

January 1998/\$3

# AIR FORCE

PUBLISHED BY THE AIR FORCE ASSOCIATION

MAGAZINE

**The B-2s Are Ready**

**The Chief of Staff on the Issues**

**The Electronic Triad**





**HE WORKS IN A  
TOUGH NEIGHBORHOOD.  
COLLINS AVIONICS  
MAKE IT SAFER.**

NAVIGATION • COMMUNICATIONS • DATA LINKS • FLIGHT MANAGEMENT • SYSTEMS INTEGRATION

Collins innovations come to life in an unmatched variety of navigation and communications products that keep him connected and situationally aware. They make his mission more effective and easier to integrate within any theater of operations. Then, when the job is done, they guide him home. Call and find out how we can help make the neighborhood safer. Our Customer Proposal Response Team will find answers for land, sea or air. Call (800) 321-2223 or (319) 295-5100. [www.cacd.rockwell.com](http://www.cacd.rockwell.com)

 **Rockwell**

*Avionics & Communications*

**Collins**

# AIR FORCE

PUBLISHED BY THE AIR FORCE ASSOCIATION

January 1998, Vol. 81, No. 1

MAGAZINE

- 4 Letters
- 12 Aerospace World
- 23 Index to Advertisers
- 23 Senior Staff Changes
- 31 Flashback
- 59 Industrial Associates
- 68 Verbatim
- 69 Valor
- 74 AFA/AEF National Report
- 82 State Contacts
- 83 Books
- 84 Unit Reunions
- 85 This Is AFA
- 86 Bulletin Board
- 88 Pieces of History

- 3 **Editorial: The Measure of Airpower**  
By John T. Correll  
*The Gulf War standard was spectacular, but it is seven years old. Today, airpower meets a higher mark.*

- 24 **The B-2s Are Ready**  
By John A. Tirpak  
*The stealth bomber is a mature system, prepared for deep, precision strike missions worldwide.*

- 32 **War in Cyberspace**  
By John T. Correll  
*A Presidential commission warns that we may not even know when we're under attack.*

- 37 **The Chief Holds Course**  
By John A. Tirpak  
*Gen. Michael E. Ryan begins his tour on notes of teamwork and optimism about the Air Force's future and direction.*

- 41 **The Pentagon Prescribes Tricare**  
By Peter Grier  
*The Department of Defense is not enthusiastic about other health care alternatives, such as FEHBP, for retirees.*



60

- 46 **Viper Country**  
*Since 1979 the 388th Fighter Wing at Hill AFB, Utah, has flown nearly every operational variant of the F-16.*

- 54 **The Electronic Triad**  
By Robert Wall  
*Sometimes, the first thing the theater commander needs will be an Information Superiority/Air Expeditionary Force built around E-3s, E-8s, and RC-135s.*

- 60 **To Halt an Enemy**  
By James Kitfield  
*The strategy still emphasizes force-on-force land warfare in which the casualty count is expected to be high.*

- 66 **Yeager's Encore**  
*Fifty years later, an aviation legend repeats his feat.*

- 70 **Dereliction of Duty**  
*The author of a blockbuster book says the Vietnam War was lost in Washington before the US armed forces were fully deployed and committed.*



**About the cover:** The stealthy B-2 proves ready for action. See "The B-2s Are Ready," p. 24. Photo by Randy Jolly.



32

AIR FORCE Magazine (ISSN 0730-6784) January 1998 (Vol. 81, No. 1) is published monthly by the Air Force Association, 1501 Lee Highway, Arlington, VA 22209-1198. Phone (703) 247-5800. Second-class postage paid at Arlington, Va., and additional mailing offices. **Membership Rate:** \$30 per year; \$75 for three-year membership. **Life Membership (nonrefundable):** \$450 single payment, \$475 extended payments. **Subscription Rate:** \$30 per year; \$25 per year additional for postage to foreign addresses (except Canada and Mexico, which are \$9 per year additional). Regular issues \$3 each. Special issues (USAF Almanac issue and Anniversary issue) \$5 each. **Change of address** requires four weeks' notice. Please include mailing label. **POSTMASTER:** Send changes of address to Air Force Association, 1501 Lee Highway, Arlington, VA 22209-1198. Publisher assumes no responsibility for unsolicited material. Trademark registered by Air Force Association. Copyright 1998 by Air Force Association. All rights reserved. Pan-American Copyright Convention.

**All the craftiness of the enemy  
without the philosophical differences.**

We can learn much from our enemy.

Especially when its mission is instructive, not destructive.

Based on thirty years of proven experience with sub- and supersonic designs, the Raytheon Aircraft **SUPER MQM**

is the most advanced evolution of our premier aerial target missile system.

Pushing the high g envelope required

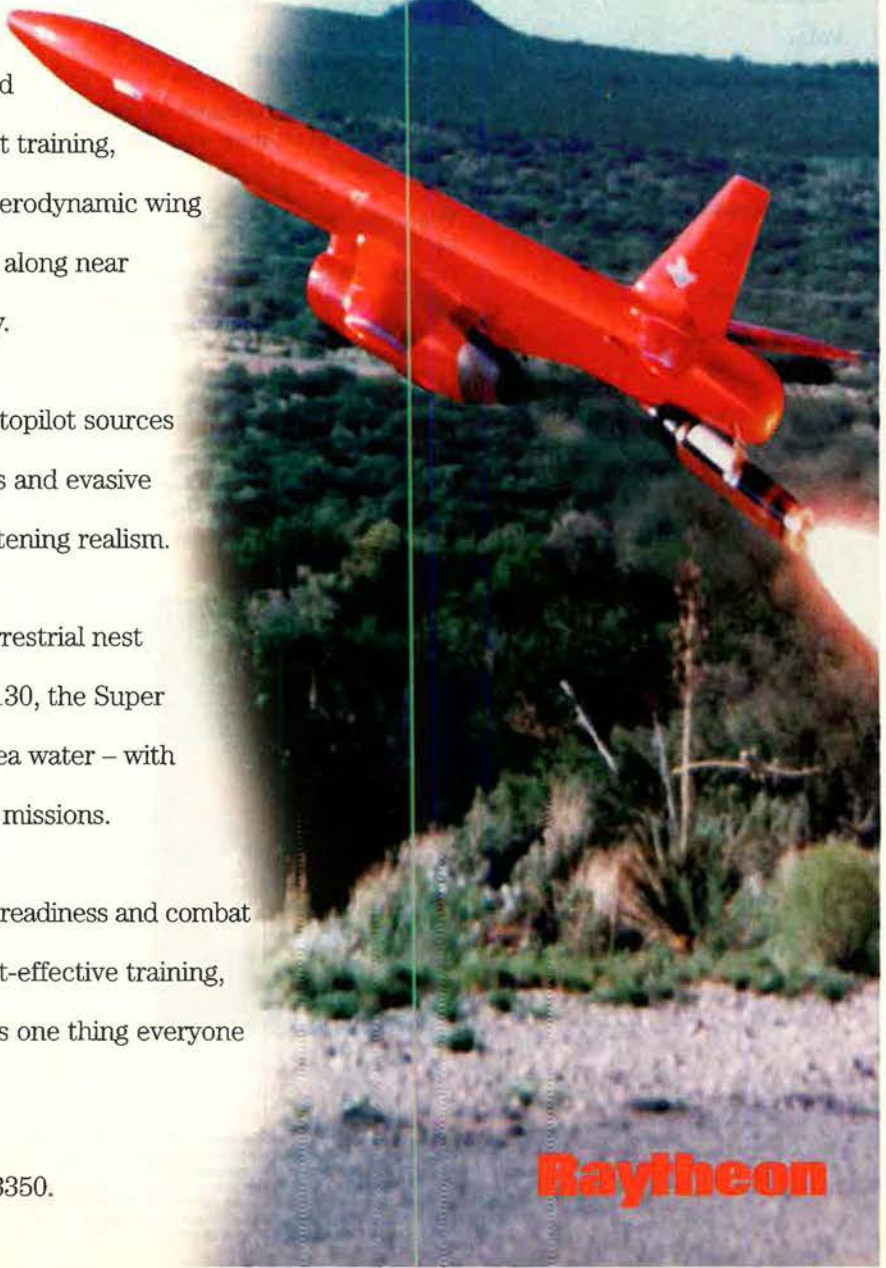
for US military air-to-air combat training, the Super MQM's NASA-assisted aerodynamic wing and its 1200 lb. thrust engine shriek along near Mach I with unsurpassed stability.

The ultrasensitive digital autopilot sources preprogrammed advanced offensives and evasive maneuvers to challenge with frightening realism.

Whether launched from a mobile terrestrial nest or from beneath the belly of a C-130, the Super MQM is fully recoverable – even in sea water – with an unprecedented average life of 20 missions.

In an environment where air defense readiness and combat success depends on realistic, cost-effective training, it's nice to know the Super MQM is one thing everyone can agree on.

For more information, call 316-676-3350.



**Raytheon**

By John T. Correll, Editor in Chief

## The Measure of Airpower

**T**HE Persian Gulf War of 1991 set a high standard for airpower. It began with a 38-day air campaign that destroyed Iraq's command and control system, closed down the bridges and supply routes, and put the world's sixth largest air force out of business for the duration of the war.

Iraqi tanks moved from their entrenched positions but twice—in the ill-fated lurch toward Khafji and, later, in the desperate retreat from Kuwait—and were shot to pieces by airpower on both occasions.

Before the ground offensive started, the casualties and desertions reduced Iraqi troop strength by at least half. Two-thirds of the armor had been destroyed. In just four days, coalition ground forces rolled over what was left of the world's fourth largest army. US personnel losses were 615 killed and wounded rather than the 20,000 casualties that had been anticipated.

There were memorable feats of precision attack. In the most famous example, a fighter rolled in on the Iraqi Defense Ministry in Baghdad and tucked a bomb neatly down the air shaft. In another instance, F-111Fs hit an oil-pumping manifold from 20 miles away with a precision guided bomb.

The Gulf War standard for airpower has loomed large in the various force alignment exercises of the 1990s—the Bottom-Up Review, the Quadrennial Defense Review, and most recently, the National Defense Panel report—with critics attacking it and defenders defending it in the competition for resources.

What even airpower advocates tend to overlook, though, is that the Gulf War standard is seven years old, says Brig. Gen. Charles F. Wald, who becomes USAF director of strategic planning this month. The Air Force today meets a higher standard than it did in 1991.

■ Precision attack missions in the Gulf War were flown by a few kinds of aircraft. Only the F-117s, the F-111Fs, and a squadron of F-15Es were equipped to deliver laser guided

bombs. By contrast, says Wald, the Air Force has about 450 precision droppers today, and the number increases steadily. Furthermore, the Navstar Global Positioning System receivers used in the Gulf War were handheld models. GPS was not yet wired into the aircraft. Today, it is integral to F-16s and B-2s, adding to

**The Gulf War standard was spectacular, but it is seven years old. Today, airpower meets a higher mark.**

their prowess in precision attack. F-15Es will soon be similarly equipped.

■ Some of today's premier systems had little or no involvement in the Gulf War. The B-1B bomber lacked a conventional attack capability. The B-2 was still in flight testing. The deep-looking Joint STARS surveillance aircraft was there in the form of two developmental prototypes.

Today, the conventionally armed B-1B deploys as part of air expeditionary forces. The B-2 has demonstrated that it can strike 16 targets on a single sortie. Joint STARS is in great demand for the whole gamut of theater operations.

■ The capability to attack at night and in weather was quite limited in Desert Storm. LANTIRN (Low-Altitude Navigation and Targeting Infrared for Night) pods were scarce. Presently, about 400 Air Force aircraft have them.

Operations in the Gulf were delayed by bad weather. Wald says that with today's systems, notably the B-2, "you can see through weather with the radar and pick out cars in the parking lot." In the near future, he adds, the Air Force will have

almost routine capability to drop guided munitions "day or night, in almost all weather short of a hurricane."

■ Intelligence in the Gulf War was "stovepiped," primarily fed from the battle area to Washington and then back to the theater. Sometimes the combat forces got the information they needed in time to use it. Sometimes they didn't. Today, the shooters are in the loop to get intelligence directly from the sensors.

"You can focus your radar on the same thing the off-board synthetic aperture radar is looking at," Wald says. "The commander has real-time targeting. The intelligence capability at wing level at Aviano Air Base in Italy today is probably 10 times better than [theater commander Gen. H. Norman] Schwarzkopf had in the Gulf War."

It is fashionable once again to disparage airpower. Newspaper analysts tell us that the four-day ground offensive, not the air campaign, was decisive in the Gulf. They do not explain how, before the ground offensive began, the Iraqi force came to be so depleted, demoralized, and unable to conduct coherent military operations.

The General Accounting Office has tried twice to prove that aerial precision attack doesn't amount to much. The Pentagon's main war planning model rates airpower as less effective than its actual performance in the Gulf. When budget reduction candidates are identified, airpower leads the list.

The nation's top defense leaders were right in 1991 when they said airpower was the decisive element in the Gulf War. It is perverse that seven years and many improvements later, airpower is still fighting for respect.

It is not an automatic assumption that airpower will be decisive in every case, but it is the best thing we have going for us. It is difficult to imagine a future conflict of any major scope in which landpower or seapower could survive—much less be decisive—without airpower. ■

## Mixed Signals

Editor in Chief John T. Correll's editorial "Sending Signals and Projecting Power" [December, p. 3] is a simplistic and ineffective attempt once again to pit the Navy against the Air Force. Correll's failure to recognize the operational flexibility of naval forces and their unique contribution to Joint operations demonstrates his shallow understanding of the manner in which our military will and must operate in the future.

The US Air Force is unmatched in its ability to generate sustained, precise combat power from above during theater-level air campaigns; it is one of the many reasons this nation maintains an Air Force. The Gulf War convincingly demonstrated the Air Force's considerable skill in carrying out this most important core competency.

However, not every war will be a Gulf War and not every conflict suited to the talents of just one service. Saddam Hussein's recent saber-rattling is a very different situation than that which faced the US and its allies in August 1990.

Moves by the Secretary of Defense to bolster American combat power in the Gulf by redeploying two aircraft carrier battle groups represent tacit recognition of this fact. Support for military options in the international community, especially among the Gulf states, remains low.

Should a military option become necessary, it is unclear whether the considerable USAF combat power now deployed to Saudi Arabia would be permitted by that nation to overstep its stated purpose for being there; to patrol the no-fly zone. Should Saudi Arabia permit that force to be used, there is no question that it would be a potent contribution to any military operation.

But are we willing to allow that nation to exercise veto power over our use of force? Carrier-based airpower is immune to such considerations.

Lost also in Correll's editorial is his understanding of the considerable striking power contained in the hundreds of cruise missiles carried by

the cruisers, destroyers, and submarines that accompany the two aircraft carriers in the region. Imagine the synergy resident in a lightning strike that combined the ability of these cruise missiles to "put out the lights" with the overwhelming capability of both land- and carrier-based airpower to destroy key targets.

We will fight in the future as a Joint force, making best use of the unique core competencies of the services. Like a chef, the Joint Forces Commander will select the best blend of ingredients to prepare his sauce.

Editorials like Correll's do little to advance the case of the Air Force or the cause of national defense.

Lt. Cmdr. Bryan G. McGrath,  
USN  
Arlington, Va.

I totally agree with Correll that the American public receives an inaccurate impression of what the military capabilities truly are in times when short notice reaction to crisis is necessary. What I do not believe Correll understands is that USAF is our own worst enemy. We deserve this type of press because we do a poor job of selling ourselves to senior leadership in Washington and the American people at large.

I was privileged to serve with both the 82d Airborne Division and the XVIII Airborne Corps immediately following the Gulf War. This period lasted until August 1995. During this time I watched, from inside the Army, a concerted effort to turn public opinion from the success of the air cam-

**Do you have a comment about a current issue? Write to "Letters," Air Force Magazine, 1501 Lee Highway, Arlington, VA 22209-1198. (E-mail: letters@afa.org.) Letters should be concise, timely, and preferably typed. We cannot acknowledge receipt of letters. We reserve the right to condense letters. Unsigned letters are not acceptable. Include city/base and state. Photographs cannot be used or returned.—THE EDITORS**

paign and the Gulf War, to the commonly used term "The 100-Hour War."

Listen closely to our politicians as they discuss our military modernization plans in the media. They depict the necessity to maintain 10 full divisions and a large carrier-based Navy; also listen to the complaints concerning the cost impact of the F-22.

In November 1991, Army Gen. Gordon R. Sullivan, at the Forces Command commanders' conference, discussed what would become the Army game plan for modernization. (This meeting was the genesis of what is now known as the Army Battle Labs.) That plan included a concerted advertising campaign using the results of exercises and experimentation to validate contentions aimed at convincing Congress and the American people that money must be spent on force modernization.

There was no malicious intent in this plan. The Army realized it needed to improve on battlefield management, extended lethality, and deployability. If you recall, [the Army] was our strongest supporter for the C-17.

As this plan progressed, it was salted with more advertising that the money being spent at the Advanced Warfighter Experiment was showing a definite return on investment in ensuring America had a strong defense based on a modernized, fully manned land force. This was done through doctrinal validation in experimentation which was presented to Congress at each round of budget talks and the QDR.

Now take a close look at the advertising campaign for the Air Force. We must learn how to sell ourselves in the same fashion. The flow of major media personalities through Ft. Hood, Texas, should convince any doubters that the Army has a superb sales campaign. We need to learn to employ the media in the same fashion. We also need to do more.

At the same MSC Conference, Sullivan also addressed the need to improve Army doctrine and the educational programs for soldiers at all ranks. As a result of this outstanding effort on the part of Training and

Doctrine Command, everyone from the most junior ranks to senior officers all know Army doctrine and positions on key subjects. More importantly, they are saying the same things.

We have taken a giant first step by establishing the Air Force Doctrine Center. This process must become an aggressive effort aimed at implementing Gen. [Ronald R.] Fogleman's initiative to educate the force and sustain this program. It must be embedded in every facet of our professional education process. Why not do this in the same fashion as the Army? It works.

The bottom line is that the Air Force must look internally and ask itself why things like the *Nimitz* issue ever came up in the first place.

We are our own worst enemy when it comes to education, doctrine, and public relations. If we are to meet our strategic objectives of true Global Reach/Global Power, we must educate ourselves first, and the American public as well, that when the 911 call comes in, the Air Force is the weapon of choice.

Col. Edward S. Modica Jr.,  
USAF  
Langley AFB, Va.

The editorial is disappointing and inaccurate. As an AFA member, I have always respected the content, accuracy, and thought-provoking perspective of *Air Force* Magazine editorials, but this leaves much to be desired. Inaccuracies include:

(a) Air Force aircraft based in Saudi Arabia and Bahrain are not "eminently capable of whatever military action was desired." They are, in fact, totally subject to the rules of the host governments and could have been completely grounded if those hosts so decreed. Currently, Oman is the latest Gulf state to restrict US air operations; others have imposed restrictions before, during, and since the Gulf War.

(b) Boasting that "during the Gulf War, the US Air Force shot down 41 of his aircraft, compared to three [Saddam Hussein] lost to Navy fighters" is a classic "self-fulfilling prophecy." If a coach starts five basketball players, they will obviously account for the scoring, and he won't criticize the bench riders for their ineffectiveness.

If Gens. [Buster] Glosson and [Charles] Horner select Air Force F-15s to "start" against the Iraqi air force, as they did in 1991, we can hardly criticize Navy F-14s and F/A-18s for any insufficiency. Our Air Force flying "70 percent of the US air sor-

ties in the Gulf War" is commendable but merely reflects its selection under an air tasking order.

(c) Not only does the Navy argue that "carriers are the force of choice," but so do the United States Senate, the House, the National Security Council, the Joint Chiefs of Staff, and even a hardly "pro-carrier" White House. Each has gone on record endorsing carriers for those missions where they are superior.

(d) Comparing land-based air with carriers on the basis of time to deploy, strike capability, and cost is so sophisticated and complex a study that volumes have been prepared addressing the issue, pro and con. The logistics challenges of Air Force deployments—the security, housing, airborne/seaborne cargo pipeline, fuel/food/water, maintenance/spares, ordnance, need for airborne tankers—stagger the imagination and should signal a "go slow" approach on this one.

(e) Suggesting "intercontinental reach is well established as a characteristic of land-based airpower" conveniently ignores realities of the 1986 Libya attacks: French denial of overfly rights, Spanish base support limitations, incredible amounts of tanker support, and the need for Navy carrier-based strike assistance. These are facts that should have been cited in the editorial.

To place 24 F-111F and three EF-111A aircraft on target required deployment of no fewer than 23 KC-10 tankers and 30 KC-135 tankers to RAFs Mildenhall and Fairford [in the United Kingdom]—and these in addition to defending fighters, airlift support, several SR-71s, and others.

(f) To support the 2d Bomb Wing's seven B-52Gs that flew from Barksdale AFB, La., to Iraq in January 1991 required an enormous array of KC-135 and KC-10 tankers deployed all over the world, a lot of advanced planning and site preparation, and a lot of time to implement one mission; frankly, it was not that easy to deliver their modest cruise missile payload.

Finally, what message was intended, what outcome was desired, and what contribution to our overall defense posture was sought? If the media misconstrued the *Nimitz* deployment, the fault is theirs, not the Navy's.

Land-based air is every bit as costly as Navy carrier air. Knocking the capacity and strengths of carrier-based air may provide personal satisfaction, but it runs counter to the basic concept of applying the best military force to the specific threat at hand—

# AIR FORCE

PUBLISHED BY THE AIR FORCE ASSOCIATION MAGAZINE

**Publisher**  
John A. Shaud

## Editorial

**Editor in Chief**  
John T. Correll

**Executive Editor**  
Robert S. Dudley

**Senior Editor**  
John A. Tirpak

**Associate Editor**  
Tamar A. Mehuron

**Contributing Editor**  
John L. Frisbee

**Managing Editor**  
Suzann Chapman

**Assistant Managing Editor**  
Frances McKenney

**Director of Production**  
Robert T. Shaughness

**Art Director**  
Guy Aceto

**Research Librarian**  
Pearlie M. Draughn

**Editorial Associates**  
Juliette Kelsey-Holland  
Chanel Sartor

**Administrative Assistant**  
Wendy Alexis Peddrick

## Advertising

**Advertising Director**  
Patricia Teevan  
1501 Lee Highway  
Arlington, Va. 22209-1198  
Tel: 703/247-5800  
Telefax: 703/247-5855

**Industry Relations Manager**  
Jennifer Krause • 703/247-5800

**US and European Sales Manager**  
William Farrell • 847/295-2305  
Lake Forest, IL



Circulation audited by  
Business Publication Audit



## Air Force Association

1501 Lee Highway • Arlington, VA 22209-1198

Telephone: (703) 247-5800

Toll-free: (800) 727-3337

Fax: (703) 247-5853

To select documents and receive them by fax: (800) 232-3563

E-mail: [information@afa.org](mailto:information@afa.org)

Internet: <http://www.afa.org/>

### AFA's Mission

- To promote aerospace power and a strong national defense.
- To support the needs of the Air Force and Air Force people.
- To explain these needs to the American people.

Telephone calls to (703) 247-5800 or (800) 727-3337:

If you know your party's extension, **press 1.**

For a customer-service representative, **press 3.**

Or stay on the line and an operator will direct your call.

### Customer Service

For questions about membership, insurance, change of address or other data changes, magazine delivery problems, or member benefit programs, select the "Customer Service" option.

### E-Mail Addresses

Communications/news media/*Crossfeed* [com@afa.org](mailto:com@afa.org)

Customer Service ..... [custserv@afa.org](mailto:custserv@afa.org)

Eaker Institute ..... [eaker@afa.org](mailto:eaker@afa.org)

Industry Relations/Advertising ..... [irl@afa.org](mailto:irl@afa.org)

Information ..... [information@afa.org](mailto:information@afa.org)

Magazine Editorial Offices ... [afmag@afa.org](mailto:afmag@afa.org)

Magazine Letters ..... [letters@afa.org](mailto:letters@afa.org)

National Defense and Congressional Issues [ndi@afa.org](mailto:ndi@afa.org)

Field Services ..... [fildsvcs@afa.org](mailto:fildsvcs@afa.org)

Aerospace Education Foundation [aefstaff@aef.org](mailto:aefstaff@aef.org)

Air Force Memorial Foundation ... [afmf@afa.org](mailto:afmf@afa.org)

For individual staff members:  
first initial, last name, @afa.org  
(example: [jdoe@afa.org](mailto:jdoe@afa.org))

## Letters

of selecting the right option no matter who flies it. When land-based air is best equipped and available, it should be used; when sea-based air is better situated, it gets the call.

Why is this so hard to grasp? Why the petty bickering?

Has the fight over dollars gotten that severe? All have roles and unique skills that clearly complement each other, and it is fortunate that the Joint Chiefs have the maturity and the facts to appreciate this. Readers have a right to expect better judgment and professionalism from *Air Force Magazine* and not a resurgence of this "us vs. them" syndrome.

Lt. Jim Mulquin,  
USN (Ret.)  
Bethesda, Md.

What a great editorial! I wonder whose responsibility it is to make sure we get credit for what we (the Air Force) do? Could it be that we are? I think the carrier has a lot of impact visually as a "big stick." We need to market our air packages with the same visual and psychological methods.

Somehow we have to impress upon the public and our non-Air Force leadership that we reach the farthest, the fastest, and can hit the hardest! Something like a full page ad with an ominous picture of a B-52, B-1B, or F-15E and a caption like: "When the President asks where the carriers are, we answer, 'Sir, if you really want to show strength, the Air Force is already there.'"

Larry Rogers  
Troy, Ohio

### Battle Continues

Your article "The Battle of Arlington Ridge [*December, p. 9*] is disingenuous. Your specious argument that a "former commandant of the Marine Corps confirmed that he had been informed in 1994 of plans for the Air Force Memorial and 'did not impose any objection'" is totally misleading.

You know very well that at that time a design for your statuary had not been selected, the site had not even been fully defined, and nowhere were there any maps, landscape design blueprints, or other graphic renderings of your proposed memorial or its site!

Further, your attempt to denigrate a Congressman and another official either in the decision process for your memorial, or for objecting to the Air Force Association's selection of the Iwo Jima Memorial site for an Air Force Memorial, is shallow. Refer-

ring to them as "a former Marine" and "also a former Marine," while true, was your attempt to make them appear *so prejudiced* that they are unable to otherwise *fairly perform* in their current positions as chairman of the House Rules Committee and US Senator. This is irrelevant and yet more subterfuge from an association I would expect a lot more of.

1st Lt. Gerald F. Merna,  
USMC (Ret.)  
Arlington, Va.

■ *At a US Senate hearing Sept. 11, Gen. Carl Mundy Jr. testified that when he was commandant of the Marine Corps in 1994, "we were aware"—"we" being the Marine Corps—of plans for the Air Force Memorial and "did not impose any objection." When the design concept was approved in March 1996, it received prominent coverage, including pictures, in the Washington Post. Opposition to the memorial began in April 1997 with a neighborhood group, with Marine Corps veterans joining in the protest later on. The objections are about the location, which was the point of the notification to the Marine Corps in 1994, not to a design for the "statuary."*—THE EDITORS

As a life member of the Air Force Association and a retired USAF officer, I take particular interest in the debate over the approved site of the Air Force Memorial in Arlington, Va. I firmly support its siting and take great issue with those whose attacks are late and off the mark.

As a resident of Virginia who frequently visits the historic and commemorative sites in the area, I am always chagrined at the absence of a suitable memorial to those of us who wore the uniform of the US Air Force in peacetime and in war.

For years now, I have listened to [Lt. Gen. Robert D.] Springer, and now [Maj. Gen. Charles D.] Link, as they led efforts to educate us on the importance of a nation's commitment to its fallen air warriors and to solicit public and private support donations. They offer a compelling rationale, and I commend their message to the largest possible audience.

The more contemporary issue now raging is its siting on Arlington Ridge. Some local Arlington residents and former US Marines have suggested this site could detract from the Iwo Jima Memorial's beautiful site and impose upon those private reflections about those war-



riors whose memory is therein honored. I find that argument without merit.

I've visited the site many times. The site will not detract from nor mar the setting for private reflections. The Air Force Memorial is a good way down the ridge, largely hidden from the view of those visiting the Iwo Jima Memorial, and designed so as not to interfere with that experience in any way.

Furthermore, it is a fitting place to site the Air Force Memorial due to its proximity to peaceful and tranquil Arlington Cemetery and Ft. Myer, where the first military flight commenced. It is also a site which has undergone every bureaucratic hurdle—sequentially and publicly—to earn approval.

Other proposed sites, such as on the Mall near the Air and Space Museum, would offer no opportunity for soulful reflection or allow us to render due homage to our fallen air warriors.

Col. Robert M. Johnston,  
USAF (Ret.)  
Falls Church, Va.

I don't understand why the Marines have this hang up about the Air Force Memorial site. After all, they were in the loop from the beginning. That would have been the time for them to complain, not now at this late hour.

As far back as 1995, this memorial has received approval of the three agencies responsible for the placement and design of memorials in the Capitol. The Air Force Memorial Foundation has done everything required and was given this site to build the memorial on.

How Rep. [Gerald B.H.] Solomon can say that the Air Force Memorial would encroach on the "hallowed ground" of the Iwo Jima Memorial is beyond me. After all, the Iwo Jima Memorial is within eight acres of the 25-acre Nevius Tract of land. The Air Force Memorial will be on a two-acre site. The Iwo Jima Memorial has the high ground while the Air Force Memorial is downhill with a row of trees and over 500 feet between the two memorials.

It seems to me that this has become a political issue. It seems that the people who live in the area don't want any other memorials on this tract of land. Solomon and Sen. Pat Roberts are former Marines.

Back in 1950 when the Chinese moved into Korea with some 120,000 men, the 1st Marine Division and four Army battalions were forced to retreat to the south tip of Chosin Res-

ervoir. Surrounded by about 70,000 enemy troops, it was up to the Navy and Marine fighters to keep the Chinese at bay. It was [up to] the Air Force with their C-47s and the C-119s to supply [the besieged troops] and do air evacuation of their dead and wounded.

The C-119s dropped many tons of supplies to the Marines while the C-47s, the best bird the Air Force ever had, landed on a 2,500-foot strip with a total of about 547,000 pounds of supplies and evacuated 4,608 wounded and 81 dead—all of this over a six-day period.

The C-119s [also] dropped several spans of a bridge to replace part of a bridge the Chinese had destroyed. I was in Korea in 1951 and 1952 as a weather forecaster. I spent my last 85 days with the 1st Marine Air Division at K-6. I found the Marines had the greatest respect for the Air Force because of the help that we gave them during their time of need.

I would like to ask Roberts and Solomon: How many of those Marines whom the Air Force evacuated, or the families of the dead whom the Air Force returned to United States control, or those who made the march back to friendly lines, would vote against the Air Force Memorial site? Not many, I think.

With all the drawdown in the military this is not the time for any two services to be at odds but the time to help each other. I am sorry to say I believe that this is a political issue rather than the Marine Corps not wanting the Air Force Memorial built on Arlington Ridge.

Those who have died while serving in the United States Air Force deserve better than having the memorial made a political football.

TSgt. Samuel M. Gardner,  
USAF (Ret.)  
Garden City, Kan.

I am outraged that anyone associated with USMC would publicly descend to describing a memorial to a sister service as pollution. Regardless of how this controversy turns out, the leadership of USMC must now do the right thing—disavow this ugly and disrespectful slur on USAF, or own up to not really being serious about Jointness . . . or civility.

Col. Mark A. Torreano,  
USAF (Ret.)  
Rockville, Md.

As an active, Air Force "alum," I want to register my *full* support for the current and approved Air Force Memorial site and design. The recent flap registered in your publication and

a few others does not represent the feeling of Air Force veterans or the American public.

The current design and Air Force Memorial site selection are the best additions Arlington has seen in a long time. The placement of another service memorial next to the Marine Memorial and the Netherlands Carillon will compliment the hallowed area very effectively and most certainly attract more people to the dedicated service that memorials are intended to impart.

Furthermore, the design is absolutely superior—a beautiful blend of openness to the sky, splendid sharp lines, and simplicity. Please register my support loud and clear.

William R. "Roger" Carter  
Manassas, Va.

As with a real donnybrook there is no rationale to the belated objections but much hyperbolic commentary. The site was properly sought and officially approved. End of subject, as I see it!

Some will seize on any cause, however insignificant, to publicize their existence to their constituency (and of course the press in reporting the opinions of the verbal combatants make the issue seem a major one). Go to the approved site and then, should you find something that the approving authorities failed to take into consideration, let us know about it!

I don't think you will find anything to object to, but go take a look!

Edward F. O'Toole Jr.  
Toms River, N.J.

#### Afterburner & Some

With respect to your otherwise excellent coverage in the November article "Reserve and Guard on Afterburner" [p. 28], I would like to point out an omission. The 178th Fighter Wing (ANG), Springfield, Ohio, was a *major* contributor to the first rainbow team in the Middle East along with the Wisconsin Guard and the Hill AFB, Utah, Reserve unit.

The 178th was a part of the three-unit Northern Watch for the period April 26–June 4, 1997. We provided four aircraft for our third of the rainbow team, and we flew during the middle month of the three-month tour.

The rainbow team was contrived in part by one of our pilots, Capt. Doug Cligrow, who was working at the Guard Bureau in the Plans Division. As an aside, our unit had also been part of Operation Southern Watch only seven months prior, Aug. 11–Sept. 26.

We are proud of the fact that this was the 178th FW's first real-world

contingency operation. The 178th stands proud as being able to support the Total Force concept with all of our deployments for a nine-month period: Southern Watch, Air Warrior II, Northern Watch, and Red Flag.

Capt. Barry G. James,  
ANG  
Springfield-Beckley MAP, Ohio

Good article and I only noted one glaring error which concerned the training schedule of traditional Guardsmen, formerly Sunday Troops. You stated the annual training requirements incorrectly. It should have read: one weekend per month and 15 days' annual training on active duty per year.

The Air Guard aim is to perform maintenance at a perfect level and keep our aircrews the best trained the Air Force has. With today's requirements that is a tough order to fill on 24 drill days and 15 active duty days per year. Many enlisted and all aircrews do more than that—sometimes many more. Thank heavens we have full-time air techs and Active Guard Reserves to maintain day to day continuity.

The ANG and AFRC are definitely on afterburner. The level of training is so much higher and so much more comprehensive (and demanding) than 20 years ago. I have two sons in the Air Guard. They enjoy it, as I did, and would like to be "career soldiers," but they have civilian jobs, too, and employers already look at the annual training as nonproductive time. Some workers have to use their yearly vacation to perform their annual training.

It definitely would help the traditional Guardsmen to do double drills and maybe two two-week stints of annual training per year. Can you imagine the reaction of employers (like me) to a worker requesting more time away from her/his civilian job? It is a tough balance for commanders to live with and hard on the Guard to keep current.

MSgt. Dennis E. Kelsey,  
ANG (Ret.)  
Connell, Wash.

Finally people are beginning to recognize what is really happening to all of our military and Reserve and Guard forces. Col. Peter E. Boyes, USAF (Ret.), hit the nail smack on the head in the last sentence of [his] letter [November, p. 8]: "What employer wants—or can afford—a worker who is frequently called for duty in anything but a national security action?"

With a military so downsized that we can't invade that great military power Haiti or support a 30,000-man police action in Bosnia without calling up the reserves, one has to wonder what would happen in the event of a full-scale national security emergency, i.e., war.

I believe that service and reserve associations should stop bragging about how well the Reserve and Guard forces have supported the Active forces in these little brushfire police actions and start questioning why this support was necessary in the first place.

Lt. Col. William H. Silcox,  
USAF (Ret.)  
Incline Village, Nev.

The Guard and Reserve have fought for years to improve their standing in the Total Force. Given the past and impending military budget constraints and pilot retention problems, I feel it is time for a major paradigm shift. The peacetime Air Force should be composed of mostly Guard and Reserve rather than mostly Active personnel, especially in the rated ranks.

It may be an oversimplification, but using a figure taken from your article, if the Guard and Reserve cost only about 60 percent as much as their Active counterparts, we could have 1,667 Guard and Reserve fliers for the same budget dollars [as] 1,000 [USAF] fliers. By shifting, possibly in place, from Active to Guard and Reserve, we could therefore grow to a larger Total Air Force for the same budget dollars.

That kind of shift and those kinds of manning gains could solve a lot of woes. It takes advantage of the higher retention inherent in the Guard and Reserves; it would solve many of the [USAF] pilots' complaints leading to their low retention; and [it would] provide more people to share the optempo burden. It is time for the Guard and Reserve to make up a larger share of the Total Air Force.

Capt. William S. Crouse,  
ANG  
McGuire AFB, N.J.

**Airborne Laser: No. 1**

Regarding [John A. Tirpak's] article "Defense at the Speed of Light" [November, p. 36]: With an Airborne Laser range of 500 miles or more and with a fighter wing escort, an ABL aircraft wing would be the most impenetrable force ever conceived. Opposing fighter aircraft could be removed or destroyed miles away, even

before [they are] flight ready or operational. Incoming missiles could be destroyed hundreds of miles away before getting near the ABL or their escorts.

If ever any military concept could be considered practically impenetrable, the ABL is it. The only two possibilities for shoot down would be overwhelming force (more incoming missiles than response capability), as you mentioned, or an opposing ABL system with greater range and/or power.

The ABL should be not only the No. 1 priority of the Air Force (the F-22 fighter should be a very distant second because the ABL could shoot it or any other fighter down before a response), the ABL should be the No. 1 priority of the Defense Department.

This revolution in defensive warfare needs to be made operational as soon as possible.

Terry Welander  
San Ramon, Calif.

**Policy Statement Lacking**

I was really impressed with the November issue, but the AFA Statement of Policy "Global Force" [p. 3] sparked me to write. I'm worried that the policy statement fell short and focused on some wrong themes. Of great import to me was that the statement of my association tended to isolate the negative and failed to provide the vision and positive energy needed by us all to meet the nation's challenges.

A key premise for much of what follows in the policy statement is your assertion that "the primary purpose of the armed forces is to fight and win wars." I think a more detailed and broader vision of future defense challenges is necessary for an organization of the stature of AFA.

The "fight and win wars" [outlook] seriously misses national strategic objectives and is too simplistic in the Global Engagement or Joint Vision 2010 framework.

The AFA corporate leadership must come to terms with the transition from [a] World War II–Cold War era to our post–Cold War (Partnership for Peace, expanded NATO, cooperative arrangements with Russia and Japan, etc.) environment. To do so spurs strategic thinkers to form vision-based concepts to facilitate and effect the true Revolution in Military Affairs we seek.

The AFA policy statement further discusses airpower as if it is an iso-

lated feature of the Air Force alone. We, as airmen, do feel strongly about airpower being what we do best and primarily. But in our changing future, we must better acknowledge the synergy of airpower provided the Joint Forces Commander from all the services' capabilities (Army aviation, Navy carrier air, Marine aviation, and Air Force). Only by doing so will the nation effect a strengthened vision of applying military power against an adversary's strengths to produce the "halt" and ultimately defeat their strategic objectives.

Further, your attention on force reduction as reflecting a reduction in capability is troubling. I believe Global Engagement and the Air Force portion of [the] QDR acknowledge increased capability. (F-22 is a quantum increase in airpower in fewer numbers than the F-15 because of its supercruise and stealthy capability; likewise [the] C-17 provides greater global reach with fewer airframes than earlier lift technology.)

Again, I worry that AFA may be losing the airpower capability message in the arithmetic of counting airframes. Carried over to our people, this same idea prevails.

The AFA policy statement reflects people turbulence and the probability of further force reduction as creating "hardship." I think you need to look again at our capability equations in terms of reduced maintenance ratios to effect equal sortie production. When technology provides improvements, then it is incumbent on our organizations to improve, too. Usually this means fewer people. As well, with fewer forward locations there are fewer people requirements.

You say that health care is the "most critical" issue facing active and retired personnel. Your medical care [position], I believe, is aimed at retired AFA members. Despite its own share of challenges, health care, for the active forces, continues to be available, professional, and competent.

In sum, I recognize the difficulty of forming a broad policy statement—and AFA hit the mark overall. The shortfall is in the negative tone of the size of drawdown equating to a weaker Air Force. As one goes on to read [the November issue], AFA's policy statement is much better communicated.

Lt. Col. D.M. Aldrich,  
USAF  
Burke, Va.

#### Linebacker—Another Look

As a matter of accuracy and fairness, your cover page and article on

Linebacker II [November, p. 50] should have been titled something like "BUFFs at War" or "Linebacker II: the B-52 Experience." Linebacker II included a host of non-B-52 folks who were given just passing mention in the article.

For example, the author (in error) reduces the F-111 role to "The F-111 force was assigned missions against nine targets," and "F-111s and Vought A-7s attacked northern airfields." Further, a table titled "Linebacker II Total Night USAF Sorties" does not include any of the many night sorties flown by F-111s during Linebacker II.

Please rerun your June 1973 article entitled "Whispering Death: The F-111 in SEA" so that any other writers who want to take a shot at "looking back" at Linebacker II can come a little closer to the mark.

For what it's worth, I flew 129 combat missions in the F-111—including several in Linebacker II—and 130 in the RF-101. That era may be ancient history to most people, but it's more like yesterday to those who were there!

Lt. Col. Carlos Higgins,  
USAF (Ret.)  
Austin, Texas

I read with great interest your article on Linebacker II. I noticed that by error of [omission] you failed to recognize other services' contributions to this important operation. Marines of VMCF squadrons supported every mission and sortie with their EA-6A aircraft. They provided the necessary ECM to imported Soviet Early Warning, Acquisition, and Fire Control Radars, [detering] the SA-2 engagement of bomber aircraft. Without their presence, Linebacker II would have been known as "The Great B-52 Turkey Shoot."

Lt. Col. Marshall A. Smith,  
USMC  
Seattle, Wash.

I read with great interest your cover article "Linebacker II," as I spent those 12 days with other members of the Tactical Analysis Division team trying to analyze and report to MACV commanders on the effectiveness of B-52 strikes in North Vietnam. Although we worked directly for the chief of air operations, our information was very limited since SAC ran its own war from afar, with only a small liaison office at MACV. This made coordinating the efforts of hundreds of other players more difficult, even though their participation was critical. These included Air Force, Marine, and Navy fighters, SAM suppression, reconnaissance, forward air

controllers, rescue, etc., whose individual stories have been carried in *Air Force Magazine*.

[Walter J.] Boyne's comment that "the B-52s were under the command of SAC, not 'chopped' to a theater commander" was apparently meant to imply that individual command authority is the preferred way to fight an air war involving combined forces. Obviously, the SAC commander at Guam agreed with that concept. However, having personally assisted several general officers in MACV with their end-of-tour reports, I remember the one point they all wanted emphasized: the need for a "single manager" in conducting a theater air war.

Lt. Col. Richard F. Quimby,  
USAF (Ret.)  
Fruit Heights, Utah

I was astonished when I opened your November 1997 edition to p. 50 and saw Jack Fellows' artwork. Did someone check this for accuracy before using it? If I am not mistaken, the fighter with US markings is a MiG-21! If it were indeed a MiG, the artwork would still be inaccurate. The North Vietnamese rarely fired SA-2s when MiGs were up, for fear of hitting their own aircraft, yet the art shows numerous missiles being fired.

Col. John Schroeder,  
USAF (Ret.)  
Mooreville, N.C.

■ *Reader Schroeder and many others who wrote and called are mistaken about the markings on the MiG-21. It has North Vietnamese red and gold markings, which are still used today. US red, white, and blue markings have a stripe through the middle of the bars.—THE EDITORS*



Enjoyed your November issue, especially the article on Linebacker II. I wish every member of our Congress and the Executive Branch could be made to understand the lessons you brought out. I spent 1966 in Saigon and well know that the same strategy used in Linebacker II was

proposed at that time, but the politicians knew better. "Those who don't learn from history are doomed to repeat it"—or something like that!

Lt. Col. Kenneth P. Hearn,  
USAF (Ret.)  
Oakridge, Tenn.

[In the] article on Linebacker II, the concept is given that the war could have been won in 1965 with all-out Linebacker attacks and, thus, we would have had fewer deaths and a military victory. I'm in complete agreement with this idea.

As a young airman in 1967, I was a gung ho warrior, ready to go to Southeast Asia and do my part just as many others of my family had done in World War I and World War II. But, as much as I supported our mission and its commanders, I had a funny feeling.

At each base in Texas and Montana that I was assigned to, there was a kind of confusion—you didn't dare bad-mouth the President, but what sense was there to this war, especially when most Air Force people agreed that we could have the victory?

The bottom line is simple: As Americans, all of us, military and civilian, have a duty to protect and defend our country, which includes making sure our government exercises responsibility and good judgment in all of its affairs both at home and abroad.

William D. Reid  
Essexville, Mich.

Many thanks for the fine article about Operation Linebacker II. I flew as a navigator on three of those missions, one from Guam and the other two from U Tapao, Thailand. As a navigator, I was the only crew member who did not have the capacity to see outside. The other crew members told me that that was my good fortune, although I am not so sure. Sometimes imagination can be worse than reality, but we didn't debate the point too much.

The drama of that operation was something I will never forget, and I will never be prouder of anything I will ever do. Our crew flew the first night, and we preflighted aircraft the second night. On the second night, I had the privilege of watching fully loaded BUFFs take off from Guam for two solid hours, at very short intervals. The majesty and awe of that sight cannot be imagined; it must be experienced to be believed.

I think the crew members had only two regrets: that we didn't do some-

thing like that 10 years previously and that we were not allowed to finish the job. The fact is, at the end of the operation, North Vietnam was absolutely defenseless. These were our private thoughts, though. Since the war, I have become an attorney and a judge, but never have I been privileged to participate in so professional an organization as SAC. I will always be grateful that I was accorded the privilege of participating in so fine an organization.

Bruce Woody  
Dallas, Texas

#### F-22 Note

I object to the Air Force assigning the name Raptor to the F-22. First, it's inappropriate. Raptor is not the name of a specific bird but the generic name for a class of birds; it's the equivalent of officially naming it F-22 Fighter. Second, it's traditional for the manufacturer to name its new aircraft. The Air Force was arbitrary and arrogant in overruling Lockheed's expressed intention of naming it Lightning II, a name of grand historical significance.

It's not too late to correct this embarrassing and shameful mistake. There is a precedent. In 1962 the Air Force redesignated the McDonnell F-110 Spectre as the F-4C Phantom II. In that case it was at the direction of no less than the Secretary of Defense, but I believe my rationale is more compelling.

TSgt. John R. Radloff,  
USAF (Ret.)  
Rochester, N.Y.

#### Deliberate Force

Thanks for the excellent article on Deliberate Force [October, p. 36]. While you spent a fair amount of time commenting on the Serb command-and-control architecture, the NATO coalition C<sup>2</sup> was mentioned in only two sentences. Most of the readers know better, but some elements of the article lend credence to the public belief that an "Iron Eagle" type mission really is possible.

While only airborne systems were mentioned in the article, I feel some attention could have been given to the ground-based team members, specifically, the Air Control Squadron portion of the Theater Air Control System.

The 603d Air Control Squadron, based at Aviano AB, Italy, receives datalinks from other ground-based radars as well as airborne platforms. This data is forwarded to the Combined Air Operations Center at Vicen-

za, Italy, as part of the recognizable air picture. During Deliberate Force, the Aviano-based part of the 603d ("Maroon" control) used airspace over the northern Adriatic as the "on deck" air refueling anchor for aircraft about to enter the Area of Responsibility. This necessitated constant coordination with the CAOC, Airborne Battlefield Command and Control Center, and AWACS to ensure strike aircraft had a compatible tanker available to off-load fuel.

Meanwhile, Det. 1 ("Coastline" control) of the 603d, based at Jacotenente, Italy, was a key player in controlling the majority of Aerial Refueling rendezvous. The first day of Deliberate Force the control team worked entirely without an Air Tasking Order while controlling nine tankers in at least two separate anchors. While other platforms perform a similar mission with sometimes dozens of people, Coastline made do with the standard configuration of two surveillance operators and a three-member control team—all utilizing the Modular Control Equipment. Coastline continues this role 24 hours a day, seven days a week. Both locations are still participating on a daily basis with many of the same units and systems that took part in Deliberate Force.

It is easy to forget the ground-based members of the C<sup>2</sup> team, but aircrew members rely on a part of this team on nearly every mission they fly.

SSgt. Austin Blessard,  
USAF  
Aviano AB, Italy

#### Objection to Khobar Decision

I just finished reading the opinions expressed in the *Air Force Magazine's* "Letters" section regarding the "disciplinary" action following the Khobar Towers tragedy. I think Brig. Gen. Gerald E. McIlmoyle, USAF (Ret.), has it wrong for several reasons [November, p. 6].

First, we were operating in someone else's sovereign territory; second, it was peacetime; third, although I don't know the details, I'm sure that the politicians in both Washington and Riyadh both had some constraints on [Brig. Gen. Terry J.] Schwalier's ability to act; fourth, it was Gen. [Ronald R.] Fogleman's call, and that is history. I suspect that Fogleman had more information on the issue than did McIlmoyle.

Lt. Col. Gerald P. Hanner,  
USAF (Ret.)  
Papillion, Neb.

### First Five—More Dates

Regarding the letter from Paul Moon [*November, p. 10*]: Got out my Form 5 and confirmed that our crew flew our first mission over Korea on July 2, 1950. This was well ahead of the Aug. 29 date in his letter. It was a nine-hour flight with our goal to interdict and punish invading forces in any way possible.

We started out at about 18,000 feet and eventually ended up at 4,000 feet bombing bridges and strafing. We were not the first 19th Bomb Group crew up there. Our plane was having jugs changed on two engines when the fighting started. It took us two days to get the plane in commission and one day to fly to Okinawa and get set up.

Other [members] of our crews had gone immediately and had bombs on Korea two or three days before us.

Our problems were compounded by a typhoon a few days after our arrival. It blew down all of our tents and made a mess of our administrative and support capability. It was hard to plan, maintain, load, brief, and get ready for a mission with everything in turmoil, but we managed. By the way, my form shows I flew missions on July 7, 9, 10, 16, 19, 21, and 24. I ended up with 51 missions and 508 hours.

The morale was high and the determination to hit the targets was unbelievable. Many great stories evolved during that "police action." I was in the 28th Bomb Squadron. I also flew combat in Vietnam and was shot down on way to Frankfurt, Germany in World War II—walked out over the Pyrenees.

Col. George F. Bennett,  
USAF (Ret.)  
Horseshoe Bay, Texas

Moon was correct that the 19th BG was the first B-29 group to join the Korean War effort. However, he was incorrect as to the date. I was in the 28th BS of the 19th BG, and my Form 5 shows that we flew to Okinawa on June 28, 1950, and we flew our first mission to Korea on June 30, 1950. The 30th BS and the 93d BS were part of the 19th BG, and they also arrived on Okinawa before the end of June 1950. Our first mission was to try to slow the advance of the North Koreans in their initial drive south toward Seoul. We flew our second mission on July 1, 1950.

Lt. Col. George E. Hardy,  
USAF (Ret.)  
Framingham, Mass.

I served with the 19th BG in 1950 and 1951, and I couldn't agree more

with Moon's comments about the esprit de corps that existed in this group. I do disagree, however, with his date of the first mission. It was not Sept. 3.

The 19th came to Okinawa from Guam on June 25–26 and flew their first mission on June 27, 1950. Everything I've read since states that the first bombs were dropped by B-26s on June 28, 1950. Since my best buddy was a crewman on the first raid and it was also his 21st birthday, there is no doubt about the date of June 27. It wouldn't be the first time the "official" and "actual" dates were in disagreement.

It's also true that the 19th BG was the only group flying B-29s that was not part of SAC. Information I discovered was that [Gen. Douglas] MacArthur had a soft spot for the 19th—the group flew him out of the Philippines in 1942. After the formation of SAC, he did not want to relinquish control of his only strike force to a group sitting at a desk in Washington. Remembering the egos of those involved, this seems highly plausible.

Those of us from the 19th feel that the 19th may be the only Air Force unit (maybe the only military unit) to have seen combat at the very beginning of World War II (they were in the Philippines in 1941) and the Korean War. The 19th still serves as the 19th Air Refueling Group at Robins AFB, Ga.

Richard R. Oakley  
Youngstown, Ohio

### Valor Added

There is much more to the story "The Only Way Out" [*Valor, November, p. 41*]. The air evacuation by the 21st Troop Carrier Squadron of wounded members of the 1st Marine Division from Hagaru-ri and Koto-ri at the Chosin Reservoir was only one of the feats of this remarkable squadron. The 21st was named the "Kyushu Gypsies" because they had no permanent "campsite" until the squadron finally found a home at K-16 (Seoul City Airport, South Korea). As far as I know, the Kyushu Gypsies was the only troop carrier squadron permanently stationed in Korea.

The Gypsies performed almost all of the air medical evacuations from the front lines. The landing strips were usually dirt strips bulldozed near the medical treatment stations. The wounded were brought back to the major airfields for hospitalization or transport back to Japan by larger aircraft. Another task performed by the Gypsies was the Beachcomber

operation. Gypsy crews flew supplies and personnel to islands in the Yellow Sea, north of the 38th Parallel, that were occupied by UN forces. The northern-most terminus serviced by the operation was Ch'o Do Island, well into North Korean territory.

Recognition should also be given to the 13th Royal Hellenic Squadron. These gallant Greeks were attached to, and were an integral part of, the 21st. The Greek aircrews lived and flew with and shared all of the hazards of the Kyushu Gypsies, including the airlift at Hagaru-ri.

Maj. Dana L. Mansur Jr.,  
USAF (Ret.)  
Flemington, N.J.

There were more than 11 C-47s of the 21st [TCS] involved in the evacuation of Chosin Reservoir. I flew a C-47 out of Itazuke, Japan, with a load of cargo up to a strip at Hamhung. From there I made the short flight up to Chosin where I picked up a load of walking wounded, then flew back down to Hamhung where the C-47 was loaded with stretchers and cleared for Itazuke. The weather was deteriorating, and by the time I got to Itazuke it was below minimums. As there was no fuel available at Hamhung I had just enough fuel for Itazuke. I made a successful approach. All were safe except for one Marine who had died in flight.

Col. Robert Muldrow,  
USAF (Ret.)  
Salt Lake City

Your fine writing brought back memories of the cold and sad, desperate days of late November and the following days of December 1950—quite a reversal from the successes just following the Inchon landings. The 21st TCS had a nickname, "Kyushu Gypsies," derived from the opinion that the squadron was being moved around "like a bunch of Gypsies." I was an airman 3d class at this time in my four-year USAF experience. I was assigned to the 16th TCS, 314th TC Gp (C-119s), but had two close buddies with the 21st.

Charlie Carlson  
Hurst, Texas

### Langley Where?

Just a small correction with reference to the "Senior Staff Changes" [*November, p. 20*], specifically the assignment information for Gen. (sel.) John A. Gordon. Headquarters for the CIA is at Langley, Va., not at Langley AFB, Va.

Col. Charles J. McCarthy,  
USAF (Ret.)  
Great Falls, Mont.

# Aerospace World

By Peter Grier

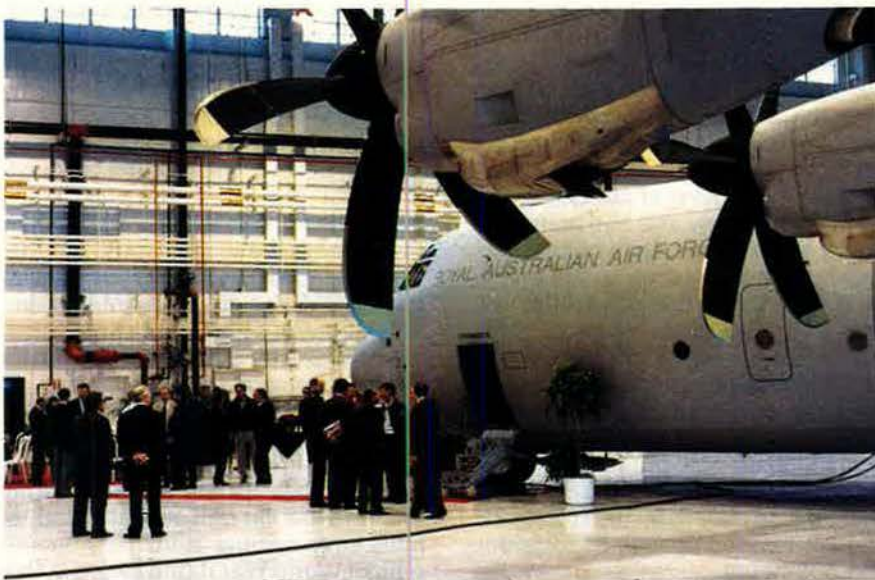
## Navy Honors USAF War Hero

In an unprecedented tribute, the United States Navy christened one of its ships with the name of an Air Force officer—a hero from the Vietnam War who gave his life to save a Marine Corps aircrew partner.

The service announced in November that it would name an ammunition ship after the late Capt. Steven L. Bennett, a Vietnam-era OV-10 pilot and recipient of the Medal of Honor.

During a mission over Vietnam in 1972, the OV-10 bearing Bennett and his backseater, Marine Capt. Mike Brown, was severely damaged by a missile. To save the life of Brown, whose parachute had been shredded by the missile, Bennett elected to try to ditch the OV-10 into the Gulf of Tonkin, although he knew a pilot in the front seat of that aircraft had never survived a ditching. The maneuver cost him his life but saved Brown.

The incident—for which Bennett was awarded the Medal of Honor—formed the basis of *Air Force Magazine's* first installment of the "Valor" column, published in February 1973.



Staff photo by Guy Aceito

*In early December, US and foreign military members and Congressional staffers got a close-up view of the new C-130J airlifter when Lockheed Martin brought to Washington this C-130J-30, a stretch version of this latest in the long line of C-130 transports. It was flown in a series of takeoffs and landings that demonstrated its remarkable rate of climb. Major advancements include a new propulsion system and state-of-the-art cockpit. This demonstration C-130J-30 is bound for the Royal Australian Air Force.*

## Congress Raises Pilot Bonus

The Air Force reported Nov. 19 that Congress' strengthening of the Aviator Continuation Pay program marks a big step on the way to solving the problem of low retention in the pilot force. The provision was contained in the Fiscal 1998 National Defense Authorization Act, signed into law Nov. 18.

The key provision increases Aviator Continuation Pay for Fiscal 1997 and 1998 eligibles from a \$12,000 annual payment to \$22,000 per year. Known as the "pilot bonus," ACP goes to pilots after they complete an initial flying training service obligation and if they agree to stay on active duty through their 14th year.

The increase in the ACP restores the original value of the bonus established in 1989.

"With this measure, Air Force officials want to send a clear message that the service provides a variety of options to retain its expe-

USAF photo by SSgt. Angela Stafford



*In a unique tribute, the US Navy christened an ammunition ship with the name Capt. Steven L. Bennett, to honor a USAF OV-10 pilot who sacrificed his life during the Vietnam War to save the life of his Marine Corps observer.*

rienced pilots to meet readiness requirements," said Lt. Gen. Michael D. McGinty, deputy chief of staff for personnel.

A record low 29.7 percent of eligible pilots accepted an ACP bonus this year, according to Air Force statistics. USAF officials hope the changes will turn the program around.

The act also contains authority for variable-length ACP agreements. The Air Force will offer one-, two-, and three-year agreements at \$6,000, \$9,000, and \$12,000 per year, respectively.

McGinty added, "These increases in compensation are only one part of our efforts to retain these important midcareer pilots." [See "Congressional News," p. 22.]

### USAF Gets MiGs From Moldova

The US secretly bought 21 modern MiG-29 jet fighters from the cash-strapped nation of Moldova this fall and has transported them to Wright-Patterson AFB, Ohio, for study, the Defense Department announced Nov. 4.

The airplanes—which included some nuclear-capable S models—cost the US government some \$40 million, according to reports. The reason for the purchase was not so much to get a peek at their technology, which US analysts have seen before, but to prevent them from falling into the hands of another buyer: Iran.

Some USAF officials hope to use the MiGs to reestablish the Cold War-era "aggressor" squadron, which flew dissimilar combat training missions



*A MiG-29B trainer, one of the 21 MiG-29s the Defense Department purchased from Moldova to ensure the former Soviet jets were not sold to rogue nations, is winched into a USAF C-17 for shipment to the US in late October.*

at Nellis AFB, Nev. This unit flew Soviet-made or Soviet-style aircraft and tactics, providing US pilots the chance to test their skills against the forces of possible adversaries. It was disbanded in the early 1990s.

A major impediment, however: where to find the money to revive this unit?

### F-22 Balances Weight, Capability

The F-22 is already some 200 to 300 pounds heavier than it should be, and will probably gain more as development proceeds, but the added weight should not materially affect the airplane's abilities, said Lockheed

Martin officials in a briefing for reporters.

Weight is currently causing the aircraft to narrowly miss three of its 40 performance specifications, but "we believe we have margin in the performance" to handle the problem, said Paul Schlein, Lockheed Martin's deputy air vehicle product manager.

There are no plans to put the airplane on a diet, as the overriding goal now is cost reduction, pointed out Schlein.

Efforts to make the F-22 easier to maintain, through changes in the placement of some removable panels, are one reason it is becoming heavier. But Schlein says the weight issue won't hinder future upgrades that add even more heft. "If we lose a couple of feet per second [in performance], we do it," he said.

### Congress Wins Depot Showdown

Despite serious political concerns, President Clinton swallowed a Congressional demand for legislation that will have the effect of steering Air Force maintenance work to three government depots.

Clinton on Nov. 18 signed the 1998 defense authorization bill into law. The bill contained the contested depot provision.

At issue in the dispute was the fate of jobs at soon-to-be-shuttered McClellan AFB, Calif., and Kelly AFB, Texas. The Clinton Administration has backed a so-called "privatization in place" policy, under which private firms could bid for repair work they would do at the two depots once the Air Force leaves.

However, that did not sit well with



*Uzbekistan soldiers get a parachute check before taking practice jumps from a tower at Ft. Bragg, N.C., in preparation for jumps from a USAF C-17. Some 900 soldiers from former Warsaw Pact nations participated with US personnel in Central Asian Battalion '97 on the longest-distance airborne operation to date.*

USAF photo by SSgt. David Wilcoxson

members of Congress representing three USAF air logistics centers that are scheduled to remain open: Ogden ALC at Hill AFB, Utah; Oklahoma City ALC, Tinker AFB, Okla.; and Warner Robins ALC, Robins AFB, Ga.

These lawmakers managed to insert a provision in the bill that would require contractors using McClellan or Kelly to include in their bids the market cost of those facilities.

That negates a major price advantage they might hold over govern-

ment depots, which are required to "charge" enough to recover their own costs. The White House had threatened to veto the bill over the issue. The number of House and Senate votes for the legislation, however, was decisive.

### **USAF Centralizes Space Operations**

A new 14th Air Force Space Operations Center opened at Vandenberg AFB, Calif., on Nov. 13. The

center will provide USAF the capability to track and control all of its space assets from one location.

Specific tasks will include such things as monitoring of space surveillance systems, satellites, and missile warning and space launch systems. The 14th AF commander will be able to task Air Force space forces to support commanders in warfighting theaters around the globe, stated the Air Force.

The center will issue a Space Task-

## **NDP Takes Aim at "Two War" Strategy**

Maintaining the capability to fight and win two Major Theater Wars at about the same time is unnecessary and diverts resources from other, more pressing defense needs.

That was the major conclusion of the National Defense Panel, a group of civilian and retired military experts set up by Congress to provide an independent counterpoint to the Pentagon's Quadrennial Defense Review. The panel, which worked for nearly a year, released its final report on Dec. 1.

The NDP asserted that there is only a remote possibility that two Major Theater Wars would break out simultaneously or in quick succession, and it said that the money spent to maintain the force structure such a strategy requires should instead be spent on "experimentation" and "new capabilities."

By contrast, the Pentagon, in its QDR, placed a two-MTW strategy as the centerpiece of its planning decisions.

The group championed a "transformation strategy" that would elevate prototyping and Joint forces to top priority, while maintaining standing forces more closely matched to realistic threats and operating tempo. It also suggested that the US be "more selective" in choosing to participate in Military Operations Other Than War, in order to reduce operating tempo and save money.

Panel Chairman Phillip A. Odeen, head of the defense contractor BDM, said the group had been in "pretty close contact" with top defense leaders in both houses of Congress throughout their research. He said he expects that panel members will be called to testify at the same hearings this winter at which Pentagon leaders present and justify their upcoming defense budgets. The panel anticipated flat defense spending levels in the coming decade.

The NDP determined that nations hostile to the US and its interests will likely "learn from the Gulf War" and either use asymmetrical means to inflict harm on American forces or, at the very least, deny the US a "build up" phase in a future war. NDP members pointed to the dangers posed by information warfare, weapons of mass destruction such as chemical and biological weapons, and expressed worry about a coming age of urban warfare and terrorism. They urged the United States to formally embrace the concept of "homeland" defense, suggesting that the Pentagon involve the National Guard much more deeply in this enterprise but giving short shrift to the idea of deployment of a ballistic missile defense system to protect US territory.

Taken in concert with the NDP's view that forward basing will become less available as time goes by, it put emphasis on stealthy, long-range aircraft "rather than smaller, shorter-range aircraft" as a proper place to put resources and expressed "concern" that this is not the way the Pentagon is investing in the future.

Asked specifically if the panel was referring to more B-2 bombers, NDP member Gen. James P. McCarthy, USAF (Ret.), said the group was more concerned that there seem to be no plans for long-range attack airplanes beyond the B-2. Odeen explained that bombers may not necessarily be the right successor to the B-2; he averred that the US might be better off pursuing unmanned aerial vehicles or some other types of long-range aircraft.

The panel urged all of the armed forces to become lighter, more mobile, and more flexible, specifically questioning the wisdom of buying any new "heavy" weapons, such as a new main battle tank for the Army. In addition, it counseled the services to set cutoff dates for modifying and upgrading "legacy systems" of today that simply won't be able to handle the threat of three decades from now. Instead, it argued that the US can "accept some risk" in the near term by divesting itself of such systems and applying the savings to modernization.

"The panel believes priority must go to the future," it said in its report.

In the future world of 2020 and beyond, "we will need greater mobility, precision, speed, stealth, and strike ranges while we sharply reduce our logistics footprint," the panel asserted. Future operations will be "increasingly Joint, combined, and interagency. Furthermore, the reserves will need to be fully integrated with active forces."

The NDP urged "at least two" more rounds of base closings to better harmonize force structure and infrastructure, as well as to free up money for modernization. It asserted that there is no longer any point to maintaining a "surge" capability in defense industry, since future wars will likely be long over before any replacement hardware could be rushed into production; it also suggested even greater streamlining of defense procurement practices.

A "budget wedge" of \$5 billion-\$10 billion annually is needed to "support a transformation strategy," and the funds should come from cutting bases and terminating increasingly expensive legacy systems.



ing Order, similar to the Air Tasking Order, for assets under its control. Previously, space units received such orders from diverse elements, including Cheyenne Mountain AS, Colo., US Space Command, Air Force Space Command, and wing command posts.

### Air Force Meets Recruiting Goals Again

For the 18th year in a row, Air Force Recruiting Service met its annual target for new enlistees when Jorge Sandoval Jr. became the 30,200th young person to head for Basic Military Training at Lackland AFB, Texas.

Hitting the goal—again—was not easy, noted AFRS Vice Commander Col. Bob Mead. The strong economy gave many youngsters good-paying alternatives to military service. An increase in the number of high school students opting for college complicated recruiters' jobs further.

"We work very, very hard to make it look like it's easy," said Mead.

Sandoval, a 22-year-old Texas native, signed on for a six-year Air Force enlistment as a ground radar systems apprentice. After basic, he will spend 36 weeks at Keesler AFB, Miss., for operational training. Like 99.1 percent of Air Force recruits this year, Sandoval has completed high school. Like 19 percent of the new airmen, he accumulated 15 or more semester hours of college credit before deciding to enlist.

Surveys show the top reason young people join USAF is to take advantage of training and education opportunities. Sandoval is typical here as well—he will receive 67 semester hours of college credit through the Community College of the Air Force upon finishing his operational training.

Sandoval had no part in another recruiting record the Air Force set this year, however. Women comprised 28.1 percent of new enlistees, an all-time high and up two percent from last year.

### DoD Announces Sweeping Overhaul ...

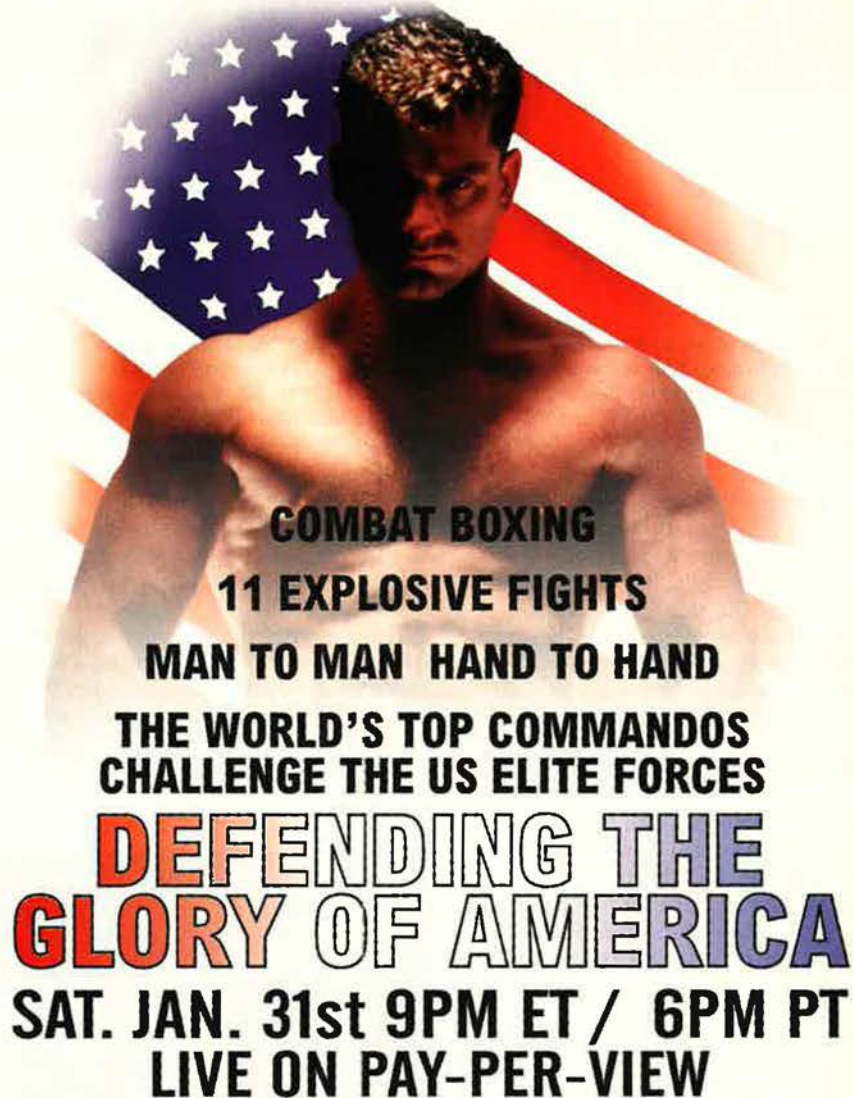
Defense Secretary William S. Cohen on Nov. 10 announced a sweeping plan to trim thousands of jobs from the top levels of the Pentagon bureaucracy, streamline operations, and close more bases—all to free up billions of dollars for modernization programs.

Cuts in the Office of the Secretary of Defense reflect a change in philosophy, Cohen said at a briefing. "We are getting out of the management business," he said. "We are going to

NAVY SEALS - GREEN BERETS - GUARD - FORCE RECONS - MARINES  
AIR FORCE - PARARESQUE - RANGERS - COMBAT CONTROL - ARMY - NAVY

# USA vs WORLD

RUSSIAN KGB - BRITISH SAS - LEBANON - SYRIA - CANADA  
GERMANY - JAPAN - RUSSIAN ALPHA - IRAN - CUBA - MEXICO



**COMBAT BOXING**  
**11 EXPLOSIVE FIGHTS**  
**MAN TO MAN HAND TO HAND**  
**THE WORLD'S TOP COMMANDOS**  
**CHALLENGE THE US ELITE FORCES**  
**DEFENDING THE**  
**GLORY OF AMERICA**  
**SAT. JAN. 31st 9PM ET / 6PM PT**  
**LIVE ON PAY-PER-VIEW**

**TO ORDER CALL**

**YOUR CABLE OR SATELLITE PROVIDER**

**CLOSED CIRCUIT AT SELECT MILITARY BASES**  
**CONTACT YOUR MWR**

**COMBAT BOXING** developed exclusively for commandos by Hall of Fame boxing legend **EDDIE FUTCH**. Explosive new rules guarantee action, intensity and courage rarely seen in the ring, enforced by the honorable referee **MILLS LANE**.

**WWW.USAVSWORLD.COM**

A Presentation of UMFC Inc.

Fighters Subject to Change.

**NR**

USAF photo by MSgt. Bob Pederson



*Two penguins pose in front of a C-141 from McChord AFB, Wash., as it's unloaded in Antarctica to resupply National Science Foundation workers. Landing can be tricky in bad weather, say the pilots, but because they don't have enough fuel to return to their New Zealand staging area, there's no going back once past the point of safe return—about 30 minutes out from landing.*

focus on core functions—policy decisions and recommendations.”

Specifically, the new Defense Reform Initiative calls for the elimination of 30,000 positions from the 141,000 now employed by OSD and its support agencies. Civilians in eliminated jobs will get pink slips; military personnel will be reassigned to duty elsewhere.

The Office of the Joint Chiefs of Staff and its related staff will be reduced by 29 percent, to about 1,800 jobs, over the next five years. Ten percent of the 18,000 troops and officers who work around the world in US military command headquarters will be taken off administrative duties and assigned combat-related jobs.

**... Plus Realignments, Closures**

In addition to the personnel cuts, the DRI calls for the formation of a new Threat Reduction and Treaty Compliance Agency by combining the functions of three existing bodies: the On-Site Inspection Agency, the Defense Special Weapons Agency, and the Defense Technology Security Administration.

Among other structure shuffles, the DRI would also eliminate the post of assistant secretary of defense for command, control, communications, computers, and intelligence and create a new office intended to focus only on intelligence matters.

The most controversial aspect of the DRI, however, will probably be its call for two more rounds of base clos-

ings—one in 2001 and another in 2005. This year Congress, sensitive to the job concerns of constituents, rejected one Pentagon proposal for more base cuts.

Even without base closings, the DRI could save the Pentagon \$6 billion a year, say defense officials. That could greatly help them in their effort to boost procurement spending from today's \$45 billion level to a \$60 billion goal.

**Military Health Care Defended**

Over the last 10 years, military health care has become equal to or better than any health care system in the country, according to Department of Defense officials.

They issued the statement to rebut a recent series of articles, produced by Cox News Service and widely reprinted in newspapers around the US, which was highly critical of military health care.

John F. Mazzuchi, deputy assistant secretary of defense for clinical services, said the Cox series focused on older cases and glossed over quality improvements that the Pentagon has made in recent years.

During the 1970s and early 1980s, many of the physicians coming into the military simply walked into recruiting offices—and thus were not always the best in their professions. But since then, said Mazzuchi, DoD has launched two initiatives intended to produce homegrown doctors: the Health Professions Scholarship Program and the Uniformed Services University of the Health Sciences. Only about one in 20 applicants to the USUHS is admitted, and today both programs provide the vast majority of military physicians.

DoD now pays doctors more if they have current board certifications in their specialties or subspecialties. DoD since 1988 has required its physicians to pass state licensing exams.



*The Ring Nebula (M57), approximately one-half light-year in diameter—or 2.95 trillion miles wide—and 1,500 light-years away, is the first image captured by DoD's new 4-meter-class telescope, located in Hawaii. Air Force Research Laboratory officials expect image quality will improve after calibration changes and further testing.*

### Retiree Dental Plan Contract Awarded

Sacramento-based Delta Dental Plan of California has won a five-year Pentagon contract to provide low-cost dental insurance to military retirees and their families. The plan will provide services throughout the US, Puerto Rico, Canada, US Virgin Islands, Guam, American Samoa, and Northern Mariana Islands. It will be available beginning Feb. 1.

Costs will vary, depending on location. But monthly premiums will average \$12.26 for one person, \$23.80 for two, and \$39.31 for a family, according to Delta. The annual deductible will be \$50, and annual benefits will be capped at \$1,000, not counting preventative and diagnostic services.

Enrollees must initially sign up for 24 months and pay four months' premiums up front. After the first two years have passed, enrollment will be on a month-to-month basis.

The plan will feature a variety of services, from basic checkups to treatment of gum disease and oral surgery. Some services—mainly diagnostic and preventative ones—will not require a co-payment. Others will require cost sharing of 20 to 40 percent.

Delta will mail information about the plan to those who are eligible.

### JSF Power Plant Passes Milestone

Pratt & Whitney has successfully completed the Critical Design Review milestone for the two F119 derivative engines it is developing for the Joint Strike Fighter. The mid-November end of the three-month CDR process means that Pratt & Whitney can now start building and testing actual power plants.

"The review confirmed that the designs do meet the requirements for the JSF program," said Robert Cea, JSF engine program manager.

Pratt & Whitney has faced challenges in adapting its F119 engine, originally developed for the F-22, to the multiple needs of the JSF program, said company officials. The engine must fit the designs of the JSF's two competing airframe manufacturers, Boeing and Lockheed Martin, as well as meet the varying needs of the carrier-based, conventional, and short takeoff and landing JSF variants.

Engineers at Pratt & Whitney started with the same engine core, then added different fans and low turbines for model variations. JSF power plants will share gear boxes, lubrication systems, external architecture, and controls with F-22 Rap-

ILA '98 information is available from Messe Berlin.

Messe Berlin GmbH  
Messedamm 22 · D-14055 Berlin  
Tel. +49 (30) 30 38-22 76  
Fax +49 (30) 30 38-20 59  
<http://www.messe-berlin.de/ila>

International Aerospace Exhibition Conventions-Conferences  
**May 18-24, 1998**



tor models—significantly reducing development risk, according to firm officials.

General Electric, with versions of its YF120 engine, is also in the running for the JSF propulsion award.

### USAF Seeks Korean War-Era Families

DoD, the Air Force, and the other services are mounting an intense effort to find family members of servicemen who vanished in the Korean War and still remain unaccounted for.



The public outreach follows negotiated agreements with North Korea allowing joint searches in that secretive country.

"We've begun to open some doors in North Korea, and we need to re-establish contact with the families of our unaccounted-for servicemen," says Tom Perry, chief of the Air Force Missing Persons Branch at the Air Force Personnel Center.

Four joint operations inside North Korea have already been conducted. The remains of what are believed to be seven US soldiers have been re-

## USAF's Hammer in the Gulf

When tensions with Iraq flared anew in November, the Air Force was on the scene immediately with a large force of battle-ready combat and support aircraft.

An augmented fleet of USAF fighters, bombers, and attack aircraft was at the ready, backed up by tankers, reconnaissance, and communications aircraft.

Here is a breakdown of the Air Force power in the Gulf:

**Residual force:** USAF had long had a strong presence in the region. At the end of September, six weeks before the onset of the latest crisis, the Air Force was already in the Gulf Theater with 120 combat aircraft—fighters, deep-strike aircraft, and two heavy, long-range B-1B bombers. These

***F-117s line up at Langley AFB, Va., on their way to Kuwait as part of the US buildup in Southwest Asia.***



USAF photo by SSgt. Vince Parker



USAF photo by SSgt. David G. Shoemaker

**The seventh AEF:** The Air Force had readied for deployment another Air Expeditionary Force—the seventh prepared for Gulf duty. It comprised some 30 aircraft, including F-15Cs, F-15Es, F-16Cs, and two B-1B bombers, and was approved to deploy to Bahrain when requested by the commander in chief of US Central Command.

Air Combat Command says that, beginning from a cold start, it can have an Air Expeditionary Force on location and operating in 72 hours. With strategic warning, it's 48 hours.

The Air Force announced Nov. 19 that the AEF was based on units drawn from four Air Combat Command bases: Moody AFB, Ga.; Shaw AFB, S.C.; Eglin AFB, Fla.; and Ellsworth AFB, S.D.

***Lt. Col. J.R. Smith, 78th Fighter Sq., Shaw AFB, S.C., preflights an F-16 for the 347th Air Expeditionary Wing.***

were bedded down at bases in Saudi Arabia and Bahrain.

Also on Gulf duty were aircraft such as U-2 reconnaissance aircraft based out of Beale AFB, Calif., which were flying over Iraq at the United Nations' request.

**Reinforcements:** As the crisis heated up, DoD directed deployment of six F-117 stealth fighters from Holloman AFB, N.M., to Kuwait and six B-52 heavy bombers from Barksdale AFB, La., to the Indian Ocean island of Diego Garcia. Nine KC-10 tanker aircraft from the 60th Air Mobility Wing, Travis AFB, Calif., deployed in support of the bombers.

The F-117s, B-52s, and tankers arrived in theater Nov. 21, within two days of the "go" order.

***TSgt. Darrell Hodger, with Shaw's 20th Equipment Maintenance Sq., tightens a strap on cargo bound for the 347th AEW aboard a C-5 from Dover AFB, Del.***



USAF photo by SSgt. James E. Loz

USAF photo by SSgt. Angela Stafford



At Arlington National Cemetery, Assistant Vice Chief of Staff Lt. Gen. David L. Vesely presents a flag to Greta Call, the mother of Capt. John H. Call III, one of five airmen who died while flying support for the Bat-21 rescue attempt.

covered. The remains of one soldier have been identified and returned to his family for burial with full military honors.

"As we're able to obtain additional circumstance-of-loss information or recover remains from North Korea, we'll need to inform the families," says Perry. "Unfortunately, in some cases, nearly 45 years have elapsed since the Air Force has had contact with many of the families." More than 900 Air Force servicemen remain unaccounted for from the Korean War.

Air Force families can call toll free (800) 531-5501. The Army number is (800) 832-2490. The Navy number is (800) 443-9298, and the Marine number is (300) 847-1597.

**USAF Opens New Officer Reduction Program**

The Air Force announced Nov. 19 that it would offer voluntary loss programs to about 1,650 officers to meet Fiscal 1998 end strength requirements. Those 1,650 would be over and above the normal number of losses predicted as a result of attrition and other routine causes.

The offer applies to those officers wishing to separate or retire early in Fiscal 1998. The only financial incentive program is early retirement, said USAF; Voluntary Separation Incentive and Special Separation Benefit will not be offered.

To meet its force-reduction targets, the Air Force needs 1,650 officers to separate or retire in 1998 (compared to 1,050 officers in 1997). Officials expected 1,000 officers to take early

retirement. The Air Force said that the rest of the losses would be achieved mostly through active duty service-commitment waivers and limited use of time-in-grade and commissioned service-time waivers.

Officers eligible for the early retirement program may submit their applications to the Air Force Personnel Center through their military personnel flights. AFPC began accepting applications on Dec. 2. Applications are handled on a first come, first served basis.

**"Bat-21" Rescue Crew Buried at Arlington Cemetery**

The recently repatriated remains of six airmen who were part of the famed "Bat-21" rescue attempt in South Vietnam were buried Nov. 19 in Arlington National Cemetery with full honors, the Air Force announced.

Finally laid to rest were Capt. John H. Call III and Peter H. Chapman II, TSgts. James H. Alley, Allen J. Avery, and Roy D. Prater, and Sgt. William R. Pearson. All were killed in the crash of their HH-53 rescue helicopter.

On April 6, 1972, their helicopter—call sign "Jolly Green 67"—was performing a search and rescue mission over Quang Tri, South Vietnam, when it was hit by enemy fire and crashed. Other aircraft in the rescue squadron located no survivors.

The crew of Jolly Green 67 was part of the effort to rescue downed airmen Lt. Col. Icael Hambleton and 1st Lt. Mark Clark. The efforts to locate and rescue both men, which involved separate Air Force, Army, and Navy operations, were the basis of the 1988 movie "Bat-21."

**DoD Holds Summit on Reserve Health Care**

The Pentagon on Nov. 18 announced it would hold the first Reserve Health Care Summit to address health care issues, entitlements, and legislative policies affecting the readiness of US military reserve components.



Michael Dosedel, in flight suit and surgical mask, checks out an F-15 at Eglin AFB, Fla. The 4-year-old, who has a rare form of muscle cancer, was chosen as the base's first Pilot for a Day, under a program, which began at Randolph AFB, Texas, in 1994, to provide unique opportunities for critically ill children.

USAF photo by Ken Moyer

US Navy photo by Lt. David B. Oates



Canadian Air Force Nurse 1st Lt. Heather Russell, training with USAF's 355th Air Transportable Hospital in Haiti, checks 9-day-old Tamamone Casmir. USAF Capt. Lorri M. Clark, a pediatric nurse practitioner, and Russell worked around the clock but couldn't save the boy, who had meningitis.

DoD said the objective was to improve readiness of reservists and ensure that those who become ill or injured as a result of service receive appropriate health care and medical benefits.

"This summit is about taking care of the people who make up nearly one-half of our total military force," said Secretary of Defense William S. Cohen. "I am committed to the seamless integration of the active and reserve com-

ponents. To achieve a seamless force, we must update our medical policies to ensure that they support mission requirements as we enter the 21st century. This summit is another step toward further integration."

The summit was to be presented in three phases, the last this month, and hosted by Deborah R. Lee, assistant secretary of defense for reserve affairs, in conjunction with Dr. Edward D. Martin, acting assistant secretary of defense for health affairs.

### NATO Expansion; More Cost Questions

NATO bureaucrats don't think the cost of NATO expansion will be as high as the Clinton Administration thinks.

US officials have said that their rough calculations for accepting three new members into NATO was \$27 billion to \$35 billion through 2009. The US share of this cost was set at \$2 billion, with the rest paid by other old and new European Allies.

Meanwhile, NATO analysts produced a study in November putting the cost of incorporating Poland, Hungary, and the Czech Republic at only \$2 billion over the next decade. A rapidly diminishing threat, among other things, means that the new members can be defended with existing equipment and troops, said the report. That estimate was greeted with open skepticism in some quarters in Washington.

Even the Clinton Administration estimates seemed to be unrealistically low, in the view of some. A recent study by the Cato Institute, for one, calls those estimates "fatally flawed" and puts the true expansion price at closer to \$70 billion, with \$7 billion of that to be paid by the United States.

Cato said DoD estimates are based on faulty assumptions. DoD assumes, for instance, that new members will upgrade their air defenses with the improved version of the Hawk—a SAM system introduced in the 1960s. Factoring in the purchase of more modern Patriots would increase costs almost fourfold, says Cato.

### News Notes

■ USAF named the nation's newest B-2 stealth bomber *Spirit of Louisiana* in a ceremony at Barksdale AFB, La., on Nov. 10. The airplane was the 17th B-2 to be named.

■ William J. Lynn was sworn in as undersecretary of defense (comptroller) in a Nov. 19 Pentagon ceremony.

## A GREAT RÉSUMÉ CAN BE THE DIFFERENCE BETWEEN A JOB OR NO JOB!

### AFA RÉSUMÉ PREPARATION SERVICE

To land the job you want you must first get an interview. AFA's résumé professionals can construct a crisp résumé that will open the doors to job opportunities. **Cost \$160.00.**

Your AFA prepared résumé will:

- Grab Attention
- Establish Credibility
- Highlight Desirable Skills



### AFA RÉSUMÉ CRITIQUE SERVICE

If you already have a résumé, let us review it and make proven suggestions for turning it into a job-getting résumé. **Cost \$50.00.**

Your satisfaction is guaranteed. For complete details, write:

AFA  
Attn: AFA Member Services  
1501 Lee Highway  
Arlington, VA 22209

or call:

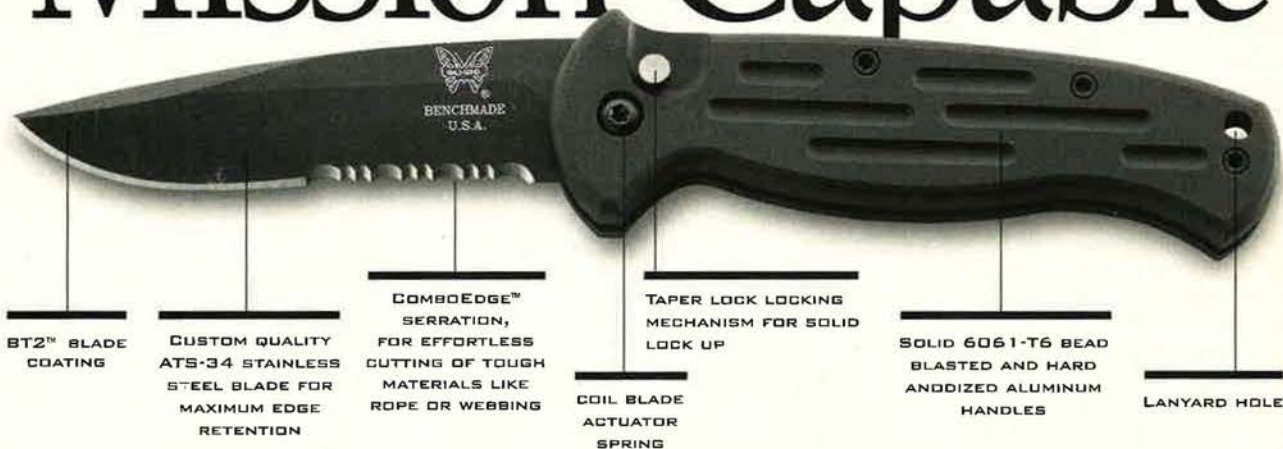
**1-800-727-3337**





The Air Force unveiled its 50th Anniversary quilt at the Pentagon in December. It contains more than 85 handmade squares from virtually every USAF base in the world. It measures 20 feet by 20 feet. To make it even more memorable, thread used to join the squares was flown aboard the space shuttle Atlantis. The quilt will be framed in a special display case that will allow viewers to walk over it. The "Fabric of the Air Force" will reside permanently at the Air Force Museum at Wright-Patterson AFB, Ohio.

# Mission Capable



BT2™ BLADE COATING

CUSTOM QUALITY  
ATS-34 STAINLESS  
STEEL BLADE FOR  
MAXIMUM EDGE  
RETENTION

COMBOEDGE™  
SERRATION,  
FOR EFFORTLESS  
CUTTING OF TOUGH  
MATERIALS LIKE  
ROPE OR WEBBING

COIL BLADE  
ACTUATOR  
SPRING

TAPER LOCK LOCKING  
MECHANISM FOR SOLID  
LOCK UP

SOLID 6061-T6 BEAD  
BLASTED AND HARD  
ANODIZED ALUMINUM  
HANDLES

LANYARD HOLE

## Model 9000SBT™

The Benchmade 9000SBT, NSN-1095-01-446-4348, is an approved issue item for the US Coast Guard for their rescue swimmers, and for the US Air Force for use in survival vests and kits. With its BT2 coated blade, specifically designed for use in corrosive environments, the 9000SBT is the ideal knife for use by air crew, search and rescue, or

maritime personnel who need a reliable, low maintenance, automatic knife. This knife is available through the Defense Logistics Agency or direct from Benchmade.

For more information fax or mail a catalog request on letterhead, to:

## BENCHMADE

BENCHMADE KNIFE COMPANY INC.  
300 BEAVERCREEK ROAD  
DEPT. AF  
OREGON CITY, OREGON 97045 U.S.A.  
VOICE: (503) - 655 - 6004  
FAX: (503) - 655 - 6223  
URL: <http://www.benchmade.com>  
E-MAIL: [info@benchmade.com](mailto:info@benchmade.com)

MADE IN  
USA  
FOR THE WORLD

Lynn had been confirmed by the Senate on Nov. 13. Lynn previously served as the director for program analysis and evaluation in the Office of the Secretary of Defense. He replaces John J. Hamre, who recently became deputy secretary of defense.

■ The Air Force set a new Titan IV launch record Nov. 7 with a third successful launch of the heavy lift booster within 23 days. The previous record for three Titan IV launches was 65 days, set last year. "We've moved one step closer to the Air Force's dream of routine access to space," said Brig. Gen. Randall F. Starbuck, 45th Space Wing commander.

■ The commissary at Eglin AFB, Fla., was named best large commissary in the continental United States at an awards ceremony held during the American Logistics Association's annual convention in Philadelphia. Ramstein AB, Germany, won for best large commissary outside the US. The honors were judged by the Defense Commissary Agency.

## Ploesti Hero General Johnson Dies

Retired Air Force Gen. Leon William Johnson, who earned the Medal of Honor for his leadership in the Ploesti, Romania, air raids of 1943, died Nov. 10 in Fairfax, Va. He was 93.

During World War II, Ploesti, was the site of vast oil refineries, which were critical sources of energy for the German war machine. They were one of the richest bombing targets in Axis-controlled territory—and one of the best defended.

In the summer of 1943, then-Colonel Johnson was commander of the 44th Bomb Group, which was on loan to Ninth Air Force. He took off from North Africa for the 2,400-mile round trip to the Romanian town, but clouds separated him and his group from the main body of aircraft, which arrived first. By the time Johnson reached the target, defensive gunners had been fully alerted.

Johnson drove his airplane toward towering flames at an altitude of 30 feet. Just when it seemed the fire would consume him, an explosion opened a tunnel of air, and he and six other bombers shot through it and dropped their payloads. Johnson's aircraft was burned black from the flames but nonetheless made it safely back to base.

Awarded the Medal of Honor on Nov. 22, 1943, Johnson said, "I cannot consider this a personal award. I consider this a citation for the leader of the group in acknowledgement of a job well done by the group."

After the war, Johnson transferred to the new Air Force and eventually helped organize 3d Air Force in England. He later served in a variety of sensitive jobs, including Air Force representative to the United Nations Military Staff Committee and director of the National Security Council Net Evaluation Subcommittee. He retired in 1965, after more than 40 years of service.

## Congressional News

President Clinton on Nov. 18 signed into law the \$268 billion Fiscal 1998 defense authorization bill. Here are some major provisions affecting the Air Force.

**Pay and Benefits.** The signing paved the way for a 2.8 percent basic pay raise and boosts in other allowances. The plan was for the 2.8 percent hike to take effect Jan. 1, 1998.

In addition, the authorization bill mandates that military compensation not be reduced for personnel assigned to duty away from a permanent duty station or while assigned to duty under field conditions at their home station.

Under the new law, the basic allowance for quarters and variable housing allowance will be consolidated into a single nontaxable allowance based on housing costs for civilians with comparable income levels residing in the same area. This would index the annual growth in housing allowance.

The bill also raises the family separation allowance from \$75 to \$100 per month; raises the limit on the quality-of-life hardship duty pay to \$300 per month; and increases access to hazardous duty compensation.

**Aircrew Compensation.** This year's defense bill boosted bonuses

for pilots. [See "Congress Raises Pilot Bonus," p. 12.] Other provisions increased special and incentive pay for aircrew members, including Aviation Career Incentive Pay and Hazardous Duty Incentive Pay.

Aviation Career Incentive Pay will increase from \$650 to \$840 per month after 14 years' service through the 22d year of service. ACIP is paid to all pilots and navigators who meet the minimum flying gate requirements, the minimal flying standards an aviator is expected to achieve after a prescribed time of service. This increase takes effect Jan. 1, 1999.

For enlisted aircrew members, the minimum rate for Hazardous Duty Incentive Pay will increase from \$110 to \$150 per month. Increasing HDIP brings the basic rate to the level of imminent danger pay.

**Military Health Care.** Congress added \$274 million to the Administration's request for the Tricare managed care program and moved to cut administrative burdens for patients and providers.

The act directs the Secretary of Defense to prepare a plan to expand Tricare Prime, which is the basic HMO-style option, into areas outside of a 40-mile radius of military medical facilities.

To support retirees, Congress or-

dered DoD to evaluate "feasibility, advisability, and cost" of extending current mail-order pharmacy programs to all Medicare-eligible beneficiaries who do not live near military medical facilities.

**Aircraft Fully Funded.** The defense authorization bill made only minor changes in the Administration's request for the military's next generation of combat jets.

More money is also authorized to either buy more B-2 bombers or to modify and repair the existing fleet.

Lawmakers provided \$2.2 billion for the F-22 Raptor program as it heads toward a scheduled 1999 start of production. The Navy's F/A-18 E/F program received \$2.1 billion. The Joint Strike Fighter was allocated \$946 million in development money.

The bill did impose a cost cap on the F-22, however: \$18.7 billion for engineering and manufacturing development and \$43.4 billion for production. Air Force officials argued against such a cap, saying it could rob them of flexibility in future years and perhaps jeopardize the program.

Some current aircraft programs received an unlooked-for boost. Lawmakers added enough funds to the bill to purchase five more F-15s and three more F-16s than the Air Force had requested.



■ The 21st Security Policy Squadron, Peterson AFB, Colo., won an Air Force Productivity Award for Professional Excellence for saving \$500,000 in the design of shipping containers for military working dogs.

■ USAF's Thunderbirds air demonstration team staged its 3,500th show at Nellis AFB, Nev., on Oct. 11. During the unit's 44-year history, more than 295 million people in 59 countries have seen the Thunderbirds perform.

■ The Air Force is putting the finishing touches on a new Jump Start outsourcing program that it hopes will save about \$1 billion in the year 2000, said Brig. Gen. Larry W. Northington, director for manpower, organization, and quality, at a Pentagon briefing. The program consists of a variety of engineering and services initiatives, most in the areas of communications, he said.

■ Former Secretary of Defense William J. Perry was named a director of Boeing on Nov. 11. Perry, who left the Pentagon last January, is currently an engineering professor and international studies senior fellow at Stanford University.

■ A groundbreaking ceremony for the X-33 launch site was held at Edwards AFB, Calif., on Nov. 14. The X-33, a subscale reusable launch vehicle technology demonstrator, is scheduled to make as many as 15 test flights from its 25-acre Edwards complex beginning in July 1999.

■ Assistant Secretary of the Army for Manpower and Reserve Affairs Sara E. Lister resigned under fire Nov. 14 after referring to the Marines as "extremists" at a public forum. The comment had infuriated Marines and their supporters in Congress, who demanded her ouster.

■ The former chairman and current ranking minority member of the House National Security Committee, Rep. Ronald V. Dellums (D-Calif.), announced that he will resign at the end of the 105th Congress. A former Marine, Dellums consistently argued for lower defense spending. His place in the established order will be taken by Rep. Ike Skelton, a pro-defense Missouri Democrat.

■ A C-141 Starlifter from the 62d Airlift Wing, McChord AFB, Wash., flew more than 47,000 pounds of relief supplies to Vietnamese victims of Typhoon Linda, which struck southern Vietnam in early November. The supplies, donated by US Pacific Command, included tents, cots, blankets, and hospital supplies.

■ The 97th Air Mobility Wing at Altus AFB, Okla., received its eighth and final C-17 Globemaster III on

Nov. 10. "The hard work—the work of producing the finest aviators in the world—lies ahead," said Col. Christopher A. Kelly, wing commander. The 58th Airlift Squadron will eventually train about 800 pilots a year in the C-17. Its student load is projected to peak sometime in 2003.

■ Maj. Pamela D. Hrcir of the 559th Flying Training Squadron, Randolph AFB, Texas, was named a recipient of the Woman Pilot Recognition of Excellence Award by *Woman Pilot* magazine. A 12-year Air Force veteran, Hrcir is currently assistant operations officer and directs a Pilot for a Day program for young cancer patients and their families.

■ In a ceremony held in the rotunda of the Capitol on Oct. 29, Congress took the unprecedented step of declaring entertainer Bob Hope an honorary veteran for his tireless efforts to lift the spirits of US servicemen abroad.

■ Jacques S. Gansler was sworn in Nov. 10 as undersecretary of defense for acquisition and technology. Most recently executive vice president and director of TASC Inc., an Arlington, Va., information technology firm, Gansler has served in several Pentagon procurement positions and is the author of a number of books and articles on the business of buying weapons. ■

## Senior Staff Changes

**NOMINATIONS:** To be **General:** John P. Jumper.

To be **Lieutenant General:** David W. McIlvoy, Lansford E. Trapp Jr.

**CHANGES:** Brig. Gen. Larry K. Arnold, from Vice Cmdr., 1st AF, ACC, Tyndall AFB, Fla., to Cmdr., 1st AF, ACC, Tyndall AFB, Fla. ... Lt. Gen. Frank B. Campbell, from Cmdr., 12th AF, ACC; Cmdr., USSOUTHCOM Air Forces; and AF Component Cmdr., USSTRATCOM, Davis-Monthan AFB, Ariz., to Dir., Force Structure, Resources, and Assessment, Jt. Staff, Pentagon ... Lt. Gen. Patrick K. Gamble, from Cmdr., Alaskan Cmd., PACOM; Cmdr., 11th AF, PACAF; and Cmdr., Alaskan NORAD Region, Elmendorf AFB, Alaska, to DCS, Air and Space Ops., USAF, Pentagon ... Gen. (sel.) John P. Jumper, from DCS, Air and Space Ops., USAF, Pentagon, to Cmdr., Air Forces Central Europe, NATO; Cmdr., USAFE; and AF Component Cmdr., USEUCOM, Ramstein AB, Germany.

Lt. Gen. David J. McCloud, from Dir., Force Structure, Resources, and Assessment, Jt. Staff, Pentagon, to Cmdr., Alaskan Cmd., PACOM; Cmdr., 11th AF, PACAF; and Cmdr., Alaskan NORAD Region, Elmendorf AFB, Alaska ... Lt. Gen. (sel.) Lansford E. Trapp Jr., from Dir., LL, OSAF, Pentagon, to Cmdr., 12th AF, ACC; Cmdr., USSOUTHCOM Air Forces; and AF Component Cmdr., USSTRATCOM, Davis-Monthan AFB, Ariz.

**SENIOR ENLISTED ADVISER RETIREMENT:** CMSgt. Nicholas S.P. Davis.

**SEA CHANGE:** CMSgt. Mike L. Myers, to SEA, USAFA, Colorado Springs, Colo. ■

## Index to Advertisers

Benchmade Knife .....	21
Boeing .....	Cover IV
Lear Siegler .....	Cover III
Messe Berlin .....	17
Mitchell Lang .....	87
Motorola .....	44-45
Raytheon .....	2
Rockwell CACD .....	Cover II
USA vs. World .....	15
<hr/>	
AFA Awards .....	87
AFA Resume Service .....	20
Military Coalition .....	80
Orlando Symposium .....	78
Video Biography on Legends of Airpower .....	84
Video on the History of USAF .....	86

A photograph of a B-2 Spirit stealth bomber on a runway. The aircraft is dark and sleek, with its wings and tail fins visible. The background shows a green field and a blue sky. The text is overlaid on the aircraft's fuselage.

**The stealth bomber is a mature system, prepared for deep, precision strike missions worldwide.**

**The B-2s Are**



# Ready

By John A. Tirpak, Senior Editor



*If any aircraft by its appearance alone can be said to epitomize USAF for the 21st century, it is surely the stealthy B-2 which, in its Block 20 and "final configuration" Block 30 forms, is combat-ready today, state USAF officials.*

**D**URING the past year, as Congress argued about whether to buy more B-2 aircraft and the media debated such fanciful issues as whether the bomber dissolves in the rain, those who actually fly and maintain the aircraft have matured it into a combat-ready system able to make good on the promise of stealth, long range, and heavy payload.

The B-2 in the past 16 months has shown its capability to deliver precision guided bombs under real-world conditions; been certified for nuclear operations; racked up experience with long-range missions and exercises; and acquired a skilled cadre of pilots and maintainers well qualified to fully exploit the B-2's unprecedented capabilities.

USAF has also labored to debunk wild accusations of gross deficiencies in the airplane even as it has tried to explain its reluctance to buy more of the expensive bombers.

Today, all B-2s operating with the 509th Bomb Wing at Whiteman AFB, Mo., are Block 20 or "final configuration" Block 30 versions, meaning each is capable of delivering large numbers of heavy bombs with very high precision. That capability was dramatically demonstrated over a year ago when three B-2 bombers destroyed 16 targets in one pass on a desert bombing range in Nevada. All of the targets were either destroyed or severely damaged, and all of the bombs used were of operational standard, not

"test" rounds that had been tweaked to guarantee success.

The demonstration was made using the GBU-36, also called the GATS/GAM, or Global Positioning System-Aided Targeting System/GPS-Aided Munition. It is a standard 2,000-pound bomb with a tail kit that can cue off the B-2's synthetic aperture radar and GPS satellite. The GBU-36 is a special munition that was designed to give the Block 20 B-2 an "interim" precision bombing capability until the full-up Block 30 version of the airplane was delivered.

Block 30 bombers can use the new Joint Direct Attack Munition, which offers similar capabilities but which will be mass-produced. Now that Whiteman has only Block 20s and Block 30s, its range of conventional targets is "unrestricted," according to 509th commander Brig. Gen. Thomas B. Goslin Jr. The base has about 100 GBU-36s on hand as well as a growing supply of JDAMs.

#### **Ready Now**

"The B-2 is combat-ready today," Goslin said. "We are meeting our training requirements and ... maturing the system."

Within a few months of the demo, the 509th was certified as having achieved Initial Operational Capability, having shown its ability to deliver conventional bombs with precision and having passed a Nuclear Surety Inspection which vetted its handling, storage, and deployment

with nuclear weapons. Since then, the wing has been trading its Block 10 airplanes back to the factory in exchange for more-advanced configurations such as the Block 20 and Block 30. The Block 10s and 20s are undergoing refit to the Block 30 standard; by the turn of the century, all 21 B-2s will be of the final configuration.

"Everyone's seen the B-2 GATS/GAM tape," said the head of Air Combat Command, Gen. Richard E. Hawley. "I've shown that to almost the whole world. That's a very impressive capability, that JDAM-equivalent capability, the ability to drop near-precision weapons from ... 45,000 feet, ... eight miles from the target, and achieve near-precision results. [It's] an incredible addition to the warfighting capability [of regional commanders in chief]."

At any given time, about nine B-2s can be found at Whiteman. The rest either are in refit to higher block configurations at Northrop Grumman's Palmdale, Calif., facility or in flight test at Edwards AFB, Calif.

Every month, about 40 pilots spend their time alternating between mission planning, three to four long-duration simulator rides, about five proficiency flights in a T-38 Talon, and two missions in an actual B-2. More pilots are in the pipeline, and unlike many other segments of the Air Force, pilot retention is not a problem. Goslin reports that he's only had three pilots leave the service since he assumed command last year, and one of them is still involved with the program as a reservist.

"You have to remember that these pilots compete very hard for this assignment," he noted. "They are highly motivated."

Because the B-2 is expected to be such a high-demand system in the event of war—and because there's no certainty it will be cleared to operate from forward bases—the pilot-to-airplane ratio on the system will be higher than for most other systems. The greater number of pilots would be needed if the B-2 were called on to fly back-to-back missions of more than 35 hours for more than a few days. Both actual missions lasting in excess of 35 hours, as well as simulated missions of over 40 hours, have been run routinely to show that the 509th can maintain a credible sortie rate with the B-2 even from its home base.

"I believe we will eventually work up to a 48-hour mission," Goslin predicted.

### Dynamic Duo

These "global power" missions are part of the B-2 training repertoire which last year included sorties to participate in Red Flag exercises, some of which were run in concert with the B-2's stealthy stablemate, the F-117 Nighthawk fighter. The two stealth airplanes practiced simulated strikes on enemy air defenses, command-and-control nodes, and "high-value" targets that would be attacked early in a war.

The exercises also help educate other forces and CINC staffs about the capabilities of the airplanes and



USAF photo by SRA Jessica Hunt



USAF photo by SSgt. Dee Ann Poole

*Behind six B-2s on the ramp at Whiteman AFB, Mo., are special hangars—with maintenance ports and hookups positioned to mate with the bomber. USAF is also acquiring some portable shelters in which personnel can carry out touch-ups to maintain the B-2's stealthy coating at a forward base.*

how to work with and around them.

"The bomber force is acquiring the same kind of precision capabilities that we've had in the fighter force the last several years," Hawley said, "and so we're beginning to make that known, [to] make sure that the CINCs are planning for the employment of bombers."

Hawley noted that B-1Bs have made several such deployments—to Korea and to the Middle East—and the B-2 is now on call to follow suit.

Already under the B-2's belt are long-duration missions to Guam and Chile and to France for the Paris Air Show. The lengthy simulator missions

of over 40 hours—monitored by USAF medical researchers—have been useful in finding out how each pilot best handles the problem of fatigue.

"We found that some of them do better with short catnaps," Goslin said, while others are refreshed by a single nap of several hours. Sometimes, "just a change of clothes can really wake them up" or a wet-toweling. Each pilot learns his optimum techniques to stay alert "during those portions of the mission where they really have to concentrate" and to rest during the "automated" portions of the flight. Diet and premission sleep pattern also

play a role. Mission plans and crew rosters are designed with individual alertness patterns in mind.

A B-2 mission would typically involve three bombers in an orchestrated attack, two in the lead and one trailing behind. One of the lead airplanes would use its synthetic aperture radar to acquire an image of the target area; the image then is correlated with reconnaissance imagery prepared beforehand. Aim points are selected and matched with previously determined GPS coordinates. With this "three-dimensional" and non-optical targeting information, the B-2 can score hits comparable to those achieved with laser-guided weapons, and it is not hampered by bad weather over the target, as would be the case if they were using laser-guided weapons.

### Cleaning Up

The two lead ships in an attack would strike most of the targets in one pass, while the "mission commander"—in the third and trailing ship—would do what amounts to an immediate bomb damage assessment with the synthetic aperture radar. Any targets not sufficiently damaged would be attacked by the third ship, greatly reducing the need to "restrike" a complex with an entirely new flight. The tactic also allows for more flexibility to attack secondary targets.

The number of sites hit with just three aircraft is truly startling. "Typically, they will go after 32 targets," Goslin said.



The past year has seen a sharp decline in the 509th's dependence on contractor help for maintaining B-2 low-observable surfaces and materials, and so there has been a great reduction in the number of contractor personnel who actually work at Whiteman. The experience and knowledge of the maintenance crews have increased substantially—so much so that Goslin doubts it would be necessary to take many—or any—contractor technical representatives along on a deployment. Virtually all of the B-2's daily maintenance needs are met by blue-suiters, with contractors called in only for special problems or to help train new maintainers.

Software support requirements for the B-2 are growing, however. At Tinker AFB, Okla., USAF has erected a special support facility to handle the millions of lines of computer code that make the B-2 run. As new tactics are developed, experience gained, and new weapons added, the software must be continually updated, and this job will fall to about 200 programmers located permanently at Tinker.

Portions of the airplane not directly associated with its stealthiness—hydraulics, engines, and the like—are proving no harder to maintain and repair than those on other airplanes. If anything, airplane crews find the B-2 easier to work on because the B-2 “bays”—the hangars at Whiteman built to house the B-2 specifically—are designed with maintainers in mind, with fuel ports,



**Sophisticated training equipment, such as the weapons load trainer (top) and the full motion cockpit flight simulator (above), has helped ensure that Air Force personnel are ready to maintain the bomber and to fly it into combat.**

drain holes, electrical hookups, and other umbilicals in the hangar positioned to mate to the airplane without fuss or difficulty.

The B-2 figures to play a key role in the new national military strategy, which assigns high value to swiftly halting an aggressor's initial thrust at the outset of a Major Theater War. DoD's latest force and strategy assessment, the Quadrennial Defense Review, put great emphasis on using bombers as the first means of counterattack against a no-warning invasion of an American ally. Unlike aircraft carriers, they do not need to get into posi-

tion before they can begin their missions.

### All in a Day's Work

Goslin said that the QDR's emphasis on the halt phase of theater war did not prompt any significant changes in the B-2 training syllabus, as the long-duration missions were already a large part of it.

“We've always ... been prepared for that kind of mission,” since the B-2's initial duty was as an intercontinental nuclear bomber. “The same kinds of training you do for the [nuclear] mission ... translate to the conventional mission we see becoming a larger part of our operations,” he said.

Though the stealthy B-2 will be a

key player in dismantling an enemy air defense system, it will be available throughout the conflict to attack high-value targets or even simply to carry large payloads of dumb bombs, Goslin said. The B-2, for instance, can carry 80 Mk. 82 500-pound bombs, almost as many as the B-1B's capacity of 84. The B-2 will also be able to carry a monster 4,700-pound “deep penetrator” to destroy deeply buried command-and-control bunkers and next year will be certified with the Joint Stand Off Weapon.

The JSOW is a stealthy glide bomb. Goslin, when asked why the B-2 would need it, explained that it “in-

creases our footprint" and makes it possible for the B-2 to attack at even longer ranges without exposing itself to the most lethal or unpredictable air defense threats.

Overall, Goslin asserted, the B-2 is "a major contributor ... to the halt phase," though he added, "Not everything depends on the B-2."

The General Accounting Office, one of Congress' watchdog agencies, late last summer lobbed a series of criticisms at the B-2 program. Many of them were picked up by press critics. The GAO concluded from the B-2's initial operational experience that its stealthy skin required too much maintenance; that it could operate from few forward bases because there are no shelters available under which to service its stealth surfaces between missions; that rain and bad weather degraded its stealth capabilities; that deployments were not possible because of a lack of spares; and that it wasn't coming even close to its intended mission readiness rates.

These conclusions—based on preliminary data long since overtaken by events—quickly and widely were repeated in the media, which interpreted them as indicating the B-2 could not fly through bad weather, that it wasn't stealthy, that it was simply too finicky for combat conditions, and that it was a costly technological failure.

"I'm the guy that's got to take it into combat, ... and I'm telling you this airplane has no [low-observability] degradation in rain or weather," Goslin said. "There's no other airplane I'd rather go to combat with."

"This is a new system," he explained. "We're still learning how you make this work."

### Substitutes

Some of the early approaches taken to sealing seams on the B-2's skin—necessary to maintain its low radar cross section—did indeed fail to live up to expectations, he said. However, new substitute techniques have proved up to the task. Tape that tended to peel back in the rain and airflow was replaced by tape with stronger adhesive, for example. And, "new materials are becoming available all the time," Goslin said.

The B-2's stealth does not degrade in bad weather to an appreciable extent, and to underline the point,



Photo by Randy Jolly

***Neither the B-52 nor B-1B bombers had achieved the progress of the B-2 at comparable stages of development and deployment, say USAF officials. They express confidence that the B-2 fleet will achieve a high mission capable rate.***

Goslin noted that "we would like to go into combat at night and in really bad weather" to further hamper air defense efforts.

In an unobtrusive effort to make the point, the Air Force welcomed dozens of journalists to Whiteman in September to look over the B-2, talk to pilots and crews ... and see it scrubbed down in a thorough washing.

Goslin admits that the B-2's surface needs some spot touch-up after a mission to make it fully stealthy for the next one. But this is the nature of stealth technology today, and it can be done quickly, Goslin said. Shelters make the process easier.

"You wouldn't paint your car in the rain," he pointed out.

While some overseas bases—such as Guam—have shelters the B-2 can use, more are being built, and the 509th will acquire some transportable shelters to take along on deployments.

Finally, spares kits were only funded for the final configuration model, the Block 30. For the Block 20 to go on deployment, spares kits will have to be created by cannibalizing some airplanes and tapping into the regular operating stores for others. It's a problem that will disappear once all the airplanes reach Block 30 configuration and the war readiness spares kits match the bulk of the fleet.

"We feel we will make the mission capable rate of 77 percent ... with the Block 30 airplane," Goslin

asserted. "It will happen ... when the airplane is mature."

He also noted that neither the B-52 nor the B-1B had achieved anything like the progress being shown by the B-2 at comparable points in their development and deployment.

Why doesn't the Air Force want to buy more B-2s, given its promising performance so far and its crucial role in the halt phase in a future no-notice war?

"I would love to have ... all B-2s" in the bomber force, Hawley said. "In an unconstrained budget environment, they would be." However, he pointed out, "We don't live in an unconstrained budget environment. In fact, we live in a very severely constrained budget environment. Therefore, everything involves trade-offs."

In the Deep Attack Weapons Mix Study that came to an end earlier this year, analysts "concluded that the bombers made great contributions in the halt phase," Hawley explained. "They also looked for the trade-offs you'd need in order to buy more B-2s. And in every case, those trade-offs would have involved giving up some important near-term capability in order to get a B-2 capability 10 or 12 years down the road."

Given the current high operating tempo of the military as a whole, "giving up significant forces in the near term, in order to acquire that enhancement in the long term, we believe not to be a good trade," Hawley said.



Brig. Gen. Bruce A. Carlson, the Air Force's mission area director of global power, put it in more concrete terms.

### End of the Line

"The bottom line is, from our point of view, it would be impossible to build more B-2s as we know them," he said. While B-2s will go through modifications at the plant for another three years, in terms of production, "the line is closed."

Of the more than 4,800 suppliers that contributed to the B-2 effort, "Ninety percent are out of that business or have shifted their product lines or laid off their people" Carlson noted. To restart and recertify the production line and all those suppliers—"if you could get the people, if you could get the parts, [it] would probably cost a billion and a half bucks," he said. "That's a significant chunk of change."

Coupled with a possible flyaway cost of more than \$750 million per airplane, an addition of only nine airplanes would cost about \$9 billion, Carlson said, and wouldn't include the cost of standardizing the fleet to a single configuration. He noted, for example, that the B-2 design was largely frozen in the early 1980s and that to take advantage of the computer, sensor, and materials advances since then would constitute virtually a new design effort—a B-3, so to speak.

Moreover, the B-2 program has been funded for operations, spares kits, and other considerations based



Photo by Randy Jolly

**A 509th Bomb Wing crew chief prepares for another B-2 sortie. Virtually all of the B-2's daily maintenance needs are met by blue-suiters, with contractors on call for special problems or to help train new USAF personnel.**

on a 21-airplane fleet. Raising that number to 30 would require far more substantial increases in all those accounts and greatly increase the system's life-cycle cost.

For all these reasons, Carlson asserted, "It is, in our judgment ... prohibitive."

The \$331 million Congress appropriated to fund additional B-2s would be only enough to start the job and would force USAF to slash other programs to make good on the balance, something the service is not prepared to do, he added. By his reckoning, the appropriation provides "only 10 percent of the cost to re-

constitute" the B-2 assembly line.

The service is asking Congress for permission to use the additional B-2 funds to enhance some of the battlefield communications capabilities of the airplane, upgrade some of the cockpit displays, and enhance the low-observables technologies. While the upgrades would not constitute a "Block 40," they do represent the next highest priorities in hardware upgrade for the B-2.

Asked if the rising cost of modern warplanes has made the B-2 the de facto "last" bomber for the Air Force, Carlson said that time will tell.

"It's not time yet to start thinking about a B-2 follow on," he said, given USAF's time-phased approach to modernization. Bomb-

ers received a hefty dose of modernization money in the 1980s, when the entire B-1B fleet and much of the B-2 program was funded. Airlift enjoyed top priority in the 1990s, and tactical aviation—in the form of the F-22 and Joint Strike Fighter—will be the priority for the coming decade.

After that, Carlson said, advances in unmanned aerial vehicles, and "especially ... hypersonics," may play a great role in deciding whether another large bomber lies in the Air Force's future. "Fortunately," he said, "that's not an issue we have to confront just yet." ■



# Flashback

## Ready, Set ...



*Who needs a runway? In the 1950s USAF looked at the capability to launch an aircraft from a flatbed trailer using a rocket booster to get up to flying speed. The zero-length-launch concept actually worked. Initial tests used dummy aircraft, called "iron birds," but successful manned flights were made with both the F-84 and F-100. Here, an F-100, inclined about 20 degrees, used*

*a Rocketdyne solid rocket booster, which produced 130,000 pounds of thrust for four seconds. At burnout the jet would reach an altitude of about 400 feet at 275 mph—nearly a 4 g ride for the pilot. North American Aviation test pilots made repeated launches, one even from indoors, to prove the idea would work from bunkers.*



Photo © Tony Stone Images / Stephen Johnson

**A Presidential commission warns that we may not even know when we're under attack.**

# War in Cyberspace

By John T. Correll, Editor in Chief

**L**AST winter, a flood of some 30,000 messages swamped the e-mail system at Langley AFB, Va., the headquarters of Air Combat Command. They virtually shut the system down for several hours until network administrators devised programs to filter out the disruptions. As investigators reconstructed it later, the messages originated in Australia and Estonia and were routed through several intermediate points, including the White House computer system. The perpetrators have not been identified.

That may have been a small-scale preview of how an enemy of the future might choose to launch a strike, rather than challenging US military superiority head-on.

"While once an attack on our nation's infrastructures had to overcome physical distance and physical borders, now an adversary can gain access to the heart of our infrastructures from anywhere instantaneously and can use that instant access to do harm," said Robert T. Marsh, chairman of the President's Commission on Critical Infrastructure Protection, which spent 15 months studying the nation's vulnerability to electronic attack.

There are perhaps 20 million people who have the means and skill to do some level of damage. It requires no more than a 486 computer and a modem. The software, instructions, and targeting information can be gotten from hacker sites on the Internet.

The threats to the public and private sectors overlap. For example, most military communications are now carried by commercial channels. "National defense is not just about government anymore, and economic security is not just about business," the Marsh commission said in its report to the President in October.

■ In 1992, a refinery in California could not use its emergency alert network to notify the surrounding area of an accidental release of toxic substances because a disgruntled employee had accessed the data system and disabled the warning mechanism for more than 25 sites.

■ In 1996, a hacker, using an electronic service denial technique that had been written up in two hacker magazines, bombarded the system of an Internet service provider in New York and practically shut down access for 6,000 individuals and nearly a thousand corporate subscribers for a week.

■ In 1997, malicious calls from a Swedish hacker jammed the 911 emergency telephone lines in Miami, disrupted service, harassed the operators, and diverted 911 calls hither and yon. He also accessed a telephone system and generated 60,000 unauthorized calls. He was tried as a juvenile in Sweden and fined the equivalent of \$345.

## **Electronic Pearl Harbor**

The Marsh commission was established in July 1996 amid concerns that, as former Sen. Sam Nunn

put it, the nation might be headed for an "electronic Pearl Harbor." Nunn said, for example, that Department of Defense information systems were coming under attack about 250,000 times a year and that more than half of those attempts had been successful. The number of attacks is increasing and is now believed to approach 500,000 a year.

The commission was chartered to examine the threats to eight critical national infrastructures: information and communications, electrical power systems, transportation, oil and gas delivery and storage, banking and finance, emergency services, water supply systems, and government services. However, what the commission found was that the problem centers on the information and communications sector—the public telecommunications network, the Internet, and the millions of computers in home, government, and commercial use.

"Our security, economy, way of life, and perhaps even survival are now dependent on the interrelated trio of electrical energy, communications, and computers," said Marsh, a retired Air Force four-star general and a former commander of Air Force Systems Command.

The commission arrayed the threats on three levels. So far, most of the activity has been at the lowest level and are "local threats," which include recreational hackers, vandals, and independent thieves. At the next level are "shared threats" from institutional hackers, organized crime, and industrial espionage. The ultimate concern is "national threats," which encompass full-up information warfare and attacks by foreign governments or terrorists.

"Today, a computer can cause switches or valves to open and close, move funds from one account to another, or convey a military order almost as quickly over thousands of miles as it can from next door, and just as easily from a terrorist hideout as from an office cubicle or military command center," the commission report said. "A false or malicious computer message can traverse multiple national borders, leaping from jurisdiction to jurisdiction to avoid identification, complicate lawful pursuit, or escape retribution."

A complicating factor is that only about 17 percent of the attacks on

## How the Hackers Attack

Eight of the 10 founders of WheelGroup in San Antonio are former members of the Air Force Information Warfare Center. Their team—named after the computer slang term for UNIX group zero (the "wheel"), which controls the network—is now among the nation's leaders in electronic security. Last year, in a demonstration organized by *Fortune* magazine and with the consent of the targeted firm, WheelGroup operators penetrated the well-defended computer networks of a Fortune 500 company in New York. Their methods illustrate some of the ways in which hackers attack.

They began their attack via the Internet, "bouncing" an e-mail with a deliberate error in it to gain pathway information from the returned message. They then "pinged" all of the computer ports at the target firm to see if any were open. However, the firm had invested in a good (and expensive) "fire wall," and rather than spend time trying to break through, WheelGroup went directly after the company's computer modems instead.

Beginning with an employee's business card and figuring that most of the target telephone numbers would have the same area code and three-digit prefix, WheelGroup "war-dialed" 1,500 numbers, using a program downloaded from the Internet.

Several of the numbers responded. One, a fax server at a subsidiary, invited WheelGroup to "log in," which it did, moving deeper and deeper into the network from there. Another modem offered WheelGroup a "C" prompt, the same kind that is familiar to millions of personal computer users. Playing a guess, WheelGroup typed in "Win," and—sure enough—was rewarded with a Microsoft Windows program screen and from there, a welcome to the corporate tax department, where all manner of information and records were stored. WheelGroup gained "root access" in short order and, true to its name, was in position to control the networks it had targeted.

*Fortune* quoted *E-mail Security* author Bruce Schneier, who says that "the only secure computer is one that is turned off, locked in a safe, and buried 20 feet down in a secret location—and I'm not completely confident of that one either."

communications and data networks are reported to law enforcement authorities. The commission report said that victims "expressed reluctance to share information about vulnerabilities, fearing it might be made public, resulting in damage to their reputations, exposing them to liability, or weakening their competitive position. Many also feared that sharing vulnerability information could invite unwanted federal regulation."

Another complication is that the problem is not widely recognized. Several industry decision makers told the commission that "there has not yet been a cause for concern sufficient to demand action."

### Big, Vulnerable Networks

The number of computers in the United States has risen from 5,000 in 1960 to about 180 million today. More than 95 percent of these are personal computers.

Over the past 15 years, many of these machines have been linked into a vast network through public telephone lines and the Internet, "creating an extended information and communications infrastructure that has changed the way we live and work," the commission report said. "This

infrastructure has swiftly become essential to every aspect of the nation's business, including national and international commerce, civil government, and military operations."

The transformation continues. "Current trends suggest that the public telecommunications network and the Internet will merge in the years ahead; by 2010, many of today's networks will likely be absorbed or replaced by a successor public telecommunications infrastructure capable of providing integrated voice, data, video, private line, and Internet-based services," the commission said.

This trend leads not only to greater economy and convenience but also to new and greater vulnerabilities.

In times past, the telephone company sent out somebody in a truck to hook up service or check out problems. Today, much of the network maintenance is performed through remote access. Services ranging from cable television to the Internet are also managed to large degree by remote electronic access.

"The channels used for remote access by authorized maintenance personnel offer potential attack routes for adversaries," the Marsh commis-

sion said. "Once logged on, an attacker can remove nodes from service and disrupt the network."

It is difficult to distinguish between an electronic attack and the accidental failure of a network. In June 1991, service for 6.7 million telephone lines in Washington, D.C., was disrupted for several hours. The problem turned out to be a mistake in the telephone switching protocol—a single mistyped character of code. An attack on the telephone system might take much the same form.

Furthermore, the commission report said, "The tools designed to access, manipulate, and manage the information or communications components that control critical infrastructures can also be used to do harm. They are inexpensive, readily available, and easy to use."

We do not even have the capability to know when we're under attack. "Deciding whether a set of cyber and physical events is coincidence, criminal activity, or a coordinated attack is not a trivial problem," the commission report said. "Without a central repository and analytic capability, it is virtually impossible to make such assessments until after the fact."

### Administrators on the Ramparts

The defenses consist mainly of scattered security practices, virus scanners, passwords, and "fire walls." Few organizations have specialized

electronic security people. "Our first line of protection is with the system administrators and computer people," said Phillip E. Lacombe, the commission's staff director.

Those working the problem say they are laboring with inadequate tools, information, and coordination of effort. They must also operate within a legal system that never envisioned an attack on the nation's telecommunications switches from a distant computer keyboard.

"Looping and weaving" is standard operating procedure for accomplished hackers. They route their attack through a series of computers, which may be located in several different countries. Security people have the technical ability to "hack back" the signal to its source, but at present, they're allowed to track it only to the last computer in the series. Going further requires a court order for every computer in the chain. On the security shopping list, therefore, is a national "trap and trace" law in which a single court order would allow pursuit all the way back to the hacker.

(Doug Richardson, writing in *Armada International*, says the Air Force has devised methods to damage computers used in hacker attacks and has destroyed expendable 486 computers in demonstration tests.)

Other provisions of the law make people in the private sector wary of sharing information, revealing prob-

lems, or cooperating with the federal government. For example, the Freedom of Information Act makes information in the possession of the government available to the public. Private sector participants want better assurances than are available now that sensitive information or trade secrets will remain confidential.

In particular, the private sector is cautious on the issue of encryption, the scrambling of data so that it cannot be decoded without a key. Initially, the Clinton Administration had opposed strong encryption systems, especially if they might be exported, unless federal law enforcement and intelligence officials were given the means to unscramble the encryption.

Getting almost no acceptance of that notion, the Administration now seeks a compromise solution—which is endorsed by the Marsh commission—that would have the deciphering keys held by trusted third parties. The Administration argues that this would permit the same sort of legal protection that currently exists for mail and telephone communications but also ensure court-authorized access for law enforcement officials. That proposal has not generated much enthusiasm from industry, either.

Among the electronic security questions yet to be resolved are: What do we guard against? How do you recognize harmful information? Even if you can recognize it, how and where do you screen for it?

In the case of online cyber attack from abroad, a signal must enter the United States either through a major satellite-downlink site, of which there are just over a dozen, or by way of telecommunications cables, said Lacombe. That might seem to reduce entry points to a manageable number. On the other hand, he added, information might enter as three separate pieces of nonmalicious data that become malicious when they are combined. There are other techniques to evade detection as well.

And of course, if the attacker can arrange to work from a computer located in the United States, a multitude of attack routes will lie open.

### A New Partnership

The Marsh commission's budget proposals are modest. At present federal spending on infrastructure protection amounts to only \$250 mil-

## Global Technology Trends

	in 1982	in 1996	in 2002
Personal computers	thousands	400 million	500 million
Local area networks	thousands	1.3 million	2.5 million
Wide area networks	hundreds	thousands	tens of thousands
Viruses	some	thousands	tens of thousands
Internet devices accessing the World Wide Web	none	32 million	300 million
Population with skills for a cyber attack	thousands	17 million	19 million
Telecommunications systems control software specialists	few	1.1 million	1.3 million

*The United States, where nearly half the world's computer capacity (180 million computers out of 400 million) and 60 percent of Internet assets reside, is at once the most advanced and most dependent user of information technology. The last line on the chart shows the population of systems control software specialists who possess the tools and know-how to disrupt or take down the public telecommunications network.*

lion a year, about \$150 million of which is spent on information security. The commission recommended doubling the amount to \$500 million a year. Much of that is for research and development of real-time detection, identification, and response tools and for means to prevent attack, mitigate damage, recover service, and reconstitute architectures.

What the commission proposed mainly is the creation of a new partnership between government and the private sector and the establishment of a national point of focus.

"National security is a shared responsibility," Marsh said. "The private sector is responsible for taking prudent measures to protect itself from commonplace hacker tools. If these tools are also used by the terrorist, then the private sector will also be protecting itself from cyber terrorist attack and will be playing a significant role in national security.

"The federal government is responsible for collecting information about the tools, the perpetrators, and their intent from all sources, including the owners and operators of the infrastructures. The government must then share this information with the private sector so that industry can take the necessary protective measures."

The commission called for an Office of National Infrastructure Assurance within the White House, reporting to the National Security Council and serving as the federal government's focal point for infrastructure protection.

A number of other organizations were proposed as well, notably "clearinghouses" as focal points for industry cooperation and sharing. Clearinghouses might be operated by associations or trade groups.

How the partnership would operate where national security is concerned is even less clear. It has not been determined when or whether a cyber attack would constitute an act of war or what the nation would do about it if it occurred.

If such an attack is an act of war, the Department of Defense would have major if not sole responsibility for response. It is not presently organized to meet such a responsibility.

In a speech in September, Marsh made passing reference to "a recent Joint Staff exercise" in which "some

## The Datastream Cowboy and Kuji

The best known of all attacks on Air Force data systems began on March 23, 1994, with penetration of the Rome Laboratory computer network at Rome, N.Y. Five days had passed before Rome discovered that the attack was under way, and before it ended 26 days later, 150 known intrusions had taken place. The hackers gained complete access to 30 systems, downloaded data, and used Rome as a launching platform to penetrate about 100 other systems, including computers at NASA, the Jet Propulsion Laboratory in Pasadena, Calif., and the Goddard Space Flight Center in Greenbelt, Md.

Using a variety of techniques, investigators learned that there were two hackers, using the handles "Datastream Cowboy" and "Kuji." They also discovered early that the final links in the attack chain were Internet service providers in New York and Seattle.

April 15 was a tense day. The hackers used the Rome computers to tap and download information from the Korean Atomic Research Institute. At first, the Air Force was fearful that the institute might be in North Korea and an intrusion from Rome Lab might be perceived by the suspicious North Koreans as an act of war. As it turned out, the institute was in South Korea.

The Air Force Office of Special Investigations got a lead on the Datastream Cowboy through his indiscretion in declaring his handle in an e-mail exchange with another hacker. He said he lived in the United Kingdom and that he liked to attack "dot mil" sites, or military computers. Unknown to Datastream, the hacker on the other end of the e-mail exchange was an OSI informant.

New Scotland Yard began monitoring Datastream's telephone in London. Instances of "phone phreaking" from his number—manipulating British Telecom to zero out billing records and thus make calls free—coincided with intrusions at Rome Lab. He routed his attacks, variously, through South America, Europe, Mexico, and Hawaii.

Datastream was arrested in May 1994. According to the *Times* of London, when the police came for him, he "curled up on the floor and cried." His name was Richard Pryce and he was 16 years old. He was using a 25 MHz, 486 SX desktop computer with a 170 megabyte hard drive at a workstation on the third floor of his family's home. On March 21, 1997, Datastream was sentenced in Bow Street Magistrates Court in London, for 12 counts of hacking in violation of the Computer Misuse Act. He was fined a total of £1,200 plus £250 court costs.

Kuji, several years older than Datastream, was not arrested until June 1996. He was revealed to be Matthew James Bevan, a computer technician from Cardiff in Wales. He has been charged under a tougher section of the Computer Misuse Act than Datastream was. At present, he is free on bail and reporting on his own case from his site on the World Wide Web.

of the issues were quite troubling—including the fact that the Joint Staff ended up fighting this war, which was not only bad but illegal."

He was talking about Joint exercise "Eligible Receiver," an element of which was an adversary using cyber tools. Public law vests the war making powers of the United States in the hands of the National Command Authorities and the commanders of the unified combat commands. This part of the exercise did not fit the mission of any of the unified commanders, so in the simulation, the Joint Staff took charge itself, which it could not legally do in an actual conflict.

The Marsh commission also proposed one or more federal agencies to coordinate work on each of the critical infrastructures. The Treasury Department would be lead agency for banking and finance matters, for example, and the Department of Energy for electrical power vulnerabilities.

Federal responsibility for the pivotal information and communications sector would be shared by the Departments of Defense and Commerce. Inevitably, the Justice Department would be involved as well. In the view of Attorney General Janet Reno, who has been active on the infrastructure protection problem from the beginning, the same sort of relationship that developed between the Departments of State and Defense during the Cold War now needs to develop between Justice and Defense.

Given the ambiguity of electronic threats, the Marsh commission concluded that "initially, all cyber attacks will have to be treated as crimes—regardless of where they originated or the purpose of the attack. When investigation provides evidence of foreign government involvement or the magnitude of the attack requires it, then other leadership may be assigned." ■

**Gen. Michael E. Ryan begins his tour on notes of teamwork and optimism about the Air Force's future and direction.**

# The Chief Holds Course

**T**HE new Chief of Staff of the Air Force does not feel the service needs much "reinventing," nor does he bring with him a new vision of what it should become under his leadership, primarily because he already feels a sense of ownership for the "Global Engagement" concepts formulated over the last couple of years.

"I didn't inherit this," Gen. Michael E. Ryan said of the Air Force's long-range plan, unveiled just over a year ago. "I helped make it."

In an interview with *Air Force Magazine*, Ryan explained that the Global Engagement vision—which touted an evolution from an "air and space force" to a "space and air force"—was "an Air Force project, a year and a half in the making, involving all the commands. This was a corporate view of the future. It was not based on individuals."

Anyone who had acceded to the top uniformed job in USAF would have stayed the course of Global Engagement, said Ryan, because "we have

**By John A. Tirpak, Senior Editor**

good agreement within the Air Force ... that this is where we want to go."

"You've got to remember that we had a big debate going into this, and we came out with pretty good unanimity," he asserted. "That doesn't mean that it's perfect. And we will redo our long-range plan on a basis that allows us to relook at it and re-'duke it out' on issues. But the basic framework for where we want to go is there."

The concerns of the "naysayers" have been addressed, he maintained, and he believes there is acceptance of Global Engagement down the chain of command. Such harmony on the service's direction in uncertain times is "very healthy," Ryan added.

### In Search of Comity

Ryan—who served as executive officer to a former Air Force Chief of Staff, Gen. Larry D. Welch, and as assistant to a former Chairman of the Joint Chiefs of Staff, Gen. Colin Powell—also favors harmony and unanimity on the JCS and rejected the idea that his job encompasses slugging it out with the other service heads for resources.

Such competitive attitudes make poor policy, Ryan said, adding that the revisions to the national military strategy contained in last year's Quadrennial Defense Review and the cuts it called for in the other services were, in his opinion, "appropriate."

Despite a shrinking pool of defense dollars, Ryan has no plans to have the Air Force go after the funds of other services, despite a pattern of the other services laying claim to savings created by USAF's reduction in size and programs.

The services have "become so dependent on each other ... that we can't afford to sit around and pick at each other in the public domain, fighting for the next buck," Ryan said. "We have to sit down and decide what's the best way to divide the national security chores for the good of the country, saving resources and precious lives that we are charged with."

He continued, "I'm not going to argue that the Army's requirements are different than what they've laid out. That's not my function. My function is to argue the merits of the use of airpower across the spectrum, to the extent that it can forward the national security interest of this country."

It serves the interests of no service "to get into some kind of squabble about marginal bucks," he added.

The QDR has served a useful purpose, Ryan asserted. The strategy review "does what we wanted it to do, and that is to do the least damage to the capabilities of the forces to fight in the near term, while trying to preserve the capabilities and leverage the technologies for the future to save American lives and to do our duty."

Global Engagement is "fundamentally sound" and fits well within the framework of the QDR, Ryan continued. The definition of Air Force "core values, core competencies" and the route to becoming a space and air force—"timing TBD" [to be determined]—is "conceptually ... a good road map, a good glide path for us. It's now up to us to go out and execute it."

Because the services now will face a QDR every four years, Ryan noted, "Our planning cycle will get into the

rhythm of that ... which includes the long-range planning and the short-range planning. So we are prepared to articulate where we think the Air Force contributions are—going into the 21st century."

Ryan thinks adequate resources are available to man and run the current Air Force, but he acknowledges there are doubts about whether it can properly modernize.

### Can We Modernize?

"If we can ... be more efficient ... in the outsourcing and privatization, and if we can continue to manage our operational tempo with the size of the force that we have"—which is less than two-thirds the size of the force in 1989 but which has four times the commitments—"and which I think we can do and have been doing for the last year and a half very well, then we're OK from a force structure size," Ryan stated. "The question is, can we do the modernization?"

Outsourcing and privatization are among the few means left to free up money needed for investment in systems to promote the Air Force's future dominance, Ryan observed.

"Those are the ways that we can save money that we need for future ... capabilities, [such as] the F-22, Joint Strike Fighter, Airborne Laser—things that we think will well-leverage our forces in the future," Ryan said. It is in outsourcing and privatization that the Air Force must find the money to be its "seed corn," or initial investment in future technologies and even basic science, he added.

The other means of obtaining the money for modernization—short of obtaining higher levels of funding from Congress—is to consolidate fighter and bomber forces to gain efficiencies and generate savings. However, "we don't have a BRAC," meaning another Base Realignment and Closure round that would allow USAF to nominate bases and facilities for closure.

"We have no way of closing the infrastructure" without another round or two of BRAC, Ryan noted. The Air Force since 1989 will have "come down 36 percent on our force structure, and we've only come down 21 percent on our infrastructure. [It's] very difficult to work consolidations when you can't close anything. That's

**"... we will not have massive RIFs [reductions in force]," Ryan said. "This will be an evolutionary change, probably by attrition and cross training. ... I don't see right now that we have to do any revolutionary kinds of reinventing how the Air Force is structured or how our career paths are structured."**



why I think the Secretary of Defense is very committed to getting a BRAC at the turn of the century."

Defense Secretary William S. Cohen announced in November he would push hard for another two rounds of the BRAC process, despite warnings from Congress that further base closings are a dead issue.

The BRAC process, as well as privatization and outsourcing, are areas in which USAF must succeed, according to the Chief of Staff. In the QDR, "we assume some savings from that [the move to privatization and outsourcing] that are fairly substantial for the Air Force, to the tune of 27,000 active duty, 18,000 civilian, 700 or so reserve," Ryan pointed out.

"Though no decisions have been made on ... what will go [away], we have in the budget already taken account for that, for the savings that we think we will get from those outsourcing and privatization efforts."

If the efforts don't pan out, the rest of the USAF program will be short by the amount of dollars that were to be saved.

### No Revolution

While the QDR cuts will be substantial—about 10 percent of the existing force—"for the most part, what I see so far is that we will not have massive RIFs [reductions in force]," Ryan said. "This will be an evolutionary change, probably by attrition and cross training. ... I don't see right now that we have to do any revolutionary kinds of reinventing how the Air Force is structured or how our career paths are structured."

He will make an effort to see that the rank and file troops have "an anticipation of the turbulence" that will come from the QDR reductions, as well as educate them on the benefits associated with outsourcing and privatization.

Other QDR directives that will have to be addressed include consolidating many squadrons, which now have only 18 Primary Aircraft Authorized, to get back to 24 PAA, to eliminate problems that arose when fewer planes had to be spread out over fewer bases. Additionally, one fighter wing of the Air Force's current 13 active duty wings will shift into a reserve status.

Ryan is, "on the whole," optimistic about implementing both Global

**"I was the commander of the air campaign in Bosnia, and had lived with almost-Vietnam rules the first year that I was there, and it was the most frustrating thing that I have ever dealt with,"**

**Ryan said.**

**"I may have been frustrated as an aircrewman by some of the stupidity in Vietnam, but I was doubly frustrated" in Bosnia ...**

Engagement and the QDR, he said. At a Corona meeting of top Air Force leaders last fall, Ryan said the group looked at progress made since Global Engagement was developed.

Ryan explained, "We looked back and said, 'How are we doing on our vision?' How are our battlelabs doing as we set them out?" On the latter issue, "That's kind of a success story because we said we were going to do it a year ago and we've done it. And they are starting to pursue some interesting innovations. And that's what we need, innovations that make us faster, better, cheaper," Ryan asserted. "Looking back, I think we've come a long way, just in a ... year and a half, structuring ourselves for how to approach this 21st century."

The two-part problem of pilot training and poor pilot retention was one issue the Corona conference examined in detail, Ryan said. The issue is being worked from the demographics of who is entering the service right through the way pilots are recruited, trained, and given experience. With a large number of pilots leaving the service, the USAF leadership is hoping to find ways to make service life more attractive and to ensure that there is a proper mix of experienced and novice crews.

"We don't want the inexperienced leading the inexperienced," Ryan noted.

Ryan is convinced that the Air Force "has it right" in its approach to

modern air combat, especially given its success in Operation Desert Storm in 1991 and Operation Deliberate Force in 1995, the latter a USAF-led air operation in Bosnia which was personally commanded by Ryan.

As a young captain flying F-4s out of Thailand in the Vietnam War, Ryan had an object lesson in the wrong way of doing things.

### The Mistakes of Vietnam

"One thing that I came away from that war with was that that was the stupidest way to use airpower that I'd ever seen," Ryan said. He complained bitterly—though privately—to his father, Gen. John D. Ryan, who at the time was commander of Pacific Air Forces and later Chief of Staff in the period 1969–73.

"There's a whole generation of us" in the senior Air Force leadership of today "that are veterans of Vietnam ... that grew up having experienced that, having flown by targets that were shooting at us—lucrative targets that could've been, should've been, hit—and we left them there. And we flew on to a stupid target," selected by authorities far above the level of the operational commander.

"Airfields were off-limits, yet we weren't off-limits to the MiGs," Ryan recalled. "Give me a break. SAMs could shoot at you, but unless they shot at you, you couldn't go after them."

That experience in Vietnam strongly influenced Ryan's handling of Deliberate Force in Bosnia.

"I was the commander of the air campaign in Bosnia, and had lived with almost-Vietnam rules the first year that I was there, and it was the most frustrating thing that I have ever dealt with," Ryan said.

"I may have been frustrated as an aircrewman by some of the stupidity in Vietnam, but I was doubly frustrated" in Bosnia "because ... I guess I took it on myself to be frustrated for all our aircrews, when [the Bosnian Serbs] could shoot at us with SAMs and we had to go back and ask the UN's permission to come back and take out the same site."

When "finally, the United States of America stood up [and] ... said ... that we weren't going to put up with this anymore, [it] led to being able to carry out the air campaign we did. And we were able to protect our forces

while executing [the] campaign." The effort brought the recalcitrant Bosnian Serbs to the bargaining table and eventually led to the cease-fire and the 1995 Dayton peace accords.

The lessons of the Bosnian campaign, and the "frustrating" buildup to it, Ryan said, is not to "lay out a mission and give it to a force without giving it the applicable rules of engagement to allow it to be able to execute the mission," which includes the authority to "protect itself."

Bosnia—and the frequent deployments of units to the Persian Gulf region—are demonstrating that the Air Force is indeed evolving into an "expeditionary" force, Ryan said, and during his tenure he will be concentrating on how to make it more capable of swiftly reacting to events, while doing so more efficiently.

Not only will Air Expeditionary Forces be routinely dispatched from the continental US, Ryan said, but "we have set up overseas Air Expeditionary Forces to rapidly respond within theaters. Conceptually, it's the right way for us to go."

Part of becoming a more efficient expeditionary force, he said, is to "reduce our footprint," or the associated logistical effort that supports a deployment. He noted as an example that U-2s flying missions over Iraq send their data via satellite to Beale AFB, Calif., from which location it is disseminated to the organizations that need it. This method eliminates the need to send "400 folks and God knows how many vans, etc., forward," Ryan said. "We do it by satellite link."

Such "reach-back" capabilities will become more frequent as efforts are made to do more with satellites and get intelligence more rapidly into the hands of those who need it, Ryan said.

### Just in Time

In a similar logistics vein, an AEF might take only two spare engines when normally it would take four. The additional engines could be sent for on a "just in time" basis if needed, and the AEF could be supported increasingly by an overnight-type package service, as eventually happened in the Gulf War.

"We can't take the kitchen sink" on an AEF, Ryan asserted.

Becoming faster at such deployments—coming lean and mean—will

make it easier for national commanders to depend on AEFs to deliver on their promise, he said.

"Though ... all the services can contribute in some way to most of the problems that we are faced with today, normally, air is asked to respond the quickest" because it can arrive on the scene first. "And if we're going to do that, we have to arrive with capabilities that are applicable to the problem," Ryan observed. That means tailored forces that are configured for the mission at hand, whether it is a humanitarian relief effort or a "shooter" package.

In terms of doctrine, "we have it pretty well mapped out ... how we do this," Ryan added.

The concept is spilling over into all aspects of what USAF does, particularly space, Ryan said.

"We are looking into our Air Operations Centers ... and putting in space capabilities within our staffs overseas, so that we have the capability to form up rapidly and use

**"Just like any family,  
we have to take care  
of them, we have to  
nurture them,  
sometimes we have to  
correct them, and  
sometimes we have to  
punish them. ..."**

space assets as necessary," he said. As soon as the call comes, such on-site personnel within a theater commander's staff can quickly "form the connective tissue to reach back" to Space Operations Centers and offer their capabilities for immediate use.

"So this expeditionary business has to do not only with the forces you bring forward ... but the reach-back concepts of how we keep that footprint smaller," he said.

Ryan's hope for his tenure as Chief of Staff is that there will be less "spectacular and speculative journalism" regarding the "good order and discipline in the force," as in the Kelly Flinn case, which "sparked great heat but not a lot of light." Flinn, an Air Force lieutenant and B-52 bomber copilot, left the service after being charged with adultery, disobeying a direct order, and lying under oath in connection with her affair with the husband of an enlisted Air Force member.

He worries that "in this age of ... immediate information ... that sometimes the facts get left behind, and sometimes we can't be very blatant about putting those facts out in the public domain, because of our responsibilities to the individuals that are involved."

The "first information that is out there, whether it is factual or not, normally sets the tone. ... Not only does it have to be rebutted, but the real information then has to come forward, so you have double duty," Ryan said.

"I'm hoping we're over that. I'm hoping that the lessons learned out of some of these controversies that occurred is that those who want to speculate will do so a little more factually based than they did over the last couple of years. [In] those particular cases, some folks got out in front of their headlights."

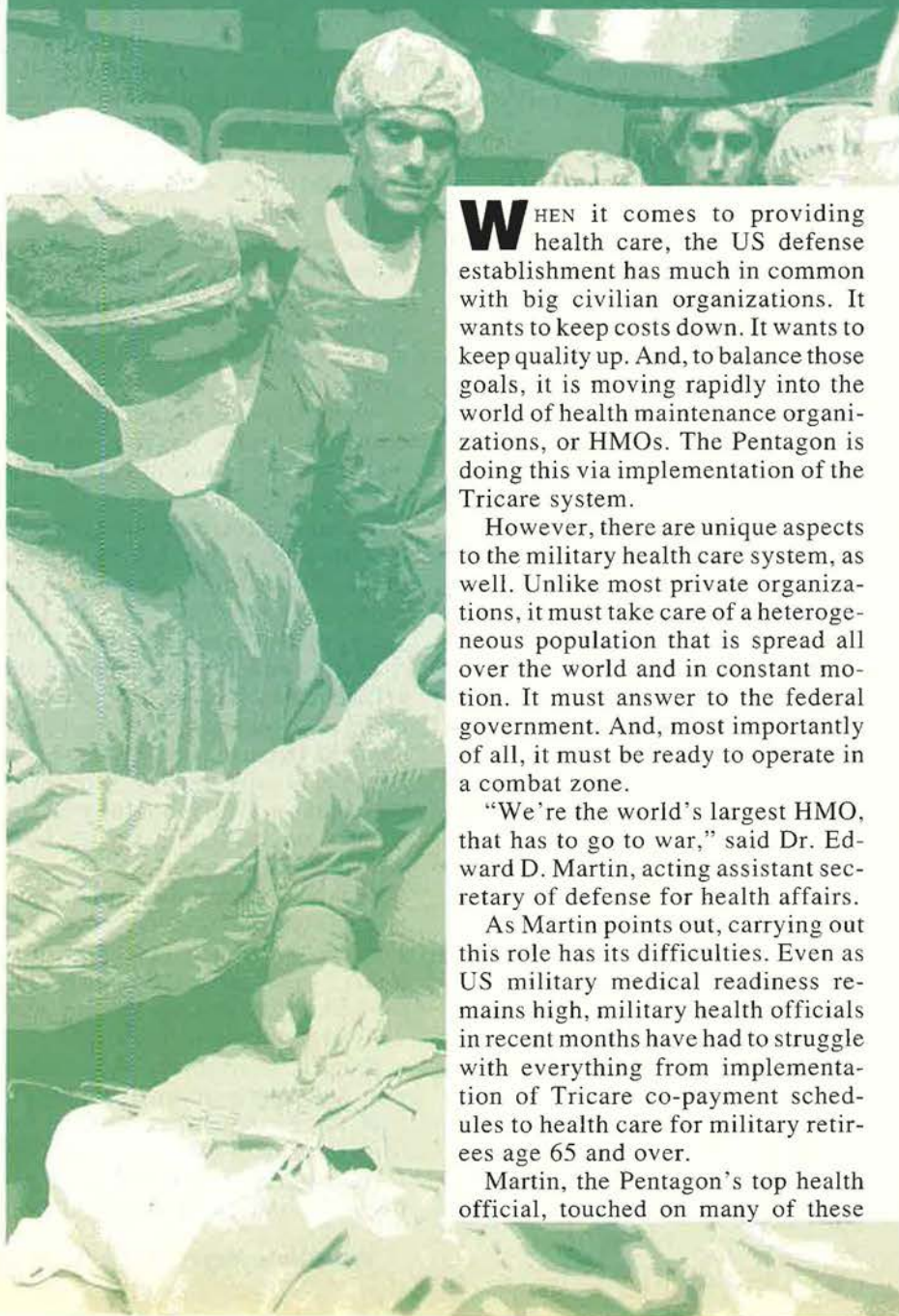
He maintained, however, that USAF still has a responsibility to those who have "sinned or erred."

"Just like any family, we have to take care of them, we have to nurture them, sometimes we have to correct them, and sometimes we have to punish them. But like any family, we protect our folks who are under our scrutiny from undue digging into their sins and errors. And we should not be part of the debate that throws it out into the public domain when they are still part of our organization." ■

The Department of Defense is not enthusiastic about other health care alternatives, such as FEHBP, for retirees.

# The Pentagon Prescribes Tricare

By Peter Grier



**W**HEN it comes to providing health care, the US defense establishment has much in common with big civilian organizations. It wants to keep costs down. It wants to keep quality up. And, to balance those goals, it is moving rapidly into the world of health maintenance organizations, or HMOs. The Pentagon is doing this via implementation of the Tricare system.

However, there are unique aspects to the military health care system, as well. Unlike most private organizations, it must take care of a heterogeneous population that is spread all over the world and in constant motion. It must answer to the federal government. And, most importantly of all, it must be ready to operate in a combat zone.

"We're the world's largest HMO, that has to go to war," said Dr. Edward D. Martin, acting assistant secretary of defense for health affairs.

As Martin points out, carrying out this role has its difficulties. Even as US military medical readiness remains high, military health officials in recent months have had to struggle with everything from implementation of Tricare co-payment schedules to health care for military retirees age 65 and over.

Martin, the Pentagon's top health official, touched on many of these

issues in a wide-ranging interview with *Air Force Magazine* in his Pentagon office. One major point: The Defense Department is not Blue Cross/Blue Shield. The special needs of military health care mean that "sometimes we have to use different approaches in order to either meet ... objectives or to meet ... expectations" of beneficiaries, Martin said.

## When Retirees Hit 65

A major—some say *the* major—health question now facing the Pentagon concerns the provision of benefits to military retirees who have reached the age of 65.

Retirees, when they turn 65, are no longer eligible for coverage under the Tricare system. Such retirees are effectively pushed into the hands of the Medicare system. They can continue to obtain treatment in military treatment facilities on a space-available basis, but the closure of bases and the general downsizing of military medicine means that such low-priority appointments are very difficult to come by in many parts of the country.

Polls show that virtually all military retirees feel that they were promised free health care for life for themselves and their families when they joined the service, so long as they completed a full military career. In-

stead they must wrestle with Medigap insurance payments and the Medicare bureaucracy.

Top Pentagon officials no longer dispute, as they once did, that such promises were made. They say they know they have a moral obligation to address this situation in an equitable manner.

"The department is looking to put together an overall plan to try to improve a predictable benefit for these people," said Martin. The plan has three basic components.

The first core part of the Pentagon plan is Medicare Subvention. Under this program, 65-and-over military retirees would be able to use military facilities, receive a full Tricare benefit, and have the Medicare funding organization reimburse the Defense Department for the cost of treatment, as it does for other Medicare providers.

Theoretically, Medicare can reimburse DoD at a reduced rate, since care can be provided more cheaply within an MTF than in the private sector's facilities.

Already, Congress has approved a Medicare Subvention demonstration project, called "Tricare Senior," to test out the concept. The task of organizing the test has taken a little longer to plan than officials anticipated, but the final sites list should be determined this fall, said Martin.

Also under review at this time is a program called "Partners," the second part of what the Pentagon is studying for 65-plus health care. Retirees would stay enrolled in Medicare HMOs, instead of joining Tricare (as they would under Medicare Subvention). However, they would maintain a relationship with military medicine—possibly through some link to pharmacy benefits.

The third part of the Pentagon's plan for the 65-plus group entails Medicare Subvention for treatment at Veterans Affairs hospitals.

There is a problem, though. Even if all three of these steps are adopted, some military retirees would still be uncovered. Those who live far from a VA facility or MTF would need to be addressed by some other change of policy.

Among the alternatives for this final group: allowing them to use the Federal Employees Health Benefits Program as a second payer to Medicare; using a modified Tricare Stan-

dard as a second payer; or subsidization of retiree Medigap policies.

"I think everybody is looking at those options," said Martin.

### The FEHBP Option

For the Pentagon, the FEHBP option is a particularly controversial issue in regard to military retiree medicine. Many military organizations, including the Air Force Association, say that all Medicare-eligible former military members and their families should be able to join the big federal employee health program.

After all, they argue, employees from all other federal agencies, as well as members of Congress and their staffs, can join FEHBP and stay in the system at and beyond 65. Why not those who wore their nation's uniform, as well?

According to Martin, the Department of Defense has long had "grave concerns" about FEHBP participation.

One of these concerns centers on cost. Congressional Budget Office estimates of the price of opening up FEHBP to the military run from \$1.6 billion to \$6 billion annually. The exact amount would depend on such variables as whether all retirees are eligible, or only those over 65, or all retirees, plus active duty dependents.

A second concern involves military readiness. The Defense Department has long contended that military doctors need to see older patients—who have a higher probability for surgery and complicated medical procedures—on a regular basis in order to sustain medical techniques needed for combat medicine.

"Basically, taking care of healthy young people does not make [sufficient] use of their skills," said Martin.

However, many of the proposals to open up FEHBP to the military are sweeping blueprints. If a more limited use of FEHBP were discussed—as in the aforementioned package plan to deal only with over-65s—"We'd have to reappraise it," said Martin.

Congressional hearings and further Washington discussion of the FEHBP subject will likely take place this spring.

Bills have been introduced in both the House and Senate to allow military retirees over the age of 65 to join FEHBP in demonstration pro-

grams at a few sites—testing the concept in a manner similar to the Medicare Subvention experiment that has already been approved.

The conference report of the Fiscal 1998 Department of Defense Appropriations Act, passed in September, said: "Alternative options [for providing health care to 65-and-over retirees], such as providing the Federal Employees Health Benefits [Program] to Medicare-eligible military retirees, exist and could serve to further ameliorate the problems caused by Tricare 'lockout.'"

### The Changeover to Tricare

The biggest recent change in military health care, of course, is the implementation of the Tricare program. Tricare is the military's version of a managed care system for active duty members, their dependents, and under-65 military retirees.

Tricare is a three-choice system. Tricare Standard is a fee-for-service option that is the same as the old CHAMPUS (Civilian Health and Medical Program of the Uniformed Services). Tricare Extra is a preferred provider option that is less expensive than Standard for its beneficiaries. Tricare Prime uses MTFs as the principal source of health care services.

Under Tricare the military contracts out health services management to private firms in 12 domestic US regions, plus Europe, the Pacific, and Latin America. The last two regions in the US to get the program—the Northeast and the Mid-Atlantic—should have Tricare providers up and running by mid-1998.

Martin said that, by adopting the efficiencies, such as volume discounts, associated with managed care, the Department of Defense will be able to save money. And even though the system is not fully up and running yet, substantial savings have already been incurred.

"Otherwise, the money would have had to continue to come out of the services and much higher priority items," said Martin. "So you've got to understand the context of what we've tried to do in Tricare."

From the point of view of decreased cost and improved quality and access for beneficiaries, Tricare has been extremely successful, said defense officials. Regions where it has been in operation for over 18 months

show high levels of consumer satisfaction, measured by such things as reenrollment rates.

However, as Martin acknowledges, the implementation of the program has been far from perfect. "We frankly made a whole bunch of mistakes, and there have been instances where our approach to particular communities [has] not worked," said the DoD doctor.

One fundamental mistake, he said, has been in marketing. Explaining health care plans is extremely complicated, as anyone who has ever tried to fully understand their coverage can attest. The FEHBP for non-military government workers has 350 complicated options, for example.

Martin said that there is a need for much simpler, more effective ways of explaining Tricare. Consider the case of active duty dependents. Health officials need to convey that the bulk of dependent health care can be carried out within the military's own system. It is only when dependents need specialized services not available in MTFs that they have to make co-payments—and even then, such cost-sharing will be ~~problems related to Tricare implementation.~~ One concerns the question of "portability." Since the system has been implemented piece by piece across the country, beneficiaries have not been assured of being able to pull up stakes and move to any other region, while carrying their Tricare Prime benefits with them. That's a problem that should be solved over the next six to eight months as the last two regions go into operation.

Martin also noted another major problem: split families, with dependents residing in several different regions. This has caused major administrative headaches.

"I think we've found a means to be able to deal with that," said Martin. "I think our hope, our intention, is ultimately for a lot of this administrative activity, complications that

we face, to be transparent or invisible to our beneficiaries."

### Complaints About Co-Payments

Another major complaint concerns multiple co-payments. Frequently, a beneficiary would be referred to a specialist for additional lab work and other procedures and would have to ante up for all of the different bills. This is considered a glitch in the process and is being corrected by regulation, according to the Pentagon's top doctor.

Martin points out that the US military health care system is bringing managed care to some areas where there has not been a great deal of activity before. In fact, the Defense Department will not be able to offer Tricare Prime in some isolated communities where there are no HMOs.

"What we are trying to do, for our active duty dependents, is establish a program which covers people who are geographically isolated," he said. "So that even if there is not Tricare Prime in a particular area, they will have the Tricare Prime option. The military had no option but to go in the direction of Tricare. The old system, besides being too expensive, did not lend itself to such modern medical innovations as ambulatory care (vs. hospitalization) and disease prevention programs.

Remaining Tricare issues that need to be addressed include continued improvement in administrative processes and claims processing and ease of obtaining appointments. "I think we have made enormous progress and will continue to do so," said Martin.

Over the last six months the Pentagon's Health Affairs office has looked again at exactly how the military health system measures up in terms of quality care and service. Said Martin: "Although we meet or exceed all the standards and accreditation requirements of the private sector, we have determined there are signifi-

cant and important improvements we could make" in this regard.

In general, the changes now sweeping through military medicine are similar to those that have greatly altered civilian health care in recent years.

"What we're seeing in Tricare is our effort in the military to make that revolution at least in step with, or in some cases a step ahead of, the private sector," said Martin.

Greater reliance on managed care is only one of the changes. Another is a move to health promotion and disease prevention—or, in other words, an effort to teach people to take better care of themselves and modify behavior that threatens their well-being.

That means military health care providers focus on such interventions as convincing people to quit smoking or stop drinking heavily. It can be as mundane as urging increased seatbelt use.

"I'm a pediatrician," said Martin. "So [I think] accident prevention among children is a good example" of this approach.

~~That means the focus is on prevention, to paraphrase Air Force Surgeon General Charles H. Roadman II.~~

"We ought to look at it as a failure when we have to admit patients to hospitals," said Martin.

Health officials say there's no doubt that the number of military hospitals will decrease in the future and that the number of hospital beds will decrease even more, as hospital floor space is turned over to ambulatory care facilities.

The old four-story hospitals which now stand on many military facilities have become, in some senses, white elephants. But, said Martin, "We'll still need large facilities, like Wilford Hall, because we're going to need places where we have sophisticated training facilities and the ability to provide very sophisticated services."

The future military health system will also be marked by a mix of service providers.

"We need to find high-quality, cost-effective alternatives for our patients," said Martin, "particularly as they are very diffusely spread across all the countries of the world, all over the United States." ■

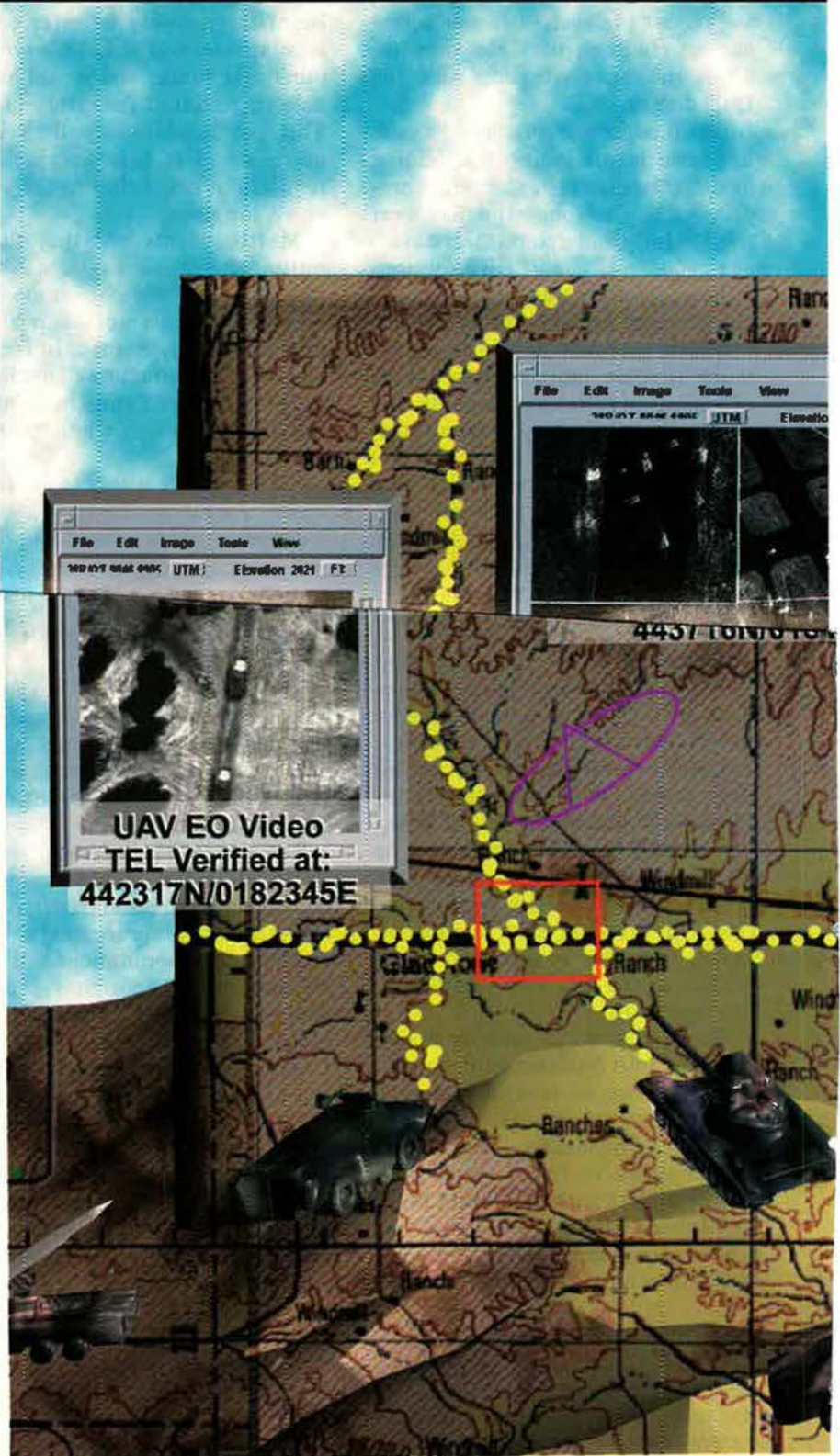
---

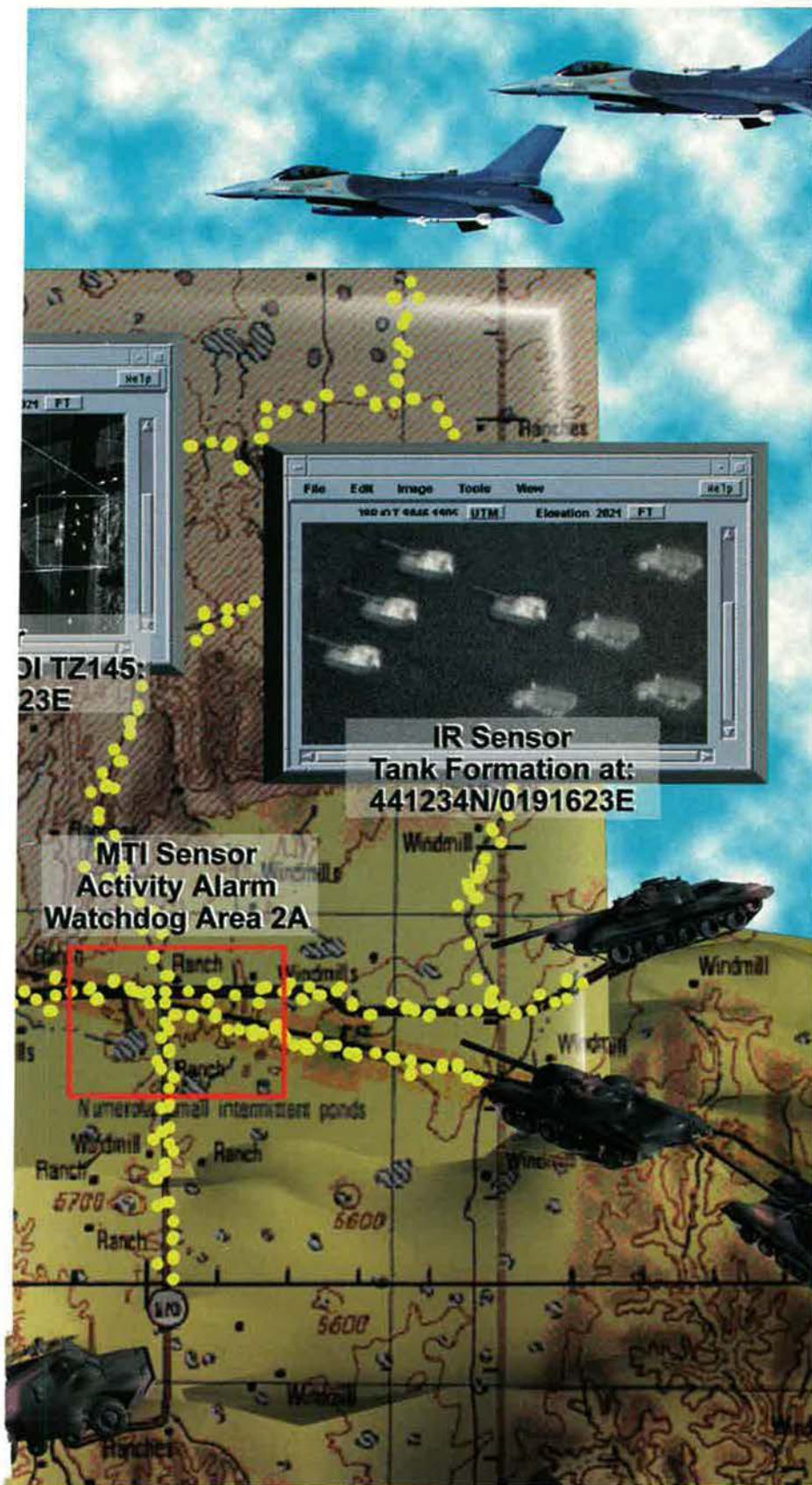
*Peter Grier, the Washington bureau chief of the Christian Science Monitor, is a longtime defense correspondent and regular contributor to Air Force Magazine. His most recent article, "Reserve and Guard on Afterburner," appeared in the November 1997 issue.*

# THE POWER TO DECIDE... TAKEN TO GREAT NEW HEIGHTS

Joint STARS. Rivet Joint. Guardrail. Predator. U2. ARL. All of these sensor platforms provide the Air Force with critical battlespace information. Now they can all be displayed in a single integrated picture with the

Joint STARS workstation... production C4I system that acquires, processes, displays and disseminates data from all of these sensors simultaneously. The result: a complete, integrated picture of the battlespace with fidelity that has never before been possible. Air Force applications for this system are seemingly endless.





Easily deployable, the Joint STARS Workstation provides near real-time surveillance, reconnaissance, situation awareness, target development, theater missile defense and battlespace visualization. This means the system can support every kind of global mission—from small scale contingency operations to major conflict operations. Imagine going into these operations with the battlespace awareness and intelligence to enable commanders to dynamically assess, plan and execute. Your ability to make decisions will be taken to great new heights. For further information, call (602) 441-3548.



**MOTOROLA**

*What you never thought possible.*

**Since 1979 the 388th Fighter Wing at Hill AFB, Utah, has flown nearly every operational variant of the F-16.**

**Photography by Guy Aceto, Art Director**

*This F-16C from the 4th Fighter Squadron streaks over the mirror-like waters of Utah's Great Salt Lake en route to a training range for an air to ground sortie. Equipped with LANTIRN (Low Altitude Navigation and Targeting Infrared for Night), the aircraft has proved to be adept at night as well as in daylight at striking a variety of targets.*





# *Viper Country*





The days usually run long at Hill AFB, Utah. Maintenance crews ready the 388th's aircraft in the late afternoon sun as flight crews settle in for a training mission that will take them into the evening. LANTIRN, via its targeting and navigation pods slung alongside the intakes on these F-16Cs, gives pilots the ability to get to the target in almost any weather and under cover of darkness to employ precision guided weapons. During the winter months at Hill, the 388th regularly flies about 25 percent of its training sorties at night. During the longer summer days, a little more than 12 percent are night flights. At left, Capt. Andrew Wolcott gets ready for the evening's sortie under the watchful eyes of crew chief Amn. David Allen.

The job of the 388th is to put a weapon on target. That doesn't happen without the munitions crew preparing the right weapon for each job. At right, Amn. Doyl Watson and A1C Chad Mullins prepare two 2,000-pound bombs for flight line delivery. Although these bombs are only inert training rounds, the munitions specialists use the same care and expertise as they would for live weapons.



The guidance control mechanism of a Precision Guided Munition requires periodic checks to ensure it's functioning properly. TSgt. Francisco Torres, a weapons systems evaluator from Eglin AFB, Fla., visited the 388th to perform these vital inspections. Whether employed in a training round or the real thing, the mechanism has to be in perfect working order—it's critical to the pinpoint capability of any PGM.



*On the flight line, the weapons load crew works with the flight-line crew to load the weapon. Above, A1C Jamaal Brown drives the "jammer" as weapons load crew chief SSgt. John Barriball checks the 2,000-pound bomb. At right, once it's moved into position on the aircraft, load crew members (left to right) A1C Timothy Smith, Barriball, and Brown attach the guidance package that will turn the "iron bomb" into a GBU-24 precision guided weapon.*

*The 388th FW's LANTIRN-equipped F-16s carry a wide variety of weapons. Munitions crews are versed in everything from the AIM-120 Advanced Medium Range Air-to-Air Missile to the 2,000-pound laser-guided bomb like this one.*





An average training sortie can last from one to four hours. In a little less than five minutes' flying time, a Hill pilot can be over the Utah Test and Training Range, one of the country's largest military training ranges. The UTTR offers a wide variety of targets and attracts units from around the world. Above, the geometric-shaped target (lower left in photo) is visible from the F-16 as it begins its target run. At right, the view from the backseat is tremendous. When these same missions are flown at night, detailed information from the LANTIRN pods and a wide-angle Head Up Display establish a clear advantage for this version of the F-16.





*This training mission included a simulated attack on a Surface-to-Air-Missile battery, six bombing runs from different angles, and a series of strafing runs. Similar mission profiles for each training sortie ensure maximum use of valuable range training time. With their frequent deployment schedule, the crews of the versatile 388th recognize the value of training time to keep their skills sharp. At left, in a hard bank, the pilot pulls his Viper in on one of the strafing runs.*

*After meeting all the training requirements, the F-16 pilots perform a Battle Damage Assessment of each other's aircraft. At right, clearly visible are the LANTIRN pods, an electronic countermeasures pod on the centerline hard point, an AGM-65 Maverick missile (top), and the pod on the opposite wing that held the six blue practice bombs. Although weighing only 25 pounds, the practice bombs have the same ballistics as a standard 500-pound bomb. This BDA check reveals that one of the bombs failed to release. Since that's not an uncommon occurrence, it's one of the reasons for doing these kinds of checks.*

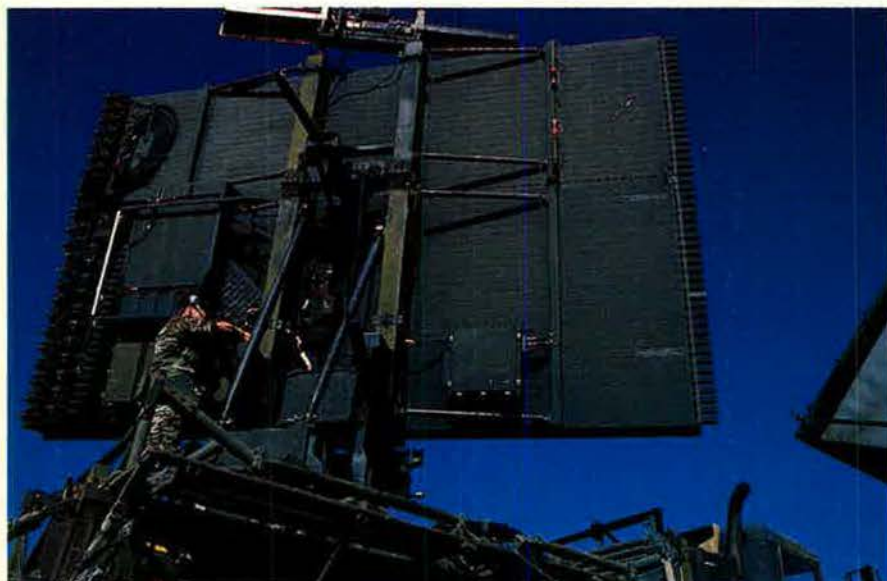


*The LANTIRN system is central to the mission of the 388th's F-16s. Each Viper's system is checked frequently to ensure it is in tip-top shape. Using the same equipment they deploy with, A1C Dario Murga (left) and SrA. Rodney Ricketts go through testing procedures on the navigation pod. The nav pod, which contains a terrain-following radar along with an infrared sensor, enables the aircraft to maintain a preselected altitude and gives an infrared image of the terrain to the pilot via the wide-field HUD. The targeting pod, with its forward-looking infrared sensor and laser designator range finder, can pinpoint a target as well as keep track of other moving elements—giving the pilot the information he needs to complete a variety of missions.*

With a busy operations tempo and demanding training regimen, maintenance is critical. The 388th is justifiably proud of its engine shop. In the background of the photo at right is a row of seven spare General Electric F110 engines ready to go at a moment's notice. In the foreground (left to right) SSgt. Hans Furber and Amn. Adam Kelly replace fan blades on another jet engine.



Staff photos by Guy Aceto



Vital to the 388th's mission, the 729th Air Control Squadron controls the skies over Hill AFB and at the nearby UTTR. The unit uses much of the same self-contained equipment its members employ on frequent missions to South and Central America in support of counterdrug operations. At left, TSgt. Jeffrey Erochu (left) and SSgt. Brian O'Mullan look over one of the squadron's AN/TPS-75 radars. The "Topsy-75" is a sophisticated radar capable of simultaneous long-range search and altitude-finding operations. Information from other radars can also be combined with data from the Topsy-75 to create an integrated picture of the aerial battlefield for theater commanders.

At right, A1C Martina Culich examines part of a satellite communications dish as A1C Jacquelyn Ashley looks on. The 729th ACS provides support for a number of missions outside Hill AFB and has the TDY numbers to prove it. During daylight, a trained six-person crew can assemble the AN/TPS-75 from its transport configuration to full operation within 90 minutes. At night, a nine-person crew can perform the same task in about 2.5 hours.





*Above, one of the 4th FS's Vipers comes in on final approach at the end of a daytime sortie. A few hours later, the night shift takes to the runway. The long flame of an F-16 with full burner is visible in the darkening skies (right) as it rockets down the runway. The 388th FW was the first unit to fly the LANTIRN system in combat—Desert Storm—and is USAF's largest night-fighting wing.*

*The wing was the first to receive the F-16 in 1979. Since then the 388th has flown nearly every version of the Viper and continues to make history. ■*



Sometimes, the first thing the theater commander needs will be an Information Superiority/Air Expeditionary Force built around E-3s, E-8s, and RC-135s.

# The Electronic



**T**he scenario has become increasingly familiar to Air Force planners: A regional commander in chief detects signs of trouble in his Area of Responsibility and looks for options. In response, the Air Force offers up an Air Expeditionary Force and sends out aircraft within 48 hours.

In the future, however, that force won't always be F-15s, F-16s, or B-1B bombers, as now is the case. The CINC might well be getting a small number of Boeing 707s, having no hardpoints for weapons but loaded with the Air Force's premier information-gathering systems.



# Triad

By Robert Wall



*Part of the force of the future, this RC-135V/W Rivet Joint aircraft will partner with the E-3 Airborne Warning and Control System and the E-8C Joint Surveillance Target Attack Radar System aircraft to form the new Information Superiority/Air Expeditionary Force.*



As seen in this image from an operator's console, an E-8 Joint STARS aircraft detects moving road and railroad traffic. The white lines are roads, dashed lines are railroads, blue lines are rivers, and orange dots are vehicles.

This force of the future is called the Information Superiority/Air Expeditionary Force. It will be built around an "electronic triad"—the E-3 Airborne Warning and Control System, the RC-135V/W Rivet Joint, and the E-8C Joint Surveillance Target Attack Radar System, plus whatever other unmanned aerial vehicle and space systems may be useful.

The IS/AEF "is the leading edge" of Air Force efforts "to gain information superiority both for the commander in chief and the National Command Authorities," said Brig. Gen. James E. Sandstrom, the Air Force's director for command and control. He said that the goal is to reveal the enemy's mind-set to American planners early on to support decision making before a crisis erupts and then after hostilities have broken out.

Sandstrom added, "We want to paint the clearest picture we can to send back to our decision makers so they can make timely and accurate decisions."

### Many Missions

The initial mission for the IS/AEF will be to collect real-time information to conduct intelligence preparation of the battlefield, such as establishing an electronic order of battle and tracking forces on the move. Next, it would try to determine the enemy's intent and expose it to the world in the hopes of avoiding further escalation. If, however,

knowledge-based deterrence fails and hostilities break out, the information that is being continuously gathered can be used to dynamically task fighters and bombers to targets.

The time lines for the IS/AEF are no less stringent than for the fighter or force application AEFs. The assets are to be on station within 48 hours, said Air Force officials. Air Force officials expect that, once the USAF systems are in theater, they will be able to provide 24-hour continuous coverage of the Joint Operations Area.

Just as it does with force application AEFs, the Air Force is looking to keep each IS/AEF small. As a result, much of the critical data fusion capability so vital to the operation will remain in the continental United States and will be accessed by in-theater assets through their command and control systems.

Air Force officials said they are excited about the IS/AEF concept for several reasons.

First, it is expeditionary and, therefore, able to respond rapidly worldwide. Second, its reliance on "reach-back" systems and capabilities gives it a small footprint in a theater and thus keeps its exposure to theater-based threats to a minimum. Third, the construct is seen as highly tailorable because it can be made up of a number of different types of assets. Finally, the IS/AEF will be readily adaptable to future needs.

The core assets for this new breed of AEF can easily be identified. They are the operational heavyweights of Air Force information superiority: the Rivet Joint for electronic signals intelligence, the AWACS for air surveillance, and the Joint STARS for ground surveillance. Current plans call for the airplanes and their different battlefield pictures to be fused together into a single, multispectral picture of the battlespace.

In this task, they would be aided by other assets. These include high-flying U-2 reconnaissance aircraft, reconnaissance UAVs, and space surveillance and communications systems, which would be "plugged into" the IS/AEF as needed. The Air Force said that the relevant aircraft of the other services could play a part as well. Among them: the Navy's air surveillance E-2C Hawkeye and maritime surveillance P-3 Orion.

The current Air Force concept calls for the IS/AEF to be able to deploy on its own with only limited fighter coverage. In some cases, however, the IS/AEF may be followed quickly by a regular, fighter-heavy AEF or deploy concurrently with one.

Air Force officials said that, compared to the standard combat AEF, the IS/AEF brings certain advantages. One is that it is less likely to be viewed as a serious military escalation in a crisis situation. Gen. (sel.) John P. Jumper, who was deputy chief of staff for air and space operations in November when he spoke with *Air Force Magazine* [now commander of US Air Forces in Europe], pointed out that "these platforms in themselves are nonthreatening" because they don't carry weapons.

### Not Like a BUFF

Another benefit is that the aircraft assets of the new AEF have extreme standoff capability, so the United States does not have to take the step of penetrating enemy airspace. Sandstrom noted, with considerable understatement, that the IS/AEF "looks different and feels different" from a collection of B-52s.

When the Air Force first began shaping up the IS/AEF concept, officials called it "The Eyes and Ears AEF." However, USAF quickly realized that the term didn't encompass everything the AEF is supposed to accomplish. The name IS/AEF, the Air Force felt, better captured its

potential for being used on the offensive as well as the defensive.

In a major conflict, the IS/AEF's main responsibilities would be to support the Joint Forces Commander, carry out dynamic tasking of combat forces, provide real-time battlespace management and intelligence, and deliver surveillance and reconnaissance support. The systems are critical for the Air Force to implement its goal to rapidly "find, fix, track, target, and engage," said Jumper. "You start out building a picture," Jumper noted, "but you grow into a targeting mechanism."

The concept of the IS/AEF—with its central innovation of fusing Rivet Joint intelligence with that collected by AWACS and Joint STARS—has gotten a major boost from a number of pivotal figures. One of the strongest advocates has been Maj. Gen. Doyle E. Larson, USAF (Ret.), the current president of the Air Force Association, who held several sensitive intelligence posts while on active duty. He retired from the Air Force in 1983 after having served as director of intelligence at US Pacific Command, deputy chief of staff for intelligence at Strategic Air Command, commander of USAF Security Service, commander of Electronic Security Command, and director of the Joint Electronic Warfare Center. Today, Larson is a visiting lecturer at the National Security Agency, Ft. Meade, Md.

Larson explained that the IS/AEF

will help warfighters overcome "blobology," the problem of having lots of potential targets on a screen without a clear idea of their nature or identity. Overlaying RC-135 intelligence on Joint STARS targets is necessary to get the precision targeting data for today's precision guided munitions, Larson said.

Joint STARS has become a core player in the new concept as the Air Force becomes increasingly enamored with what the system will do. Sandstrom acknowledges that it's the "emerging operational capability of Joint STARS" that has been driving a lot of the IS/AEF concept development. The Air Force is hoping to duplicate in the IS/AEF the success it already has experienced in tying together the Rivet Joint and AWACS data.

The role of Joint STARS is getting particular attention as the Air Force fleshes out its concept of engaging an enemy during the halt phase of combat—the early hours or days of a Major Theater War when the enemy has the initiative and the US wants to decisively engage and defeat him. Joint STARS, linked to fighters and bombers, would allow the Air Force to see moving targets and stop them in their tracks, USAF officials emphasize.

In Larson's view, the IS/AEF "is critical for the development of that halt phase, as I see it. If you're going to halt the enemy, you've got to know where he is, exactly." The information will create that detailed picture

of the battlefield which allows the Joint Forces Commander to begin the targeting process as soon as he gets permission to execute the halt phase, Larson added.

### Army Inertia

One of the challenges the Air Force is likely to face in selling the concept to the Pentagon is interservice rivalry. The Army, in essence, views Joint STARS as the property of its land units. The Army already resists the Air Force's call for increased use of airpower early in a conflict and for making the halt phase the decisive point in the war (as opposed to the land-force-intensive counteroffensive toward the end of the war). Given that reality, the Army is unlikely to greet the use of Joint STARS in the IS/AEF with much enthusiasm.

Air Force officials are of two minds on how to deal with that problem. One community hasn't forgotten the Quadrennial Defense Review, where Joint STARS production was cut from 19 aircraft to 13. They still attribute that decision largely to Army failure to support the platform and are, therefore, reluctant to listen to potential Army concerns about competing uses of these scarce aircraft.

Other officers want to take a more conciliatory approach. They plan to sell the concept by pointing out that once the Army has gotten its troops in place it will have access to Joint STARS imagery via its ground station module, as called for in the Air Force-Army agreement on the platform. Until Army forces are in place, however, the Air Force will try to exploit that moving target data for its own purposes.

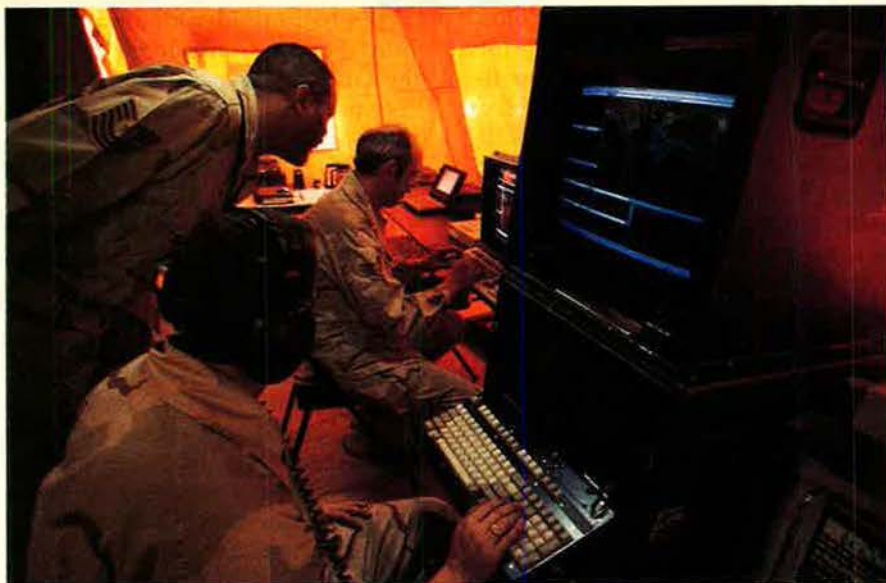
Maj. Gen. John P. Casciano, the Air Force's director of intelligence, surveillance, and reconnaissance, emphasizes that using Joint STARS in this fashion isn't driven by Air Force ambition but by the need to bring to fruition the information superiority goals laid out in the Joint Staff's Joint Vision 2010 document. He adds that the IS/AEF supports the development of a Joint Force Commander's entire campaign plan—not just the air campaign portion of it.

Though they differ on strategy, Air Force officials agree they can't let potential differences between the services stand in the way of implementing the IS/AEF concept.

Photo by Ted Carlson



**USAF hopes to duplicate the success it already has experienced in tying together data from Rivet Joint and AWACS, like the one above, with Joint STARS and, potentially, other information elements in the IS/AEF.**



**USAF plans to utilize the new IS/AEF in its Expeditionary Force Exercise later this year. It could also show up at Green Flag, above, engaging members of the 609th Intelligence Squadron, or even Red Flag.**

The Air Force wants to carry a strong message to the regional CINCs this year: The IS/AEF is available now. That, too, is driven largely by the maturation of Joint STARS, which reached its initial operational capability in December 1997 with the first three production aircraft operationally available. As soon as the E-8s reached IOC, Sandstrom said, the whole IS/AEF concept was "ready."

Later this year, the IS/AEF may make an appearance at the Air Force's planned Expeditionary Force Exercise. Also, it could show up at Red Flag and Green Flag exercises.

The Air Force is confident it can have an IS/AEF ready almost right away because it has been operating all the assets for some time. "This is not rocket science," Sandstrom pointed out. More than a year ago, wing commanders from the 55th Wing (at Offutt AFB, Neb.), 552d Air Control Wing (Tinker AFB, Okla.), and 93d Air Control Wing (Robins AFB, Ga.) decided to work closely together. The 55th controls the RC-135s, the 552d the E-3s, and the 93d the E-8s.

### Linking Up

The communications infrastructure to net the platforms together and to talk to the fighters is being built already. Link 16 is the architecture underlying the information network. The Air Force has confidence that Link 16 will have sufficient band-

width to handle the necessary message traffic. However, getting Link 16 into the field has proven difficult. Funding problems have delayed installation on several aircraft over the past years.

Larson said that, without the proper communications infrastructure, the contribution that the IS/AEF can make to offensive operations is limited. The Air Force would have to rely on the more cumbersome system of voice commands instead of being able to use a more efficient, automated process. To ensure the effectiveness of an integrated communications infrastructure, Larson said, the IS/AEF and the forces relying on their information will have to employ a common registry of targets on the battlefield using Global Positioning System coordinates.

Another piece of the IS/AEF puzzle is working with a distributed Air Operations Center. That concept, which is being explored at Blue Flag exercises, establishes a "virtual" AOC in theater. In reality, the personnel doing the mission planning and writing the Air Tasking Order can remain behind in CONUS.

Although much activity surrounding the IS/AEF is in full swing, a core notion of the concept is its ability to grow with USAF in the future, to

include greater reliance on space systems and improved information operations capability. The Air Force expects that future contributors to the IS/AEF will include the Global Hawk and DarkStar high altitude, high endurance UAVs, the Airborne Laser with its extensive surveillance and battle management systems, and the F-22 tactical fighter with its highly advanced sensing systems. Unattended ground sensors that monitor underground weapons storage facilities some day could play in the AEF.

Offensive information operations, one of the Air Force's current growth areas, will figure heavily in the IS/AEF concept, according to Jumper.

"There are tools out there," he said, "that you can put on these airplanes that make the enemy intercept operations center guy see things that aren't there, making him so unsure about what he sees that he doesn't have confidence to make a move."

Jumper maintained that the Air Force doesn't have those systems yet but added they "are things we will have to pursue in the future."

The net effect of this activity would be that the Air Force's information superiority airplanes would act like shooters themselves, even if not in the traditional sense of dropping bombs and firing missiles.

Jumper said that, as the concept is being developed, "we are trying to make sure that we think of information like we think of air superiority. There's not much of a leap between offensive and defensive counterair and counterspace and offensive and defensive counterinformation."

There are less obvious payoffs to the Air Force from the new concept. One of them is that data collected by the IS/AEF can dramatically improve mission planning for air strikes. Coupling the battlespace picture provided by the IS assets with 30-meter-accuracy digital terrain elevation will allow the Air Force to create accurate, near-real-time simulations of attack missions against designated targets. Those simulations could deliver important information on what course of action would have the greatest payoff and least risk. ■

*Robert Wall is the Pentagon reporter for Aerospace Daily, a Washington defense and commercial aviation periodical. This is his first article for Air Force Magazine.*

# 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.

3M/Federal Systems Department  
AAI Corp.  
Aerojet  
Aerojet Electronic Systems Div.  
Aerospace Corp.  
Aerospatiale, Inc.  
AIL Systems Inc., a subsidiary of  
Eaton Corp.  
Alliant Techsystems Inc.  
AlliedSignal Aerospace Co.  
Analytic Services Inc. (ANSER)  
Anheuser-Busch, Inc.  
ARINC  
Army Times Publishing Co.  
Astronautics Corp. of America/  
Kearfott Guidance &  
Navigation  
AT&T Federal Systems  
Atlantic Research Corp.  
Autometric, Inc.  
Battelle Memorial Institute  
BDM International, Inc.  
Bell Helicopter Textron  
Betac Corp.  
Blue Chip Computers Co.  
Boeing Co.  
Boeing Defense & Space Group  
Bombardier Inc., Canadair  
Booz-Allen & Hamilton Inc.  
Bose Corp.  
British Aerospace, Inc.  
BTG, Inc.  
Burdshaw Associates, Ltd.  
C3I  
Calspan Advanced Technology  
Center  
Canadian Marconi Co.  
Cessna Aircraft Co.  
C.F.C. Reclamation  
Charles Stark Draper Laboratory,  
Inc., The  
Cobham plc  
Coltec Industries, Inc.  
Computer Sciences Corp.  
Computing Devices International  
COMSAT Aeronautical Services  
Contraves Inc.  
Cubic Corp.  
Cypress International, Inc.  
Daimler-Benz Aerospace of  
North America Inc.  
Datatape Inc.  
Derco Aerospace  
DFI International  
Dowty Aerospace  
DRS Military Systems  
DynCorp  
Eastman Kodak Co., C&GS  
ECC International Corp.  
EDO Corp., Government  
Systems Div.

EDS  
EFW, Inc.  
EG&G Defense Systems Group  
E. I. du Pont de Nemours & Co.  
Electronic Warfare Associates  
ESCO Electronics Corp.  
Evans & Sutherland  
Exide Electronics  
Firearms Training Systems, Inc.  
GE Aircraft Engines  
GEC Avionics, Inc.  
GEC-Marconi Electronic Systems  
Corp.  
General Atomics  
Gentry & Associates, Inc.  
Georgia Tech Research Institute  
Government Employees  
Insurance Co. (GEICO)  
Greenwich Air Services  
GTE Government Systems Corp.  
GTE Government Systems Corp.,  
Electronic Defense Systems  
Div.  
Gulfstream Aerospace Corp.  
Harris Electronic Systems Sector  
Harris Government  
Communications Systems Div.  
Harris Government Support  
Systems Div.  
Honeywell Inc., Space and  
Aviation Control  
Howell Instruments, Inc.  
Hughes Aircraft Co.  
Hughes Defense Communications  
Hughes Training, Inc.  
IBP Aerospace  
IMI Services USA  
IMO Industries Inc.  
Information Technology  
Solutions, Inc.  
Ingersoll-Rand Co.  
Innovative Technologies Corp.  
Intergraph Corp.  
Interstate Electronics Corp.  
Israel Aircraft Industries Int'l, Inc.  
ITT Defense  
Jane's Information Group  
Johnson Controls World Services  
Inc.  
Judd's, Inc.  
Kollsman  
Lear Astronics Corp.  
Learjet Inc.  
Lear Siegler Services, Inc.  
Litton Amecom  
Litton Applied Technology  
Litton Data Systems  
Litton Guidance & Control  
Systems  
Litton Industries

Lockheed Martin Corp.  
Lockheed Martin Corp.,  
Aeronautics Sector  
Lockheed Martin Corp.,  
Electronics Sector  
Lockheed Martin Corp.,  
Information & Services Sector  
Lockheed Martin Corp., Space &  
Strategic Missiles Sector  
Lockheed Martin Fairchild  
Systems  
Lockheed Martin Federal  
Systems  
Lockheed Martin Tactical  
Systems Sector  
Logicon, Inc.  
Logistics Management Institute  
Lucas Aerospace Inc.  
Lucent Technologies, Inc.  
Management Consulting &  
Research, Inc.  
Martin-Baker Aircraft Co. Ltd.  
McDonnell Douglas Military  
Aircraft  
MITRE Corp., The  
Mnemonics, Inc.  
Motorola Inc., GSTG  
NavCom Defense Electronics,  
Inc.  
Nichols Research Corp.  
Northrop Grumman Corp.  
Northrop Grumman Corp., B-2  
Div.  
Northrop Grumman Corp.,  
Electronic Sensors & Systems  
Div.  
Northrop Grumman Corp.,  
Electronics & Systems  
Integration Div.  
Northrop Grumman Corp.,  
Military Aircraft Div.  
Northrop Grumman Corp.,  
Norden Systems  
Northrop Grumman Corp.,  
Surveillance & Battle  
Management Systems—  
Melbourne  
OEA, Inc.  
Orbital Sciences Corp.  
OSC Fairchild Defense  
Ozark Aircraft Systems  
Pemco Aeroplex, Inc.  
Per Udsen Co.  
PRB Associates, Inc.  
PRC  
Precision Echo, Inc.  
Presearch Inc.  
Racal Communications, Inc.  
Rafael USA, Inc.  
RAND Corp.  
Raytheon Aircraft Co.

Raytheon Co.  
Raytheon E-Systems  
Raytheon E-Systems, Waco  
Raytheon TI Systems  
RECON/OPTICAL, Inc.  
Reflectone, Inc.  
Research Triangle Institute  
Robbins-Gioia, Inc.  
Rockwell Collins Avionics &  
Communications Div.  
Rolls-Royce Inc.  
Sabreliner Corp.  
Sargent Fletcher Inc., a Cobham  
plc company  
Scheduled Airlines Traffic  
Offices, Inc. (SatoTravel)  
Science Applications Int'l Corp.  
SDS International  
Sensis Corporation  
Sikorsky Aircraft  
Smiths Industries, Aerospace &  
Defense Systems Co.  
Space Applications Corp.  
SPRINT, Government Systems  
Div.  
Sun Microsystems Federal, Inc.  
Sundstrand Aerospace  
Sverdrup Technology, Inc.  
Synergy, Inc.  
Systems Research Laboratories/  
Defense Electronic Systems  
TEAC America, Inc.  
Technical Products Group, Inc.  
Teledyne Brown Engineering  
Teledyne, Inc.  
Teledyne Ryan Aeronautical  
Telephonics Corp.  
TELOS Corp.  
Textron  
Textron Systems  
Thiokol Corp.  
Tracor, Inc.  
Trident Data Systems  
TRW Space & Electronics Group  
TRW Systems Integration Group  
Unisys Corp.  
United Technologies Corp.  
Universal Propulsion Co., Inc.  
UTC, Hamilton Standard  
UTC, Pratt & Whitney  
UTC, Pratt & Whitney/Space  
Propulsion Operations  
Vector Data Systems, an Anteon  
company  
Virtual Prototypes, Inc.  
Vought Missile Systems, a  
Lockheed Martin company  
Wang Federal, Inc.  
Watkins-Johnson Co.  
Whittaker, Safety Systems  
Williams International

**The strategy still emphasizes force-on-force land warfare in which the casualty count is expected to be high.**

# To Halt an Enemy

By James Kitfield

**I**N the wake of a series of post-Cold War defense and strategy assessments—culminating in 1997 with DoD's Quadrennial Defense Review and the National Defense Panel report—clear-cut battle lines are drawn in the debate between airpower and land force proponents.

All agree that the stakes are high. The outcome will influence service budgets and multibillion dollar weapon programs and have a direct impact on the US ability to get the most out of cutting-edge technologies that some call a Revolution in Military Affairs.

The debate over the capabilities and proper roles of airpower and land forces will dictate how US forces fight future wars. Today, the national military strategy and Pentagon warfighting models reflect a Cold War emphasis on large, force-on-force engagements between land armies.

Airpower forces are cast in a supporting role, a fact that airpower experts consider a fatal flaw.

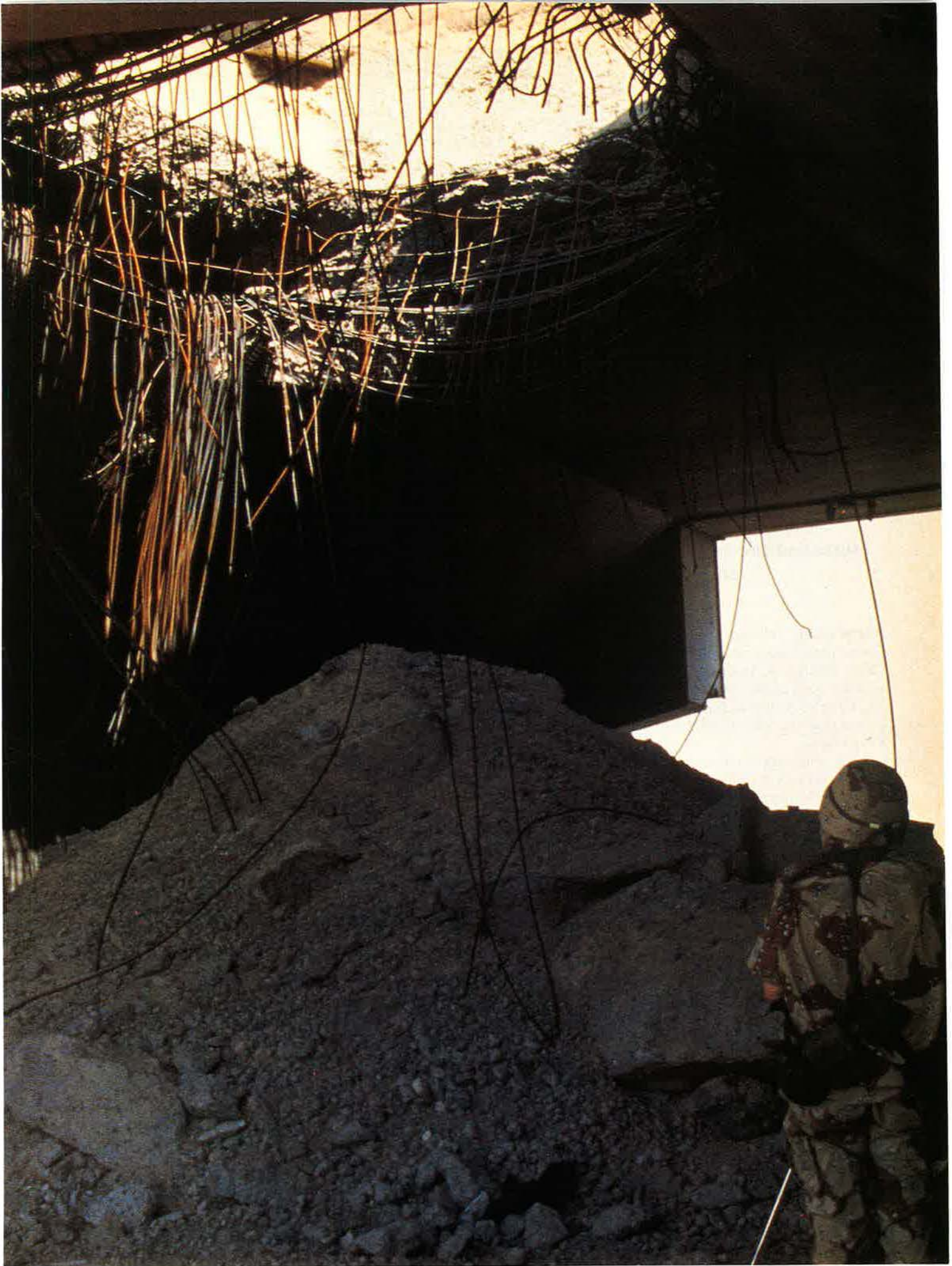
"Recent DoD assessments represent the most exhaustive look at these issues since 1948, and they clearly show that our warfighting models don't work and our national strategy is all screwed up," said Maj. Gen. Charles D. Link, who recently re-

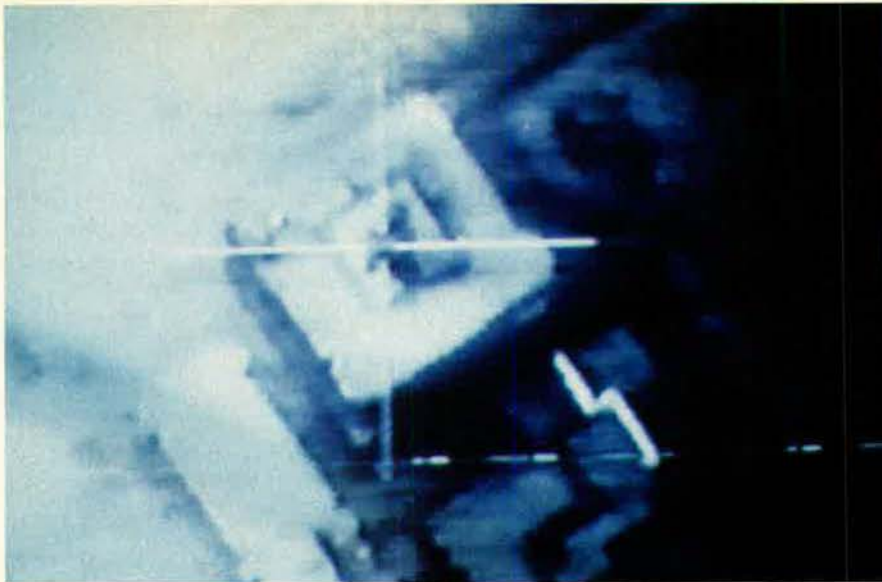
tired after serving as the special assistant to the Air Force Chief of Staff for the National Defense Review and the QDR. Link also led the Air Force team in both the Commission on Roles and Missions and Deep Attack Weapons Mix Study.

Link said DoD's strategy is that, in response to a large-scale aggression by enemy land forces, the US would deploy large Army and Marine Corps divisions to the war theater rapidly in anticipation of a decisive land counteroffensive. "That's a strategy for putting the largest possible number of Americans within range of enemy fire as quickly as we can," said Link, who added, "It solves the enemy's deep attack problem."

Link delivered these and similar remarks at several venues that took up the airpower vs. landpower debate around the capital in late fall.

The Eaker Institute put on a strategy, requirements, and forces colloquy on Oct. 31 at the National Press Club. It is the policy and research arm of AFA's Aerospace Education





**Strike camera footage from an F-117 with an Iraqi communications center in its crosshairs. Precision munitions increased the targets per sortie ratio.**

Foundation. Joining Link on the Eaker panel were retired Air Force Gens. Charles A. Horner, the coalition air boss in the 1991 Gulf War, and Charles A. Boyd, former deputy commander in chief of US European Command.

Link and other active duty and retired military officers also argued the issue during a symposium at the Center for Strategic and International Studies and at a session of the Defense Writers Group in Washington.

Referring to the current DoD war plan, Link said, "That strategy construct concluded that the only answer to Saddam Hussein's thrust into Kuwait was to move six-and-a-half divisions to the theater rather than start killing his armor as soon as it crossed the border. That warfighting model also led Gen. [H. Norman] Schwarzkopf to order some 20,000 body bags for Allied forces in preparation for Desert Storm."

Link thought it was a step in the right direction that the QDR called for airpower to achieve a halt in the advance of enemy armored forces within 14 days of an aggression—a critical component of the Pentagon strategy to fight two Major Theater

Wars nearly simultaneously. It has yet to be matched, however, with commensurate changes in resources, warfighting plans, or doctrine, he said.

#### **Gulf War Lessons**

The example of the Desert Storm campaign forms the crux of the argument that airpower should be given a more prominent, and to some extent independent, role in future warfighting scenarios. Instead of launching a synchronized ground/air counteroffensive as prescribed by the AirLand Battle Doctrine of the 1980s, Schwarzkopf led with a withering campaign of air bombardment that lasted for weeks and reduced many Republican Guard and other land divisions to less than 50 percent combat effectiveness.

The result was a rapid, 100-hour ground campaign marked by historically low friendly casualties.

Air Force officials said the air campaign revealed that a combination of advanced technologies, such as stealth, precision guided weapons, space-based surveillance and targeting, and advanced command-and-control systems had vastly increased the effectiveness of US airpower against massed armored forces, even when the latter were in dug-in positions. The improved reliability of modern aircraft also led to historically high sortie rates.

Even Horner, the air campaign commander, concedes he was taken aback by the combined effect of all those technological advances.

"I don't think any of us understood airpower going into the Gulf

War," said Horner. "We hadn't had any real experience since Vietnam."

The Gulf War featured a steep learning curve. Horner noted that, at the beginning of the air campaign, planners assigned roughly an equal number of sorties and aim points. "But by the end of the war we were assigning two to four aim points per sortie with some aircraft, because we learned that one aircraft with precision munitions could service that many targets. So we were ignorant as airmen going into the Gulf War."

Airpower experts insist they have gone to school on the lessons of the Desert Storm air campaign. However, arguments for major changes in warfighting strategy and shifts in the service budgets to reflect the greater capability of airpower have met stiff resistance. The problem, say former Air Force insiders such as Link, is that such arguments run up against a Pentagon culture which values consensus and an emphasis on Joint operations above nearly all else.

"When a *soldier* talks about using airpower to support troops on the ground, he's applauded for his 'Jointness,'" said Link. "When a *sailor* talks about using Air Force tankers to extend the range of naval aircraft, he's lauded for his 'Jointness.'

"But when an *airman* talks about using airpower independently to kill the enemy instead of putting our troops in harm's way in the first place, he's being parochial and 'unjoint,' which is now viewed as a sin on the order of adultery."

Link went on, "It is difficult to advocate airpower without sounding parochial, but I believe that if we in the Air Force fail to do so, we're contributing to unnecessary American casualties in the future. That's immoral."

It's also unsound politically, Boyd said in his remarks to the Eaker forum. He noted that, in the early days of US involvement in Bosnia, American officials wanted airpower options that would minimize casualties on all sides.

"We were to find things [to attack] that would hurt no one and yet would, at the same time, cause the war to turn in its progress," said Boyd, who explained that this experience led him to deduce certain principles in the American way of war.

"There are three conditions, it seemed to me, that were important



for Americans,” said Boyd. “One is that the conflict ... had to become resolved very quickly. Two, that none of their sons and daughters get hurt. Three, that they didn’t hurt anybody they weren’t mad at.”

He went on, “What we were dealing with in the Bosnia case was we wanted to make sure we didn’t hurt anybody we weren’t mad at—and we weren’t mad at very many people. It made target selection a very, very difficult thing. How are you going to turn the course of the war without hurting anybody? Not only not getting any of your own people hurt, but then not hurting anybody that you are not mad at?”

Fundamental to the whole issue, said Boyd, is a single question: “How many casualties is this nation really willing to absorb? My own feeling is, very few, when our national security is not directly threatened. For the kind of feel-good diplomacy that we are increasingly involved in—humanitarian and upholding humanitarian law and so forth—the American people are not very interested in those kinds of conflicts in a national security sense, so I think their toleration of casualties is very, very low.”

**Target selection in Bosnia was difficult—defined by need for minimal casualties on all sides. Below, ground crew members ready an F-16 at Aviano AB, Italy.**

Representatives of the other services, however, accuse the Air Force of overselling advances in military technology and preparing to fight the last war rather than focusing on the kinds of missions the military has confronted in recent years.

A case in point is Gen. Dennis J. Reimer, the Army Chief of Staff, who addressed the airpower issue in a Nov. 5 session of the Defense Writers Group in Washington. “If you look at the number of missions the military has been given since 1989, you’ll find the Army has conducted 60 to 70 percent of them, and that’s with only 23 percent of [the defense budget],” the Army chief maintained. “Go back to the strategy as outlined in the QDR of *responding, shaping, and preparing*. The Army plays in all three of those, and particularly in shaping where you often have areas dominated by land armies—shaping means army-to-army relations and boots on the ground.”

Landpower advocates said that, while airpower certainly played a decisive role in the Gulf War, it was a scenario tailor-made for the Air Force. They warn that airpower may prove less effective in combating “asymmetrical” threats of the future such as missile attacks, terrorists armed with weapons of mass destruction, and guerrilla warfare.

One of these is retired Marine Corps Lt. Gen. Paul K. Van Riper, the former commander of Marine Corps Combat Development Command, speaking at the Center for Strategic and International Studies symposium. “If we’re looking to re-

peat Desert Storm, then I have little problem with the Air Force argument,” he told the CSIS audience, “but I believe the next threat will be asymmetrical. I know of no system that can detect and target 12 terrorists in a market, nor do I understand why all these high-tech surveillance systems we keep hearing about failed to find that A-10 aircraft for two weeks when it was lost in our own country.”

He was referring to the recent Hamas terrorist bomb attacks in Israel and the April 2 crash high in the Colorado mountains of an A-10, flown by Capt. Craig Button.

“What we have are a lot of buzzwords floating around associated with the Revolution in Military Affairs, and if they weren’t so dangerous they might be funny,” said Van Riper. “With the possible exception of nuclear weapons, technology has never resulted in a fundamental change in how nations go to war. It’s ludicrous to suggest that such concepts as ‘information dominance’ will now somehow make all the military doctrine that came before it irrelevant. We had information dominance in Somalia, but the information that mattered was the culture of that warlord’s tribe.”

### Budget Battles

Nowhere has the battle between airpower and land force proponents been fought more fiercely than in the budget arena. Given the internal political dynamic of the Pentagon—that is, the need to build a consensus even for incremental change within the world’s most massive bureaucracy—Defense Department leaders have generally spread the pain of the post-Cold War drawdown equally, cutting each service by roughly a third since 1989.

Given fundamental changes in technology and in the comparative value of different forces in the US military, though, airpower proponents clearly chafe at this “cookie-cutter” approach. Since 1989, for instance, the US military has largely transitioned from a force forward deployed on the periphery of the former Soviet Union to one that is increasingly based in the United States. Such an evolution would seem to play to Air Force strengths in power projection, rapid reaction, and precision strike.

Photo by Paul Kennedy



"I don't believe 'Jointness' means simply spreading cuts equally among the three services," said Brig. Gen. Charles F. Wald, special assistant to the Air Force Chief of Staff for the National Defense Review, speaking at the CSIS symposium. "That may seem like fairness to some people, but people in leadership positions need to make decisions based on capabilities and not just on service orientation."

Because advances in technology hold out the promise that airpower can thwart and halt armored forces largely independent of other forces—a critical component of the Pentagon's strategy of fighting two Major Theater Wars nearly simultaneously—Air Force officials also assumed their fortunes would rise on the RMA's technological tide.

Apparently, that's not true. Horner, former CINC of US Space Command, believes the Defense Department is squandering a historic opportunity to press US technological advantages. "If there are two areas where our military capability ought to be growing, it's in airpower and spacepower, but they are constrained by these budget fights," said Horner, speaking at the Eaker Institute symposium.

"All of the services are focusing a lot of attention on information warfare and cyberspace, but the Air Force is uniquely capable of exploiting those realms because of the speed and lethality of modern air weapons. So the fundamental problem is not where the Air Force should go but how do you break away from this

concept that our national wealth has to be distributed equally among the services, no matter what."

Though each of the post-Cold War defense reviews has prompted behind-the-scenes service grumbling, frustrations have bubbled to the surface to an unusual degree in the wake of the release of the QDR in May. Rather than benefiting from a high-tech focus and power-projection capabilities, officials said, the Air Force was a target of disproportionate cuts.

As a result of the QDR, for instance, the Air Force faced the largest active duty personnel cuts (26,900 vs. 15,000 for the Army and 18,000 for the Navy) and sacrificed an active duty fighter wing (transferred to the reserves), a major building block of Air Force force structure. Favored weapons programs were also hit hard. The B-2 bomber program was capped at 21 aircraft, and the F-22 fighter program reduced from 438 to 339 aircraft. Perhaps most surprisingly, the Joint STARS surveillance aircraft program—a cutting-edge technology closely associated with the emphasis on information warfare—was cut from 19 to 13 planned aircraft.

Air Force officials maintain they

**USAF took hits in personnel and weapons programs via the QDR. Example: Buy of the stealthy F-22 dropped from 438 to 339.**

financed their share of the Joint STARS program, but money was pulled by the Army. "All of these decisions are driven by the budget and competition for money," said Wald at the CSIS symposium. "But I can tell you that the Air Force is a firm believer in Joint STARS, and we fully funded the program. Someone else pulled funding for those four aircraft."

### The Halt Phase

Service quarrels over weapons programs and budgets are hardly headline news inside the Washington beltway. Far more serious, however, are claims by airpower proponents that American military strategy and the warfighting models which support it are fundamentally flawed.

Part of the problem, they say, are warfighting models and simulations that fail to take into account increased capabilities of modern airpower. When Link studied the assumptions of the "Tacwar" simulation which played heavily in both the Bottom-Up Review and Deep Attack Weapons Mix Study, for instance, he found that the model estimated the effectiveness of air sorties at 15 percent, less than what the Air Force experienced years ago in the Vietnam War.

According to the model's calculations, it took 16 air sorties to destroy a single armored personnel carrier.

"Tacwar is a pretty good surface warfare model, but it fails to get at the relative contribution of air and sea forces," said Link. "Thus decision makers in the Pentagon and commanders in chief in the field are using the wrong model to influence resource allocation and validate warfighting plans."

Partially in recognition of the increased capability of modern airpower demonstrated during the Gulf War, however, the QDR for the first time calls on air forces to begin destroying massed enemy forces on the first day they cross into friendly territory and to achieve a halt of the offensive within 14 days. That capability is critical to the Pentagon's stated ability of fighting and winning two Major Theater Wars nearly simultaneously.

As airpower is achieving total air superiority and a halt in the enemy's advance, however, Pentagon war plans still prescribe a synchronized buildup of ground forces in anticipa-



tion of a decisive ground counteroffensive.

"War plans still assume that after we achieve a halt phase, the Air Force goes off and plays volleyball during the buildup phase," said Link. "I would maintain that from that point on, the enemy's strategic options decline. He is either leaving for home or dying in place, and a follow-on counteroffensive may not be necessary. A ground war becomes an option rather than an inevitability. The point is, our long-term preoccupation with land forces has skewed this debate, and left unchanged it will lead to unnecessary casualties or military failures in a future conflict."

Landpower proponents counter that such a scenario risks prolonging a conflict before the decisive blow is delivered by US forces and flies in the face of successful campaigns throughout history.

"I agree that you halt an enemy with whatever means you have," said Reimer, the Army chief, "but this idea that airpower will win the war is historically suspect. You need to quickly synchronize your forces, get your force on the ground, and take advantage of what each service brings to the fight, and then go after the enemy and wrap things up as quick as you can. I think that's what the American people expect."

### The Battle of Khafji

That thinking may well be outmoded. Airpower experts point to the little-noted battle of Khafji during the Gulf War as a real-world example of the disproportionate role airpower can play in a "halt phase" scenario.

Hoping to jump-start the ground war and initiate bloodletting of coalition forces in late January 1991, Saddam Hussein launched a three-division assault into Saudi Arabia. Alerted to the ground action by the Air Force's E-8 Joint STARS aircraft, the air component commander began attacking the armored columns from the air as they moved south.

"By the time those three divisions and 40,000 troops crossed the Saudi border," recalled Horner, they had been so devastated that "they were



defeated by 5,000 Marine Corps and Saudi National Guard troops. Because it demonstrated what airpower can do to an attacking armored force in a halt phase scenario, I believe Khafji, though largely overlooked, was the single most important land battle of Desert Storm."

Some Army and Marine Corps leaders concede that war simulations and plans do not yet adequately reflect the decisive impact of stealth technology, precision weapons, satellite reconnaissance, and other accoutrements of modern airpower. Even so, they deride what one Marine general referred to as the Air Force's vision of "immaculate warfare." They sense a disconnect between it and the reality of combat through the ages.

"A major competitor in the future will not try and match the United States military—system for system," said Maj. Gen. Robert H. Scales Jr., a doctrinal expert and commandant of the Army War College, at the CSIS symposium. "Instead he will use his own advantages, and the No. 1 enemy advantage will most likely be the collective psyche and will of his people.

"As the Germans found out in the Battle of Britain, trying to destroy enemy will through bombardment can sometimes steel that will."

Scales said he could still recall lending fire support to American

### The battle of Khafji demonstrated what airpower can do to an attacking armored force in the halt phase of war.

paratroopers trying to take a hill in Vietnam. "Every day I watched as aircraft dropped hundreds of bombs on top of that hill, and every night the North Vietnamese cooking fires would come on," he said.

Airpower and land force proponents continue to debate whether recent technological advances represent a paradigm shift in the effectiveness of airpower, or evolutionary change that little alters the fundamental nature of warfare. Absent a cathartic national crisis, however, even some airpower proponents warn against expecting a seismic shift in thinking inside an institution as conservative as the Pentagon.

"Resistance to radical change is a natural human condition, and I don't expect an institution such as the Defense Department to reform its thinking in a meaningful way absent a catastrophic failure or some threat to its existence," said Boyd, speaking at the Eaker forum. "Yet it's worth noting that decisions we make about our military forces today will affect their ability to respond to a crisis 20 years from now, when there may be a danger of catastrophic failure." ■

---

*James Kitfield is a defense correspondent for the National Journal in Washington. His most recent article for Air Force Magazine, "Lightning Bolts," appeared in the April 1997 issue.*

# Yeager's Encore

Photos by Erik Simonson



*Brig. Gen. Chuck Yeager (Ret.) mingled with scores of fans after landing the F-15 he flew in the re-enactment of his record-breaking flight at Edwards AFB, Calif.*

**W**ithin a few weeks of the establishment of the Air Force as a separate service, one of its young fliers, Capt. Charles "Chuck" Yeager, became the first man to break the sound barrier, flying at Mach 1.06 on Oct. 14, 1947. This historic achievement has been dramatically depicted in movies and numerous books but was commemorated in a special way when on Oct. 14, 1997—50 years after the historic event—it was re-enacted by the man himself.

**Fifty years later, an aviation legend repeats his feat.**

*For the benefit of an eager crowd of more than 5,000 aviation buffs, Yeager dumped fuel to form a contrail, which made it easy to see the aircraft as it streaked through the sound barrier. He followed the same flight path, at the same altitude, and in the same airspace (over what was then Muroc Army Air Field) as he did in the original supersonic flight—this time with Lt. Col. Curtis R. Elkin, operations officer from the USAF Test Pilot School, as his backseater. Also re-enacting his role as chase pilot was aviation legend R.A. "Bob" Hoover (seen here in the nearer F-16), accompanied by Air Force Flight Test Center Vice Commander Col. James H. Doolittle III, grandson of Gen. Jimmy Doolittle.*



*They broke the mold. In his signature panama hat, Hoover joins Yeager in addressing the crowd after the flight. Yeager told the audience, "What I am, I owe to the Air Force." Since his retirement in 1975 after 34 years in the service, Yeager has been a consultant test pilot for the AFFTC while Hoover has crisscrossed the country, wowing crowds with his aerobatic feats. Lt. Col. Joe Sobczak (far left), master of ceremonies for the event, shares the podium.*

*Yeager flew this F-15, specially marked Glamorous Glennis, named in honor of his wife—as was the X-1 in which he set the 1947 record. In his remarks, Yeager announced that he was giving back the keys of fast jets to the Air Force.*

*In 1947, breaking the sound barrier was a long-sought and hard-earned achievement that set the pace for future aviation. The 1997 replay helped cap USAF's celebration of its 50th anniversary and Yeager's remarkable career. In his words, "The rest is pretty much history." ■*



Photos: Erik Smanson

## Get the Net

"The [Gulf War] allies made a lot of destruction. They killed a lot of people, but they didn't win the war. Don't just look at the immediate results of a military conflict. Look at the results in the long run. Those who supported the Americans, the United States, in the Gulf War: Are they better off now than they were in the 1990s? Are they more secure? Are they better off economically? Are they stronger than they were in 1990? The answer is simple: No. So those ... who joined the United States in this campaign against Iraq actually lost."

**Tariq Aziz, deputy prime minister of Iraq, in Nov. 13, 1997, interview with PBS talk show host Charlie Rose.**

## Fustest With the Mostest

"Crisis planning and execution under short-warning conditions are likely to be the rule in many future conflicts. ... Waiting to engage the enemy until most forces are in theater will likely provide the opponent with an advantage that may be costly to overcome. ... Air- and spacepower can make up for deficiencies in other force areas for a limited period of time, making early availability of air and space assets particularly important in a short-warning war."

**Three of the major "insights," or conclusions, contained in the September 1997 Air Force paper "Strategic Force," based on a wargame of the same title.**

## "Dramatic Decline"

"There has been a fairly dramatic decline in death rates from aircraft accidents. The major accident rate per 100,000 hours flown has gone from 2.04 in 1990, down to 1.50 in 1996. The number of aircraft destroyed in those accidents has declined from 143 in 1990, to 67 in 1996. So there's been a rather dramatic improvement there. ...

"In terms of accidents from all sorts, worldwide, there's also been a fairly dramatic decline that, not surprisingly, mirrors the declining rate in deaths from aircraft accidents. The figures I have go back to 1980. The deaths per 100,000 have declined from 117

in 1980, to 68 in 1996. ... There's been considerable progress, but there are 1.4 million people in the military, and if you multiply 68 per 100,000 by 1.4 million, you can figure out—by the proper multiplier—you figure out how many people die every year. It's a lot, but it [fatality rate] is going down." **Pentagon spokesman Kenneth H. Bacon in an Aug. 7, 1997, press briefing on safety issues.**

## Millions of Potential Deaths

"Iraq has declared almost 9,000 liters of anthrax, and they said, 'We destroyed it all.' They declared several thousand liters of botulinum toxin, and they told us they produced other agents like aflatoxin and said they had it on missile warheads, etc. So Iraq has declared a lot [and] said they destroyed it.

"I think the real issue is to understand what makes a difference in terms of biological agents. ... Anthrax is a spore, and if you ... inhale 10,000 spores of anthrax, it's sort of generally accepted as a lethal dose for anthrax. If you try to imagine what it is, you're talking about something that's smaller than a speck of dust—something you wouldn't even see that you're breathing. It's not like ... you're walking into a dust cloud and you're saying, 'Wow, I'm in anthrax.' No. We're talking about inhaling something that's really the size of a speck of dust, that's generally lethal. And by generally lethal I mean that if a group of people inhaled this amount, this number of spores, about 80 percent of them are going to die.

"If an attack occurs in a clandestine way, symptoms don't come for one to three days, depending on how much you get. This initial exposure to anthrax is when you have a window for treatment. So if you've been exposed and you've inhaled anthrax in your system, you've got a short window where you've got to take some medical action in order to enhance your survival chances. After that, you develop flu-like symptoms and die within a matter of a few days.

"That gives you a sense of what we're talking about with anthrax. A ki-

logram of anthrax has literally millions and millions of potential deaths in it."

**An unnamed senior DoD official, speaking to reporters at a Nov. 14, 1997, background briefing on Iraq's chemical and biological weapons capabilities.**

## An Offer They Can Refuse

**Reporter:** "[Russian military] security is perhaps as good as the US, but they also face different kinds of threats, don't they? I mean, is there more likelihood of, say, organized crime being able to procure a nuclear weapon?"

**Habiger:** "If what I saw is representative of the Strategic Rocket Forces [as a whole], organized crime getting their hands on a weapon out of their facilities would be [an] extremely remote [possibility]."

**Exchange between a reporter and Gen. Eugene E. Habiger, commander in chief of US Strategic Command, at a Nov. 4, 1997, press briefing on Habiger's visit to Russian nuclear facilities.**

## Steady as a Rock

"I went to bed every night praying to God that I wouldn't wake up in the morning. I never actually attempted suicide. But I thought about it, hard. I imagined what my suicide note would say and to whom I'd send it. I knew where a gun was hidden in a friend's house. I imagined myself driving by and getting it. Shooting myself would have been too messy, though. I didn't want my parents to have to clean up a mess."

**Kelly Flinn, former B-52 copilot, writing in the Nov. 24, 1997, Newsweek. Flinn accepted a general discharge rather than face an Air Force court-martial for lying under oath, disobeying an order, adultery with the husband of an enlisted airman, and fraternization.**

## And Run, He Explained

"Take the general. You're looking at a very real possibility of prison time." **Defense lawyer Frank Spinner's advice to Flinn when USAF offered to drop charges if she accepted a general discharge, as quoted by Flinn in Nov. 24, 1997, Newsweek.**

By John L. Frisbee, Contributing Editor

## Heroic Noncombatants

Chaplains of all services performed many acts of valor in combat during World War II.

**B**y definition chaplains are non-combatants, yet in the Pacific Theater alone, more than 20 chaplains were killed in action while ministering to the spiritual and physical needs of the troops. One of the most notable examples of sustained heroism among chaplains was that of Robert Preston Taylor.

During the campaign to hold the Bataan Peninsula in the Philippines, Taylor spent many days in the battle area, searching out and caring for the physically wounded and disheartened, sometimes behind enemy lines. By his example, he brought hope and religious faith to those who had lost both and created a new faith among some who had none. These were hallmarks of his ministry throughout the war. He was awarded the Silver Star for gallantry in action.

During the death march that followed the surrender of Bataan, Taylor suffered many beatings and calculated torture for his attempts to alleviate the suffering of other POWs. At Cabanatuan, the largest of the POW compounds, the inspirational Taylor soon became the best known and respected of the officers. He volunteered for duty in the worst of all areas, the hospital, where the average life of a patient was 19 days. Many men could have been saved if the Japanese had provided a minimum of medication, of which they had ample supplies.

Taylor devised a plan for getting medical supplies from Philippine guerrillas and smuggling them into camp—an offense punishable by death. The plan was carried out largely by a corporal who was assigned work at railroad yards near the camp. The supplies could be obtained by Clara Phillips, an American woman who had contacts with the guerrillas. As medication began to filter into the camp, the death

rate among patients declined drastically.

Eventually the smuggling operation was exposed. Phillips was sentenced to life imprisonment and several participants were executed. Taylor was threatened with imme-



diately die by the brutal camp commandant, Captain Suzuki, then confined in a "heat box"—a four-by-five-foot cage placed in the blazing sun—where he was expected to die. With barely enough food and water to keep him alive in the pest-infested cage, Taylor survived the box for nine weeks. His example encouraged others in the boxes to not give up. Near death, Taylor was moved to the hospital to die. Against all odds, he survived.

A new and more humane commandant replaced Suzuki. Conditions began to improve, in part due to Taylor's influence over the new man. In October 1944, the Japanese ordered all American officers at Cabanatuan to be shipped to Japan. The Americans now were within 200 miles of Manila. Defeat stared Japan in the face. Some 1,600 officers were moved to Manila, where they were held nearly two months while the enemy assembled a convoy to take them and others to Japan.

Early in December, the hottest and driest month in the Philippines, the men were marched to the docks. The 1,600 from Cabanatuan were assigned to *Oraoka Maru*, which once had been a luxury liner. The men were forced into the ship's three sweltering, unventilated holds. About two square feet of space was available for each man. There were no sanitary facilities. The first night, 30

men died in just one of the holds.

After an attack on the convoy by US bombers whose crews did not know there were Americans aboard, only *Oraoka Maru* survived and it was anchored in Subic Bay. The next morning it was bombed and left sinking. Taylor was severely wounded but continued to help others out of the doomed vessel. As those who could swim neared the shore, Japanese troops opened fire on them, killing many.

Jammed into a succession of equally crowded, unsanitary hulks, and with the barest minimum of food and water, the officers from Cabanatuan finally reached Japan on Jan. 30 in freezing weather for which they were not clothed. Only 400 of the original 1,600 survived the horrible experience in the "hell ships," as they became known. Throughout the long months at Cabanatuan and the terrible voyage to Japan, Taylor never ceased to encourage hope among the POWs and to enlighten their spiritual lives.

When Taylor regained some strength as his wounds healed, he was assigned to work in the coal mines at Fukuoka. Soon formations of B-29s began to fill the skies of Japan. For that country, the war clearly was lost. The POWs were moved to Manchuria until the war ended. Only two chaplains who were aboard the hell ships survived.

After the war, Taylor remained in the Air Force. He was assigned to wing and command chaplain posts at several US bases and ultimately was named Air Force chief of chaplains with the rank of major general. On his retirement in 1966, he returned to his native Texas to continue a life of service. Throughout his years that were marked by the horrors of war and by great personal suffering, he never lost the faith that sustained him and that he engendered in those whose lives he touched. He and the many chaplains who have devoted their lives to the service of others are a part of the Air Force tradition of valor. ■

**The author of a blockbuster book says the Vietnam War was lost in Washington before the US armed forces were fully deployed and committed.**

# Dereliction of Duty

*H.R. McMaster is the author of Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies That Led to Vietnam, published last May by HarperCollins. He is an active duty US Army major. His book, which he researched and wrote on sabbatical, is extraordinary—if not unprecedented—in the degree of attention, credibility, and influence it has achieved among military leaders and professionals. It is based largely on previously secret tape recordings and transcripts of key meetings during the period 1963–65, and it presents an important new analysis of how the US got into the Vietnam War. It reveals how President Lyndon B. Johnson and his top advisers, insufficiently challenged by the Joint Chiefs of Staff, forgot about integrity and followed a course of “arrogance, weakness, lying in the pursuit of self-interest, and, above all, the abdication of responsibility to the American people.” (An exception was Air Force Chief of Staff Gen. Curtis E. LeMay, whom the author termed a “thorn in the Administration’s side.”) McMaster met on Oct. 29 with the Defense Writers Group in Washington.*

## All the Way With LBJ

“One of the major themes in the book, resulting from the research, was Lyndon Johnson’s deliberate circumvention of the Constitution of the United States [on war planning]—to deny the people, and their representatives in Congress, a say in whether or not the country went to war.

“One of the things he was most concerned about was that, as our involvement in Vietnam grew, the gap between the nature of that involvement and LBJ’s depiction of it to the American people widened. Over time, he became quite vulnerable to a military officer who would be candid with the Congress of the United States and who would provide information that would reveal the depth of our commitment and the nature of the long-term costs and consequences associated with Americanizing the war.

“[For this reason] Johnson was very much concerned about the civil-military relationship. What’s particularly striking about it is, he didn’t want military advice from the Joint

Chiefs of Staff. What he wanted, instead, was tacit approval for decisions already made. And he also wanted to use their uniforms to lend credibility to his policies, even though they really hadn’t had a say in any of these decisions.”

## The Coach and His Team

“He wanted to keep the Chiefs on the team. There’s a very compelling chapter called ‘The Coach and his Team.’ It’s a ... record of a meeting between Johnson and the Joint Chiefs of Staff, where he says, ‘I’m like a coach ... and you all are my team. You’re all Johnson men.’ In that meeting you can see all of the tactics Johnson used to manipulate the Joint Chiefs of Staff, to keep them on the team, and to get them to support his policy.

“He would alternate using threats, lauding them, but principally he would hold out the promise of future action—that, over time, the Joint Chiefs of Staff would be able to pursue a military strategy in Vietnam more in keeping with their ideas about the use of force, rather than Mc-

Namara’s strategy [of slow, graduated pressure].”

## What Should They Have Done?

“In the book, I don’t say, ‘Hey, these guys [the Chiefs] should have resigned.’ ... But they should have given their best advice [to Johnson and to Congress]. They should have said, ‘Mr. President, you’re trying to win this thing with mirrors.’ ... Johnson crafted his requests for advice to get the answers that he wanted. ... I think if all of them had been honest with him at all times, when he asked their opinion, that would have made a difference. If they had been honest with the Congress, ... that would have made a difference. ...

“They became [a] party to this. Essentially, instead of questioning a strategy that they knew to be fundamentally flawed, the Chiefs signed up for that strategy and took ... a ‘foot in the door’ approach. It was, ‘Just get the first bomb runs off. Just get the first Marine battalions in. And then once we’re in, we’ll have more bargaining power in connec-



tion with escalating the war and fighting it in a way more in keeping with our own views.' ”

### **McNamara's Strategy**

“It [a strategy of graduated pressure] was developed to conform with the President's domestic political concerns. It was a strategy based on assisting Johnson in getting elected in 1964 and passing the Great Society [legislation] in 1965. ...

“The military [in response] made the mistake of engaging in executive and legislative politics by thinking—and this is a quote from [Gen.] Earle Wheeler, when he was Army Chief of Staff and about to become JCS Chairman—‘This war could be lost in the Congress if they lose faith in this.’ This was in the context of him giving instructions to [Gen. William C.] Westmoreland on his way to Vietnam, in essence telling Westmoreland to be really careful of what he says and to portray the war in the most favorable light so that Congress doesn't lose faith.”

### **Admiral McDonald's Case**

“[Parochial service interest] was a huge problem with the Chiefs during the Vietnam period. The Chiefs were loyal to their services more than they were, I think, to their duties as principal military advisers.

“One example was Adm. [David L.] McDonald, Chief of Naval Operations. He was very adamant in private meetings within the Joint Chiefs of Staff about the flaws in McNamara's strategy of graduated pressure. Forces were not used to destroy the enemy's capabilities [but to] signal intentions, to hold out the prospect of greater damage in the future. ...

“Admiral McDonald thought this was doomed to failure. He was quite adamant about it in meetings within the Joint Chiefs of Staff. But when he met with the National Security Council or with the President, he was silent, strangely silent. I had this question in my mind, as to why he would behave this way.”

### **McDonald's Motives**

“In his oral history at the Washington Navy Yard, he stated that McNamara backed him when no one else would back him on a matter of importance to the Navy. That [mat-

ter] was: Who was going to succeed Adm. [Harry D.] Felt as CINCPAC? [Commander in Chief, Pacific, always had been a naval officer.]

“The Chiefs had voted on whom it would be, and it was Air Force Gen. Jacob Smart. ... The Commandant of the Marine Corps even voted against McDonald, which he [McDonald] would hold against him for the rest of their time together.

“McDonald said in his oral history, ‘After that [McNamara's decision to support the Navy and nominate Adm. Ulysses Grant Sharp instead of Smart], I always felt indebted to McNamara, on Vietnam and other issues.’

“He also said after that, reflecting on his behavior and his suppression of his own views, ‘Maybe we were all weak. Maybe we should have stood up and pounded the table. I was part of it, and I'm sort of ashamed of myself, too.’ ”

### **Lack of Debate**

“What's astonishing is that ... debate [over Vietnam strategy] did not occur until after we were at war. So no one had really assessed what it would take, or talked to the President certainly, or debated what it would take to win in Vietnam, to define what win would mean, and then develop a strategy to achieve that policy goal or objective. ...

“You have the Joint Chiefs of Staff, who think that it's going to take 500,000 troops and five years just to stabilize the situation, including a ground invasion. You have the President and the Secretary of Defense who are determined to severely limit the American military effort for a number of reasons—domestic political concerns [first the 1964 Presidential election and then the 1965 Great Society legislative effort] and also the fear of escalation in connection with China.

“So, if they had sat down to try to reconcile their views, they could not have helped but come to the conclusion that the effort would be futile. What happened is that the President, instead of defining a goal and objective, kept it deliberately ambiguous.”

### **“Mr. McNamara's Bank”**

“The President decided what level of force was going to be politically palatable in the short term and then

he made that available to the Joint Chiefs.

“[In early 1965], the Chiefs came in with a watered-down proposal—three divisions, which is about one-fourth of what they thought would ultimately be required [to hold the line in Vietnam]. They sat in with the President and told him, ‘Three divisions.’ This is the Chairman, Earle Wheeler.

“McNamara was sitting next to him, tallying up the numbers, including those that were already in Vietnam. He came up with a number of 150,000 troops. Johnson said, ‘No, dammit, I can't give you 150,000 troops. Women will come out of their pantries and take their aprons off’—meaning there was not enough public support for this effort.

“So then, he turned to [Army Chief of Staff Gen.] Harold K. Johnson and asked him the same question, ‘How many troops do you think it's going to take?’ He said, ‘Three divisions.’

“And Johnson said, ‘Now, dammit, I'm not going to give you three divisions.’ He said, ‘Let me tell you a story. Imagine you're all businessmen, you're businessmen down in Johnson City, Texas, and you need a small business loan to keep your business afloat because you're having some financial problems. You go to the bank, and it's Mr. McNamara's bank. You say, ‘I need \$150,000 to keep my business afloat.’ And the banker says, ‘I can't give you \$150,000, but I can give you \$5,000.’

“Then he looked at the Chiefs and he said, ‘What do you do? Do you take the \$5,000 and do the best with what you've got, or do you let your business go under?’ ”

### **5,000 Marines**

“Then he [Johnson] turned to the Commandant of the Marine Corps [Gen. Wallace M. Greene Jr.], who believed it might take 700,000 troops, and he said, ‘General Greene, what do you think? You had some good ideas when you were here last time.’ He was patronizing; it was the whole Johnson treatment, keeping him on the team.

“General Greene said, ‘Hey, I think 5,000 Marines would do a hell of a lot of good in Vietnam.’ He [Greene] saw Vietnam as an opportunity to create a second Army, to increase the size of the Corps.”

### Tactics–Strategy Disconnect

“What you had was activity without any idea how that military activity was connected to progress in the war effort. You see this in personal accounts of the war as well—the frustration, the lack of understanding about how the risks that individuals are taking, the sacrifices they are making, relate to any sort of end state in this thing. And so you have bombing North Vietnam, and you have killing Viet Cong in South Vietnam. It’s activity that’s automatically equated with progress, but of course it doesn’t mean progress at all.

“Johnson was almost paranoid about the people around him. So just when the situation in Vietnam was demanding a wide debate and an examination of alternatives, he was shunning his advisers, drawing his adviser circle closer and closer, and relying principally on three people—McGeorge Bundy, Robert McNamara, and Dean Rusk.

“Of those three, who dominated? It was McNamara.

### LBJ’s Lapdog

“McNamara was, in essence, a very talented and persuasive sycophant.

gress, to reporters on a constant basis.”

### The Continuing Cover-up

“He’s still doing it [lying]. His book [*In Retrospect: The Tragedy and Lessons of Vietnam*] was really astonishing to me. It was astonishing to me because I had been through the research, I had all the material, and I think I was writing about chapter six or seven. And so I could see, as I was reading the book—I was pulling documents down, saying, ‘Look, this doesn’t match. This is wrong! This guy’s being completely dishonest!’

“McNamara [in his book] said, ‘We were wrong, terribly wrong’ [about Vietnam] but that he and others were prisoners of the Cold War ideology of containment. So they had no flexibility. It didn’t matter who the President was, who the Secretary of Defense was, who the members of the Joint Chiefs of Staff were, because they were compelled by the ideology of the time.

“What this new evidence shows dramatically is that these were men who not only should have known better but who *did* know better. It also shows that the war, far from being inevitable, was only made possible by the deliberate deceit and manipulation of the American public, the Congress, and members of Johnson’s own administration.”

### The Sins of the Chiefs

“The military, on the other hand, engaged in a mutually deceitful relationship, in that they did not question a strategy that they knew to be fundamentally flawed and instead went along with the game. ...

“[During a July 1965 meeting with the House Armed Services Committee], they [the service chiefs] were asked point-blank, ‘Is mobilization going to be necessary in Vietnam?’ Johnson was not there. McNamara was not there. ... They asked point-blank about mobilization, how many troops it was going to take.

“Gen. Harold K. Johnson was very evasive. [He said nothing about mobilization, even though] he had all the plans. He had already issued orders to prepare for mobilization because the Chiefs assumed that there was going to be mobilization. ... That is one example of how they were not forthright.”

Military Post	The Initial Chiefs	After the Change Out
Chairman, JCS	Gen. Lyman L. Lemnitzer	Gen. Maxwell D. Taylor Gen. Earle G. Wheeler
Chief of Staff, USA	Gen. George H. Decker	Gen. Earle G. Wheeler Gen. Harold K. Johnson
Chief of Staff, USAF	Gen. Curtis E. LeMay	Gen. John P. McConnell
Commandant, USMC	Gen. David M. Shoup	Gen. Wallace M. Greene Jr.
Chief of Naval Operations	Adm. George W. Anderson Jr.	Adm. David L. McDonald

“The President reinforced this because his focus was short term. He wanted to show improvement in the situation. He wanted to pursue his domestic agenda. So he told the Joint Chiefs, ‘I want you to kill more Viet Cong.’ This was in April 1965. He encouraged this focus on tactics, instead of strategy. He focused the Chiefs away from their principal responsibilities and tried to keep them on the team.”

### “Lessons” of Vietnam?

“This research really convinced me that Vietnam was the result of a unique interaction of personalities and circumstances. [The most crucial personality] was Johnson, by far. And I would say McNamara as well.

“Gosh, how do you talk about Johnson’s personality? We could have a week-long seminar on that, right? There were so many aspects of his personality, but the most overwhelming was his profound insecurity, his constant desire for reassurance, his associated fear of dissent, and his associated fear of leaks to the press.

He sensed what the President wanted and gave it to him. If you doubt this, listen to the tapes [of telephone and office conversations secretly recorded by LBJ]. They are very compelling—not just for content but for tone. I mean, it’s really sometimes [sickening]. ... He [McNamara] sensed what the President wanted to hear, and what he needed, and then reassured him completely.

“On the tapes, for example, you’ll hear a couple of times where he [McNamara] starts to raise a question. The President is saying, ‘Well, look, I think we’re going to have to make a stark choice one time, one day, between war and disengagement in Vietnam.’ He [McNamara] is about to say, ‘I think we are at that point now,’ and then Johnson shuts him down. Johnson comes in and starts talking, overwhelms him, essentially. And then, McNamara says, ‘Yes sir, that’s right. That’s exactly right. This is what we need to do.’

“He gave the President what he wanted in the form of this strategy of graduated pressure. He was his front man on it. He lied blatantly to the American people, to the Con-

## Bob McNamara, Superhero

"This whole [graduated pressure] strategy was based on the assumption that this force—it was essentially a show of force, both in the form of bombing North Vietnam and the deployment of troops into South Vietnam—would compel North Vietnam to withdraw its support from the insurgency in the South. They never thought about it [how a war might unfold].

"They just assumed that it would end like the Cuban missile crisis, and this is what McNamara thought. Talk about a bad analogy or a poor use of history: His only experience with the employment of military force was in the Cuban missile crisis, and he assumed that that experience was directly relevant to Vietnam. Our military forces and naval forces quarantined and blockaded Cuba, placed what he later called graduated pressure on Cuba with overflights and threats of the use of military force, and Khrushchev buckled. That's what McNamara took away from it. ...

"He sort of pictured himself as Robert McNamara, superhero, savior of the world, and then thought that he could do the same thing with Ho Chi Minh—with this graduated pressure—and thought that Ho Chi Minh, eventually, would just, you know, sort of give up."

## Defeatist From the Start

"The conventional wisdom on Vietnam is ... America was overconfident, thinking that American power was relevant in all areas of the world, ignorant of the difficulties.

"Far from it. In fact, those who were charged with the planning of the war were in fact defeatist. John McNaughton, who was the [Pentagon's] International Security Affairs division chief, thought this was doomed to failure. ... But he still had to plan under McNamara's strategy. So what he did was he justified that by changing the objective of military force, which was no longer to guarantee the freedom and independence of South Vietnam, but it was instead to 'maintain American credibility.'

"He came to this almost perverse conclusion that to send up to 200,000 troops into Vietnam and *lose* would be better than doing nothing at the outset. What he said was, 'We have to get bloodied so that we can show

the world that we were'—and here he used another metaphor—'a good doctor who did all he could for the patient, but the patient died of this incurable disease.'

"So there is this defeatism at the outset and this unclear objective. What is the objective? I mean, can you imagine going to Congress and saying, 'We don't really have a way out of this, but we just need to get bloodied?'"

## Earle Wheeler's Silence

"He [Wheeler, the JCS Chairman] had compromised himself, in that he had gone along with the strategy in the hope that, over time, he would be able to pursue a fundamentally different strategy—which was, in essence, the Army's plans of physically cutting the Ho Chi Minh Trail with three divisions and a much larger effort in South Vietnam and against North Vietnam as well.

"In the spring of 1965, ... General Westmoreland was complaining about controls on the air campaign and numbers of troops he needed. ... He sent General Westmoreland a cable, and he basically said, 'Don't worry about any of that now. We will be able to get that over time. What we need to do is break the psychological and political logjam associated with further bombing missions now.'

"So he just wanted to get his foot in the door. Wheeler did not ask for the number of troops that he believed was necessary from the outset, until 1968, after the Tet Offensive."

## You Get What You Ask For

"Ultimately a President, an administration, can get the military advice it wants, depending on whom it appoints to these positions [the Chiefs]. In this case, Kennedy and then later Johnson didn't really want military advice from the Chiefs. They wanted people who would be acquiescent, who would be malleable. Kennedy kicked himself for appointing [Gen. Curtis E.] LeMay [as Air Force Chief of Staff] early in his Administration. He couldn't wait to get rid of him.

"And [Army Gen. Lyman L.] Lemnitzer as well and [Army Gen. George H.] Decker as well. Another man who was very strong in character was Gen. [David M.] Shoup of the Marine Corps. Very independent in

mind. He believed there should be no land war in Asia again. That was one of the lessons he took from his experience in Korea."

## Tale of Two JCS Groups

"What's interesting is to look at the Laotian crisis of 1961 [before Kennedy and Johnson had appointed their own JCS], and see the difference in the approach the Chiefs took then, and the approach they took to Vietnam. In 1961, the Chiefs in essence laid it out as [Army Lt. Gen. Matthew B.] Ridgway and others did in 1954, after Dien Bien Phu. They laid out what the long term costs and consequences of this might be.

"The Chiefs really changed out dramatically after that. Lemnitzer was gone, replaced [as Chairman] by [Army Gen.] Maxwell D. Taylor, who was the President's man, hand-picked by Kennedy."

## The Hollow Man

"I was frankly astonished by a lot of it [the secret record] because it did cut against the conventional wisdom. ...

"I thought I was going to find just great material about Maxwell Taylor, the soldier statesman. I had admired him. I could not believe what I was finding. I think what I was most shocked about was the lack of integrity and the absolute ease with which he deceived the American public at every turn for short-term self-interest. ...

"For example, Hanson Baldwin [the Pentagon reporter for *The New York Times*] had a lot of meetings with Maxwell Taylor. He was sort of viewed as the enemy. Baldwin was lied to on a number of occasions ... by Maxwell Taylor, not just about military plans but about the nature of our involvement in Vietnam."

## McNamara's Silence

"I did not get McNamara's interview. I asked him for an interview when he was in the middle of preparing his memoir—his so-called memoir. I got my letter back from him, with a handwritten note, saying, 'You're onto a very important topic.' You know, an encouraging note. I also asked for access to his oral history at the same time. And he said, 'I can't help you at this time. And there's nothing in my oral history that's relevant to this.' "

# AFA / AEF National Report

By Frances McKenney, Assistant Managing Editor

## Visions Program Starts the School Year Off Right

*USA Today* newspaper and Aerospace Education Foundation's Visions of Exploration program got off to a strong start this academic year.

As of early December, 77 chapters had committed to sponsoring more than 1,000 classrooms across the nation. This number nearly matches the number of chapters—83—that sponsored Visions programs in the entire 1996–97 school year.

The **Gen. E.W. Rawlings (Minn.) Chapter** continues to have the largest number of classrooms signed up for Visions—166. The **Langley (Va.) Chapter** follows with 67 classrooms. Also active supporters of Visions are the **Central Florida Chapter**, with 60 classrooms, the **Fort Worth (Texas) Chapter**, sponsoring 56 classes, and the **Golden Triangle (Miss.) and Dallas (Texas) Chapters**, both sponsoring 40 classrooms.

Close behind are the **David D. Terry Jr. (Ark.) Chapter**, with 39 classrooms, and the **Colorado Springs/Lance Sijan (Colo.) Chapter**, with 30.

*USA Today* and AEF began Visions of Exploration in 1991 as a way to encourage an interest in math and science among schoolchildren. Thirty classrooms participated in the first year.

As part of the program, classrooms receive a subscription to the newspaper, and teachers are given lesson plans keyed to articles in it. Feedback from the teachers indicates that the Visions program also helps students develop thinking skills and even leads to an interest in aviation and the Air Force.

Local AFA chapters sponsor Visions classrooms, with AEF matching their expenditures, dollar for dollar.

### Day's Work

In the course of a few hours spent with the **Dacotah Chapter** in Sioux Falls, S.D., AFA National President Doyle E. Larson demonstrated several

of the outreach activities he has charged AFA chapters with carrying out.

His visit to Sioux Falls began with a guest stint at radio station KSOO-AM. For the first half-hour, radio host Rick Knobe interviewed Larson on AFA and its mission and on USAF topics, such as the Air Force Memorial, women in the military, and the service's newest aircraft.

Charles A. Nelson, South Dakota state president, not only arranged for this radio hour but also provided Knobe with background material ahead of time, to focus the interview.

During the second half-hour, Larson fielded phone calls on a wide variety of subjects. A widow asked how to get her ID card reinstated. Another caller asked how his Marine Corps veteran friend could get military medals that were due to him but never received. Someone raised the subject of UFOs. There was also debate on why the military handles peacekeeping and drug interdiction duties. One gentleman talked about the Air Force as a great career opportunity. Another reminisced about Gen. Curtis E. LeMay.

Following the talk show, Larson addressed a joint luncheon meeting of the Dacotah Chapter and the Sioux Falls Downtown Lions Club. To the audience of 150, Larson spoke about USAF's key role among the military services, its unique ability to stop military aggression quickly, and its challenges in securing funding and support.

Arrangements by chapter member Reid A. Christopherson led to a local television station interviewing Larson briefly after the luncheon. The spot made the local evening news that night.

Capping his seven-hour visit to Sioux Falls, Larson called on Col. Thomas J. Lien, commander of the 114th Fighter Wing (ANG), Joe Foss Field, S.D. He received a briefing on the unit's mission and accomplishments, then took a "windshield tour" of the facility.

### In the Navy

AFA's newest chapter has sprung up in an unlikely setting: the US Naval War College in Newport, R.I.

Called the **Newport Blue & Gold**



"Hello, you're on the air": In Sioux Falls, S.D., AFA National President Doyle Larson's interview with host Rick Knobe (right) at an all-talk radio station generated phone calls from listeners eager to share and ask for information about a wide range of military topics.



USAF photo by Lynn Davis



*President Larson recently visited the Air Force Enlisted Heritage Research Institute at Gunter Annex, Maxwell AFB, Ala. Guided by Roy A. Boudreaux (center), Alabama state president, and CMSgt. Gary Akin, institute director, he learned about the memorabilia collected at the EHRI from USAF's enlisted members and admired its famous "Wall of Achievers" exhibit.*

**Chapter**, it is the second AFA chapter in the Ocean State. Its name was chosen to symbolize Air Force blue and the chapter's formation on USAF's golden anniversary, reported Col. David T. Buckwalter, chapter president. He added that the blue and gold combination also stands for the active duty Air Force presence at the Naval War College.

Along with Buckwalter, the other chapter officers are Lt. Cols. Dennis L. D'Angelo, vice president, Paul L. Bailey, secretary, and Peter H. Liotta, treasurer. D'Angelo and Bailey are students at the NWC. Buckwalter is senior Air Force adviser there, and Liotta is a professor of strategy and force planning. In all, the chapter has 28 charter members.

At the chapter's first meeting on Sept. 18, the group approved submission to AFA of the application for their charter and constitution. Guest speaker at this inaugural event was retired USAF Col. O.B. Ross, a former NWC professor and a B-17 bomber-

dier who enlisted in the Army Air Corps in 1939. Other special guests included Dr. Eugene M. D'Andrea, **Metro Rhode Island Chapter** president; Joseph A. Zaranka, national director; Francis F. Carmichael Jr., Massachusetts state president; and Metro Rhode Island Chapter member Brig. Gen. Joseph N. Waller, assistant adjutant general for air, Rhode Island ANG.

The next day, chapter members helped the NWC celebrate the Air Force's anniversary with festivities overlooking Narragansett Bay.

Chapter member Maj. Michael D. Hennessy narrated a flyby arranged by USAF personnel at the College of Naval Command and Staff.

The flyby involved HH-60 helicopters from the 106th Rescue Wing, Francis S. Gabreski IAP, N.Y.; F-15s from the 102d Fighter Wing (ANG), Otis ANGB, Mass.; F-16s from the 158th Fighter Wing (ANG), Burlington IAP, Vt.; A-10s from the 103d Fighter Wing (ANG), Bradley IAP, Conn.;

C-130s from the 143d Airlift Wing (ANG), Quonset State Airport, R.I.; and AT-38s from the 560th Training Squadron at Randolph AFB, Texas.

Also in the lineup were a KC-10A from the 305th Operations Group, McGuire AFB, N.J.; a C-5 from the 436th Airlift Wing, Dover AFB, Del.; and a B-1B from the 28th Bomb Squadron, Dyess AFB, Texas. Most aircraft were in the area on training missions.

Buckwalter conducted a POW/MIA remembrance ceremony as part of the event, and chapter member Maj. Steven R. Charbonneau led the crowd in singing the Air Force song.

#### **On the Road Again**

Already seasoned veterans of group travel, the **Chautauqua (N.Y.) Chapter** took a bus trip again—this time a three-day jaunt to Dover AFB and the Hagley (E.I. Du Pont) Museum in Delaware and to the US Naval Academy at Annapolis, Md.

On the chapter's first bus trip in August 1995 they traveled to the US Air Force Museum at Wright-Patterson AFB, Ohio. Chapter President John Dunderdale reported then that the group of 45 had so much fun they decided to make museum trips an annual event. Last year, they bused to the National Air and Space Museum in Washington.

On this year's journey in September, 42 chapter members and guests

#### **Tricare—How Goes It?**

Tricare is a major change in health care delivery for Air Force members, their families, and retirees. AFA has worked diligently to monitor the implementation of this program to ensure it is meeting your needs. Now we need your help. If you have a Tricare story, be it a success or a problem, please write to us including any attachments you deem appropriate. Direct your material to Brian Smith, AFA, 1501 Lee Highway, Arlington, VA 22209-1198.



**USAF Medal of Honor recipients (front row, l-r) William R. Lawley Jr., Bernard F. Fisher, and Joe M. Jackson, visited Little Rock, Ark., for a Congressional Medal of Honor Society convention. They also attended a luncheon with the David T. Terry Jr. Chapter and are shown here with (back row, l-r) Col. Charles Lambert, 314th Airlift Wing vice commander, Little Rock AFB; Marleen Eddleman, former Arkansas state president; and John Sullivan, then-state president.**

headed first for a morning at Dover AFB. They took a guided tour of the base museum, housed in a World War II hangar listed on the National Historic Register.

In the afternoon, the group toured the Hagley Museum complex. It includes the site of the E.I. Du Pont de Nemours Co.'s first enterprise—a black gunpowder works—and the first Du Pont family home, built in 1803.

That evening, the group ate at a World War II-theme restaurant in New Castle, Del. Called Air Transport Command, it evokes the era with indoor and outdoor decor that includes a Checkpoint Charlie-style entrance, sections of wartime aircraft, a bombed out airplane, jeeps, and sandbags, as well as photos and newspaper clippings from that time.

On the second day of the trip, the group toured the Naval Academy.

Dunderdale said these bus trips have consistently boosted membership. A possible destination next year: the Mighty Eighth Air Force Heritage Museum in Savannah, Ga. For that trip, they'll travel by plane, Dunderdale said.

**Good Morning, College Park**

Acrian Cronauer, whose work as an armed forces radio disc jockey in Saigon during the Vietnam War was portrayed in the 1987 movie "Good Morning, Vietnam," was among the guest speakers at a celebration of

USAF's 50th anniversary at College Park Airport, Md.

The **College Park Airport Chapter** and the **Baltimore Chapter** organized the September event, held at the College Park Airport Museum and at a World War I-theme restaurant called 94th Aero Squadron, all located at the oldest continuously operated airport.

The University of Maryland's AF-ROTC Det. 330 posted the colors to open the celebration. Along with Cronauer, the guest speakers included retired USAF Col. John M. Fabian, an astronaut on the *Challenger* space shuttle in June 1983 and on *Discovery* in June 1985. Fabian is now president and CEO of Analytic Services, Inc., in Arlington, Va. Cronauer, a former USAF sergeant, is now a lawyer in Washington.

The guests also held a remembrance ceremony for missing service members and viewed a model of the POW/MIA memorial to be built at Andrews AFB, Md. In addition, a Beech Aircraft T-34, Boeing Stearman, and North American AT-6 flew overhead and landed at the airport for a static display. August Schell Jr., a retired USAF major, displayed about 2,000 items from his collection of AAF and USAF patches.

Other honored guests included then-National Vice President (Central East Region) Charles G. Durazo, World War II ace David F. Thwaites, Tuskegee Airman William Broadwater, and Women's Airforce Service Pilots Toby Felker and Lorraine Rodgers.

**Annual Ball in Alpena**

The **Lloyd R. Leavitt Jr. (Mich.) Chapter** cosponsored the 17th annual Military Ball with the Air National Guard and Army National Guard in Alpena, Mich., in October.



**The Air Force Intern Program Class of 1997 invited President Larson to speak to them on the topic of leadership. Donald W. Steele Sr. Memorial (Va.) Chapter member Capt. Steven J. Bleymaier arranged the event, which took place at George Washington University in Washington, where the 50 captains will complete graduate studies during the two-year intern program.**

Chapter President Billie E. Thompson was among the three speakers at the event, held in the ANG armory. She told the audience that the AFA chapter was fortunate to have in its area the ANG Combat Readiness Training Center and its Medical Readiness Training Site, which is the only military site in the continental US providing a Northern European environment for military medical unit training.

Maj. Gen. E. Gordon Stump, the adjutant general of the Michigan ANG, and Army National Guard Capt. Bernard S. Peters, commander of Co. C, 1st Battalion, 125th Infantry (Mechanized), also spoke to the audience of 260 people.

The highlight of the evening was recognition for CMSgt. Kenneth Summerix, who retired in October after 40 years of service, all spent at Alpena. At the military ball, he received appreciation awards from various units and from the state of Michigan.

Thompson is the 13-year-old Leavitt Chapter's first female president and formerly managed the base exchange at Alpena. She also recently received a Medal of Merit, presented by Anton D. Brees, national vice president (Great Lakes Region), at an AFA regional meeting.

#### Air Zoo's Air Day

When the Kalamazoo Aviation History Museum held its most recent Air Day in September, the **Kalamazoo (Mich.) Chapter** set up an AFA display.

William Monica Jr., chapter president, said the display featured the AFA videos "Legends of Airpower" and "B-2: Worth the Price?" Chapter members also distributed 75 membership application forms and back issues of *Air Force Magazine*. Monica said the chapter puts on each magazine cover a label with point of contact information printed on it.

The chapter, which as of last June had 275 members, maintains close ties to the museum through volunteer work there. Monica and chapter member William A. Morris are among those who volunteer to take schoolchildren through the museum as part of the "Why Airplanes Fly" program. Monica said the chapter feels this is one way to promote aerospace education.

The museum is located adjacent to the Kalamazoo/Battle Creek IAP, in Kalamazoo, and began its collection with a Curtiss P-40 Warhawk, Douglas C-47 "Gooney Bird," and three US Navy Grumman "cats"—the F4F Wildcat, F8F Bearcat, and the F6F Hellcat. Because of these animal-named airplanes, the museum gained



*More than 275 guests attended an Air Force birthday ball, sponsored by the Gen. Bruce K. Holloway (Tenn.) Chapter. Holloway (center); CMSgt. Donnie Hooks of the 134th Air Refueling Wing, McGhee Tyson Airport, Tenn.; and Cadet Apryl Van Sickle, a chapter member from AFROTC Det. 800, University of Tennessee at Knoxville, cut the cake at the September celebration.*

the nickname "Air Zoo." Its collection of classics on display now numbers 55.

#### Teaching an Ace

Vietnam War ace Col. Charles B. DeBellevue was among those who took a cardiopulmonary resuscitation class put on by several **Central Missouri Chapter** members for the cadet instructors and staff of AFROTC Det. 440, at the University of Missouri, Columbia, Mo.

Led by Chapter President Capt. Rene M. Chinn-Lang, a nurse anesthetist at the Whiteman AFB, Mo., hospital, the instructors also included Sharon Shade, a Community Partner whose company teaches medical self-help procedures. Maj. W.A. Locke, detachment executive officer, invited the chapter to conduct the class.

While a weapon systems officer with the 555th Tactical Fighter Squadron, Udorn AB, Thailand, in 1971, DeBellevue completed 220 missions—96 over North Vietnam—and is credited with destroying six North Vietnamese jet fighters in aerial combat, making him the leading ace from the Vietnam War. He is a Central Missouri Chapter member and was commander of Det. 440 at the time the CPR class was conducted.

Earlier in the fall, the Central Missouri Chapter sponsored a Membership Appreciation picnic at Whiteman AFB's Ike Skelton Park. Chinn-Lang reported that about 80 people attended the event, which featured food, music, a dramatic storytelling of the life of pilot Bessie Coleman, and spe-

cial appearances by Miss Johnson County (Christina Gunn, a USAF dependent) and "Air Bear," the Federal Aviation Administration's mascot.

Chinn-Lang said the children mobbed Air Bear, who was dressed in a flight suit and an aviator's cap and goggles. The bear passed out coloring books and crayons, pencils, oversize plastic paper clips shaped like airplanes, and booklets on aviation topics such as how to become a pilot.

In a period costume of a black leather jacket, boots, and other aviator garb, FAA employee Sandra Campbell delivered a first-person narrative on the life of Bessie Coleman, the first licensed African American female pilot and the first woman to earn an international aviation license (in 1921). Chinn-Lang said the children listened attentively to details of Coleman's life, from her birth in 1893 as the 12th of 13 children, through her determination to become a pilot—even though it meant learning French and going to France in order to get her license—and her career as a barnstormer and lecturer, before her death in 1936 while practicing for an air show.

#### Mobile Science

The **Leigh Wade (Va.) Chapter** put the kids in the pilot's seat in September. The chapter sponsored a visit to Lakeview Elementary School in Colonial Heights, Va., by the "Air-Mobile"—a trailer full of exhibits and hands-on activities that teach aeronautical science and history.

The AirMobile traveled to the school



## Air Force Association's 14th Annual Air Warfare Symposium

### Global Engagement: Making the Vision Operational



**Feb. 26-27, 1998**

The Buena Vista Palace Hotel,  
Orlando, Fla.

### The AFA Symposium

Strategic planning has generated new visions of air warfare requirements, weapons system modernization, and technology developments that are shaping the Air Force today. Top military leaders will explore the progress in making these plans an operational reality and give an update on how the Air Force flies and fights. Planned speakers will include:

Secretary of the Air Force

**Gen. Michael E. Ryan,**  
Chief of Staff, USAF

**Gen. Richard E. Hawley,**  
Commander, ACC

**Gen. Eugene E. Habiger,**  
CINC STRATCOM

**Gen. Walter Kross,**  
CINC TRANSCOM/Commander,  
AMC

**Gen. Richard B. Myers,**  
Commander, PACAF

**Gen. John P. Jumper,**  
Commander, USAFE

**Lt. Gen. Carl E. Franklin,**  
Commander, 9th Air Force

**Lt. Gen. A.M. DeQuetteville,**  
Commander, Canadian Air Com-  
mand.

### Golf Tournament

AFA's Central Florida Chapter will sponsor a golf tournament on Walt Disney World's Magnolia and Palm Courses on Wednesday, Feb. 25, 1998. Contact Jim DeRose at (407) 356-5750.

### Gala

The chapter will sponsor its 14th annual black-tie Gala on Friday, Feb. 27. Proceeds will benefit AFA's Aerospace Education Foundation and the Air Force Memorial Foundation as well as give support to AFROTC, AFJROTC and CAP units and other aerospace education activities. Contact Marty Harris at (407)-469-1939, or fax (407) 469-3828.

### Reservations

For hotel reservations, call Buena Vista Palace Hotel at (800) 327-2990 or nearby Grosvenor Hotel at (800) 624-4109. Mention the AFA Symposium for special rate. The cut-off date for reservations is Jan. 23, 1998.

### Registration

Advance registration closes Thursday, Feb. 19, 1998. No refunds can be made for cancellations after this date. Symposium fee for AFA Individual or Industrial Associate member is \$495.00. Fee for nonmember is \$550.00. Fee includes coffee breaks, sandwich lunch, reception/buffet, and continental breakfast. Those registering may purchase an extra reception/buffet ticket and/or lunch ticket, at \$105 for the additional reception/buffet ticket and \$20 for the extra lunch ticket.

Call Jennifer Krause at the Air Force Association at (703) 247-5838, e-mail: [jkrause@afa.org](mailto:jkrause@afa.org), if you have any questions or to register. To receive registration information by fax, call our fax on demand service 24 hours a day at (800) 232-3563, and order document number 320, or visit our web site at [www.afa.org/orlsymp.html](http://www.afa.org/orlsymp.html).

### Mark Your Calendar

Coming April 28-29, 1998, in San Antonio  
*The first AFA National Symposium on medical care and training. Come hear nationally recognized speakers discuss the significant challenges of medical care and the current and future responses to those challenges. Hear also about the amazing techniques and technology that impact military training. This symposium will feature participation by leaders of all the services.*



from its home base at the Science Museum of Virginia in Richmond, parked on the school's playground, set up its steps, unfurled its awnings, and hosted 250 students. They came from 10 classes, covering grades three through five, and went through the exhibits in groups of 15.

Inside the 45-foot-by-14-foot trailer, chapter member George Aguirre helped the children "fly" the flight simulator, while Chapter President Glen E. Thompson helped others understand exhibits on the Global Positioning System, weather, forces of flight, and aviation history and personalities of Virginia. The children also operated "push-button interactives"—exhibits with buttons that they could push to introduce smoke into a wind tunnel, for example, or light up a map of the state's 70 airports.

The AirMobile stayed on site after school and opened up that evening, so the children could bring their parents to visit it.

**Marking an Anniversary**

To honor the Air Force's 50th anniversary, the **Enid (Okla.) Chapter** dedicated a marker Sept. 18 at the Vance AFB, Okla., air park.

Col. Daniel J. Mumaugh, 71st Flying Training Wing commander, joined the chapter's board of directors at the dedication ceremony for the bronze plaque mounted on a waist-high granite block. The air park also includes five training aircraft on static display: a BT-13, AT-6, T-28, T-33, and T-41.



*Rebecca Spaatz Nagel (second from left), daughter of Gen. Carl Spaatz, and Rebecca White McCoy (second from right), daughter of Gen. Thomas White, joined President Larson as special guests at a Northern Shenandoah Valley (Va.) Chapter celebration of USAF's 50th anniversary. During the social hour, they met Thomas Shepperd (left), past chapter president, and Eric Rodney, chapter president.*

The marker was the idea of Chapter Secretary Oscar Curtis, who said the chapter's Community Partners funded the project through their annual dues. The chapter has 199 Community Partners.

**More Chapter News**

In October, the **Lloyd Schloen-Empire (N.Y.) Chapter** organized an assembly at Bethpage Senior High School in Bethpage, N.Y., to recog-

nize the students for their patriotism. The students recite not only the Pledge of Allegiance each morning but also "The American's Creed," a statement of support for the nation written in 1918 by William Tyler Page. William G. Birnbach, chapter president, opened the program by describing the mission of USAF and AFA. Representatives from the office of Rep. Peter King (R-N.Y.) and the local Air Force recruiting station also took part in the program. The Air Force Band of Liberty ensemble, "New Horizon," based at Hanscom AFB, Mass., then performed a concert for the assembly of 850 students. The musicians afterward had brunch, courtesy of the Long Island Lighting Co.

**Patricia E. Whipp (1942-1997)**

It is with great sadness that the AFA headquarters staff notes the passing of Patricia E. Whipp, a member of the support staff for more than 37 years. She began working for AFA in August 1960 in what is now the Membership Department and over the years rose to become an assistant supervisor in the Management Information Systems Department. Though working mostly behind the scenes, Whipp came into contact with many association members as they phoned her department to notify AFA of address changes and to update other membership information. In recent years, she had also run the distinguished visitors' desk during the National Convention. ■



*To celebrate USAF's 50th anniversary, the Enid (Okla.) Chapter used funds from its many Community Partners to create a granite marker for Vance AFB's air park. The chapter's board of directors joined Col. Daniel Mumaugh, 71st Flying Training Wing commander, at the dedication ceremony for the marker.*

LEGISLATIVE ACTION PENDING • ACT NOW!



# Tell Congress to Keep Health Care Promises

## Speak Out Today!

Medicare-eligible uniformed service retirees need and deserve the same Federal Employees Health Benefits Program already available to all other federal retirees. But it won't happen unless legislators are overwhelmed with constituent mail.

Your senators and representative must hear from YOU! Call today, and we'll send you three personalized letters plus three envelopes pre-addressed to your legislators.

We'll also send you a free pamphlet, "How to Follow Up with Your Elected Officials." Written for the citizen-lobbyist, this pamphlet details fast and effective ways to follow up your letters.

Ask your spouse, relatives, friends and neighbors to call, too—it's volume that counts.

Every letter not written gives Congress another excuse for inaction. Please do your part. We've made it easy; we've made it inexpensive. Spending \$5.95 now can save you thousands later, but only if you pick up the phone and CALL NOW!

## Health Care Equity Action Line

**1-900-288-1776**  
THE TOTAL COST IS ONLY \$5.95

Your Name Printed Here  
Your Street Address, Apt., or Box Number  
Your City, State, ZIP Code

The Honorable (Your Senators'/Representative's Name)  
U.S. Senate/U.S. House of Representatives  
Washington, D.C. 20510/20515

Dear Senator/Representative:

I am writing to urge you to cosponsor (S. 1334/H.R. 1766), to authorize a test of allowing Medicare-eligible uniformed services beneficiaries to enroll in the Federal Employees Health Benefits Program (FEHBP-65). This legislation is essential to ensure the government keeps its promise of lifetime health care for the men and women who dedicated themselves to careers in service to their country.

It is truly ironic that, despite their many sacrifices, retired service members lose their military health insurance at age 65. In contrast, large corporations like GM, Ford, IBM, and Exxon offer their retirees heavily subsidized Medicare supplement plans, most including dental and drug coverage. The government subsidizes lifetime FEHBP coverage for every other federal retiree—including retired Members of Congress and their staffers—often after as little as 5 years of federal service! Those who served decades in uniform deserve no less.

FEHBP-65 is affordable. The government is able to find \$3 billion a year to provide FEHBP for Medicare-eligible federal civilian retirees. FEHBP-65 for service retirees will only cost about one-tenth that amount, and a test will prove it.

Correction of this severe inequity is long overdue. Please cosponsor (S. 1334/H.R. 1766) and do all you can to ensure Congress enacts at least a test of FEHBP-65 in 1998. I look forward to your early reply.

Sincerely,

*(Your signature and a handwritten "P.S." lets Washington know of your personal interest in this legislation.)*

- Begin by calling 1-900-288-1776. This service is available in all 50 states, seven days a week, 24 hours a day. The call costs \$5.95 and will appear on your next telephone bill.
- After a brief recorded message, an operator will ask for your name and mailing address. Active duty personnel whose current mailing address is different from their voting address should also give the ZIP code of their voting address.
- When calling our legislative action line, if you hear a recording that your call cannot be completed as dialed or a similar message, this is because your local telephone company has blocked your telephone for calls to 900 services.

However, you can still participate by sending your name, address (active military must include their voting ZIP code), and a check or money order for \$5.95 to MC/USA Letters, P.O. Box 9865, Washington, D.C. 20016.

- Your three personalized letters will be mailed to you within five days. Just stamp the pre-addressed envelopes that come with the letters, sign your letters, then mail them.
- Remember, it's your thoughts that count, so it's important to add a handwritten postscript (P.S.) to your letters. And if, by chance, there's a problem with your letters contact USA Letters at 1-800-755-1994.



# AFA's National Committees and Advisers for 1997-98

As of Dec. 2, 1997

The makeup of AFA's national committees for 1997-98 has been determined. The following association members have been named to serve on the committees. (Ex officio members of all committees are nonvoting.)

## Executive Committee

Gene Smith (*Chairman*)  
James E. Callahan  
Charles H. Church Jr.  
William D. Croom Jr.  
Michael J. Dugan  
Doyle E. Larson  
John Politi  
Vic Seavers  
Cheryl L. Waller  
Thomas J. McKee, *ex officio*  
Walter E. Scott, *ex officio*  
John A. Shaud, *ex officio*

## Finance Committee

Charles H. Church Jr. (*Chairman*)  
R.L. Devoucoux  
Thomas J. Kemp  
Ivan L. McKinney  
Charles A. Nelson  
Jack G. Powell  
Mark J. Worrick  
Gene Smith, *ex officio*

## Membership Committee

Daniel C. Hendrickson (*Chairman*)  
Michael F. Cammarosano  
Gerald S. Chapman  
Sandra L. Henninger  
Jack C. Price  
Charles G. Thomas  
Doyle E. Larson, *ex officio*

## Constitution Committee

Monroe W. Hatch Jr. (*Chairman*)  
Joan Blankenship  
Tommy G. Harrison  
Harold F. Henneke  
P.K. Robinson  
Gene Smith, *ex officio*

## Resolutions Committee

William D. Croom Jr. (*Chairman*)  
James E. Callahan  
Charles H. Church Jr.  
Michael J. Dugan  
Doyle E. Larson  
John Politi  
Vic Seavers  
Gene Smith  
Cheryl L. Waller  
Thomas J. McKee  
Walter E. Scott  
John A. Shaud, *ex officio*

## Long-Range Planning

James E. Callahan (*Chairman*)  
Roy A. Boudreaux  
Rodney E. Ellison  
M.N. Dan Heth  
Robert E. Patterson  
Michael J. Peters  
Mary Anne Thompson  
Doyle E. Larson, *ex officio*

## Science and Technology Committee

John J. Welch Jr. (*Chairman*)  
Thomas E. Cooper  
Charles G. Durazo  
Charles A. Gabriel  
J. Michael Loh  
Robert T. Marsh  
Thomas S. Moorman Jr.  
Thomas McMullen  
Wayne A. Schroeder  
Henry C. Smyth Jr.  
Richard E. "Dick" Thomas  
Leonard R. Vernamonti  
Billy E. Welch  
John G. Wilson  
Doyle E. Larson, *ex officio*

## Audit Committee

John Politi (*Chairman*)  
(term expires September 1998)  
Billy M. Boyd  
(term expires September 2000)  
William A. Lafferty  
(term expires September 1999)  
William L. Sparks  
(term expires September 1999)  
Walter G. Vartan  
(term expires September 1998)  
L.B. Webber  
(term expires September 2000)  
Gene Smith, *ex officio*

## AFA/AEF 2010 Committee

Vic Seavers (*Chairman*)  
Robert J. Cantu  
Maureen Eddlemon  
Julie E. Petrina  
Jack C. Price

# AFA State Contacts



Following each state name are the names of the communities in which AFA chapters are located. Information regarding these chapters or any of AFA's activities within the state may be obtained from the appropriate contact.

**ALABAMA** (Birmingham, Gadsden, Huntsville, Mobile, Montgomery): **Roy A. Boudreaux**, P.O. Box 1190, Montgomery, AL 36101-1190 (phone 334-241-2739).

**ALASKA** (Anchorage, Fairbanks): **Carl W. Bradford Jr.**, 8040 Evans Cir., Anchorage, AK 99507-3248 (phone 907-753-7143).

**ARIZONA** (Green Valley, Phoenix, Prescott, Sedona, Sierra Vista, Sun City, Tucson): **Raymond D. Chuvata**, 5039E N. Regency Cir., Tucson, AZ 85711-3000 (phone 520-747-2738).

**ARKANSAS** (Fayetteville, Hot Springs, Little Rock): **John L. Burrow**, 409 E. Lafayette St., Fayetteville, AR 72701 (phone 501-751-0251).

**CALIFORNIA** (Apple Valley, Bakersfield, Edwards AFB, Fairfield, Fresno, Los Angeles, Merced, Monterey, Orange County, Pasadena, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, Sunnyvale, Vandenberg AFB, Yuba City): **Paul A. Maye**, 1225 Craig Dr., Lompoc, CA 93436 (phone 805-733-1448).

**COLORADO** (Colorado Springs, Denver, Fort Collins, Grand Junction, Pueblo): **Howard R. Vasina**, 1670 N. Newport Rd., Ste. 400, Colorado Springs, CO 80916-2700 (phone 719-591-1011).

**CONNECTICUT** (Brookfield, East Hartford, Middletown, Storrs, Stratford, Torrington, Waterbury, Westport, Windsor Locks): **Harry C. Levine**, 14 Ardmore Rd., West Hartford, CT 06119 (phone 860-292-2456).

**DELAWARE** (Dover, New Castle County, Rehoboth Beach): **Stephanie M. Wright**, 5 Essex Dr., Bear, DE 19701-1602 (phone 302-834-1369).

**DISTRICT OF COLUMBIA** (Washington): **Rosemary Pacenta**, 1501 Lee Hwy., Arlington, VA 22209-1198 (phone 703-247-5820).

**FLORIDA** (Avon Park, Broward County, Cape Coral, Daytona Beach, Fort Walton Beach, Gainesville, Homestead, Hurlburt Field, Jacksonville, Leesburg, Miami, New Port Richey, Orlando, Palm Harbor, Panama City, Patrick AFB, Port Charlotte, St. Augustine, Sarasota, Spring Hill, Tallahassee, Tampa, Vero Beach, West Palm Beach, Winter Haven): **Robert E. Patterson**, 95 Country Club Rd., Shalimar, FL 32579-1610 (phone 904-882-9118).

**GEORGIA** (Athens, Columbus, Peachtree City, Rome, St. Simons Island, Savannah, Valdosta, Warner Robins): **Edward I. Wexler**, 8 E. Back St., Savannah, GA 31419-3343 (phone 912-966-8252).

**GUAM** (Agana): **Dion W. Johnson**, P.O. Box 12861, Tamuning, GU 96931 (phone 671-646-0262).

**HAWAII** (Honolulu, Maui): **Richard M. May Jr.**, P.O. Box 6483, Honolulu, HI 96818-0483 (phone 808-422-2922).

**IDAHO** (Boise, Mountain Home, Twin Falls): **Chester A. Walborn**, P.O. Box 729, Mountain Home, ID 83647-1940 (phone 208-587-9757).

**ILLINOIS** (Addison, Belleville, Champaign, Chicago, Moline, Rockford, Springfield-Decatur): **John D. Bailey**, 6339 Cotswold Ln., Cherry Valley, IL 61016-9379 (phone 815-226-6932).

**INDIANA** (Bloomington, Columbus, Evansville, Fort Wayne, Grissom ARB, Indianapolis, Lafayette, Marion, Mentone, New Albany, Terre Haute): **James E. Fultz**, 3915 Baytree Ln., Bloomington, IN 47401-9754 (phone 812-333-8920).

**IOWA** (Des Moines, Marion, Sioux City, Waterloo): **Louis M. Rapier**, 2963 29th Ave., Marion, IA 52302-1367 (phone 319-373-1036).

**KANSAS** (Garden City, Topeka, Wichita): **Jean M. Clifford**, 2070 Millford Ln., Garden City, KS 67846 (phone 316-275-4317).

**KENTUCKY** (Lexington, Louisville, Paducah): **Bradley C. Young**, 636 Grabruck St., Danville, KY 40422-1764 (phone 606-748-5684).

**LOUISIANA** (Alexandria, Baton Rouge, New Orleans, Shreveport): **Michael F. Cammarosano**, 4500 Sherwood Commons Blvd., Apt. 302, Baton Rouge, LA 70816 (phone 504-925-4911).

**MAINE** (Bangor, Caribou, North Berwick): **Gerald Bolduc**, 130 Clark Ave., Bangor, ME 04401-3502 (phone 207-990-7250).

**MARYLAND** (Andrews AFB, Baltimore, College Park, Rockville): **Robert D. Gatewood Jr.**, 5102B Lahm Ct., Andrews AFB, MD 20762-5885 (phone 301-981-9411).

**MASSACHUSETTS** (Bedford, Boston, East Longmeadow, Falmouth, Hanscom AFB, Taunton, Westfield, Worcester): **Francis F. Carmichael Jr.**, 14 Carmichael Way, West Wareham, MA 02576-1486 (phone 508-295-9167).

**MICHIGAN** (Alpena, Battle Creek, East Lansing, Kalamazoo, Marquette, Mount Clemens, Oscoda, Traverse City, Southfield): **James W. Rau**, 466 Marywood Dr., Alpena, MI 49707-1121 (phone 517-354-2175).

**MINNESOTA** (Duluth, Minneapolis-St. Paul): **Coleman Rader Jr.**, 6481 Glacier Ln. N., Maple Grove, MN 55311-4154 (phone 612-943-1519).

**MISSISSIPPI** (Biloxi, Columbus, Jackson): **Billy M. Boyd**, 107 N. Rosebud Ln., Starkville, MS 39759 (phone 601-434-2644).

**MISSOURI** (Richards-Gebaur ARS, St. Louis, Springfield, Whiteman AFB): **Graham Burnley**, 112 Elk Run Dr., Eureka, MO 63025-1211 (phone 314-938-6113).

**MONTANA** (Bozeman, Great Falls): **John M. Wallace**, 310 Treasure Ave., Bozeman, MT 59718-6466 (phone 406-587-8998).

**NEBRASKA** (Lincoln, Omaha): **Robert M. Williams**, 6014 Country Club Oak Pl., Omaha, NE 68152-2009 (phone 402-572-7655).

**NEVADA** (Las Vegas, Reno): **Albert S. "Sid" Dodd**, 1921 Dresden Ct., Henderson, NV 89014-3790 (phone 702-295-4953).

**NEW HAMPSHIRE** (Manchester, Portsmouth): **Baldwin M. Domingo**, 5 Birch Dr., Dover, NH 03820-4057 (phone 603-742-0422).

**NEW JERSEY** (Andover, Atlantic City, Camden, Chatham, Forked River, Ft. Monmouth, Gladstone, Jersey City, McGuire AFB, Newark, Old Bridge, Toms River, Trenton, Wallington, West Orange): **F.J. "Cy" LaManna**, 770 Berdan Ave., Wayne, NJ 07470-2027 (phone 201-423-0030).

**NEW MEXICO** (Alamogordo, Albuquerque, Clovis): **Dennis E. Mills**, 3016 Cheyenne Dr., Clovis, NM 88101-3204 (phone 505-762-4417).

**NEW YORK** (Albany, Binghamton, Brooklyn, Buffalo, Rome, Jamestown, Nassau County, New York, Queens, Rochester, Staten Island, Syracuse, Westhampton Beach, White Plains): **Bonnie B. Callahan**, 6131 Meadowlakes Dr., East Amherst, NY 14051-2007 (phone 716-741-2846).

**NORTH CAROLINA** (Asheville, Charlotte, Fayetteville, Goldsboro, Greensboro, Greenville, Havelock, Kitty Hawk, Littleton, Raleigh, Wilmington): **Bill M.**

**Dyer**, 1607 Cambridge Dr., Kinston, NC 28504-2001 (phone 919-527-0425).

**NORTH DAKOTA** (Fargo, Grand Forks, Minot): **Ronald L. Garcia**, 1600 University Ave. W., Minot, ND 58703-1908 (phone 701-858-3856).

**OHIO** (Cleveland, Columbus, Dayton, Mansfield, Newark, Youngstown): **William "Ron" Goerges**, 4201 W. Enon Rd., Fairborn, OH 45324-9412 (phone 937-429-6070, ext. 102).

**OKLAHOMA** (Altus, Enid, Oklahoma City, Tulsa): **Jo Smith**, 3937 S.E. 14th Pl., Del City, OK 73115 (phone 405-736-5839).

**OREGON** (Eugene, Klamath Falls, Portland): **John Lee**, P.O. Box 3759, Salem, OR 97302 (phone 503-581-3682).

**PENNSYLVANIA** (Allentown, Altoona, Beaver Falls, Coraopolis, Drexel Hill, Erie, Harrisburg, Johnstown, Lewistown, Philadelphia, Pittsburgh, Scranton, Shiremanstown, State College, Washington, Willow Grove, York): **Jerome P. Ashman**, R.R. 1, Box 266, Bolivar, PA 15923-9644 (phone 412-238-4015).

**RHODE ISLAND** (Newport, Warwick): **Eugene M. D'Andrea**, P.O. Box 8674, Warwick, RI 02888 (phone 401-461-4559).

**SOUTH CAROLINA** (Charleston, Clemson, Columbia, Myrtle Beach, Sumter): **Stanley V. Hood**, P.O. Box 6346, Columbia, SC 29260-6346 (phone 803-787-2743).

**SOUTH DAKOTA** (Rapid City, Sioux Falls): **Charles A. Nelson**, 1517 S. Minnesota Ave., Sioux Falls, SD 57105-1717 (phone 605-336-1988).

**TENNESSEE** (Chattanooga, Knoxville, Memphis, Nashville, Tullahoma): **Glenn Fuller**, 6440 Strathspay Dr., Memphis, TN 38119-7751 (phone 901-682-1905).

**TEXAS** (Abilene, Amarillo, Austin, Big Spring, College Station, Commerce, Dallas, Del Rio, Denton, El Paso, Fort Worth, Harlingen, Houston, Kerrville, Lubbock, San Angelo, San Antonio, Wichita Falls): **Henry C. Hill**, P.O. Box 10356, College Station, TX 77842-0356 (phone 409-821-0201).

**UTAH** (Clearfield, Ogden, Salt Lake City): **Boyd Anderson**, 1120 Canyon Rd., #15, Ogden, UT 84404-5964 (phone 801-621-2639).

**VERMONT** (Burlington): **Erwin R. Waibel**, 1 Twin Brook Ct., South Burlington, VT 05403-7102 (phone 802-660-5298).

**VIRGINIA** (Alexandria, Charlottesville, Danville, Langley AFB, Lynchburg, McLean, Norfolk, Petersburg, Richmond, Roanoke, Winchester): **George D. Golden**, 36 W. Riverpoint Dr., Hampton, VA 23669-1072 (phone 757-850-4228).

**WASHINGTON** (Seattle, Spokane, Tacoma): **Richard A. Seiber**, 5323 97th Ave. Court W., Tacoma, WA 98467-1105 (phone 206-564-3757).

**WEST VIRGINIA** (Charleston): **Samuel Rich**, P. O. Box 444, White Sulphur Springs, WV 24986 (phone 304-536-4131).

**WISCONSIN** (Madison, Milwaukee, General Mitchell IAP/ARS): **Gilbert M. Kwiatkowski**, 8260 W. Sheridan Ave., Milwaukee, WI 53218-3548 (phone 414-463-1849).

**WYOMING** (Cheyenne): **Irene G. Johnigan**, 503 Notre Dame Ct., Cheyenne, WY 82009 (phone 307-775-4552).

# Books

Compiled by Chanel Sartor, Editorial Associate

**Aldebol, Lt Col. Anthony**, USAF (Ret.). *Army Air Force and United States Air Force Decorations, Medals, Ribbons, Badges and Insignia: The First 50 Years*. Medals of America Press, 1929 Fairview Rd., Fountain Inn, SC 29644-9137. 864-862-6051. 1997. Including photos and index, 144 pages. \$24.95.

**Caine, Philip D.** *Aircraft Down! Evading Capture in WWII Europe*. Brassey's, Inc., PO Box 960, Herndon, VA 20172. 703-260-0602. 1997. Including photos, maps, notes, and index, 285 pages. \$24.95.

**Cooksley, Peter.** *Nieuport Fighters in Action*. Squadron/Signal Publications, 1115 Crowley Dr., Carrollton, TX 75011-5010. 214-242-1485. 1997. Including photos and diagrams, 50 pages. \$7.95.

**Cossa, Ralph A., ed.** *Restructuring the U.S.-Japan Alliance: Toward a More Equal Partnership*. CSIS Press, 1800 K St. NW, #400, Washington, DC 20006. 202-775-3119. 1997. Including index, 153 pages. \$18.95.

**Dick, Air Vice-Marshall Ron**, RAF (Ret.), and **Dan Patterson**. *American Eagles: A History of the United States Air Force—Featuring the Collection of the US Air Force Museum*. Howell Press, 1147 River Rd., Ste. 2, Charlottesville, VA 22901. 800-868-4512. 1997. Including photos, bibliography, and index, 456 pages. \$65.00.

**Goldstein, Donald M., Katherine V. Dillon, and J. Michael Wenger.** *The Vietnam War: The Story and Photographs*. Brassey's, Inc., PO Box 960, Herndon, VA 20172. 703-260-0602. 1997. Including photos, bibliography, and index, 180 pages. \$31.95.

**Gordon, Yefim, and Vladimir Rigmant.** *Tupolev Tu-95/-142 "Bear": Russia's Intercontinental-Range Heavy Bomber*. Specialty Press Publishers and Wholesalers, Inc., 11481 Kost Dam Rd., North Branch, MN 55056. 800-895-4585. 1997. Including photos, diagrams, and index, 128 pages. \$24.95.

**Goure, Daniel, and Christopher M. Szara**, eds. *Air and Space Power in the New Millennium*. CSIS Press, 1800 K St. NW, #400, Washington, DC 20006. 202-775-3119. 1997. Including appendices, 172 pages. \$21.95.

**Haas, Col. Michael E.**, USAF (Ret.). *Apollo's Warriors: United States Air Force Special Operations During the Cold War*. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328. 202-512-1800. 1997. Including photos, maps, bibliography, and index, 369 pages. \$28.00.

**Halvorsen, Col. Gail S.**, USAF (Ret.). *The Berlin Candy Bomber*. Horizon Publishers and Distributors, Inc., PO Box 490, Bountiful, UT 84011-0490. 800-453-0812. 1997. Including photos and appendix, 239 pages. \$17.98.

**Hammel, Eric.** *Aces at War: The American Aces Speak, Vol. IV*. Pacifica Press, 1149 Grand Teton Dr., Pacifica, CA 94044. 800-453-3152. 1997. Including photos, glossary, bibliography, and index, 263 pages. \$29.95.

**Holm, Maj. Gen. Jeanne M.**, USAF (Ret.), ed. *In Defense of a Nation: Servicewomen in World War II*. Military Women's Press, PO Box 96745, Washington, DC 20077-7766. 703-533-1155. 1998. Including photos, chronology, abbreviations, notes and sources, selected bibliography, and index, 192 pages. \$19.95.

**Kelly, Col. Arthur L.**, USA (Ret.). *Battle Fire! Combat Stories from World War II*. The University Press of Kentucky, 663 South Limestone St., Lexington, KY 40508-4008. 606-257-8761. 1997. Including photos, maps, sources, and index, 226 pages. \$22.00.

**Knott, Richard C.** *A Heritage of Wings: An Illustrated History of Navy Aviation*. Naval Institute Press, 2062 Generals Hwy., Annapolis, MD 21402. 800-233-8764. 1997. Including photos, maps, notes, bibliography, and index, 339 pages. \$49.95.

**Lambert, John W.** *Low Level Attack: The Pacific*. Specialty Press Publishers and Wholesalers, Inc., 11481 Kost Dam Rd., North Branch, MN 55056. 800-895-4585. 1997. Including photos, 112 pages. \$18.95.

**Lambert, John W.** *Bombs, Torpedoes and Kamikazes*. Specialty Press Publishers and Wholesalers, Inc., 11481 Kost Dam Rd., North Branch, MN 55056. 800-895-4585. 1997. Including photos, 112 pages. \$18.95.

**Laurie, Clayton D., and Ronald H. Cole.** *The Role of Federal Military Forces in Domestic Disorders 1877-1945*. Government Printing Office, Superintendent of Documents, PO Box 371954, Pittsburgh, PA 15250-7954. 202-518-1800. 1997. Including photos, maps, bibliography, and index, 475 pages. \$38.00.

**Lopez, Donald S.** *Into the Teeth of the Tiger*. Smithsonian Institution Press, PO Box 960, Herndon, VA 20172-0960. 800-782-4612. 1997. Including photos, appendices, and index, 230 pages. \$17.95.

**McFarland, Stephen L.** *A Concise History of the U.S. Air Force*. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328. 202-512-1800. 1997. Including photos and suggested readings, 84 pages. \$5.00.

**Miller, Jay.** *Convair B-58 Hustler: The World's First Supersonic Bomber*. Specialty Press Publishers and Wholesalers, Inc., 11481 Kost Dam Rd., North Branch, MN 55056. 800-895-4585. 1997. Including photos, diagrams, bibliography, and index, 152 pages. \$27.95.

**Morehead, James B.** *In My Sights: The Memoir of a P-40 Ace*. Presidio Press, 505B San Marin Dr., Ste. 300, Novato, CA 94945-1340. 415-898-1081. 1998. Including photos and epilogue, 201 pages. \$24.95.

*New England Aviators 1914-1918: Their Portraits and Their Records*. Schiffer Publishing Ltd., 4880 Lower Valley Rd.,

Atglen, PA 19310. 610-593-1777. 1997. Including photos, Vol. I, 472 pages, and Vol. II, 480 pages. \$49.95 ea.

**Neyland, Lt. Col. David L.**, USAF (Ret.). *Virtual Combat: A Guide to Distributed Interactive Simulation*. Stackpole Books, 5067 Ritter Rd., Mechanicsburg, PA 17055-6921. 800-732-3669. 1997. Including photos, diagrams, appendices, notes, glossary, and index, 184 pages. \$19.95.

**Patterson, Dan, and Air Vice-Marshall Ron Dick**, RAF (Ret.). *Messerschmitt Bf-109: Luftwaffe Fighter*. Howell Press, 1147 River Rd., Ste. 2, Charlottesville, VA 22901. 800-868-4512. 1997. Including photos, 66 pages. \$15.95.

**Parker, James E., Jr.**, *Covert Ops: The CIA's Secret War in Laos*. St. Martin's Paperbacks, 175 Fifth Ave., New York, NY 10010. 800-288-2131. 1997. Including photos, maps, glossary, and index, 235 pages. \$5.99.

**Peddie, John.** *Hannibal's War*. Sutton Publishing Ltd., PO Box 605, Herndon, VA 20172-0605. 703-661-1500. 1997. Including photos, maps, appendices, notes, bibliography, and index, 232 pages. \$44.95.

**Peebles, Curtis.** *The Corona Project: America's First Spy Satellites*. Naval Institute Press, 2062 Generals Hwy., Annapolis, MD 21402. 800-233-8764. Including photos, maps, appendices, notes, and index, 351 pages. \$36.95.

**Pierre, Andrew J., ed.** *Cascade of Arms: Managing Conventional Weapons Proliferation*. Brookings Institution Press, 1775 Massachusetts Ave., NW, Washington, DC 20036-2188. 800-275-1447. 1997. Including charts, graphs, notes, and index, 466 pages. \$49.95.

**Robson, Graham.** *Prop Perfection: Restored Propliners and Warbirds*. Motorbooks International, 729 Prospect Ave., PO Box 1, Osceola, WI 54020-0001. 715-294-3345. 1997. Including photos, 112 pages. \$24.95. ■

# Unit Reunions

**5th Air Commando Sq.** Seeking members for reunion in spring 1998, in Patrick AFB, FL, area. **Contact:** Harvey Taffet, 502 Eleuthera Ln., Indian Harbour Beach, FL 32937 (407-773-0863) (htinc@iu.net).

**22d Military Airlift Sq.** Tachikawa, Japan. March 2-4, 1998, at the Stratosphere Hotel and Casino in Las Vegas. **Contact:** Betty Monsen, 19441 Camp 12 Rd., Dunbar, WI 54119 (715-324-6541). Cliff Woolwine, 5561 S. 2150 W., Roy, UT 84057 (801-773-2955).

**47th BS, 41st BG (WWII).** April 16-19, 1998, at the Holiday Inn Northwest in San Antonio. **Contact:** Kem Sitterley, 20449 Blue Mountain Dr., Walnut, CA 91789-1001 (818-966-2129).

**49th FG,** May 14-16, 1998, at the Sheraton Westport Inn, St. Louis. **Contact:** Jerry Holtwick or William B.N. Schultz, 49th Fighter Group, PO Box 1270, Phoenix, AZ 85001-1270 (314-821-4167 or 602-833-8187).

**59th FG,** 339th AAF BU, Thomasville AAF, GA (1943-45). April 3-5, 1998, at the Holiday Inn in Thomasville. **Contact:** John R. Phillips, 691 Inverness Dr., Fairborn, OH 45324-9723 (937-767-5581).

**62d Troop Carrier/Airlift Wing.** May 31-June 4, 1998, at the Hilton Flamingo in Reno, NV. **Contact:** Don Guenthoer, PO Box 4220, McChord AFB, WA 98438-0220 (253-841-3993).

**69th Fighter-Bomber Sq,** Korea, 1952-58. June 11-14, 1998, in Oshkosh, WI. **Contact:** Roger

**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.**

Warren, 7550 Palmer Rd., Reynoldsburg, OH 43068 (614-866-7756 or 813-345-8254).

**99th BG, 15th AF (WWII).** May 5-10, 1998, in Springfield, MO. **Contact:** Jim Smith, 1507 W. Stone Blvd., Raymore, MO 64083-9110 (816-322-9173).

**396th BS (B-25), 41st BG (WWII).** April 16-19, 1998, at the Holiday Inn Northwest in San Antonio. **Contact:** Bill Zingery, PO Box 5930, College Station, TX 77844 (409-694-9584).

**446th BG, 8th AF (WWII).** April 30-May 3, 1998, at the Marriott Riverfront in Savannah, GA. **Contact:** Link Veazey, 1938 Harbor Oaks Dr., Snellville, GA 30278 (770-972-5883).

**465th Troop Carrier Wg,** 780th, 781st, and 782d TCS (1953-57). Sept. 14-17, 1998, at the Virginia Beach Resort Hotel and Conference Center in Virginia Beach, VA. **Contact:** Jim Strickland,

3218 Greenwood Ct., Fort Collins, CO 80525-2916 (970-282-0209).

**921st Military Airlift Gp,** 34th Aeromedical Evacuation Sq. 30-year reunion, Jan. 31, 1998, at Lackland AFB Officers' Open Mess, Lackland AFB, TX. **Contact:** Morris Baxter, 222 County Rd. #363, Hondo, TX 78861-6427 (830-741-4506) (baxmor@worldnet.att.net).

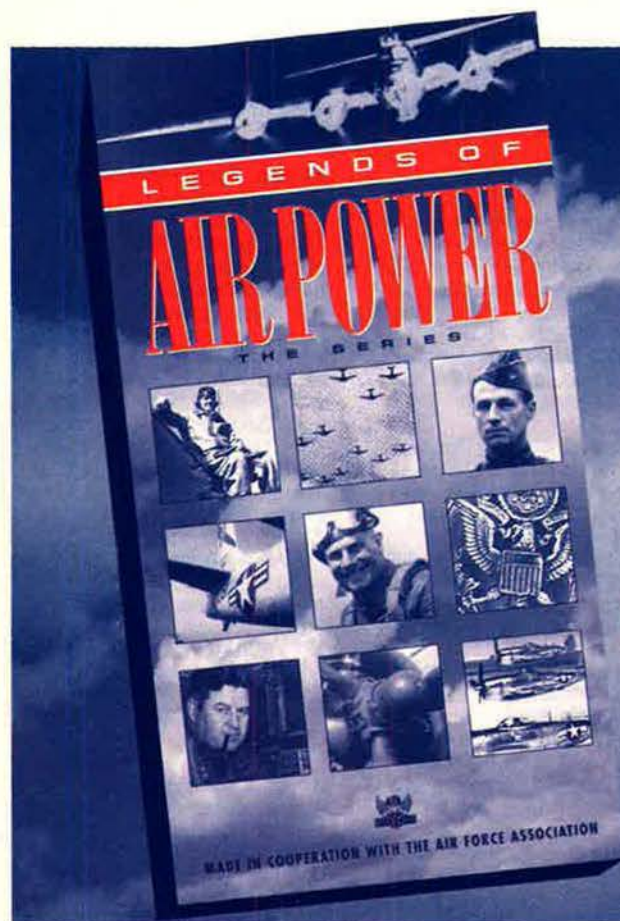
**1198th OE&T Sq.** August 1998. **Contact:** Bob Gonterman, 4312 Cavelle Ave., Louisville, KY 40213. 502-366-2124. Ron Duffy, 2111 Ashcraft Ln., Louisville, KY 40242-3365 (502-426-5236).

**American Defenders of Bataan and Corregidor** (all services). May 18-23, 1998, at the Executive West Hotel in Louisville, KY. **Contact:** Charles L. Pruitt, 1231 Sweetwater Vonore Rd., Sweetwater, TN 37874 (423-337-5190).

**Engineer Aviation Units, Special Category Army With the Air Force.** June 24-27, 1998, in Springfield, MO. **Contact:** Jim McCoy, 4216 65th St., Des Moines, IA 50322-2814 (515-276-5345).

**Pilot Class 56-P, Navigator Class 56-08C.** Seeking members for a reunion in fall 1998. **Contact:** Lt. Col. Roger Dilling, 104 E. Montego Ct., Milledgeville, GA 31061-9428. (rdilling@peachnet.campus.mci.net).

**Santa Ana AAB.** April 25, 1998, at Orange Coast College in Costa Mesa, CA. **Contact:** SAAAB Wing, PO Box 1764, Costa Mesa, CA 92628 (714-631-5918).



They were the men who made American airpower the best in the world. They were the kings of the sky.

**Give the Gift of Video!  
AFA Members Receive  
a \$3 Discount!**

Face down the enemy and relive the greatest moments in airpower history as Emmy Award-winning producer Russ Hodge and a production staff with six combined Emmys tell the stories of these legends.


This multi-part biographical series will make a rich addition to the video library of any aviation enthusiast.

**Non-members: \$19.95 (plus \$4 shipping & handling) \$23.95**  
**AFA members: \$16.95 (plus \$4 shipping & handling) \$20.95**  
**All 3 videos: \$39.95 (plus \$4 shipping & handling) \$43.95**

PLEASE SPECIFY YOUR TAPE CHOICE WHEN ORDERING

**THREE TAPES AVAILABLE NOW!**

- Jimmy Doolittle
- Hap Arnold
- Billy Mitchell

 **SEND CHECK OR MONEY ORDER TO:**  
Three Roads Communications  
Post Office Box 3682  
Frederick, MD 21705-3682



**PRESIDENT**  
Doyle E. Larson  
Burnsville, Minn.



**BOARD CHAIRMAN**  
Gene Smith  
West Point, Miss.



**SECRETARY**  
William D. Croom Jr.  
Colorado Springs, Colo.



**TREASURER**  
Charles H. Church Jr.  
Lenexa, Kan.

## NATIONAL VICE PRESIDENTS

Information regarding AFA activity within a particular state may be obtained from the vice president of the region in which the state is located.



**R. Donald Anderson**  
3 White House Dr.  
Poquoson, VA 23662  
(757) 868-8756

**Central East Region**  
Delaware, District of Columbia, Maryland,  
Virginia, West Virginia



**Anton D. Brees**  
23049 Bonnyriggs Ct.  
Hawthorn Woods, IL 60047-7525  
(847) 259-9600, ext. 5104

**Great Lakes Region**  
Illinois, Indiana, Kentucky, Michigan,  
Ohio, Wisconsin



**George E. Masters**  
1029 6th Ave. S.W.  
Minot, ND 58701-3806  
(701) 723-6697

**North Central Region**  
Minnesota, North Dakota,  
South Dakota



**Ivan L. McKinney**  
331 Greenacres Blvd.  
Bossier City, LA 71111-6014  
(318) 861-8600

**South Central Region**  
Alabama, Arkansas, Louisiana,  
Mississippi, Tennessee



**Ronald E. Palmer**  
269 Overlook Rd.  
Glastonbury, CT 06033  
(860) 633-3567

**New England Region**  
Connecticut, Maine, Massachusetts,  
New Hampshire, Rhode Island, Vermont



**John J. Politi**  
1970 Timber Ridge Dr.  
Sedalia, MO 65301-8918  
(573) 526-1728

**Midwest Region**  
Iowa, Kansas, Missouri, Nebraska



**I. Fred Rosenfelder**  
P.O. Box 59445  
Renton, WA 98058-2445  
(206) 662-7752

**Northwest Region**  
Alaska, Idaho, Montana, Oregon,  
Washington



**Jack H. Steed**  
309 Lake Front Dr.  
Warner Robins, GA 31088-6064  
(912) 929-3888

**Southeast Region**  
Florida, Georgia, North Carolina,  
Puerto Rico, South Carolina



**Charles G. Thomas**  
4908 Calle Del Cielo  
Albuquerque, NM 87111-2912  
(505) 845-3506

**Southwest Region**  
New Mexico, Oklahoma, Texas



**Arthur F. Trost**  
288 Lombardi Cir.  
Walnut Creek, CA 94598-4907  
(510) 934-2889

**Far West Region**  
Arizona, California, Guam, Hawaii,  
Nevada



**Dolores F. Vallone**  
143 Marne Rd.  
Hopatcong, NJ 07843-1843  
(973) 770-2161

**Northeast Region**  
New Jersey, New York, Pennsylvania



**Mark J. Worrick**  
3210 S. Oneida Way  
Denver, CO 80224-2830  
(303) 757-8565

**Rocky Mountain Region**  
Colorado, Utah, Wyoming



**Special Assistant Pacific**  
**Ken I. Manako**  
15-9 Minami Aoyama 1-Chome  
Minato-Ku, Tokyo 108 Japan  
011-81-3-3475-6330



**Special Assistant Europe**  
**Frank M. Swords**  
PSC 3, Box 1469  
APO AE 09021-1466  
011-49-6308-7237

## NATIONAL DIRECTORS

**Henry W. Boardman**  
Gulfport, Miss.

**Dr. Dan Callahan**  
Warner Robins, Ga.  
**James E. Callahan**  
East Amherst, N.Y.  
**David J. Campanale**  
Vienna, Va.

**Gerald S. Chapman**  
Sarotoga, Calif.  
**James G. Clark**  
Springfield, Va.

**Michael J. Dugan**  
New York  
**Charles G. Durazo**  
McLean, Va.

**Rodney E. Ellison**  
Peterson AFB, Colo.  
**Ronald R. Fogleman**  
Durango, Colo.

**Samuel M. Gardner**  
Garden City, Kan.  
**John O. Gray**  
Washington, D.C.

**Tommy G. Harrison**  
Apopka, Fla.  
**Monroe W. Hatch Jr.**  
Clifton, Va.

**Daniel C. Hendrickson**  
Layton, Utah  
**Harold F. Henneke**  
Indianapolis

**Sandra L. Henninger**  
Cheyenne, Wyo.  
**Sharon M. Johnson**  
Ravenna, Ohio

**William A. Lafferty**  
Green Valley, Ariz.  
**Stephen M. Mallon**  
Hampton, Va.

**James M. McCoy**  
Bellevue, Neb.  
**Thomas J. McKee**  
Arlington, Va.

**Michael J. Peters**  
Auburn, Calif.  
**Julie E. Petrina**  
Perry Hall, Md.

**Victor C. Seavers**  
Eagan, Minn.  
**Dale E. Selber**  
Great Falls, Mont.

**Kevin Sluss**  
Jacksonville, Ark.  
**James E. "Red" Smith**  
Princeton, N.C.

**Lisa A. Smith**  
Fresno, Calif.  
**William L. Sparks**  
Daytona Beach, Fla.

**John B. Steele**  
Fairborn, Ohio  
**Mary Anne Thompson**  
Oakton, Va.

**Walter G. Vartan**  
Chicago  
**Cheryl L. Waller**  
Santa Maria, Calif.

**L.B. "Buck" Webber**  
Fort Worth, Texas  
**Joseph A. Zaranka**  
Bloomfield, Conn.

**ex officio**  
**John A. Shaud**  
Executive Director  
Air Force Association  
Arlington, Va.

**Rev. Richard Carr**  
National Chaplain  
Springfield, Va.

**Korvin D. Auch**  
Chairman, Junior Officer  
Advisory Council  
Hickam AFB, Hawaii

**Kurt C. Helphinstine**  
National Commander  
Arnold Air Society  
Portland, Ore.

**directors emeritus**

**John R. Allison**  
Washington, D.C.  
**Joseph E. Assaf**  
Mashpee, Mass.

**Richard H. Becker**  
Oak Brook, Ill.  
**David L. Blankenship**  
Tulsa, Okla.

**John G. Brosky**  
Pittsburgh, Pa.  
**Dan F. Callahan**  
Nashville, Tenn.

**Robert L. Carr**  
Pittsburgh  
**George H. Chabbott**  
Dover, Del.

**Earl D. Clark Jr.**  
Shawnee Mission, Kan.  
**O.R. Crawford**  
Austin, Texas

**R.L. Devoucoux**  
Portsmouth, N.H.  
**Jon R. Donnelly**  
Richmond, Va.

**Russell E. Dougherty**  
Arlington, Va.  
**George M. Douglas**  
Colorado Springs, Colo.

**Joseph R. Falcone**  
Ellington, Conn.  
**E.F. "Sandy" Faust**  
San Antonio

**Joe Foss**  
Scottsdale, Ariz.  
**Barry Goldwater**  
Scottsdale, Ariz.

**Jack B. Gross**  
Harrisburg, Pa.  
**Martin H. Harris**  
Montverde, Fla.

**Gerald V. Hasler**  
Albany, N.Y.  
**H.B. Henderson**  
Ramona, Calif.

**John P. Henebry**  
Deerfield, Ill.  
**Robert S. Johnson**  
Lake Wylie, S.C.

**David C. Jones**  
Arlington, Va.  
**Arthur F. Kelly**  
Los Angeles

**Victor R. Kregel**  
Colorado Springs, Colo.  
**Jan M. Laitos**  
Rapid City, S.D.

**Frank M. Lugo**  
Mobile, Ala.  
**Nathan H. Mazer**  
Roy, Utah

**William V. McBride**  
San Antonio  
**Edward J. Monaghan**  
Anchorage, Alaska

**J.B. Montgomery**  
Piedmont, Calif.  
**Bryan L. Murphy Jr.**  
Fort Worth, Texas

**J. Gilbert Nettleton Jr.**  
Los Angeles  
**Ellis T. Nottingham**  
McLean, Va.

**Jack C. Price**  
Pleasant View, Utah  
**William C. Rapp**  
Williamsville, N.Y.

**Julian B. Rosenthal**  
Durham, N.C.  
**Peter J. Schenk**  
Pinehurst, N.C.

**Walter E. Scott**  
Dixon, Calif.  
**Mary Ann Seibel**  
Clayton, Mo.

**Joe L. Shosid**  
Fort Worth, Texas  
**William W. Spruance**  
Wilmington, Del.

**Thos. F. Stack**  
San Mateo, Calif.  
**Harold C. Stuart**  
Tulsa, Okla.

**James M. Trail**  
Oro Valley, Ariz.  
**A.A. West**  
Hayes, Va.

**Sherman W. Wilkins**  
Issaquah, Wash.

# Bulletin Board

Seeking members of the **59th, 375th, and 2079th Recon Sq**, Shemya AFB, AK, and Yokota AB, Japan, 1948-49. **Contact:** Milton Greenberg, 1367 Charmaine St., Las Vegas, NV 89104.

Seeking photos of **training planes** of the 1940s, the Stearman PTs and the Vultee BT-13A. Also seeking photos of P-47, B-26, A-20, F-80, F-86, and F-15 aircraft. **Contact:** Jack Daitz, 11045 N. 77th St., Scottsdale, AZ 85260-5565.

Seeking **Sgt. Solomon A. Grey**, a military policeman at RAF Mildenhall, UK, around September 1956, who knew Dorothy Patterson. **Contact:** Paul Patterson, 32 Litchfield Rd., Southtown, Great Yarmouth, Norfolk NR31 7OQ, UK.

Seeking **Lt. Col. Woodsford S. Montgomery**, stationed at England AFB, LA, 1953. **Contact:** Gerald D. Carpenter, 5624 N. 69th Ave., Omaha, NE 68104-1517.

Seeking **patches** from the 162d FG (Air Defense), ANG F-84F period, Tucson, AZ, and from the 303d BW, any squadron, B-47-era only, Davis-Monthan AFB, AZ. **Contact:** Robert G. Trentman, 1002 12th St. SE, Apt. 206, Auburn, WA 98002-6271.

Seeking **patches** of the 376th BW and photos of **B-47s** stationed at Lockbourne AFB, OH. **Contact:** Rich Jones, 2755 Eakin Rd., Apt. E, Columbus, OH 43204.

Seeking a **USAAF serviceman**, stationed near Northampton, UK, August 1943, who knew Myrtle Maltby and was a boxer. **Contact:** Terry Maltby,

3 Swedish Houses, Humfrey Ln., Boughton, Northampton NN2 8RN, UK.

Seeking information on crew members of B-24 **Widdle Wed Wabbit**, based at Benghazi, Libya, and that flew in the Ploesti raids. **Contact:** E. Riggs Monfort III, 1609 Honfleur Dr., Sunnyvale, CA 94087 (408-773-8816).

Seeking personnel of the **156th/512th Fighter-Bomber Sq**, RAF Manston, UK, November 1951-54. **Contact:** Richard T. Grace, 5609 Princeton Rd., Hamilton, OH 45011-8408.

Seeking **Maj. Timothy R. Johnson**, of Saginaw, MI, commander of 1st Combat Cargo Sq, Chengdu, China, January-June 1945. **Contact:** Gerald A. White Jr., 1818 Barbee St., McLean, VA 22101 (gwhite@monumental.com).

Seeking information on B-17 **Uninvited**, which had chin turret removed, with 711th BS, 447th BG (Eighth AF). **Contact:** Grey Eagles Project, c/o Hugh Fred Jope, 1047 Broadway, Haverhill, MA 01832-1106.

Offering back issues of **Air Force Times** newspapers. **Contact:** Louis F. Roberts, 1350 S.W. Sunset Trail, Palm City, FL 34990-3345.

Seeking photos of and information on **AV-8B, F-4, F-111, F-15, A-10, SR-71, F-18, and F-22 aircraft**. **Contact:** David E. Heggie, 33 Apple Blossom Ln., West Field, MA 01085.

Seeking information on **Lt. Eugene Berman**, Carlstrom Field, FL, 1944-45. **Contact:** Muriel

Schwartz, 300 E. 33d St., Apt. 9J, New York, NY 10016.

Seeking **Sgt. David Schafer**, stationed in Somerset, KY, in the mid-1970s. **Contact:** Lloyd W. Campbell, 124 E. University Dr., Somerset, KY 42503.

Seeking **Sgt. Darlene Denise King**, 4412th WAF Sq, Langley AFB, VA, 1950. **Contact:** John A. Mamola Jr., PO Box 6076, March ARB, CA 92518-6076.

Seeking personnel assigned to Hq, **1807th AACs Wg**, Furstenfeldbruck AB, and Bitburg AB, Germany, 1954-58. **Contact:** David A. Grose, 12550 Maxwell Rd., Carleton, MI 48117.

Seeking a copy of **Army Air Forces Operation Crossroads**, shown on p. 88, October 1997, *Air Force Magazine*. **Contact:** Chuck Hansen, 1086 S. Bernardo Ave., Sunnyvale, CA 94087.

Seeking owner of a **Distinguished Flying Cross** lost Sept. 6, 1945, at Camp Atterbury, IN. **Contact:** Max Kahn, 1395 Nancy Dr., Southampton, PA 18966.

Seeking photos, film, flight and maintenance manuals, flight test reports, and service evaluations for **Bell FM-1 Airacuda** and **Lockheed XFM-2** and information on the **AAC multiplace fighter competition**. **Contact:** Charles E. Davis, 11750 N. Fenton St., Westminster, CO 80021.

Seeking **Major Jackson**, a pilot who became operations officer at Harmon Field, Guam, imme-

**Give the Gift of Video!  
AFA Members Receive  
a \$3 Discount!**

The newly released video, *People, Power, and Mission* commemorates the fiftieth anniversary of the United States Air

Force. Its stirring, visually rich history is presented in compelling style, featuring rarely seen footage.

Featured are interviews with General Brent Scowcroft, Gabby Gabreski (the world's greatest living ace), General Bernard Schriever, and dozens of others who have made the USAF the best in the world.

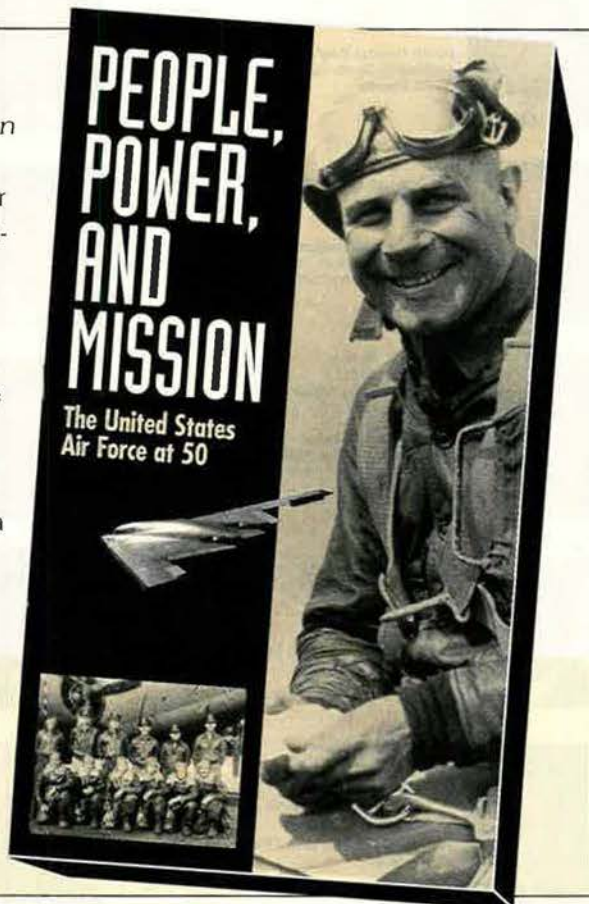
The Air Force Association has joined the Emmy Award-winning production team of Russ Hodge, Tim White, and a production staff with more than a half-dozen Emmys to produce this must-have video. Order your copy today!

**Non-members: \$19.95 (plus \$4 shipping & handling) \$23.95**  
**AFA members: \$16.95 (plus \$4 shipping & handling) \$20.95**



**SEND CHECK OR MONEY ORDER TO:**

Three Roads Communications  
Post Office Box 3682 • Frederick, Maryland 21705-3682





If you need information on an individual, unit, or aircraft or want to collect, donate, or trade USAF-related items, write to "Bulletin Board," *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Items submitted by AFA members have first priority; others will run on a space-available basis. If an item has not run within six months, the sender should resubmit an updated version. Letters must be signed. Items or services for sale, or otherwise intended to bring in money, and photographs will not be used or returned.—THE EDITORS

diately following WWII. **Contact:** Walter W. Dewey, 1208 S. Country Club Cir., Carlsbad, NM 88220-4620.

Seeking anyone formerly associated with the **Convair F-106 Delta Dart interceptor**. **Contact:** Christopher T. Carey, 5960 S. Land Park Dr. #341, Sacramento, CA 95822-3313 (916-391-8216).

Seeking photos of and information on encounters with WWII **Italian aircraft**, especially FIAT, Macchi Castoldi, Reggiane, and Savoia-Marchetti. **Contact:** Dennis Arrobio, 3511 Almond St., Irvine, CA 92606-2103.

Seeking contact with or information on DFC recipient **Clyde or JL Christensen** of the 578th Sq, Selby, UK, 1944. **Contact:** Derek Paterson (derek.paterson4@virgin.net).

Seeking **Walt Haywarth (or Haiwart) Jr.**, in Aachen, Germany, in August 1944, who knew Hubertine "Tinni" Meven. **Contact:** Annita Schlei, Bussenstr. 5, 88527 Dietelhofen, Germany.

Offering **pilot manuals**, specifically operating instructions for P-61A, B-24G, H, and J, Navy model PB4Y-1, C-46, C-46A, and Navy model R5C-1, all from 1944. **Contact:** John S. Williams, 14 Bounty Rd. E., Fort Worth, TX 76132-1002.

Seeking **1st Lt. Lloyd L. Allen**, B-24 pilot, 389th BG, Hethel, UK. **Contact:** Charles S. Bell, 114 McDaniel Greene, Greenville, SC 29601.

Seeking **Phil Phillips** of the Montgomery, AL, area who attended Auburn University and was a FAC with the 21st TASS, stationed at Gia Nghia, Vietnam, 1969-70. **Contact:** Clay Peacock, clayp@hiwaay.net.

Seeking **Joseph "Stretch" Falls** of Brooklyn, NY, who served as a US Navy pilot with the OSS, possibly with the Special Duties Squadron out of Newmarket or Tempsford, UK, in 1943. **Contact:** Pierre LeFrenais, The Breakers, 1 South Country Rd., Palm Beach, FL 33480.

Seeking **Military Payment Certificates**, US military currency used overseas and in Vietnam. **Contact:** Nick Schrier, Box 60104, Sacramento, CA 95860 (916-486-8720).

Seeking metal and identification **aircraft models**. **Contact:** Ira Kuperstein, 22 Brush Hill Terr., Kinnelon, NJ 07405-2439 (973-283-2420).

Seeking information on or contact with the unit and pilot who participated in the battle at **Tay Ninh Province** in Dog Head area, near the Cambodian border, April 1, 1970. **Contact:** Ralph H. Jones, 4388 Green Arbor Ln., Cincinnati, OH 45249.

Seeking information on **Lt. Col. Richard Dutton**, MIA Nov. 5, 1967. **Contact:** Vic Byers, 611 S. Anthony St., Anaheim, CA 92804.

Seeking **SSgt. Lawrence L. Lowe**, 677th ACW Sq, Alpena, MI. **Contact:** Max Larimore, 601 N. 1250 E., Idaville, IN 47950-9743 (219-943-3352).

Seeking information on the bomb squadron for the B-17 **Miss Bitchy** (possibly the 544th, 545th, 546th, or 547th BS), a sketch or photo of its nose art, and its serial number. **Contact:** Joseph A. Raubar, 51 Lennox Ave., Amherst, NY 14226.

Seeking information on the "**Free French**" B-26 bomber crews trained at Barksdale Field, LA, by Third AF. **Contact:** John J. Winner, 1510 Garfield Ave., Dubuque, IA 52001-2211.

Seeking information on and photos from former participants of **Special Projects X and Y** horizontal take off, drone, and VTOL jet disk. **Contact:** George A. Filer, 222 Jackson Rd., Medford, NJ 08055.

Seeking contact with the USAAF pilot from **405th FS**, 371st FG, Ninth AF, who flew a P-47 and was shot down near Reifenberg, Germany, in 1945 and was taken prisoner by German Army. **Contact:** Tim Stidhams, PO Box 1516, Puyallup, WA 98371.

Seeking members of and information on the **771st BS**, 462d BG, and the **794th BS**, 468 BG. Specifically interested in three aircraft interned in Russia during July and November 1944. **Contact:** Hal Fulton, 2833 Mara Loma Cir., Wooster, OH 44691 (FASU@aol.com).

Seeking information on **2d Lt. David E. Nelson**, 3d Recon. Sq, 311th Wg, killed on take off June 11, 1946, in Guam. **Contact:** David Eriksen, HC11 box 71 D-2, Kamiah, ID 83536 (rustspur@camasnet.com).

## Attention Chiefs



The "Classic" Chief's ring is a proud symbol of your achievements. It's in a different league from typical, school-style military rings.

To get a **FREE** color brochure showing metal choices and prices, call **1-800-872-2853** (free 24 hr. recorded message - leave your name & address and the information will be rushed to you). Or, to speak directly with a sales representative, call 1-800-872-2856. Or write to: Mitchell Lang Designs, 435 S.E. 85th Dept. AR, Portland OR 97216.

*These rings are custom-made in limited numbers, so to avoid disappointment act now.*

➤ Also available: MSgt, SMSgt, USAF, ANG rings

Code AR-198

## AFA Awards



**B-1 Medallion and Ribbon Plaque.** Enclosed in walnut shadow box 9.5" x 12" with engraving plate size 3" x 5". **\$97.00**

**B-2 Laser Engraved Walnut Plaque with Outstanding Service Inscription.** 8" x 9" with AFA logo in gold. Includes 3" x 5" engraving plate. **\$32.00**

**B-3 Monarch Analog Clock, Walnut Plaque.** 4" x 6" accurate quartz movement. Includes engraving plate. **\$46.00**

**B-4 Brass AFA Medallion with Blue Velvet Presentation Box.** 4.25" x 7" Medallion suitable for engraving. **\$45.00**

**B-5 Laser Engraved Walnut Plaque.** 8" x 9" with AFA logo in gold. Includes 3" x 5" engraving plate. **\$32.00**

*Please add \$3.95 per order for shipping and handling.*

# Pieces of History

Photography by Paul Kennedy

## A-2 to B-15



*Nothing expressed the pride of the US airman quite like the classic leather A-2 flight jacket. Standardized in 1931, these jackets, made of seal-brown horsehide leather and lined with silk, were often adorned with "war art" and became status symbols. But as raw materials became scarce and more expensive, Gen. H.H. "Hap" Arnold in 1942 ordered the*

*jackets replaced. Several different versions came and went, none lasting more than a few months, before introduction in 1945 of the B-15, a sage-green, baseball-collar, nylon version. The B-15, changing over time to fire retardant Nomex and adding a standard collar in the 1970s, lasted until the return of the A-2 in 1987.*

# After 1,000,000 Mishap-Free Hours Of Flight Instruction, It's Time For Us To Solo.



Lear Siegler Services, Inc. is finally its own company. We are completely independent and ready to focus on the task at hand. Providing you with the highest quality logistic and management services, repair, training and contract field teams across the country and around the world.

The superb reputation we have built for over 36 years means you will

receive exceptional performance along with uncompromising standards. Year after year, contract after contract, base after base, we have created this pro-active, service-oriented attitude for doing business. Our customers swear by our flexibility, cooperation and willingness to go the extra mile.

So if your needs call for a team player with a proven reputation, talk to us. We're Lear Siegler Services, Incorporated, a familiar name on a trusted face.

*For information on exciting career opportunities with this industry leader, call us at 1-800-999-1770 today and ask for the recruiting department.*

175 Admiral Cochrane Drive  
Annapolis, Maryland 21401 · (800) 533-8965  
[internet@okc.learinc.com](mailto:internet@okc.learinc.com)



When America

makes a promise,

we deliver.

 **BOEING**

Boeing is proud to build the C-17 Globemaster III, the world's most capable airlifter.

[www.boeing.com](http://www.boeing.com)