 10th Tactical Reconnaissance Squadron, 69th Tactical Reconnaissance Group, 9th Air Force. **Contact:** Lt. Col. Eric P. Dundatscheck, AFRES, 93 Creekside Dr., Half Moon Bay, CA 94019-2347.

Seeking contact with **Donald Ahern, Jimmy Campbell, James M. Parker, and David Spiller**, who were B-47 crew chiefs from the 321st Bomb Wing, Pinecastle AFB, Fla. **Contact:** TSgt. Norman F. Jones, USAF (Ret.), Rte. 3, Box 370, Hwy. 341, Fort Valley, GA 31030.

Seeking contact with anyone stationed at Falkirk or Grangemouth, Scotland, in 1945 who knew **Catherine (Katy or Rose) Wright Miller Duncanson**. **Contact:** Fiona Elliot, 29 Inchmead Dr., Kelso, Roxburghshire, TD5 7LW Scotland.

Seeking contact with **Joe R. Roper**, who was with the 7053d Air Intelligence Service Squadron, Germany, in 1953. **Contact:** Knud Elmer, 1228 Rainier Dr., Burlington, WA 98233.

If you need information on an individual, unit, or aircraft, or if you want to collect, donate, or trade USAF-related items, write to "Bulletin Board," Air Force Magazine, 1501 Lee Highway, Arlington, VA 22209-1198. Letters should be brief and typewritten; we reserve the right to condense them as necessary. We cannot acknowledge receipt of letters. Unsigned letters, items or services for sale or otherwise intended to bring in money, and photographs will not be used or returned.—THE EDITORS

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M0133



M0119A

#C1008
AFA Satin Podium Banner. 42"×30" with crossbar, gold fringe and tassel cord. \$55

#C1009
AFA Nylon Banner. 3'×5' with grommets top and bottom for mounting. Full color AFA logo. \$40

#M0133
AFA Totebag. 16"×12"×6" heavyweight cotton duck with reinforced handles in red and blue. AFA logo on front pocket. \$25

#M0119A
Airpower for a Strong America T-Shirt. Depicts Bald Eagle and U.S. Flag in full color. 100% pre-shrunk cotton. Sizes: M,L,XL,XXL. \$10

Order Toll-Free 1-800-727-3337

Air Force Association

New from AFA— TRICARE Prime Supplement

AFA MEMBERS are now beginning to participate in TRICARE Prime, the new DoD managed care plan cosponsored by the three major branches of the Service. To help these members guard against unexpected out-of-pocket expense, AFA has created a new supplement program.

"Our new supplement program pays your co-payments for you," explains Richmond M. Keeney, Director, Membership Operations. "Many members who tested TRICARE Prime report that routine prescriptions and doctor visits alone can run hundreds of dollars each year. And, of course, one illness or accident can send your costs skyrocketing. AFA's new supplement caps your medical expenses."

Here's How the TRICARE Prime Program Works

Every time a retiree or a military dependent visits the doctor or fills a prescription, they pay a small co-payment—\$5 to \$10 in most cases. Although each payment is small, the patient's out-of-pocket liability may still be as high as \$7,500 each year! If unexpected illness or accident strikes, the co-payment continues to be charged at each and every visit until this cap is reached.

Retirees and their dependents also pay a civilian hospitalization co-payment—at \$11 per day, it's modest—but there is no separate limit on this liability, which could run into thousands of dollars each year!

AFA's Supplement Program Covers Costly Co-payments

"Basically, the AFA Supplement pays your out-of-pocket costs," explains Mr. Keeney. "If your co-payment is \$12, the supplement pays \$12. If your co-payment is 20%, the supplement pays 20%. You're covered no matter how many times you go to the doctor or the hospital. And there's no limit to the number of prescriptions you can fill each year."

AFA's Supplement Stands Alone

AFA has a long history of providing members with protection against unexpected medical costs. The popular ChamPLUS

insurance plan has helped countless members avoid financial disaster. Now, AFA is extending that same protection to members who join TRICARE Prime. Although most insurers are taking a "wait and see" attitude, AFA is determined to provide members with the protection they need.

"Our members are joining TRICARE Prime now," explains Mr. Keeney. "They need a supplement today, not in a few years after the insurers have had time to figure out just how high the co-pays will go."

AFA's Supplement Covers All Military Managed Care Plans

TRICARE Prime is currently being rolled out in Region 11 (the states of Washington and Oregon), and all AFA members in that region are eligible to apply for AFA's Supplement. In addition, members who participate in other DoD managed care plans in other parts of the world can also apply for supplemental protection. Members who are covered by standard CHAMPUS can apply for ChamPLUS coverage.

To request information about AFA's TRICARE Prime Supplement or the ChamPLUS program, call 1-800-727-3337, ext. 2045.

Schedule for TRICARE Delivery of Care

Region 1	National Capital Area.....May 1997
Region 2	Portsmouth.....May 1997
Region 3	Eisenhower.....May 1996
Region 4	Keesler.....May 1996
Region 5	Wright-Patterson.....May 1997
Region 6	Wilford Hall.....November 1995
Region 7	Beaumont.....November 1996
Region 8	Fitzsimons.....November 1996
Region 9	San Diego.....September 1995
Region 10	David Grant.....September 1995
Region 11	Madigan.....March 1995
Region 12	Tripler.....September 1995

AFA's Supplement to TRICARE Prime Benefit Schedule

For Military Retirees Under the Age of 65 and Their Dependents

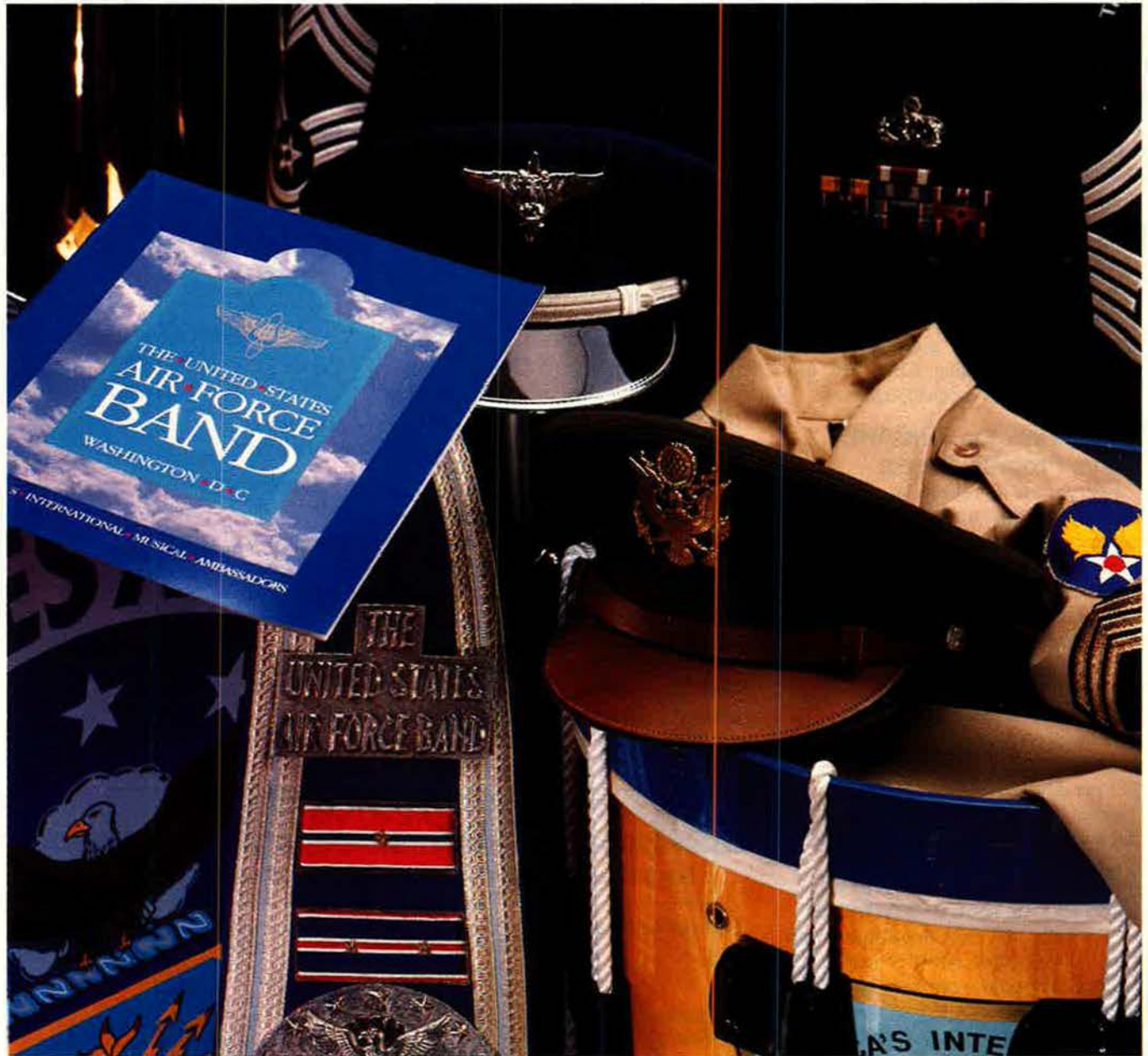
Prescription Drugs	TRICARE Prime pays most of the cost of a 30-day supply for all prescriptions but requires a co-payment of \$9 for each prescription.	AFA's Supplement to TRICARE Prime pays the required co-payment of \$9 for each prescription.
Hospitalization Outside an MTF	TRICARE Prime pays for most hospital costs but requires a co-payment of \$11 per day.	AFA's Supplement to TRICARE Prime pays the required co-payment, whatever the amount, for each hospital admission.
Outpatient Service	TRICARE Prime pays for most outpatient care services but requires a co-payment, generally \$12 for each outpatient visit.	AFA's Supplement to TRICARE Prime pays the required co-payment, whatever the amount, for each covered outpatient visit.

To apply for AFA's TRICARE Prime Supplement, call 1-800-727-3337, ext. 2045. You'll receive FREE information, including a handy chart designed to calculate the low premium.

Pieces of History

Photography by Paul Kennedy

The Band



The US Air Force Band began in 1941 as the Bolling Army Air Corps Band. The 209-member unit, based at Bolling AFB, D. C., now performs some 1,800 "commitments" a year, from the single-bugle ceremony at Arlington National Cemetery to the Guest Artist Series concerts that regularly fill a 3,800-seat auditorium.

"America's International Musical Ambassadors" and components—the Concert Band, Singing Sergeants, Strolling Strings, Airmen of Note, Ceremonial Brass, High Flight, Silver Wings, and Chamber Players—tour the world (including a recent first visit to China) and perform for appreciative audiences at home.

Memorabilia courtesy The United States Air Force Band, Bolling AFB, Washington, D. C.



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