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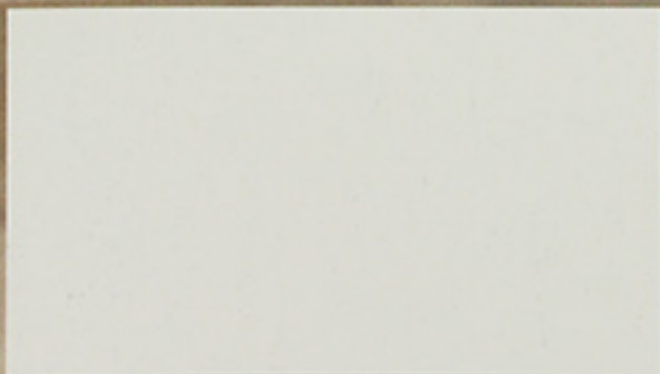
JOURNAL OF THE AIR FORCE ASSOCIATION

MAGAZINE

The Squeeze on Air Mobility

Rumsfeld Tackles the Civil Service

The Gulf War II Air Campaign, by the Numbers





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About the cover: US Air Force C-17s await their loads for Operation Iraqi Freedom. See "The Squeeze on Air Mobility," p. 22. Photo by SSgt. Mitch Fuqua.

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By Robert S. Dudley, Editor in Chief

Why Korea Mattered

LATE this month, Americans will mark the passage of 50 years since the Korean War armistice, which came into force on July 27, 1953. A newspaper on that day described the 37-month struggle as a "bitter war which nobody won." Today many call it, simply, "The Forgotten War."

That label, however, is highly misleading—as Peter Grier demonstrates in "The Remembered War," which starts on page 68. He shows Korea is anything but forgotten. Indeed, the events of a half-century ago still exert an influence on world affairs.

Korea militarized the Cold War, an event of lasting impact. In the wake of World War II, the US slashed its air, land, and naval forces, assuming that a relative handful of atomic weapons would deter Soviet-backed expansionism. Korea shattered that illusion.

The shock of the June 25, 1950, Communist attack on South Korea threw the US onto a dramatically new course. The military budget nearly tripled in a single year and topped \$500 billion just one year later.

The armed forces expanded. On the day that Communist units crossed the 38th parallel, the Air Force had a single airman and no bases in Korea. At war's end, Korea was home to 44,000 airmen and 34 bases. USAF had 48 active wings in 1950, but three years later it was headed toward 143 wings.

The other services also launched buildups in response to the war in Korea, and the US never stood down. Thus did the Korean War lay the groundwork of a large standing force deployed around the world.

When it comes to war, success is a poor teacher. Korea, a war without a declared victory, provided its share of lessons, most of them as valid today as they were back then.

Americans learned that unpreparedness has a heavy cost. The US was not ready for Korea, and it turned out to be one of the most destructive wars of the 20th century. The US suffered 36,914 deaths and 103,284 wounded. The Korean War took the lives of thousands of

allied forces. It killed perhaps as many as four million Koreans, whose country was devastated.

These losses had a profound impact in the US, which has remained determined—properly so—never to be caught short again.

The Korean War gave Americans an up-close-and-personal look at "limited war," something never be-

**Fifty years later,
the "Forgotten War"
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nation and the
world.**

fore experienced. It was fought under political restrictions without victory as the objective. For the first time in its history, Washington used its forces to send political signals, impose costs, manipulate images in the mind of the enemy, and so forth—but not to win the war.

President Truman kept what he called a "police action" under tight control. In the war's desperate early days, the Air Force could not even attack targets in North Korea. US forces later were barred from striking sources of Communist power in China and the Soviet Union. US officials put electrical power plants and dams off limits to US attack.

This prolonged the war, increased US casualties, demoralized the troops, and fanned public opposition. Incredibly, Washington made the same kinds of mistakes in Vietnam.

Korea demonstrated that raw physical power counts for little without political staying power. Technically, the conflict never ended, the shooting just stopped. South Korea became free and prosperous in part because the US stationed roughly 40,000 servicemen and -women in Korea for these past five decades.

In June, the US agreed to close front-line bases and pull troops back from positions in the Demilitarized Zone. These troops will still train and operate far forward, however.

Korea taught—actually, retaught—the US the value of airpower.

Air-to-air combat between F-86 Sabres and MiG-15s got the publicity (the Sabre "won" 792 to 76, a favorable exchange ratio of 10-to-one). However, nearly 80 percent of all combat sorties were devoted to attack of Communist forces in the field. Whenever North Korea or China concentrated their armored forces, the Air Force pounded them to bits. Airpower accounted for 75 percent of all tanks kills.

USAF airlifters transported 579,000 tons of cargo and 2.2 million passengers into, within, or out of Korea during the war.

The price of this effort was high—the war claimed the lives of 1,180 airmen, not to mention thousands in the other services. The Air Force also lost a total of 1,466 aircraft to hostile action or other causes.

There is no doubt, however, that airpower, by harrying the invasion force in the early weeks, prevented a swift Communist victory. Later, it took a heavy toll on Chinese forces.

Maj. Gen. William F. Dean, commander of the Army's 24th Infantry Division, referred to those grim early days when he said: "Without this continuing air effort, it is doubtful if the courageous combat soldiers, spread thinly along the line, could have withstood the onslaught of the vastly numerically superior enemy."

Veterans of the Korean War are a dwindling group. According to the Department of Veterans Affairs, they number about 3.9 million, only 16 percent of the total veteran population of 24.4 million. The VA estimates that the number will shrink to 2.5 million over the next decade, thinning the ranks by 37 percent.

Long after they are gone, however, the world will continue to see "their" war as a pivotal event of the tumultuous 20th century. ■

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The US Air Force at War

Robert S. Dudley's editorial "The US Air Force at War," May [p. 2], cuts to the heart of the problem of the US military in the aftermath of a decisive victory. Historically, budgeteers and political piranha strip the DOD budget, believing security is at hand. Historically, that thinking has cost America lives, materiel, and national prestige. Sadly, a result of the post victory times is that our services become fiscal gladiators at the Capitol forum. May I offer some ophthink?

First, there is no single service answer to protecting America's truly vital interests. Our military leadership must be managers of change or America faces grave danger. Winston Churchill, reflecting on France's Maginot Line after the fall of France, commented that military leadership is always prepared to fight the most recent war. For many reasons, the world will grow exponentially more dangerous. Can we transform to address the danger?

Second, and in my opinion, the evidence indicates that airpower made ground power decisive. Saddam is out of power because US-coalition tanks and armored personnel carriers rolled into Baghdad. US armor in Baghdad's main square made a huge political statement to the world, but regime demise was official with the photo of the US Army soldier lounging in Saddam's gilded chair while smoking a cigarette. Airpower enabled ground forces to get to Baghdad, but ground power made Saddam's regime leave. Infantry and armor remain relevant and essential.

Third, the global reach of airpower and the in-theater ability of USAF to organize huge air operations in support of a combatant commander's campaign make USAF relevant. It is not good enough. The challenge is to remain relevant. The afterglow of victory must be tempered by sober analysis of future requirements by all of our services.

Fourth, America cannot spend its way to security. Indeed, the Maginot Line was hugely expensive and ob-

solete at conception. The lesson of the Maginot Line was not its construction and its abject failure to stop the Wehrmacht, but the consensus belief that the line would keep France safe. Americans are just as vulnerable to single-issue hypnosis. Let's not be too clever; both the B-2 and the bayonet will be relevant. More than money, there must be coherent thinking across the spectrum of our services and with our elected leadership.

Fifth, the threat to US security will take many forms: asymmetric, conventional, nonconventional, and others. North Korean misbehavior is an example. US and allied airpower will devastate North Korean forces, but ground power will push them back across the 38th parallel. Airpower, not a tank, is the best weapon against a tank. We ought not to surrender the heavy ground fight completely. Heavy is the enemy of deployable. Deployable is a component of relevance. We must find the balance.

Sixth, an Air Force colonel once said, "Genuine readiness is a product of genuine training." Powerful. Training is an easy fiscal bogey and the foundation of service relevance. Most of us older vets remember the abysmal level of training/readiness in the immediate post-Vietnam era. Let's never reinvent that wheel.

So, how to proceed? There will be more competent adversaries. If we transform our thinking and thus shape our forces, Operation Iraqi Freedom

will become one of a growing list of America's finest hours.

Lt. Col. Tom Brannon,
USMC (Ret.)
Joint Air Operations Instructor
Hurlburt Field, Fla.

We are all grateful for recent military successes in Iraq. While any loss of life is regrettable, our casualties have been remarkably low. In fact, Iraqi Freedom has to be one of the most one-sided military engagements in history. Skill, bravery, training, and outstanding leadership are all important factors contributing to superiority of our forces over those that they oppose.

But we should also be mindful of the fact that our military forces enjoy the advantages of having better equipment. It is no accident that the M1 tank is able to defeat Soviet-developed T-72 tanks. The M1 is simply the better tank. The mix of Bradleys and M1s works well because they are the right complementary tools specifically designed for conducting fast-moving ground engagements.

Let's not forget the critical importance of airpower. Republican Guard forces were traumatized and degraded by air strikes, in most cases long before direct encounters with M1s and Apache gunships. Our air superiority is no accident either. Not only are our pilots the best trained and highly motivated but they enjoy significant equipment advantages compared to their Soviet-developed counterparts. The Iraqis did not have anything equivalent to the F-117A, B-2, B-52, cruise missiles, AC-130 Gunships, J-Stars, or A-10 Warhogs (to mention only some of our key assets).

Now would be a good time to say a little "thank you" to men and women in the American defense industry who designed, developed, tested, perfected, and made possible our country's superior military equipment.

News media are quick to parade \$1,000 hammers and toilet seats but are inclined to ignore critical war winning contributions of our defense industrial complex. Without the sincere

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hardworking efforts of defense contractors, Iraqi Freedom might [have gone] much differently.

James Bunnell
Cedar Creek, Tex.

I just finished reading "The US Air Force at War," and I must say it filled me with pride to see how wonderful our Air Force components performed, making a major contribution to the success of the war with Iraq. However, with all due respect to that contribution, which was extraordinary, I would like to see someone write an article from a broader perspective that highlights how magnificently all of our services, as well as the British and Australian contingents, worked together to achieve this dramatic outcome.

After every major campaign, as far back as I can remember, each service component rushes to claim theirs was the dominant element, without which victory would not have been possible. In some ways that is understandable, since the services compete for their share of the defense budget and a lot depends on how much "ink" the services can generate

to support their claim of dominance. This was especially true following the first Gulf War in 1991.

However, the truth is that the synergistic benefits of all these elements working together, including US Army Special Forces and CIA agents working on the ground months before the first bombs were dropped, brought about a victory so swift that it is probably unprecedented in the history of warfare. I suspect students at the National Defense University and individual service war colleges will be studying this war for a great many years.

I don't mean to take anything away from the magnificent performance of our Air Force units. No one can ever deny the importance of airpower, but I just wish occasionally, when hostilities cease, we could join hands with the other services and take a well-deserved bow together, instead of always coloring our stories as though the other services were somehow extraneous.

As a retired Air Force officer, I am extremely proud of the young Air Force men and women who put themselves in harm's way for no other reason



Photo by Paul Kennedy

Here's What It Really Looked Like. Our "Pieces of History" page in June carried a photo of a venerable AC-130A Hercules (S/N 54-1630)—a veteran of the Vietnam War and Desert Storm—which is now on display at the US Air Force Museum in Dayton, Ohio. Because of a production mix-up at Air Force Magazine, however, the image turned out fuzzy and flawed. We apologize to our readers and herewith present the photo again. It may not be as large as last month's, but it is a lot clearer.

Letters

than that their country asked them to do so. But I am also proud of the soldiers, sailors, Marines, and Coast Guard personnel who contribute in their own unique ways to our collective and combined efforts. In a very real sense, we win together—or we don't win at all!

Lt. Col. Donald L. Gilleland,
USAF (Ret.)
Suntree, Fla.

I have a positive image of what the Air Force has done and I tend to be quite proud of what the Air Force accomplishes. However, I do hear more than a few negative reviews concerning what the Air Force has—and has not—contributed to the Iraqi Freedom campaign, and (unfortunately) reading your May editorial I am not convinced that we are getting a positive message out to the American public. That's a shame. USAF has surely contributed mightily to the success in Iraq, but in the end, the word is not getting out.

I'm not convinced that the press coverage of this war did anything to increase the stature or perceived value of the Air Force. USAF was invisible during the early phases of the war. Your editorial presents statistics that the Air Force flew 40 percent of the combat sorties. In response I say, "Ouch—that's way too low to be proud of!" If we only flew 40 percent, I won't be surprised if I later see that the Navy flew nearly 40 percent and possibly more. Do we want to admit that the Navy outflew us? They should not even come close.

And what was today's top USAF news making the national press? It had to do with the return of Whiteman AFB's [Mo.] B-2s after a 30-day deployment. I find it difficult to understand why Air Force public affairs would have put that story out. If we were only needed for 30 days (which is the message that some will hear and the Navy and Army will trumpet) that will be seen by some as a clear message that the Air Force is not pulling its weight. Do you want to tell me that the Air Force flew 70 percent of the refueling sorties? OK, but since 58 percent of our refueling capability is in the Guard and Reserve, the question eventually becomes, "Why [are] the things we are doing a lot of in the Guard/Reserve?"

Am I deliberately ignoring good facts? Of course I am, but so will those who want to reallocate part of the Air Force budget to the sister services—or completely out of DOD. I think that the end analysis will be

that for USAF, this war will be as much of a PR nightmare as was Desert Shield. (Remember all the Desert Storm pictures of the Army marching off into the desert, while the Air Force touted its air-conditioned maintenance hangars?) The other services will trumpet their sacrifices, and since the bulk of the 800 reporters embedded into units went into the Army and Marines (with more than a few on ships at sea) the other services will have garnered many more friends in the print media than did the Air Force. Where are the positive articles in the national press? In the last month, I've seen more coverage of the problems at the Air Force Academy than I have concerning USAF in Iraq.

Bottom line: I have yet to see an article about the Air Force contribution that was anything more than "preaching to the choir." The Air Force story we want to articulate is not coming out, not if the coming out party is only being held within *Air Force Magazine*.

Col. Kevin J. Kirsch,
USAF (Ret.)
Centerville, Ohio

Gulf War III?

Having just read your excellent coverage of Gulf War II in the "Aerospace World Special" [May, p. 10], may I be allowed to inform your readers that as far as the Brits are concerned this latest conflict in Iraq was Gulf War III!

On April 1, 1941, Rommel's fierce assault against the British Army in Libya resulted in pushing our forces back to Egypt, apart from a contingent in Tobruk that had been bypassed. British Intelligence was to report that Hitler subsequently planned to invade Syria and Iraq with the intention of capturing the Gulf oil fields and then progressing to the Suez Canal to surround the beleaguered British forces.

On April 3, the revolutionary Iraqi Army led by Raschid Ali had seized power in Baghdad with support from the Nazis. On April 30, 5,000 Iraqi troops supported by artillery and tanks amassed on a plateau overlooking RAF Habbaniya, an airfield occupied by No. 4 Flying Training School, equipped with obsolete training aircraft.

Despite being grossly outnumbered, the school hastily armed their inadequate aircraft and valiantly fought without respite whilst the airfield was being subjected to constant shelling. A quarter of the instructor pilots and senior students were killed on the first day, but after five days of cease-



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less attack, which included German bombers operating from Mosul, the Iraqi Army was defeated and fled in terror to Iran. The Iraqi Air Force was then quickly neutralized and the Germans were to give up on their Gulf adventures.

Many historians refer to the Battle of Habbaniya during May 1941 as being instrumental in changing the

course of World War II. No. 4 Flying Training School still exists at RAF Valley, Wales, training fast jet pilots for the Royal Air Force.

Dennis W. Pritchard
Caernarfon, Wales, UK

The Lightning War

What struck me about John A. Tirpak's article [*"Aerospace World Special: Desert Triumph,"* May, p. 10] were such comments as "an emphasis on speed, flexibility, rapid maneuver of ground forces" and "the ferocity of air attacks on Saddam's facilities in Baghdad and elsewhere coupled with swift ground force movement."

The offensive strategy used by Central Command's Gen. Tommy R. Franks appears to be very closely modeled upon Gen. Heinz Guderian's Blitzkrieg strategy of applying well-coordinated Panzer, Wehrmacht, and Luftwaffe forces in his "lightning war" against Poland.

Then, as now, the world observed in awe how effective such a strategy can be. Poland in 1939, like Iraq in 2003, fell quickly before the onslaught. Of course, we must also acknowledge another key factor, i.e., that of a well-armed, strong military force applied against a much weaker adversary. In neither the Blitzkrieg nor Operation Iraqi Freedom were the opposing sides equally matched.

Mario D. Bartoletti,
Civil Air Patrol
Port Richey, Fla.

A Big Chunk of Work

I am flabbergasted by the amount of information contained in the 2003 Almanac issue. Having been an air attache during my career and having to put together an air order of battle for the host country air force, I can appreciate the tremendous effort re-

Letters

quired to publish this document. I bet the foreign attaches in Washington can hardly wait for this issue to come out. There will no doubt be a copy in every diplomatic pouch leaving D.C.

The foreign attache association should come up with some kind of special award for the Air Force Association for doing a big chunk of their work for them.

Col. Jack Ramey,
USAF (Ret.)
Bellevue, Neb.

Early Communications

I have to comment about the Air Force Communications Command chart of the "USAF Almanac" [May, p. 66].

You never mentioned the communications service [leaders] before July 1, 1961. I don't know when the Airways and Air Communications Service came into being, but we were the eyes and ears of the sky around the air bases. There were a couple of thousand of us who wore the uniform. The Berlin Airlift would not have been successful if it weren't for the control tower and [ground control approach] operators.

I was at Wiesbaden AB, Germany. An air evac coming from Verdun, France, had a very sick baby on board. After landing, the ambulance driver was afraid to drive from the air base to Lindsey Hospital because of the fog. Base operations called the GCA unit and asked if we knew where the hospital was on the radarscope. We did. A helicopter took off with the sick baby and was directed over the hospital. That could be the first air evac landing at a hospital.

Yes, there was a communications service in the Air Force long before July 1, 1961.

MSgt. Marvin J. Johnson,
USAF (Ret.)
Lindale, Tex.

■ Thank you for sharing some of the history of the Airways and Air Communications Service. However, the leaders section is limited to major commands (with one exception, the Air Force Academy). The AACCS was not a major command. The listing begins with the first leader of the AACCS when it was elevated to major command status and redesignated Air Force Communications Service. You'll note, too, that we stopped adding commanders to the Air Force Communications Command listing in 1991, when USAF changed it from a Majcom to a field operating agency.—

THE EDITORS

Corrections

The Air Force History Research Agency recently corrected its record of aerial victory credits for two World War I aces. The roster of aces in our USAF Almanac 2004 will show these changes: 1st Lt. Arthur R. Brooks, six aerial victory credits, and 1st Lt. Arthur E. Easterbrook, six aerial victory credits.

In the May issue "Guide to Air Force Installations Worldwide," under the Charleston AFB, S.C., entry, Air Force Reserve Command's 315th Airlift Wing flies C-17 airlifters as an associate unit of the 437th Airlift Wing.

Also in the May issue, the "USAF Aircraft Tail Markings," p. 89, has two errors. The tail marking "LF" for the 56th Fighter Wing at Luke AFB, Ariz., was omitted. The second error affected the aircraft listed for 23 tail code entries. Under the SL tail code entry, the aircraft beginning with A/OA-10, F-16CJ/D are out of alignment. Those aircraft belong opposite the SP tail code, and so forth, so that the column ends with the E-3B, F-15C/D, KC-135R, HH-60G lineup opposite the ZZ tail code.

Million Mogadishu Man

I read the article "Antiwar Movement's 'Million Mogadishu' Man" [*"Aerospace World," May, p. 23*] with great disgust and anger. It really bothers me that "Professor" Nicholas De Genova can openly state that he hopes for "a million Mogadishu" and is not held accountable. I would like to know what private citizens can do to hold people like him—unfortunately he is not the only one in academia who holds anti-American views—accountable for what they say? Also, if this is who is "educating" our young people, we are in serious trouble.

Joe Domhan
Babylon, N.Y.

A Bad Day Over Berlin

Regarding your story [*"A Sharper Sword," April, p. 36*] on the 422nd Test and Evaluation Squadron—that was a neat account. However, the original 422nd was not a night fighter outfit. Rather it was a B-17 bomb squadron of the Eighth Air Force. I flew in it until a bad day over Berlin.

Roy J. McCaldin
Tuscon, Ariz.

Quesada and Dulles

Rebecca Grant's article [*"Quesada the Conqueror," April, p. 76*] on Elwood R. "Pete" Quesada nicely explicated the general's leadership in war and peace.

She notes that in 1958, after Quesada retired from the Air Force, President Dwight Eisenhower named him the first head of the Federal Aviation Administration. This provided Quesada with a platform to continue to influence American aviation. But Quesada had another, earlier role which had important consequences for commercial jet travel and still indirectly affects many Air Force members and others in the Washington, D.C., area. In 1957, President Eisenhower asked Quesada to recommend one of several Virginia locations for the site of a new international jet airport to be constructed by the federal government to serve the nation's capital. Quesada ultimately chose Chantilly, over the objections of many local residents and elected officials.

The airport opened in 1962, named for late Secretary of State John Foster Dulles.

Christopher Bright
Vienna, Va.

Caste System

I can't help but disagree vehemently with retired Lt. Col. Alton Dobbins regarding his proposal to require military service for full citizenship.

[See "Letters: No Quick Fix," May, p. 4.] I agree that citizenship bears responsibility and that there are many in our society who do not share the sacrifice. However, I shuddered when I realized the caste system that could result.

America is not the Roman Empire—let's keep it that way.

Glenn Liston
Kettering, Ohio

About Those Insignia

I retired as a master sergeant from the Air Force on Sept. 1, 1972. In your May edition, you list all of the current awards and decorations and badges [p. 92].

The one that gripes me is the Global War on Terrorism medal. Look, I don't think it's an undeserved ribbon, but why isn't a Cold War ribbon authorized? Here we have a war that lasted for well over 40 years. To say that if you fought in the two major battles against the Red menace is not to say your ribbons for each of those battles are enough.

If there ever was a war on terror, it was the war against Communism. During the Vietnam War, the people at Travis AFB, Calif., worked their

tails off. Yet they never got a ribbon for their support of that war! Anyone who claims that in-area medals are all that is required has never fought in a war.

Look, I'll never wear my uniform again, unless they slit the back of the jacket when they lay me out. I'm not a big rah-rah ex-military guy. I did serve for nearly 21 years, and I served to fight the terror of Communism. I think we all earned a Cold War ribbon.

Gerald L. Norway
Fulton, N.Y.

I very much enjoy the "USAF Almanac" issue of the magazine every year. I would like to suggest that on the page displaying the USAF grades and insignias that warrant officer insignia be added. I know that the Air Force does not have warrant officers anymore, but there are a number of us retired who feel we are still part of the Air Force.

Also, on the page displaying the ribbons, I think the Army Commendation Medal should be included.

CWO4 Howard P. Stott,
USAF (Ret.)
Downers Grove, Ill.



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Aerospace World

By Suzann Chapman, Managing Editor

C-130s for Promotions?

The Senate on June 12 approved promotions for 127 active duty Air Force captains and majors. There were 741 nominees who were still on the list, some from early January. And approval for the 127 came only after pressure from the White House itself.

The problem is that Republican Sen. Larry Craig of Idaho wants four additional C-130 aircraft for the Idaho Air National Guard.

Senators can and do hold up nominations—usually civilian, not military—indefinitely and anonymously. In this case, the *New York Times* reported on June 9, it was Craig who was blocking the promotions.

A spokesman for Craig said the Air Force promised seven years ago to station eight C-130s in Boise for the ANG squadron there. Currently, the unit has four operational C-130s and one trainer.

According to the *Times*, USAF officials said no such pledge was given and called the Senator's action "black-mail." Reports of the number of confirmations actually being blocked by Craig varied. His office claimed the Senator had only put a hold on 212.

Two Luke F-16s Crash

Two F-16 fighters based at Luke AFB, Ariz., crashed in a single week during training missions. The first crash occurred June 10, followed by one on June 13.

Both pilots ejected safely.

The first F-16 crash occurred at 5:15 p.m. The pilot was Capt. David O'Malley, an instructor pilot with the 310th Fighter Squadron at Luke. The second crashed at 9:30 a.m. It was piloted by Capt. Scott Arbogast, also an IP, of Luke's 61st Fighter Squadron. The aircraft were over the Barry M. Goldwater Range at the time of the accidents.

Luke suffered a series of six F-16 crashes in late 1998 and early 1999. The service found that four of those crashes were engine-related. A subsequent inspection of all the F-16s at Luke found engine cracks in 18 of the base's older fighters. The Air Force



USAF photo by A1C Brian Ferguson

An F/A-22 Raptor touches down at Nellis AFB, Nev., on May 29. This fighter was the third of USAF's next generation stealth fighters destined for the Air Warfare Center at Nellis. The center will eventually receive 17 of the fighters to help develop the tactics that future F/A-22 pilots will use in combat.

is still investigating causes of the two recent crashes.

Two Aircraft Down in Iraq

US Central Command reported that an Air Force F-16CG had crashed and an Army Apache helicopter had been shot down during operations in Iraq on June 12. The crews of both aircraft were rescued.

In a briefing the next day, officials said that an initial report on the USAF fighter indicated it had a mechanical failure before it crashed at 6:30 a.m. (Baghdad time). The pilot ejected and was rescued about an hour after the crash.

CENTCOM said the AH-64 helicopter was hit by hostile fire. Two additional Apaches helped engage the hostile forces in the vicinity, and coalition ground forces reached the two crew members almost immediately.

Blue, Silver To Stabilize AEFs

The Air Force has tagged its two transitional 120-day Air and Space Expeditionary Forces as AEF Blue

and AEF Silver. These two AEFs are part of USAF's plan to fix its broken schedule by March 2004.

To handle Gulf War II in Iraq plus ongoing operations in Afghanistan, the service had to reach into its AEF rotation cycle—freezing some forces in place and advancing others. (See "Expeditionary Air Warriors," June, p. 24.)

The service had established 90-day rotation periods as its norm but announced in May that it would carry out two temporary rotations of 120 days each to get the system back on track. AEF Blue will handle operations from July through October. AEF Silver will pick up then and run through February of next year.

Service leaders are currently reviewing the expeditionary system and the feasibility of maintaining its 15-month cycle.

It's Never Too Late

President Bush nominated retired Gen. Peter J. Schoomaker to return to active duty to head the Army. He retired from service in December 2000

as commander of US Special Operations Command.

Gen. Eric K. Shinseki retired as Army Chief of Staff on June 11. Vice Chief of Staff Gen. John Keane, who is also slated to retire, is serving as acting Chief. Keane was offered the top job but turned it down.

Defense Secretary Donald H. Rumsfeld fired the Army's top civilian, Thomas E. White, who left office May 9. (See "Aerospace World: The Pentagon Shuffle," June, p. 9.)

A-10s Under the Microscope

A *New York Times* op-ed article on May 27 claimed that Maj. Gen. David A. Deptula, director of plans and programs at Air Combat Command, had "ordered a subordinate to draft a memo justifying the decommissioning of the A-10 fleet."

Deptula and ACC commander, Gen. Hal M. Hornburg, vehemently denied the claim.

There is no drive in the Air Force to prematurely "kill" the A-10, affectionately called the Warthog, say USAF officials.

At issue were some planned A-10 upgrades that ACC is reviewing as it tries to craft a 2005 budget.

US Ends CRAF Call-Up

US Transportation Command on June 18 officially ended the Civil Reserve Air Fleet call-up for Operation Iraqi Freedom. The CRAF activation began on Feb. 8.

It was only the second time commercial carrier aircraft had been activated under the CRAF program to augment the Air Force mobility fleet.

From Feb. 8 through June 9, CRAF commercial carriers compiled an impressive record:

- Eleven carriers flying 51 passenger airliners carried out more than 1,600 missions and transported more than 254,000 troops.

- Sixteen commercial carriers volunteered to move 11,050 short tons of cargo destined for Southwest Asia.

Welch: Nuclear Triad Still Useful

Retired Gen. Larry D. Welch recommends the US maintain its nuclear triad capability even as it reduces the scope of its nuclear arsenal. Speaking on Capitol Hill on June 4, the former Air Force Chief of Staff said each element of the triad—air, land, and sea—still offers unique value.

At the same time, Welch said the US must study what role nuclear weapons should play in the post-Cold War, post-9/11 world. He added that the current systems may no longer be relevant.

Welch endorses a plan proposed by Rep. Curt Weldon (R-Pa.) and

McPeak Faults Army on Use of Apaches and Patriot

Few military leaders rile more people more often than retired Gen. Merrill A. McPeak, Air Force Chief of Staff from 1990 to 1994. McPeak, blunt-spoken as always, continues to lob bombshells from his retirement home in Lake Oswego, Ore. His most recent shot was a *Washington Post* op-ed column June 5.

"For all but the resolutely sightless, it is now obvious that air combat determines the outcome in modern war," wrote McPeak, who went on to say the US had better figure out how to conduct aerial warfare as well as possible.

As in previous conflicts, airpower was highly effective in Iraq, McPeak said, but "the air war did feature lackluster performance involving two pieces of equipment: the Apache helicopter gunship and the Patriot air defense missile."

In McPeak's estimation, the Apache and the Patriot—both of them Army systems—are pretty good. His criticism was about how they were employed.

In March, the Army sent a battalion of 32 Apaches on a long-range attack mission against the Republican Guard. One helicopter was shot down and all of the others took severe battle damage.

The mistake, McPeak said, was using the Apaches for deep attack. They do not have the speed or stealth to evade ground fire. But the Army, long eager "to get into the air fight," does not want to restrict its attack helicopters to close air support roles or missions with fighter escort.

Patriot shot down two friendly aircraft. McPeak said, "It's hard to figure out why Patriot crews should be so quick on the draw," especially when the Iraqi Air Force was not flying. The Patriots, he said, should be regarded as one part of a bigger air defense system, one that has prevented enemy aircraft from attacking US ground forces for 50 years.

"Gen. Merrill A. McPeak does not speak for the US Air Force," said Gen. Hal M. Hornburg, commander of Air Combat Command, in a rebuttal letter printed in the June 11 *Washington Post*. "While I agree that the Air Force has never been better, I would say the same about the Army, the Navy, the Marine Corps, and the Coast Guard."

The op-ed column was vintage McPeak, guaranteed to raise hackles from coast to coast. It was also a reprise of McPeak's "Three Battles" concept from 10 years ago. Combat forces, he said in 1994, were hampered by overlap and duplication but were short on integration and coordination.

He proposed a realignment in which forces would be organized to fight a Close Battle (to seize and hold terrain), a Deep Battle (interdiction and strategic attack), and a High Battle (to control and exploit air and space).

The ground force commander would be in charge of the Close Battle, including the helicopters and fixed-wing aircraft that provided close air support for the troops. The Air Force and Navy would provide backup as needed.

The Deep Battle would be the province of the Air Force and the Navy. It would not be an arena for vulnerable Army helicopters, operating alone.

In the High Battle, defense against aircraft and ballistic missiles would be treated as an integrated system, with the Air Force primarily responsible for both land-based air and ballistic missile defense. (McPeak raised a furor when he publicly called for cancellation of the Army's deep-attack missile system and transfer of Army theater air defenses to the Air Force.)

In his *Washington Post* column, McPeak said that, "a decade ago, while serving as Air Force Chief of Staff, I went quietly to my Army counterpart, Gordy Sullivan, and proposed that we make a trade: Swap the Air Force's primary close air support aircraft, the A-10, for the Army's theater air defense missile, the Patriot," but Sullivan "gave me the cold shoulder."

McPeak pitched his Three Battles realignment idea to the Congressionally chartered Commission on Roles and Missions in September 1994, but it was not adopted.

—John T. Correll



A C-130 from Air Force Reserve Command's 910th Airlift Wing, Youngstown, Ohio, delivers 15,000 pounds of medical supplies, beds, and tents on May 30 to Algeria. The country had suffered a major earthquake that killed more than 2,300 people.

Supreme Court Sinks "Class Act" Lawsuit

The Supreme Court on June 2 rejected a request for a formal hearing on a case—known as the "Class Act" lawsuit—that sought free lifetime medical care and some compensatory payment for World War II and Korean War-era military retirees. The lawsuit maintains that recruiters and recruiting literature promised that the retirees would receive free medical care for life once they retired after 20 years of service.

The justices refused to review a ruling issued last November by the US Court of Appeals for the Federal Circuit. The ruling said the promises were not valid because the recruiters had no statutory right to make such claims. (See "Ghosts in the Machine," by *Air Force Magazine* Editor in Chief Robert S. Dudley, January, p. 2.)

Retired USAF Col. George "Bud" Day—Medal of Honor recipient, Vietnam War prisoner of war, and lawyer—initiated the suit in 1996 on behalf of two Air Force retirees, Robert L. Reinlie and William O. Schism. (Schism died earlier this year.) About 22,000 other retirees of the same eras formed a possible legal class.

Day called the Supreme Court action "clearly a disappointment." He said it was "a sad day that the United States Supreme Court did not step up to the plate and deal with this gross injustice to our World War II/Korea-era warriors."

He added, "The legal fight is over, [but] our legislative efforts will take center focus." Day said the Defense Department's implementation of Tricare for Life, which enables military retirees who are Medicare-eligible to use the military health care service, only "partially satisfied" the unwritten contract with older military retirees.

Since Day first initiated the lawsuit in 1996, various government officials have agreed that promises of lifetime care were made. Even President-elect Bush noted on Jan. 19, 2001, "We must keep our commitment to those who wore the uniform in the past." During his campaign, Bush said the issue was "a contractual promise" he intended to fulfill.

There was no issue until the mid-1990s because military retirees, whatever age, had access to military medical facilities. Then came the post-Cold War drawdown and base closures. That was followed in 1995 by creation of the Tricare health care program, which forced those 65 and older out of the military system. Tricare for Life, instituted in October 2001, opened the door again for those 65 and older, but it is not free.

"We should never have been forced to wage this fight," said Day, adding, "but we are in it and I will offer my energies toward a comprehensive legislative victory."

included in the House version of the Fiscal 2004 defense authorization bill. It would create a commission to develop an all encompassing strategy for the US nuclear arsenal.

C-17 IPs Go Back to School

Starting this month, four C-17 instructor pilots will embark as the first class in a 5.5-month C-17 Weapons Instructor Course established at McGuire AFB, N.J. The new course is considered the "doctorate" for C-17 IPs.

The C-17 course will parallel similar instruction set up for C-130 and KC-135 IPs. The three courses make up the service's new USAF Mobility Weapons School at McGuire.

Officials say C-17 pilots taking the course will follow an intensive curriculum of more than 300 academic hours and 25 flights in four phases: advanced tactical maneuvering, direct delivery, joint operations, and mission employment.

The advanced tactical maneuvering and direct delivery phases will orient the pilots to different types of flying, airdrop, and air-land techniques, including reaction to threats. After completing these two phases, the pilots will receive joint operations training.

At the end of the course, the C-17 pilots will participate in a two-week exercise at the USAF Weapons School at Nellis AFB, Nev.

Once they graduate, the pilots are expected to return to their units and pass on their knowledge to other IPs and student pilots.

DOD and VA Form New Team

The Defense and Veterans Affairs Departments on May 31 opened a new compensation program for some disabled military retirees. Payments under the Combat-Related Special Compensation program were slated to begin this month.

The CRSC program applies to two categories of military retirees:

- Those who have disabilities resulting from combat injuries for which they received the Purple Heart.

- Those rated at least 60 percent disabled because of armed conflict, hazardous duty, training exercises, or mishaps involving military equipment.

Eligible retirees must apply to their branch of service using DD Form 2860, "Application for Combat-Related Special Compensation." The form is available from retirement services representatives or on the Web at <https://www.dmdc.osd.mil/crsc>.



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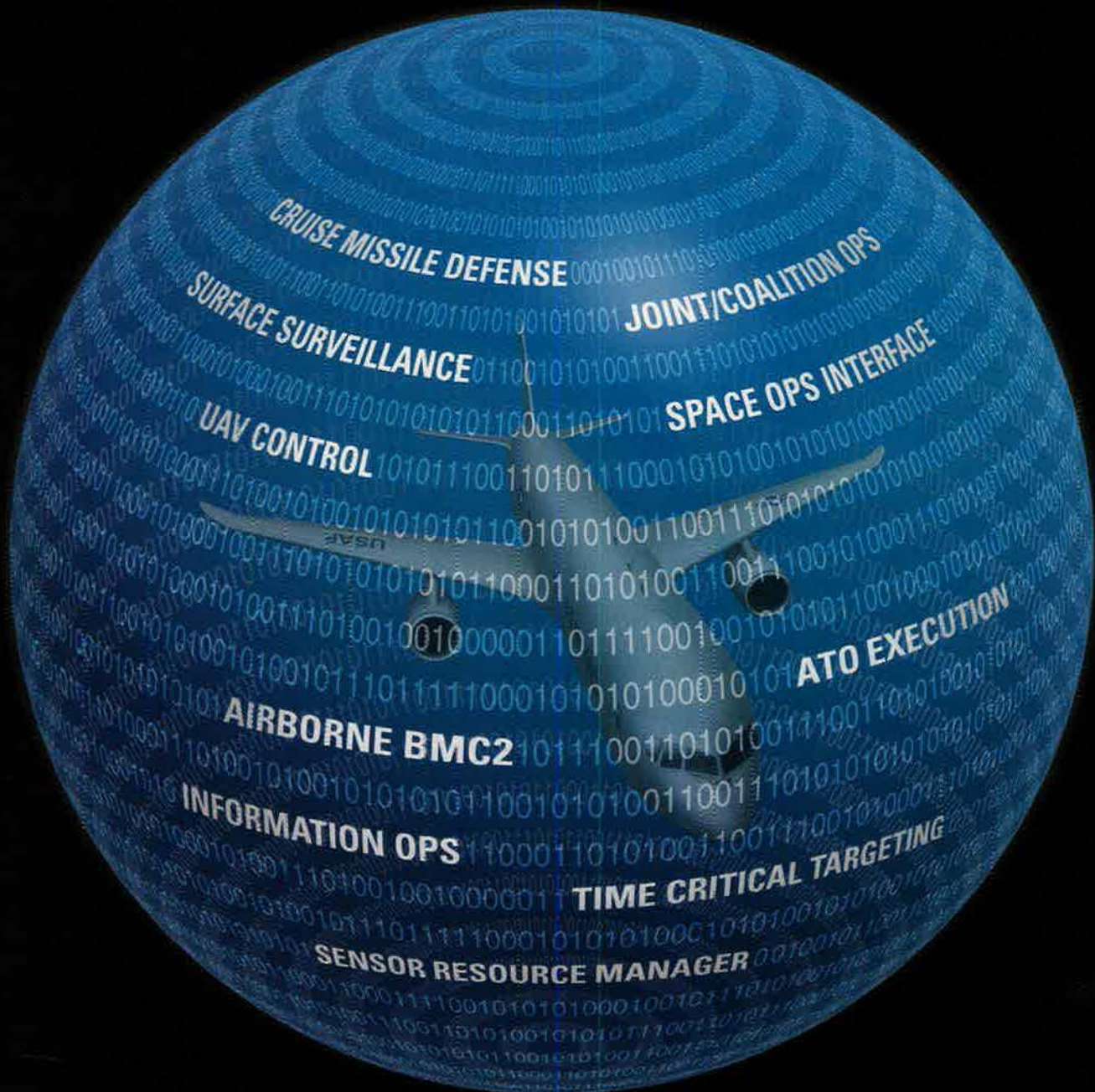
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AMC Opens New Control Center

Air Mobility Command on May 16 officially opened a new Tanker Airlift Control Center at Scott AFB, Ill. Officials say the new center brings all airlift control functions together.

TACC personnel "now have the ability to call upon a wide range of electronic tools and databases to help them make smart decisions in a timely manner," said Maj. Gen. Edward L. LaFontaine, TACC commander.

He said the new center permits flight dispatchers, flight controllers, weather and intelligence personnel, and logisticians to enter "a working community to optimize air mobility operations."

The old control center's operations were split between eastern and western hemispheres. "As part of the effort to create a more efficient and effective TACC, we got rid of the east-west divisions," said SMSgt. Robert Dunn, superintendent of the TACC Operations Support Division.

The new center is divided into functional areas, or mission types, "which gives us the flexibility to manage our manpower based on our actual workload rather than by the location of each mission," said Dunn. Before, the east division might be working 1,000 sorties in a day, while the west crew only had 300.

By dividing the operations center according to function, explained Dunn, "we can adjust the number of people to each type of mission."

DOD Changes Budget Cycle

Pentagon Comptroller Dov S. Zakheim on May 22 unveiled DOD's plan for a new two-year budget cycle. It requires no Congressional action, he said, and will begin with an abbreviated cycle for Fiscal 2005.

Under the new approach the annual program objective memorandum and budget estimate submission cycle moves to a biennial cycle. During the off year, Zakheim said, the Pentagon will focus on "fiscal execution and program performance."

The change also affects the defense planning guidance, which the services and defense agencies use to develop their individual budget and programming requests. It was provided annually. Now, the DPG will be issued in the off year "at the discretion of the Secretary of Defense," according to a Pentagon statement.

What's more, the statement said, the off-year DPG will "not introduce major changes to the defense program, except as specifically directed by the Secretary or Deputy Secretary of Defense."



Photo by Paul Kennedy

Air Mobility Command's new Tanker Airlift Control Center features state-of-the-art operations. (See "AMC Opens New Control Center," at left.) The new TACC will still be located at Scott AFB, Ill.

DOD Names Air Force Academy Review Panel

The Pentagon on May 27 announced the names of the seven individuals who will serve on a Congressionally mandated panel to review allegations of sexual assault at the US Air Force Academy. They are:

- Tillie K. Fowler, panel chair and a lawyer and former Congresswoman.
- Josiah Bunting, superintendent of the Virginia Military Institute.
- Amy McCarthy, United Airlines pilot and USAFA graduate.
- Laura L. Miller, social scientist at RAND and former assistant professor of sociology at the University of California at Los Angeles.
- Michael J. Nardotti, lawyer and retired Army major general who served as judge advocate general of the Army.
- John W. Ripley, director of Marine Corps History Center and Museum, a US Naval Academy graduate, and former president of Southern Virginia College.
- Sally L. Satel, practicing psychiatrist in Washington, D.C., with expertise in behavior related to sexual misconduct.

A Pentagon statement said the panel has 90 days to study "the policies, management and organizational practices, and cultural elements of the academy that may have been conducive to the alleged sexual misconduct, including sexual assaults and rape."

The panel is to submit its report of findings to the Secretary of Defense and the chairmen of the Senate and House Armed Services Committees.

It was slated to hold a public meeting on June 23 in Washington, D.C. Sen. Wayne Allard and Rep. Joel Hefley, both Republicans from Colorado and both vocal critics of the Air Force for its handling of the academy issue, planned to attend.

USAF planned to release the findings of Mary L. Walker, USAF general counsel, before the panel's public hearing. The findings are titled "Report of the Working Group Concerning the Deterrence of and Response to Incidents of Sexual Assault at the US Air Force Academy."

The Air Force has already made key leadership changes at the academy.

Walker's review determined that there were 61 reported incidents of sexual assault from 1990 to 2003. According to Allard and others, the number may be higher because cadets feared to report such incidents.

(For more information on the issue, see "Aerospace World" articles "Independent Panel to Review Situation at Academy," May, p. 49, and "USAF Leaders Vow To Make Changes at Academy," April, p. 18.)

USAF photo by TSgt. Dave Butner



TSgts. Jeff McElhoe (foreground) and Jessie Koob guide the forklifts driven by TSgt. James Simmons and MSgt. Mark Kellie as they move the shipping cradle under the fuselage from an A-10 Warthog. Air Force officials said the attack aircraft was hit by hostile fire during operations over Iraq in April and was being sent back to the US for repairs.

Rumsfeld Targets Aircraft Accidents, Deaths

Defense Secretary Donald H. Rumsfeld has given the military services two years to cut the department's safety mishap rate in half. The directive came in response to a 26 percent increase in 2002 in the number of deaths due to aircraft accidents.

"World-class organizations do not tolerate preventable accidents," Rumsfeld wrote in a May 19 memo to service leaders.

According to DOD, the number of deaths from Air Force aircraft accidents rose from nine in Fiscal 2001 to 22 in Fiscal 2002—a rate of 1.62 mishaps per 100,000 flying hours. So far this fiscal year, USAF's rate has gone down to 1.27. However, that is still higher than the two previous years.

As of May 30, aircraft accidents DOD-wide have claimed 67 lives, compared to 63 in all of 2002.

Rumsfeld named David S.C. Chu, undersecretary of defense for personnel and readiness, to lead the accident reduction effort.

The defense chief said in his memo, "I intend to be updated on our progress routinely."

There will be no DPG for Fiscal 2005.

To handle needed changes, DOD will use program change proposals in lieu of an off-year POM, and budget change proposals instead of an off-year BES.

UAV Ground Control Takes To Air

The Air Force has successfully tested control of a Predator unmanned aerial vehicle from an airborne platform. Predator normally is operated from a mobile ground station using satellite communications.

According to a May 23 report on InsideDefense.com, the test, dubbed Scathe Falcon, marks the first air-to-air control of a Predator UAV. It was conducted by Aeronautical Systems Center at Wright-Patterson AFB, Ohio, earlier this year.

ASC placed a modified Predator ground station with crew on board a C-130 aircraft. The Predator crew flew the UAV for more than five hours using a C-band line-of-sight antenna.

By developing this capability, the Air Force will be able to fly the UAV in areas that may have limited SATCOM coverage. The capability may be added to the service's new E-10 multisensor command and control aircraft.

USAF Releases 2002 QOL Results

The Air Force on May 30 said that its personnel showed "an increase in satisfaction" with the service as a job and way of life. The claim was based on responses to the 2002 Chief of Staff Quality of Life Survey.

Charles Hamilton, chief of the Air Force Personnel Center's survey branch, said the latest survey showed a rise in satisfaction virtually across the board, when compared to results from the 2000 QOL survey. He added, too, that "career intent was up among all demographic groups."

Hamilton's office sent the survey to more than 100,000 active duty airmen and civilian personnel last September.

While the responses were largely positive, with 90 percent of military members and 89 percent of civilians saying the Air Force is a good place to work, Hamilton said there was a recurring concern among all groups—manpower shortages. (See "Masters of What They Survey," p. 76, for more on the manpower issue.)

Reservists To Weigh In

For the first time, the Air Force will query reservists when it conducts its next organizational climate survey. It is slated to run this fall.

Officials said the Air Force Cli-

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mate Survey 2003 will be easily accessible on the Air Force survey Web site and user-friendly.

The climate survey, unlike the QOL survey, asks questions about organizations, teamwork, supervision, training, unit flexibility, etc. The QOL survey measures feed-

back on pay and benefits and base facilities.

Like the QOL survey, however, officials say the Air Force ensures anonymity of respondents by using software masking techniques to separate the respondent's user identification and password from responses.

Ironman Returns Home

Nearly 59 years after his death, 1st Lt. Carl Hoenshell, has come home. The airman's remains were returned in May to his hometown, Owosso, Mich., for burial.

Hoenshell was a member of the World War II "Ironmen" of the 71st

News Notes

By Tamar A. Mehuron, Associate Editor

■ NATO on May 23 named Adm. Edmund P. Giambastiani Jr. as its supreme allied commander for transformation, a position he will hold in addition to serving as commander of US Joint Forces Command.

■ The Air Force opened a 10-bed expeditionary medical support hospital at Tallil Air Base in Iraq on May 27, replacing the Army's 80-bed combat support hospital. EMEDS is USAF's new medical deployment approach that provides streamlined, modular medical capabilities. The facility at Tallil has emergency and routine medical care and an operating room, along with counseling, dental, and pharmacy services.

■ Russian Space Forces placed a new military satellite into orbit June 4 aboard a Kosmos-3M rocket launched from the Plesetsk Cosmodrome.

■ An Air Force F-15E crashed at about 5 p.m. on June 4 near Newton Grove, N.C., about 35 miles southeast of Raleigh. The pilot and weapons systems officer ejected safely, sustaining only minor injuries. They are assigned to the 4th Fighter Wing, Seymour Johnson AFB, N.C.

■ The Army submitted plans May 24 for a new transport airplane—the Air-Maneuver and Transport aircraft—it expects to have in service by 2008, according to *Defense News*. The AMT, which will be able to fly 310 miles round-trip and carry up to 20 tons, could transport one of the Army's new Future Combat System land vehicles. The Army is considering tilt-rotor, tilt-wing, and rotorcraft technologies.

■ US Joint Forces Command opened a new facility in Suffolk, Va., May 13 to support joint training events and experiments. The Distributed Continuous Experimentation Environment facility will enable JFCOM to link computer modeling simulations software and networks into one common computer infrastructure among the ser-

vices, other government agencies, industry, academia, and multinational partners.

■ USAF officials are investigating a May 29 F-16 crash at Osan AB, South Korea, that occurred just as the pilot was taking off on a training mission at 8 p.m. The pilot ejected safely before the crash and was taken to a nearby military hospital. There were no civilian casualties.

■ Northrop Grumman on May 15 received a contract from the Electronic Systems Center, Hanscom AFB, Mass., for \$215 million for weapons systems integration for the new E-10 multisensor command and control aircraft. The WSI contractor team is led by Northrop and includes Boeing and Raytheon.

■ Two Air Force officers have been tapped for key roles in the Pentagon's military commission that will hear cases involving terrorist activities and violations of the laws of war. They are Col. Will Gunn, who will be acting chief defense counsel, and Maj. John Smith, who will serve as the commission's judge advocate spokesman. Gunn said he did not seek the position he's been given, but that he realized it would be "a critical role ... not just for the individual but also for the nation." Army Col. Frederick Borch will serve as acting chief prosecutor.

■ For the first time, one of the more than 800 unknown US servicemen killed during the Korean War who are buried at the National Memorial Cemetery of the Pacific has been identified. The Army's Central Identification Laboratory in Hawaii exhumed two of the unknowns to attempt identification using new forensic techniques. The remains of Marine Pfc. Ronald D. Lilledahl were identified after a nearly four-year effort. CILHI teams continue to attempt to identify and recover remains. According to DOD, there are still more than 8,100 missing in action from the Korean War.

■ The first KC-135 tanker with the Global Air Traffic Management system installed made its maiden flight around the world recently to complete a 10-day flight test, culminating more than a year's work of modifications and ground and air testing. A 24-person team led by members of the KC-135 Combined Test Force from Edwards AFB, Calif., conducted the flight test to determine whether the system is indeed interoperable with air traffic systems around the world and will enable the tanker to fly in congested airspace. Officials said the test was successful.

■ Enhancing public health, improving disease surveillance and detection, and ensuring the health and fitness of America's warfighters are the missions of the newly formed Air Force Institute for Operational Health. AFIOH resulted from the recent merger of two separate organizations, the Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis and the Development Center for Operational Medicine.

■ Two airmen were found guilty in separate courts-martial at Osan AB, South Korea, and both received bad conduct discharges. The charges against MSgt. Clarence Lott, a 19-year veteran, included larceny of about \$19,000 in excess housing allowances and obstruction of justice when he attempted to enlist a former subordinate to cover up his crime. A1C Francisco Lira III was convicted of writing \$7,200 in bad checks and using his government travel card for personal expenses that he did not repay.

■ Pilot error caused the Dec. 4 collision of two A-10s on a training mission out of Nellis AFB, Nev., investigators have concluded. One pilot, Capt. Eric Palaro, was killed, while the second, Maj. Scott Kneip, ejected with only minor injuries. (See "Aerospace World: A-10 Pilot Dies in Crash," January, p. 11.) According to the accident report, Palaro lost situational awareness when he tried to rejoin a four-ship formation and mistook another aircraft as the lead. The lead pilot contributed to the accident by failing to note Palaro was not in proper position.

Fighter Squadron. His P-38 was shot down over Bulgaria.

Hoenshell's niece, Elizabeth Wilson, and nephew, David Hoenshell, in 1995 began an effort to locate and recover his remains. Research, both online and through personal contact with other World War II airmen, led them in 1998 to a probable crash site in Bulgaria. In 1999, an excavation team found

Hoenshell's ID bracelet. War in the Balkans disrupted the search, but in 2002, the team found his remains, which were shipped to the US Army Central Identification Lab Hawaii.

On Hoenshell's last mission in 1944, he was among 48 P-38 pilots who accompanied bombers sent to attack the Ploesti oil refineries in Romania. On the return, he ran out of ammuni-

tion when Nazi fighter aircraft attacked. He told his fellow pilots to hit the deck and head for home as he led at least three of the enemy aircraft away. In 1945, he was officially removed from the missing in action list and declared killed in action.

AWACS Finally Goes Home

On May 28, the E-3 Airborne

Representatives of the Italian Air Force on May 16 accepted the first five of a planned 34 upgraded and modified F-16A and B models destined for the Italian Air Force. The aircraft underwent 220 days of refurbishment at the Ogden Air Logistics Center, Hill AFB, Utah, making them "like new planes," said Wayne Hansen, F-16 production chief. The ALC expects to complete delivery of all 34 by November 2004.



USAF photo by Todd Cromar

■ The Pentagon is participating in an Internet voter registration and voting demonstration project for 2004. The Congressionally mandated effort will enable thousands of absentee uniformed services personnel, their dependents, and overseas US citizens to register to vote and cast their ballots from any Windows-based computer with Internet access. States currently participating are: Arkansas, Florida, Hawaii, Minnesota, North Carolina, Ohio, Pennsylvania, South Carolina, Utah, and Washington. To register and vote, log on to www.servusa.gov.

■ DOD launched a financial readiness campaign in May after studies revealed that money woes among service members are a growing problem and could affect readiness. According to a report DOD provided Congress, pay grades E-1 through E-6 have the most trouble making ends meet. Within USAF, E-3 through E-5 airmen, some 50 percent of the force, receive 76 percent of nonjudicial punishment handed out for indebtedness.

■ SrA. Jeffrey Beagle, assigned to Osan AB, South Korea, was found guilty at a court-martial of attempted arson and writing more than \$5,000 in bad checks. His sentence included five years' confinement and a dishonorable discharge.

■ Two Air Force civilians were among this year's top 50 Hispanics in Business and Technology, listed by *Hispanic Engineer and Information Technology* magazine: Michael L. Dominguez, the assistant secretary of the Air Force for manpower and reserve affairs, and Michael Montelongo, the assistant secretary of the Air Force for financial management and comptroller.

■ The Defense Logistics Agency awarded Northrop Grumman's Integrated Systems Sector a Best Value Gold Medal on May 20. The company achieved perfect scores in product quality and on-time delivery of parts and assemblies for several aircraft, including the B-2 bomber and T-38 trainer.

■ The Pentagon is sponsoring activities around the nation under a program called "Operation Tribute to Freedom" to show appreciation for the troops that are serving in the global war against terrorism. Officials plan to make veterans of ongoing operations available to speak in communities and to try to match up speakers with their hometowns. For more information about Tribute to Freedom, go to the DOD Web site www.defendamerica.mil.

■ Air Mobility Command enlisted

the help of Russian An-124 cargo carriers to airlift troops and equipment for operations in Southwest Asia, reported the *Honolulu Advertiser*. The huge airlifters, several of which were at Hickam AFB, Hawaii, to pick up troops and equipment, had been hired when AMC had no C-5 or C-17 transports available and no carriers in the Civil Reserve Air Fleet could do the job. (See "The Squeeze on Air Mobility," p. 22.) The An-124, larger than a C-5, can carry four Black Hawk helicopters, two Humvees with ammunition trailers in tow, and troops.

■ On May 27, the National Security Administration awarded the Air Force Academy the first traveling cyber-defense trophy for besting the other service academies in an annual cyber-defense exercise.

■ Lt. Col. Edward Cabrera, 411th Flight Test Squadron commander, Edwards AFB, Calif., received a National Image Meritorious Service Award on May 22 for his work with Hispanic American youth and service to the nation. Cabrera, who is also an F/A-22 test pilot, said that he grew up in East Los Angeles where technical job recruiters were rare and feels he needs to share his experiences with minority youths who may not otherwise learn of such opportunities.

Warning and Control System community completed an arduous, 13-year continuous mission in desolate Southwest Asia. The mission began in August 1990, when the first AWACS deployed as part of Operation Desert Shield, the buildup for Gulf War I.

AWACS aircraft and personnel from Tinker AFB, Okla., handled the mission alone for nine years. Then in 1999 Pacific Air Forces AWACS elements began helping out. Tinker forces then handled about 80 percent of the mission and PACAF the other 20 percent.

AWACS forces flew 277 combat sorties during Gulf War II, according to USAF.

"We were in the middle of everything," said Lt. Col. Joe Rossacci, commander of the 363rd Expeditionary Airborne Air Control Squadron. "We were providing battle management for fighters, bombers, combat search and res-

cue, aerial refuelings, recovery and time-sensitive targeting missions."

SMSgt. Gary Oldham, the 363rd EAACS operations superintendent, was a member of the AWACS team to deploy for Desert Shield in 1990. He said

he had been back to the region several times. He was back for the end as well. He noted, "Lots of guys have over 200 days a year away from home."

Oldham called the last sortie an "awesome sense of closure." ■

AFRC Facilities Emphasize Joint Use

Nine Air Force Reserve Command installations are being redesignated this summer as either joint bases or stations "to reflect the multiservice use of the facilities," said officials.

The AFRC commander, Lt. Gen. James E. Sherrard III, called for a survey of Reserve installations. The survey identified nine that qualify for joint status.

There are five new Joint Air Reserve Bases (JARB): Dobbins JARB, Ga.; Grissom JARB, Ind.; Homestead JARB, Fla.; March JARB, Calif.; and Westover JARB, Mass.

There are four Joint Air Reserve Stations (JARS): Minneapolis-St. Paul JARS, Minn.; Niagara Falls JARS, N.Y.; Pittsburgh JARS, Pa.; and Youngstown JARS, Ohio.

AFRC expects the changes to be completed by July 31.

Senior Staff Changes

NOMINATIONS: To be **General:** T. Michael **Moseley**. To be **Lieutenant General:** Walter E.L. **Buchanan III**, Daniel P. **Leaf**.

CHANGES: Brig. Gen. Thomas S. **Bailey Jr.**, from Cmdr., 74th Medical Gp, ASC, AFMC, Wright-Patterson AFB, Ohio, to Command Surgeon, AFMC, Wright-Patterson AFB, Ohio ... Brig. Gen. John T. **Brennan**, from Cmdr., 48th FW, USAF, RAF Lakenheath, UK, to Dep. Dir., Reaction Force Air Staff, Allied Command Europe, NATO, Kalkar, Germany ... Brig. Gen. Roger W. **Burg**, to Dir., Combat Plans, STRATCOM, Offutt AFB, Neb., to Dir., Nuclear Policy & Arms Control, NSC, Washington, D.C. ... Maj. Gen. Trudy H. **Clark**, from Dep. Chief Info. Officer, USAF, Washington, D.C., to Dep. Dir., Defense Threat Reduction Agency, Washington, D.C. ... Maj. Gen. (sel.) Scott S. **Custer**, from Dep. Dir., LL, OSAF, Pentagon, to Dir., LL, OSAF, Pentagon ... Brig. Gen. (sel.) Guy K. **Dahlbeck**, from Cmdr., 8th FW, PACAF, Kunsan AB, South Korea, to Dep. Dir., Policy & Planning, NORTHCOM, Peterson AFB, Colo. ... Lt. Gen. (sel.) Michael M. **Dunn**, from Vice Dir., Strat. Plans & Policy, Jt. Staff, Pentagon, to President, NDU, Ft. McNair, D.C. ... Brig. Gen. (sel.) David K. **Edmonds**, from Chief, Senate Liaison Office, OSAF, Washington, D.C., to Dep. Dir., LL, OSAF, Pentagon ...

Brig. Gen. (sel.) Burton M. **Field**, from Asst. Dep. Dir., Politico-Military Affairs, Jt. Staff, Pentagon, to Dep. Dir., Politico-Military Affairs, Jt. Staff, Pentagon ... Maj. Gen. (sel.) Paul J. **Fletcher**, from Dir., P&P, PACAF, Hickam AFB, Hawaii, to Asst. Dir., DCS, P&P, USAF, Pentagon ... Brig. Gen. (sel.) Alfred K. **Flowers**, from Comptroller, AETC, Randolph AFB, Tex., to Comptroller, SOCOM, MacDill AFB, Fla. ... Gen. Robert H. **Foglesong**, from Vice C/S, USAF, Pentagon, to Cmdr., USAF, Ramstein AB, Germany ... Brig. Gen. (sel.) Randal D. **Fullhart**, from Cmdr., 92nd ARW, AMC, Fairchild AFB, Wash., to Vice Dir., AF Studies & Analyses Agency, USAF, Pentagon ...

Brig. Gen. (sel.) Marke F. **Gibson**, from Vice Dir., Ops., NORAD, Peterson AFB, Colo., to Cmdr., 332nd AEW, ACC, Davis-Monthan AFB, Ariz. ... Brig. Gen. Silvanus T. **Gilbert III**, from Spec. Asst. to Asst. Dep. Under SECDEF, Intl. Affairs, Pentagon, to Asst. Dir., Strat. Planning, DCS, P&P, Pentagon ... Brig. Gen. (sel.) Robert H. **Holmes**, from Spec. Asst. to Cmdr., SOCOM, MacDill AFB, Fla., to Cmdr., 37th TW, AETC, Lackland

AFB, Tex. ... Brig. Gen. (sel.) Larry D. **James**, from Cmdr., 50th SW, AFSPC, Schriever AFB, Colo., to Dep. Dir., Ops., AFSPC, Peterson AFB, Colo. ...

Brig. Gen. Thomas P. **Kane**, from Dep. Dir., Reaction Force Air Staff, Allied Command Europe, NATO, Kalkar, Germany, to DCS, United Nations Command Korea, Yongsan, South Korea ... Maj. Gen. Edward L. **LaFontaine**, from Cmdr., Tanker Airlift Control Center, AMC, Scott AFB, Ill., to Dir., Log & Security Assistance, EUCOM, Stuttgart-Vaihingen, Germany ... Lt. Gen. (sel.) Daniel P. **Leaf**, from Dir., Operational Capability Rqmts., USAF, Pentagon, to Vice Cmdr., AFSPC, Peterson AFB, Colo. ... Brig. Gen. Thomas J. **Loftus**, from Command Surgeon, USAF, Ramstein AB, Germany, to Command Surgeon, AMC, Scott AFB, Ill. ... Gen. Gregory S. **Martin**, from Cmdr., USAF, Ramstein AB, Germany, to Cmdr., AFMC, Wright-Patterson AFB, Ohio ... Brig. Gen. (sel.) Mark T. **Mathews**, from Dep. Dir., Operational Plans, USAF, Pentagon, to Cmdr., 48th FW, USAF, RAF Lakenheath, UK ... Gen. (sel.) T. Michael **Moseley**, from Cmdr., 9th AF, ACC, Shaw AFB, S.C., to Vice C/S, USAF, Pentagon ... Maj. Gen. Craig P. **Rasmussen**, from Dir., Log & Security Assistance, EUCOM, Stuttgart-Vaihingen, Germany, to Dir., Log. Readiness, DCS, Instl. & Log., USAF, Pentagon ...

Lt. Gen. (sel.) John W. **Rosa Jr.**, from Dep. Dir., Current Ops., Jt. Staff, Pentagon, to Superintendent, USAFA, Colorado Springs, Colo. ... Maj. Gen. James N. **Soligan**, from DCS, United Nations Command Korea, Yongsan, South Korea, to C/S, JFCOM, Norfolk, Va. ... Brig. Gen. (sel.) Thomas E. **Stickford**, from IG, AMC, Scott AFB, Ill., to Dir., Weather, DCS, Air & Space Ops., USAF, Pentagon ... Maj. Gen. (sel.) Kevin J. **Sullivan**, from Dir., Log. & Readiness, DCS, Instl. & Log., USAF, Pentagon, to Cmdr., Ogden ALC, AFMC, Hill AFB, Utah ... Brig. Gen. Frederick D.J. **Vanvalkenburg**, from Cmdr., 37th TW, AETC, Lackland AFB, Tex., to Dir., C4 Sys., STRATCOM, Offutt AFB, Neb. ... Brig. Gen. (sel.) Robert M. **Worley II**, from Cmdr., 30th SW, AFSPC, Vandenberg AFB, Calif., to Dir., Mission Spt., AFSPC, Peterson AFB, Colo. ... Brig. Gen. Donald C. **Wurster**, from Spec. Asst. to Cmdr., SOCOM, MacDill AFB, Fla., to Dir., Intel. & Info. Ops. Center, SOCOM, MacDill AFB, Fla. ... Brig. Gen. (sel.) Mark R. **Zamzow**, from Cmdr., 97th AMW, AETC, Altus AFB, Okla., to IG, AMC, Scott AFB, Ill. ■

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Demand for airlift far exceeds supply, and senior USAF officers say it is time to expand the fleet.

The Squeeze on

THE Air Force mobility fleet long has been key to US power projection. In Operation Iraqi Freedom, however, USAF's transport and tanker aircraft were absolutely crucial. They not only made possible an unprecedentedly fast "rolling start" deployment into and within the theater, but also singlehandedly solved otherwise intractable access problems.

The unique capabilities of the new C-17 airlifter gave Washington the power to open and sustain a northern front despite Turkey's refusal to permit US troops to stage from its soil.

In the south, C-17 and C-130 trans-

ports provided swift and sure resupply of coalition ground forces, helping to sustain the momentum of their lightning-fast dash to Baghdad.

Meanwhile, USAF's aerial tankers extended the reach and staying power of Mediterranean-based Navy fighters, helping them get into the fight over Iraq and continue punching once they arrived.

The combined capabilities of, on one hand, civilian air freighters and passenger airplanes and, on the other, their USAF military counterparts made possible both the swift buildup of American power in the Gulf as

By John A. Tirpak, Executive Editor

Never before has a single airplane made an entire wartime front possible, but that's exactly what the C-17 accomplished in Operation Iraqi Freedom, solving a thorny access problem by dropping troops and landing tanks and supplies in enemy territory.

Air Mobility

USAF photo by SSgt. Alfred Fucua



well as the quick return of forces when the war was over.

In all of this, however, airlift forces were pressed to their limits. Gen. Tommy R. Franks, commander of US Central Command, was forced to modify his original war plan to live within USAF's "constrained" airlift fleet. This forced US commanders to make gut-wrenching choices between competing high priorities.

With the exception of a VIP jet and a retiring medevac transport, every type of aircraft in the inventory of USAF's Air Mobility Command was put to virtually nonstop use. That meant that each diversion of a freighter or some other type of airplane for a pop-up requirement meant that some vital equipment was grounded elsewhere.

A "One-War" Force

The eruption of a second major regional challenge—say, on the tense Korean peninsula—would have brought American officials face to face with excruciating choices about how to meet the dire combat needs of two theater commanders, and in what order.

Gulf War II, thus, highlighted this fact: Airlift might well be indispensable to the American way of war, but the airlift fleet can handle no more than one major regional conflict at a time. This is hardly a military secret; it has been acknowledged for years. However, the unprecedented application of airlift in the Gulf—

sustaining fast ground operations, ferrying special forces, defeating access problems—has generated new pressure for a major rewriting of outdated airlift requirements.

Operation Iraqi Freedom underscored today's delicate balance of needs and capabilities, said Gen. John W. Handy, commander of the joint-service US Transportation Command and USAF's Air Mobility Command. Handy spoke with *Air Force Magazine* in May, shortly after the conclusion of major combat operations.

He said that, when Franks submitted his Iraq war plan for TRANSCOM's

review, it sparked "fairly substantial negotiations" between the commands.

"We have to ... negotiate because of lack of lift," he explained.

Handy said he would have liked to have been in a position to meet the warfighters' requirements, in full, when and where they wanted them to be met. However, he added, Franks had to defer some of the elements he wanted for the major assault. Various military aspects were postponed, "in some cases, by quite a long time," said Handy. At times, things had to be moved with less than optimum efficiency.



Photo by Paul Kennedy

The new Tanker Airlift Control Center at Scott AFB, Ill., is the nerve center of 24-hour-a-day global mobility operations. In the fast-moving war on terrorism, the ability to rapidly move people and machines is a key national asset.

USAF photo by SSgt. Cherie A. Thurby



Leapfrogging from one captured airfield to another, C-17s and C-130s like this one allowed ground forces to maintain their momentum toward Baghdad by bringing forward everything from MREs to M1A1 tanks.

USAF's airlift fleet not only faced the demands of a full-blown war but also had to meet ongoing lift requirements of other regional commanders, support peacekeeping operations in Bosnia and Kosovo, back Operation Noble Eagle homeland defense missions, and help reinforce South Korea—all "right in the heart" of the ongoing Iraqi operation, said Handy.

Was the airlift fleet pressed to its very limits? Yes, said Handy, "categorically." He went on, "We were a very tight rubber band in terms of available lift and air refueling assets."

Handy noted that the airlift and mobility structure is sufficient to transport and sustain a force big enough to fight only one Major Theater War. Given the expanded uses to which airlift was put in Gulf War

II, as well as continuing demands of Operation Enduring Freedom and other contingencies, said Handy, "I firmly believe we need another Mobility Requirements Study."

High Risk

The current requirements document—called MRS-05—was the first to take into account the need for more airlifters to fill special operations requirements. However, MRS-05 was completed before the 9/11 terrorist attacks. It was largely based on diminished airlift requirements then considered adequate for the post-Cold War world. The document noted that the airlift fleet even then was insufficient for known requirements, and it further stated that wartime needs could be met only with "a high degree of risk."

Of course, AMC's responsibilities have surged since then.

Maj. Gen. Edward L. LaFountaine, commander of the Tanker Airlift Control Center at Scott AFB, Ill., said AMC, before the attacks, was running about 250 to 260 missions per day. In the immediate aftermath of the attacks, he went on, the number hit a new plateau in the high 400s and even spiked above 500 missions per day in fall 2001.

When the war in Afghanistan slowed down, the airlift fleet settled back to a new level in the mid-300s per day, he said.

Even that number does not fully convey the extent of AMC's new



USAF photo by SrA. Jorge A. Rodriguez

USAF's C-141s, shown here operating in support of Operation Enduring Freedom, played a role in medical evacuations as well as resupply in Gulf War II. The giant C-5s went everywhere USAF had a runway that was big enough.

workload. Air Combat Command, for example, scores its level of activity by a sortie standard—each combination of a takeoff and a landing counts as a single sortie. AMC scores its activity not by sortie but by mission. Completion of a single mission often requires several takeoffs and landings (i.e., several sorties) over several days.

"It's about a three-to-one multiple of sorties to missions," LaFountaine explained.

In Gulf War II, missions run by AMC increased to a peak of 460 a day, or roughly 1,400 notional sor-

ties. This did not include the activities of airlifters and tankers "chopped"—that is, temporarily assigned—to Central Command, which carried out a combined total of 13,616 airlift and tanking sorties during the conflict.

These figures include missions flown by the commercial aircraft of the Civil Reserve Air Fleet, or CRAF. The CRAF Stage 1 call-up of passenger airplanes greatly reduced the burden on AMC airlifters, which normally are configured for carrying not passengers but outsize and oversize cargo. There was no need for a similar call-up of civilian freighter aircraft; more than enough civilian carriers had already stepped forward and volunteered for duty.

Handy is on record as saying the currently planned procurement of only 180 C-17s is insufficient. He contended that the real requirement even under the old—and now outmoded—MRS-05 standard was more like 222 C-17s. Today's need would go even higher.

Handy wants the Air Force to conduct a new requirements review right away, "while the lessons [of OIF] are all very hot on people's minds" and supporting data are readily available.

He said flatly, "We need to look at the assumptions in MRS-05 and update it."

The Air Force has taken delivery of more than 100 of the advanced C-17 transports. However, said



USAF photo by SSgt. Jeffrey Allen

KC-10s such as this, refueling F-16s over Luke AFB, Ariz., were part of the mobility fleet in Gulf War II. During the war, AMC had to resupply other overseas locations, move reinforcements to Korea, and keep up with training.

Handy, the mobility force can actually call on fewer than 50 C-17s to support an action such as Gulf War II, given other demands on the inventory. These include other operations, test, training, and depot maintenance, Handy noted.

The general does not have a new goal number of C-17s in mind, but he said it should be a "very robust" fleet and exceed the figure of 222 called for under MRS-05. He has tasked his staff to come up with a number that would have allowed AMC to "meet General Franks's initial logistics requirements," as it was first stated. Handy said, "They're still working on that."

The Northern Front

When Turkey decided that US forces could not transit its territory to invade Iraq from the north, it seemed at first that there would be no northern front to the war.

A flight of 15 C-17s, however, was able to bring in 954 troops of the Army's 173rd Airborne Brigade, which parachuted into the war zone on the night of March 26. They landed and regrouped in the vicinity of Iraq's Bashur airfield, which then was taken and used as an American supply hub.

The C-17s staged out of Aviano AB, Italy, not far from Vicenza, where the paratroopers were stationed. Flying direct from Aviano, the first five aircraft dropped equipment while the other 10 dropped



USAF photo by TSgt. Rich Puckett

When Turkey declined to allow US forces to stage from its soil, the work-around was to bring them by air. Without the C-17, there would have been no northern front in Iraq.

paratroopers. Flying in darkness, the C-17 pilots used night vision goggles and made use of special field lighting set up by US Special Operations Forces.

The C-17s deployed another 1,200 troops to Bashur over the next few nights. On April 8, C-17s began the delivery of five US Army M1A1 tanks, five Bradley fighting vehicles, 15 M113 armored personnel carriers, and 41 Humvees, along with other equipment from the 63rd Armored Regiment in Germany. The job required 27 round-trips between Ramstein AB, Germany, and Bashur.

This marked the first time that the big 65-ton Abrams tank had been flown directly into a combat sector, and the airdrop of troops marked the C-17's first combat personnel drop. Both types of operations had been practiced in preceding months.

The C-17 was the only airlifter able to operate on unimproved runways and one of only two aircraft (the other is the C-5) able to lift the Abrams tank. The limit is one Abrams per aircraft per mission.

"The reason we had a northern front in Iraq was because of the C-17," asserted Maj. Gen. Roger A. Brady, AMC's director of operations. "It has the capability to carry a lot of people and supplies into relatively short strips and that's a unique characteristic of that airframe."

Brady reported that M1A1 tanks had been deployed elsewhere in Iraq, too. "We did take in some tanks ... in some other operations in southern Iraq," he said. "Obviously, at one tank per [aircraft], it's not the preferred way to move tanks." The vehicles were moved by aircraft chiefly because of the distances involved and the need to beef up the capability of small ground forces in places such as captured airfields in western Iraq.

The C-17 achieved a mission capable rate during the war of 88.2 percent, and the airplane has been turning in an MC rate "in the high 80s" for years now, said Brig. Gen. Loren M. Reno, AMC director of



USAF photo by TSgt. Stephen Faulisi

Paratroopers of the 173rd Airborne Brigade get "racked and stacked" aboard C-17s at Aviano AB, Italy, in preparation for the flight to Iraq. Nearly 1,000 of the troops went in by night, in the largest combat drop since World War II.

logistics. Its performance has been “magnificent,” he said.

The Vital Tankers

The Air Force’s fleet of aerial refueling aircraft and tanker crews also played a vital role in Iraqi Freedom and demonstrated a surprisingly high mission capable rate while doing it. Some 255 tankers were chopped to CENTCOM for the duration of the conflict.

The KC-135 tanker fleet is old, but that didn’t seem to affect operations too much. “The MC rate for the -135 has been running in the mid-80s,” Reno reported. “They have been workhorses.”

Not long ago, the KC-135 posed a serious problem, with many spending up to 400 days in depot maintenance. In fact, the ramp at Tinker AFB, Okla., was so full of KC-135s



USN photo by Cmdr. Thomas Lalor

A tanker air bridge stretching from Maine to Cyprus kept aircraft moving to the theater in a rolling buildup to and through the start of combat. USAF tankers allowed carrier-based Navy jets in the Mediterranean to get to the fight.



USAF photo by MSgt. Dave Ahlischwede

An AWACS breaks free after an in-flight refueling from a KC-10 during a mission in support of Operation Iraqi Freedom. Tankers were stationed throughout the region, some in bases barely large enough to hold them.

awaiting overhaul at USAF’s Oklahoma City Air Logistics Center that officials there had to turn away airplanes. The long stays were the result of ancient wiring, corroded joints, and the accumulated stresses, cracks, and other maladies typical of aged aircraft.

Tremendous progress has been made at Tinker since then, Reno said. “In the last two-and-a-half years, they have cut in half the number of KC-135s that are in depot status,” he said. Two years ago, he said, 160 KC-135s—about a quarter of the fleet—were in depot maintenance at

any given time. Today, the number is in the 80s.

The improvement is attributable to “improved processes” both by the ALC and its contractors, which have sped up overhauls.

Still, he said, the KC-135 must enter depot maintenance every five years. Lately, aircraft are being virtually rebuilt, due to corrosion and simple age. The average age of the KC-135 is 40 years.

Brady’s conclusion: “Recapitalization, replacement of the tanker fleet is critically important to us.”

After more than a year since the

Air Force first proposed to lease about 100 Boeing 767s configured for aerial refueling, the Pentagon on May 23 announced approval of the plan. It still must pass Congressional scrutiny.

For operations in Afghanistan and Iraq, USAF set up a “tanker bridge” across the Atlantic, supported by a string of critical air bases. At the western terminus were Air Force bases in the northeast United States. Halfway across was Lajes Field, on a Portuguese island in the mid-Atlantic. To the east were the European bases of Rota Air Base and Moron Air Base in Spain, RAF Mildenhall in Britain, Ramstein Air Base and Rhein-Main Air Base in Germany, and then Cyprus and destinations in the theater.

Tankers in the Mediterranean Sea and farther east were placed under the control of the CENTCOM air tasking order. Others were controlled by the Tanker Airlift Control Center. AMC worked hard to make sure all incoming flights were noted in the ATO and to deconflict aircraft.

Navy Grumbling

Some Navy carrier pilots grumbled about the availability of tankers for their needs, but Brady said that that problem “was put to bed pretty well by the Navy” itself. He explained, “If you’re a young O-3 in a fighter and you don’t get your tanker—something happens and [the mission] falls apart—you’re not going to be happy



C-130s ranged across Southwest Asia, bringing supplies to primitive locations. Gen. John Handy believes that, as the Army shifts toward smaller, lighter vehicles, it may be a good time to reassess the number of C-130s in the fleet.

about that. And occasionally that happened.”

He noted that the combined force air component commander, Lt. Gen. T. Michael Moseley, apportioned the tankers “in a way to get the best strike results and to get the best tankers against the best assets and to have the greatest effect on the target. It’s all about target effect.”

Gulf War II saw a huge number of C-130 transports employed in the tactical airlift mode. More than 140 were chopped to CENTCOM, Brady said. Kuwait City, the largest transshipment point for cargo and passengers, hosted most of the C-130s in the theater.

They went into austere locations and established airfields, said Brady, adding, “and they provided intra-theater lift around the [Arabian] peninsula, as well. They did their traditional workhorse job.”

The C-130s were stationed in “half a dozen locations,” Brady said, “but they were all over the place.” The Hercules transports in particular helped the Army keep up the momentum of the charge to Baghdad, he added.

“The Army moved very rapidly,” he explained, “and when you do that, it’s very easy to outrun ... your supplies and your equipment.” The C-130s and C-17s kept the Army and Marine juggernaut rolling.

The Army’s new operational concepts call for moving faster, both by ground and air. Its new fighting ve-



In Afghanistan, it became apparent that USAF needed far more flight crews that are proficient with night vision goggles. AMC quickly trained up from nine special operations crews to several hundred in time for OIF.

hicle, the Stryker, is designed to be air transportable by the C-130. This concept, too, has evolved since MRS-05, and Handy said the C-130 requirement will also need to be revisited.

He continued: “I’ve asked the question, ‘In light of what we’ve seen in Enduring Freedom and OIF, is there a requirement for a good, exhaustive, second look [at tactical airlift], much like MRS did for 2005?’ Should we look at the tactical side and say, ‘What do we need in the way of C-130s? Are we postured appropriately?’”

Handy said he’s seen nothing to

indicate that AMC should transition to an all-C-17 force of strategic airlifters, as some have proposed.

Although C-5s could not go everywhere in the theater as the C-17s did, the Galaxy’s huge throughput capacity makes it a capability too valuable to throw away.

Given the C-5’s capacious volume, Handy said, USAF needs some number of very highly modified, high-mission capable rate C-5s. “We still need both [the C-17 and the C-5], but I certainly can’t trade one off for the other,” he insisted. “I’ve got to work the modifications on the C-5 and work the acquisition of more C-17s.”

Blackout Conditions

The Air Force moved quickly to outfit the entire airlift fleet to be able to work at night in blackout

conditions. Brady said the Air Force learned from the war in Afghanistan that it did not have enough people trained to do night-vision-goggles landings. “Only our special-ops-trained folks in the C-17 had been trained to do that,” he noted. They numbered just nine crews.

“So we started a crash program to get as many C-17 and C-130 crews as we possibly could trained to conduct air-land operations on night vision goggles,” Brady added. “Now, we have several hundred crews that can do that.”

The move required quick-turn con-

tracting to obtain cockpit lighting filters so that C-130 crews, particularly, could use the NVGs, Brady said. The C-17 already came equipped with the proper lighting. "All you do is flip a switch," he explained.

Another big winner, said LaFountaine, was the ability to "leapfrog" tanker airlift control elements, which did advance work on expeditionary air bases. They would set up air traffic control, lighting, navigation aids, and ground handling equipment in a bare-bones location, then, as soon as it was up and running, move on to another base. USAF had 10 TALCEs and each set up about three bases in Saudi Arabia, Jordan, Romania, Bulgaria, Turkey, and Iraq.

Newly formed Global Assessment Teams—the "leading elements for TALCEs"—would travel with Army and Marine units either overland or as paratroopers, said LaFountaine. Upon arrival at a captured airfield, GAT members would evaluate its suitability for operations and order what was needed to make it usable.

"It worked extremely well," he said.

AMC expects to see a slight downturn in availability of airlifters and tankers for several months, but the dip will in no way resemble the massive reconstitution that followed the 1991 Gulf War, 1999 conflict in Kosovo, or 2001 war in Afghanistan.

In Desert Storm, every available



USAF photo by MSgt. Ronny Przynsucia

Dependence on aerial tankers became all too apparent in Operation Iraqi Freedom. DOD has decided to pursue a third type of tanker, as insurance against a possible grounding of the KC-135.

airlifter was rushed into the theater—some only half painted. That didn't happen this time around. "AMC this time did not accelerate or compress any aircraft that were in [programmed depot maintenance]," Reno boasted. "Accelerate means do the work faster; compress means there's some work you don't do so you can get the aircraft out of PDM faster. We did not do either in this war."

Moreover, he said, no aircraft scheduled for depot were delayed in going there. "We stayed on the plan we had before the war," Reno said. Air Force Materiel Command did,

however, give AMC a list of aircraft that could be compressed or accelerated if the need arose, he noted.

Reno explained, however, that many work-arounds were employed to boost the number of aircraft available for the conflict and that the fleet will require a short recovery period.

Aircraft washings—done not to make the airplanes attractive but to fight corrosion—were deferred, but must now be accomplished. Maintenance checks of aircraft, such as the C-5, were postponed and must now be performed.

Some of these items could be deferred without affecting the long-term health of the airplanes, Reno said, because they were typically done at the "forward edge" of the target period. They were pushed to the rear of the target period.

"What we try to do is reconstitute on the fly," Handy explained. "We don't defer maintenance, we don't defer depots; we try to work those requirements in the middle of everything that we're doing, because we know there's not going to be some downtime ... to take three months or six months and recover. I'd love to do that for the people, I'd love to do that for the weapon systems, but we find no time to do either."

He went on to say that he didn't expect a letup.

"I don't see any end in sight," he said. "We must posture ourselves at some degree of surge for some period of time." ■

USAF photo by SSgt. Wayne Clark



Brand-new Tunner and Halvorsen loaders played a critical role in OIF, showing the importance of investing in things that may not be flashy or glamorous but which make all the difference in the crunch.

In Gulf War II, the Air Force and Army discovered a new “sweet spot” in combat cooperation.

Hand in

By Rebecca Grant



IN RECENT years, the Air Force and Army periodically have pushed to improve their cooperation in joint warfare. The AirLand Battle doctrine of the 1980s coordinated some service strengths. The so-called “31 Initiatives” of that era helped to shape USAF’s E-8 Joint STARS aircraft. There were other, lesser steps.

Gulf War II, however, took integration to new highs, and now some view it as the distinguishing feature of warfare, US style.

That’s the view of Richard H. Sinnreich, a former director of the Army School of Advanced Military Studies. “If there is a single thing that jumps out at you about Iraq,” he told the *Los Angeles Times*, “it is that combined arms works like gangbusters.”

Retired Navy Vice Adm. Arthur K. Cebrowski, director of the Pentagon’s Office of Force Transformation, reached much the same conclusion about Operation Iraqi Freedom. “When the lessons learned come out, one of the things we are probably



Higher and Higher. Most combat aircraft were capable of precision attack. Even B-52s (such as this one from the 40th Expeditionary Bomb Squadron) could provide CAS from higher-than-ever altitudes.

USAF photos by TSgt. Richard Freeland and (above) SrA. Tammy L. Grider

Glove



Desert Destruction. Tank carcasses (here, hulk of an Iraqi T-55) were a common sight. The goal was to move beyond “deconfliction” and harmonize the combat power of air and land forces.

going to see is a new air-land dynamic,” he said recently. “It is as if we will have discovered a new sweet spot in the relationship between land warfare and air warfare.”

Finding that sweet spot was no sure thing. The 1991 Gulf War coalition won a major victory, but cooperation of air and land components fell short in several key areas.

Sparks flew over placement of the fire support coordination line, alleged inflexibility of the air component’s air tasking order, and even the tally of Iraqi tanks, armored vehicles, and artillery pieces destroyed by airpower. Most important was the difficulty the two services had in adapting to an unexpected event: the rapid, organized retreat of Republican Guard divisions one day after the ground war started.

Gen. H. Norman Schwarzkopf, the commander of US Central Command in Gulf War I, relied heavily on airpower throughout, but he began downplaying its impact as soon as victory was in sight. In his famous televised briefing of Feb. 27, 1991, the night before the cease-fire took effect, he

said airpower had been effective initially but had been less so in the war’s latter stages.

Schwarzkopf’s statement angered airmen who had executed a high-intensity, 38-day-long air campaign that had shredded Iraq’s ground forces and made possible a 100-hour Army walkover against a devastated enemy. “The truth was, his remarks hurt,” said Gen. Buster C. Glosson, who was the chief air campaign planner, in his recent book *War With Iraq*.

McPeak’s Words

The game of ego wounding turned into an equal opportunity sport. Gen. Merrill A. McPeak, the Air Force Chief of Staff, made a quiet but bold statement at a March 15, 1991, Pentagon news briefing. “My private conviction,” McPeak declared, “is that this is the first time in history that a field army has been defeated by airpower.” Though McPeak swaddled his words in effusive praise for coalition ground forces, the damage was done.

Gulf War histories such as *Cer-*

tain Victory: The US Army in the Gulf War, written by Army Brig. Gen. Robert H. Scales Jr., documented profound bitterness caused by misunderstanding of the air component’s target selection process. Two corps commanders, Army Lt. Gens. Gary E. Luck and Frederick M. Franks Jr., were unconvinced that airpower was striking hard enough at enemy forces they would face in battle. In his book, Scales wrote, “The number of corps-nominated targets actually flown quickly became the litmus test for air support.”

In fact, wartime analysis showed that a large number of corps-nominated targets were based on outdated intelligence and thus weren’t worth striking. However, corps commanders were not back-briefed on why some targets were hit and others not. This was largely an organizational failure. Because Schwarzkopf had made himself the commander of coalition ground forces, there was no three-star land component commander to work out problems with the three-star air component commander, Lt. Gen. Charles A. Horner.

In short, “jointness” did not reign supreme.

Misunderstanding festered into a mistrust that infected professional and public debate. Looking back on that time, USAF’s Gen. Richard B. Myers, Chairman of the Joint Chiefs of Staff, said in a recent interview with *Defense News*, “We were basically in a deconfliction mode.”

For the rest of the decade, there were few real-world opportunities to test air and land component coordination within conventional operations. Airpower dominated military action in the 1990s. Operation Deliberate Force in Bosnia in 1995 employed airpower first, with US ground forces entering the region much later as peacekeepers. In 1999, Operation Allied Force in the Balkans ran for 78 days with no land component involvement and no ground operations until after the cease-fire in June.

In 2001, Operation Enduring Freedom made its mark with a different air-land dynamic. The fight featured Special Operations Forces backed by persistent, joint airpower. The coterie of SOF units worked undercover to maneuver various sets of Afghan allies to victory against Taliban-held cities. However, the role for conventional US ground forces was small. There was no land component commander in theater until mid-November 2001, a month after the start of the war.

Integration of the air and land com-

ponents was not tested in conventional combat until operations in Afghanistan entered a new phase in early 2002.

Up From Anaconda

The forces of Enduring Freedom made the transition to peacekeeping and stabilization missions in early 2002. One of the remaining tasks was to clear concentrations of surviving al Qaeda and Taliban fighters. One such concentration was pinpointed in the Shah-e-Kot Valley of eastern Afghanistan, near the Pakistani border, and on March 2, 2002,

Maj. Gen. Franklin L. “Buster” Hagenbeck, coalition force land component commander forward, launched Operation Anaconda.

Anaconda was designed to quickly clear the enemy from the valley, but it ran into trouble as the opposition in the wintry, mountainous terrain proved much fiercer than expected. Airpower became the major source of fire support for Hagenbeck’s 1,411 men on the ground and SOF teams working near them.

After a rough start, airpower and some smart tactical decisions by the troops on the ground got the opera-



US Army photo by Spc. Andres J. Rodriguez

Lessons Learned. US soldiers take part in Operation Anaconda in Afghanistan, which sparked an Air Force–Army effort to improve close air support planning, equipment, and control measures.

US Army photo by Sgt. Kevin P. Bell



Close Contact. USAF member attached to the Army’s 101st Airborne Division (note “Screaming Eagles” patch) receives medals for actions in Anaconda. (Photo has been cropped and retouched to protect the identity of this airman.)

tion back on track and the Shah-e-Kot Valley was cleared in two weeks.

The number of al Qaeda and Taliban enemy in the valley exceeded estimates by several hundred fighters. For the Army, it was an unpleasant surprise. From the start, moreover, it was apparent that the air and land components were not in sync. Too many things went wrong. Planning was rushed. The staff of CFLCC main headquarters was in Kuwait, which was too distant from air component staffs in Saudi Arabia and Shaw AFB, S.C.

Most important, air component planners got word about the major operation very late. There was only time to put in place a skeleton version of the standard theater air control system needed to provide close air support to engaged Army forces.

Mobility also suffered. In a period when all fuel, ammunition, supplies, and personnel came into Afghanistan only by air, the planning countdown left little time for working air-lift requirements.

Understanding between the components suffered. For example, the ground component fire support coordinator, Lt. Col. Christopher F. Bentley, criticized air control mechanisms as “inflexible and not well-suited to support a nonlinear, asymmetrical battlefield.”

The technology and tactics were there. Operation Anaconda proved that airpower could on short notice pour munitions into a small area, helping ground forces stand against stiff resistance and accomplish their objectives with minimal casualties.

Yet no matter how well individuals performed, their valor compensated in part for shoddy operational-level planning and the inadequate working relationships between the two components. The Anaconda experience revealed that nearly every area of air and land component coordination needed some work.

Helping to focus on the problem was the looming war with Iraq. If the miscues of Operation Anaconda played out on a larger scale, the war might founder.

Senior service leaders responded. Talks between Air Force and Army three- and four-star generals quickly identified practical improvements for close air support equipment and control measures.

At the operational level, Air Force Maj. Gen. Daniel P. Leaf was sent to Camp Doha, Kuwait, to be the air component liaison to the land component commander. Preparing for war in Iraq demanded that the air and land components leave nothing to chance.

The Problem of Iraq

Despite the success of Operation Desert Storm a decade earlier, many had misgivings about attacking the regime of Saddam Hussein, which they thought would be tougher this time around. In fact, Myers told reporters in early March, Operation Iraqi Freedom would be very different from the first Gulf War.

This time, the US and its coalition partners had to take Baghdad. The strategic problem was different, too. In 1991, Iraq massed regular Army



US Army photo by Spc. Daniel T. Dark

Hammer and Anvil. Enemy forces were kept on the move—and forced into the open—by both ground and air attack. This Iraqi tank was destroyed by elements of the 7th US Cavalry, Ft. Stewart, Ga.

forces in a line along the border with Saudi Arabia. Top-flight Republican Guards forces were behind the front line in a mutually supporting formation that guarded the escape routes north to Basra and on to Baghdad.

As 2003 began, Iraq's forces were in much different positions; they were stationed throughout Iraq. A new force of Special Republican Guards, consisting of four brigades with about 15,000 soldiers each, had been formed to protect Baghdad itself. The mechanized and infantry divisions of the Republican Guards were divided into two corps. The Northern Corps defended outer Baghdad while the Southern Corps, headquartered at al Hafreia, had to watch out for a possible US invasion from Kuwait.

In the forthcoming battle, defeating Iraq's Republican Guards was the key. The question was whether the Republican Guards might have a chance to retreat back into Baghdad itself and set the stage for bloody urban combat.

Added to the operational challenges, the global war on terrorism came with its own set of rules. Warfighters had to reduce the impact on civilians for any war to be deemed a political as well as a military success. It was a point that was made by none other than the combined force air component commander himself, Lt. Gen. T. Michael Moseley.

“The sensitivity that the CINC and all of us have as component com-

manders is to absolutely totally minimize the collateral damage and absolutely totally minimize the effect on the civilian population,” he said during an April 5 news briefing.

Speed was also important. A war that dragged on would jeopardize the fragile political support for the operations in Iraq and increase the risks to those fighting it. Iraqi chemical and biological weapons were deemed a real threat, and no one wanted to give Iraqi forces the time to use them.

Out of these considerations emerged the OIF plan. It hinged on ground forces making a rapid thrust to Baghdad. Still, there would be a gap between the time the ground forces jumped off from Kuwait and when they encountered the Republican Guards outside of Baghdad.

The Game Changes

The key to a swift war would be to pin down and attrit those Republican Guards forces so they could not move back into defensive positions inside Baghdad. Until the ground forces made contact, it was a job for airpower.

The operation began on March 20 (local Baghdad time) with F-117 fighter and Tomahawk cruise missile strikes. Air strikes against Republican Guards targets began right away, too. Ground forces started moving several hours later. After about 24 hours, the 3rd Infantry Division had moved 100 miles into



Warthog-o-rama. A-10 attack aircraft (such as this one taxiing at Bagram Air Base) had field days in Afghanistan and Iraq, pulverizing enemy vehicles and suppressing ground fire.

Iraq. By March 24, they were at Karbala, 50 miles from Baghdad.

Here the game changed. Two armored divisions of Republican Guards stood in the way. The Hammurabi took up a supporting position behind the Medina, just as they had done in the first Gulf War. Then came the sandstorm. From March 24 through March 26, blowing sand and dust plunged the region into a gritty brownout. In this crucial interval, it was up to airpower to seal off any attempted maneuver by Iraq's best forces.

The Army's V Corps commander, Lt. Gen. William S. Wallace, made his move—and encountered the unexpected. He stretched the fire support coordination line out to the Republican Guards forces and attacked with Apache helicopters, which suffered combat damage so extensive that the helicopter attack had to be called off. "The attack of the 11th Aviation on the Medina Division did not meet the objectives that I had set for that attack," Wallace told reporters in early May.

This time, however, the air and land components were ready to deal with the unexpected. A-10s flew cover to suppress ground fires on subsequent missions. Joint STARS radar aircraft and other sensor platforms tracked two separate columns of the Republican Guard on the move. Heavy air attacks knocked them out. As Moseley said, "The strikes on those formations have been devas-

tating and have been decisive in breaking them up."

Air attacks on the Republican Guards put the campaign in a good position. Wallace identified the culminating point as a series of five coordinated attacks by the 3rd Infantry Division and the 101st Airborne and 82nd Airborne Divisions, all starting early in the morning on March 30.

Wallace explained: "As we completed those attacks, defeated the enemy in and around al Hillah—which is the first time, by the way, that we had confirmed contact with the Re-

publican Guard—we began to receive reports from our [unmanned aerial vehicles] and aerial observers and from our intelligence folks that the Iraqi Army was repositioning. And it was about 3, maybe 4 in the afternoon on a beautiful sunlit day, low wind, no restrictions to flight, and at that point the US Air Force had a heyday against those repositioning Iraqi forces."

Airpower Made the Difference

The Republican Guard units never got the chance to mount coordinated resistance; the Guard divisions had suffered grievous losses. A few counterattacks did occur, but the power of the Republican Guard to be spoilers in the battle of Baghdad melted away under the impact of coalition strikes.

Mastery of the air enabled other operations to proceed smoothly. In a stunning display, the 101st and 82nd Airborne separately conducted air assaults that secured key airfields, allowing close air support aircraft to move closer to the scene of action. The 3rd Infantry's audacious entry into Baghdad provided a healthy dose of shock and awe. Moseley applauded the "incredibly brave US Army and US Marine Corps troops who have been able to capitalize on the effect that we've had on the Republican Guard and the fielded forces and have been able to exploit that success."

Four factors strengthened the co-



Watch on Iraq. USAF flew advanced ISR aircraft (such as this RQ-1B Predator) around the clock, a step that gave ground commanders an unprecedented view of the battlespace.

operation between the air and land components.

One was the vastly improved intelligence-surveillance-reconnaissance capabilities now available to the combined air operations center and Army command posts. Platforms such as the Joint STARS, U-2, and Global Hawk UAV put together a superior real-time picture of the battle by exploiting various types of sensor information. Over Baghdad, USAF operated four Predator UAVs at a time. The combination made possible strike coordination and reconnaissance—in other words, using sensor platforms in near real time to identify and verify targets, then check on damage assessments. Commanders could therefore “see” the effects on the Republican Guard units. Combined with better communications, the net effect was also to give a better integrated view of joint operations.

Commented Adm. Edmund P. Giambastiani Jr., commander of US Joint Forces Command: “We had probably more situational awareness on where our own forces were than we’ve ever had on any battlefield before.”

Second, as foreshadowed in Operation Allied Force and in Enduring Freedom, coalition airpower attained a new level of precision and persistence. Only nine percent of the munitions employed in Operation Desert Storm were precision munitions. The early total for precision in Iraqi Freedom was 68 percent. With all fighters and bombers capable of precision attack, and with most able to plug into an enhanced ISR network, the value of each sortie rose exponentially.

Third, OIF planners would have air supremacy from the outset. It did not take 38 days to set conditions for land attack this time. Daring land component actions—from the use of just a few divisions to the stretching out of supply lines—rested in a framework of air dominance carved out months before the operation began. Between June 2002 and March 2003,



USMC photo by Gunnery Sgt. Matthew M. Smith

Collapse of a Tyranny. The Republican Guard, whose troops wore the red triangle on the sleeve, were crushed between the force of coalition airpower and Army, Marine Corps, and allied land forces.

coalition aircraft “actually flew about 4,000 sorties against the integrated air defense system in Iraq and against surface-to-air missiles and their command and control,” according to Air Force Chief of Staff Gen. John P. Jumper. “By the time we got to March, we think that they were pretty much out of business,” he added.

From Day 1

Day 1 air dominance helped make it possible to move up the timetable for the ground attack and seize the oil fields on short notice. Airpower was also the backup to SOF teams working in Iraq months before OIF started. During the main phase of the campaign, persistent airpower was on tap to seek out and destroy Iraqi forces or deliver close air support when requested. As a result, the coalition could afford to risk rapid forward movement of ground forces, bypassing cities and leaving long supply lines relatively open. Airpower could quickly defend the flanks.

Finally, there was a real desire to move beyond what Myers called the “deconfliction” mind-set of the past to create greater harmony between the air and land components—and

cash it in for devastating combat effectiveness.

Credit in part the deliberate, incremental effort to cultivate better joint relationships—to find the “sweet spot” of operational success. Joint tours and joint education are now a way of life and a requirement for promotion for top officers across the services. Today’s colonels and generals are more likely than ever to have a personal, practical experience base of joint operations that becomes part of instinct as commanders.

The climate at the top is propitious. The annual Army–Air Force Warfighter Talks among four-star generals began anew in the mid-1990s to try to find common ground on programs and to close some of the gaps in perspective.

It is too soon to say whether OIF success will lead to permanent bonds between air and land operations. Moseley has gone out of his way to spread credit around and describe success in joint terms. Land component kudos have not been as frequent or as lavish. The institutional tensions caused by transformation efforts could also sour the relationship yet again.

Thus, further integration may not be easy, but future operations will have the success of OIF as a solid foundation. In the words of Moseley: “I’ve had five joint assignments, and this is the best joint cooperation that I have seen.” ■

Rebecca Grant is a contributing editor of Air Force Magazine. She is president of IRIS Independent Research in Washington, D.C., and has worked for RAND, the Secretary of the Air Force, and the Chief of Staff of the Air Force. Grant is a fellow of the Eaker Institute for Aerospace Concepts, the public policy and research arm of the Air Force Association's Aerospace Education Foundation. Her most recent article, "Quesada the Conqueror," appeared in the April issue.

The US Air Force led the way in every aspect of the air effort.

The Gulf War II Air Campaign, by the Numbers

By Robert S. Dudley, Editor in Chief

The United States Air Force dominated the Gulf War II air campaign, contributing to the coalition effort 863 aircraft and 24,196 combat and support missions of all types.

Those and other data are contained in a summary of airpower statistics prepared by the staff of Air Force Lt. Gen. T. Michael Moseley, head of Central Air Forces under US Central Command.

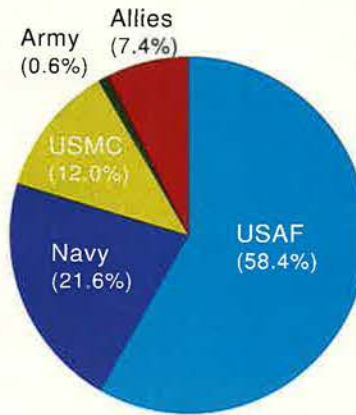
Moseley was CENTCOM combined force air component commander—the “air boss”—throughout Operation Iraqi Freedom. The air compo-

nent comprised forces from not only the US Air Force but also the Navy, Marine Corps, Army, Royal Air Force, Royal Australian Air Force, and Canadian Air Force.

Moseley’s unclassified 16-page report, dated April 30, carries the title “Operation Iraqi Freedom—By the Numbers.” It covers the period March 19 through April 18.

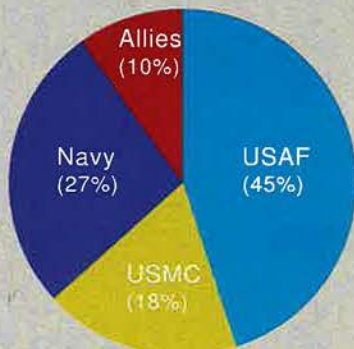
The report said that Air Force aircraft turned in nearly 60 percent of the coalition's 41,404 sorties. USAF notably dominated the strike and mobility categories of sorties. Data does not include Special Operations Forces, Army helicopter, and coalition sovereignty flights.

Total Air Sorties



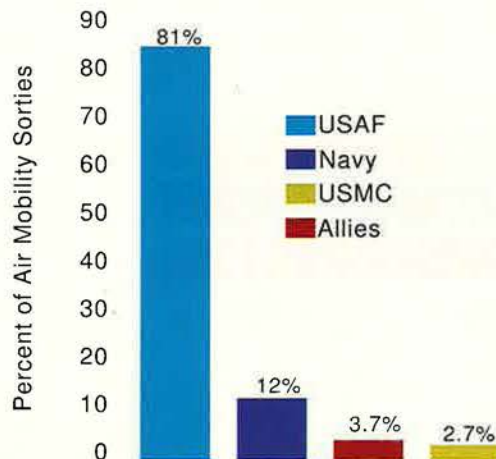
| | Fighter | Bomber | Tanker | Airlift | C2 | ISR | Rescue | Other | Total |
|--------------|---------------|------------|--------------|--------------|--------------|--------------|------------|--------------|---------------|
| USAF | 8,828 | 505 | 6,193 | 7,413 | 432 | 452 | 191 | 182 | 24,196 |
| Navy | 5,568 | 0 | 2,058 | 0 | 442 | 357 | 0 | 520 | 8,945 |
| USMC | 3,794 | 0 | 454 | 0 | 75 | 305 | 0 | 320 | 4,948 |
| Army | 0 | 0 | 0 | 0 | 0 | 269 | 0 | 0 | 269 |
| Allies | 2,038 | 0 | 359 | 263 | 112 | 273 | 0 | 1 | 3,046 |
| Total | 20,228 | 505 | 9,064 | 7,676 | 1,061 | 1,656 | 191 | 1,023 | 41,404 |

Strike Sorties



| | Fighter | Bomber | Total | Percent |
|--------------|---------------|------------|---------------|---------|
| USAF | 8,828 | 505 | 9,333 | 45.0% |
| Navy | 5,568 | 0 | 5,568 | 26.9% |
| USMC | 3,794 | 0 | 3,794 | 18.3% |
| Army | 0 | 0 | 0 | 0 |
| Allies | 2,038 | 0 | 2,038 | 9.8% |
| Total | 20,228 | 505 | 20,733 | |

Air Mobility Sorties



| | Tanker | Airlift | Total | Percent |
|--------------|--------------|--------------|---------------|---------|
| USAF | 6,193 | 7,413 | 13,606 | 81.3% |
| Navy | 2,058 | 0 | 2,058 | 12.3% |
| USMC | 454 | 0 | 454 | 2.7% |
| Army | 0 | 0 | 0 | 0 |
| Allies | 359 | 263 | 622 | 3.7% |
| Total | 9,064 | 7,676 | 16,740 | |

The coalition conducted some 20,000 individual strikes, some requiring use of more than one weapon.

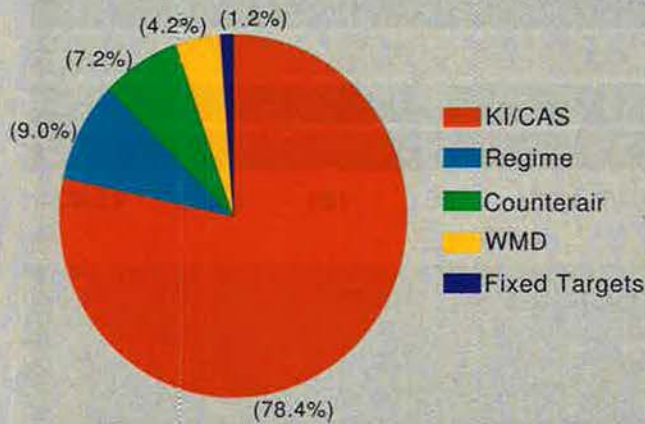
The air component devoted an overwhelming amount of its effort—some 78 percent—to support of ground forces. These were called “kill box interdiction/close air support,” or KI/CAS missions.

Coalition aircraft attacked 156 “time-sensitive targets,” which are fleeting in nature, and 686 “dynamic targets,” meaning those that are mobile and of high importance.

Dynamic Targets Struck

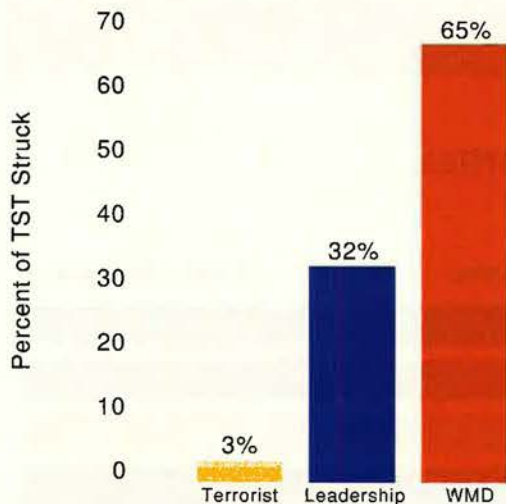
| | | |
|--------------|------------|-----|
| South | 243 | 35% |
| West | 271 | 40% |
| North | 172 | 25% |
| Total | 686 | |

Strikes by Category



| | |
|---------------|---------------|
| KI/CAS | 15,592 |
| Regime | 1,799 |
| Counterair | 1,441 |
| WMD | 832 |
| Fixed targets | 234 |
| Total | 19,898 |

Time-Sensitive Targets Struck



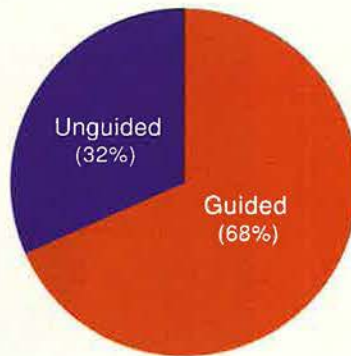
| | |
|--------------|------------|
| Terrorist | 4 |
| Leadership | 50 |
| WMD | 102 |
| Total | 156 |

The study reported that coalition aircraft dropped on Iraq a total of 29,199 bombs, rockets, and missiles of all varieties.

Gulf War II featured heavy use of precision guided weapons, or those guided to the target by laser beams, satellite signal, or TV image matching. Two-thirds of the expended munitions—19,948—were of the precision guided type.

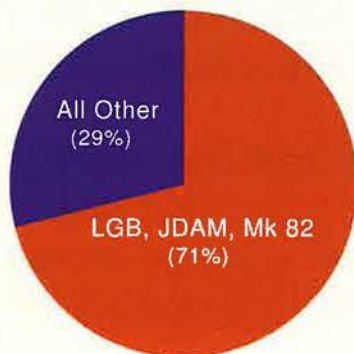
In heaviest use were the laser guided bomb, Joint Direct Attack Munition, and Mk 82 iron bomb. These three types accounted for 71 percent of all munitions expended. The rest was divided among 16 other types.

Munitions Expended



| | |
|--------------|---------------|
| Guided | 19,948 |
| Unguided | 9,251 |
| Total | 29,199 |

Most Popular Munitions



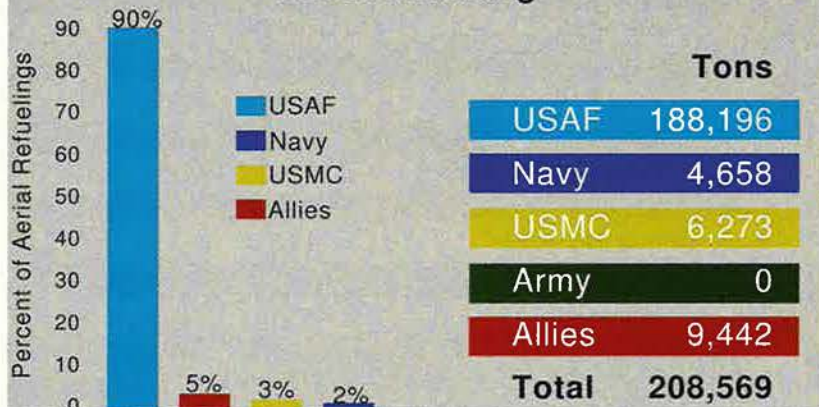
Air Force aerial tankers provided critical support for all other aircraft, delivering 90 percent of the 208,569 tons of jet fuel offloaded in the sky.

Another major support effort—theater and medical transport—generated 2,478 sorties during the war.

Munitions Use By Type

| | | |
|-----------------|---------------|--------|
| LGB | 8,618 | 29.51% |
| GPS-JDAM | 6,542 | 22.40% |
| Mk 82 | 5,504 | 18.85% |
| Mk 83 | 1,692 | 5.79% |
| M117 | 1,625 | 5.57% |
| Maverick | 918 | 3.14% |
| GPS-WCMD | 908 | 3.11% |
| TLAM | 802 | 2.75% |
| Allied guided | 679 | 2.33% |
| Hellfire | 562 | 1.92% |
| HARM | 408 | 1.40% |
| JSOW | 253 | 0.87% |
| CBU-99 | 182 | 0.62% |
| CALCM | 153 | 0.52% |
| Allied unguided | 124 | 0.42% |
| CBU-87 | 118 | 0.40% |
| GPS-LGB | 98 | 0.34% |
| Other guided | 7 | 0.025% |
| Mk 84 | 6 | 0.021% |
| Total | 29,199 | |

Aerial Refueling



Air Force Theater Transport

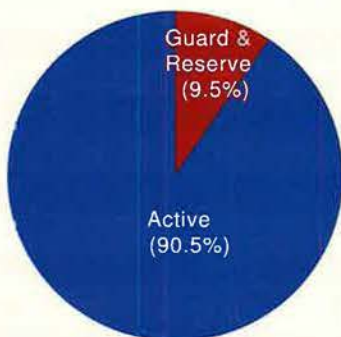
| | Missions | Persons |
|--------------|--------------|---------------|
| C-130 | 2,203 | 9,662 |
| Medevac | 136 | 1,572 |
| DV aircraft | 139 | 641 |
| Total | 2,478 | 11,875 |

Coalition nations deployed 466,985 active, National Guard, and Reserve airmen, soldiers, sailors, Marines, and Coast Guardsmen.

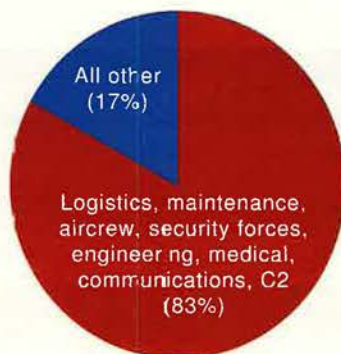
Of the coalition total, 423,998—91 percent—were American. Almost 10 percent of the US force came from the Guard and Reserve.

Half of the Americans—233,342—were soldiers. USAF provided 54,955 troops. Seven USAF personnel categories—logistics, maintenance, aircrew, security forces, engineering, medical, communications, and command and control—accounted for four-fifths of the total.

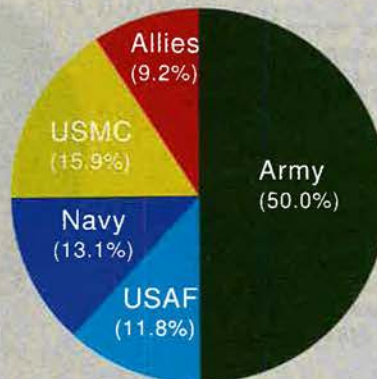
The US Force Mix



USAF Breakdown



Total Personnel



| | Active | ANG | AFRC | Total |
|--------------|----------------|---------------|---------------|----------------|
| USAF | 45,664 | 7,207 | 2,084 | 54,955 |
| Army | 213,793 | 8,866 | 10,683 | 233,342 |
| USMC | 64,904 | 0 | 9,501 | 74,405 |
| Navy* | 59,240 | 0 | 2,056 | 61,296 |
| Allies | 42,987 | 0 | 0 | 42,987 |
| Total | 426,588 | 16,073 | 24,324 | 466,985 |

*Navy number includes 681 Coast Guard.

US Air Force Personnel Categories

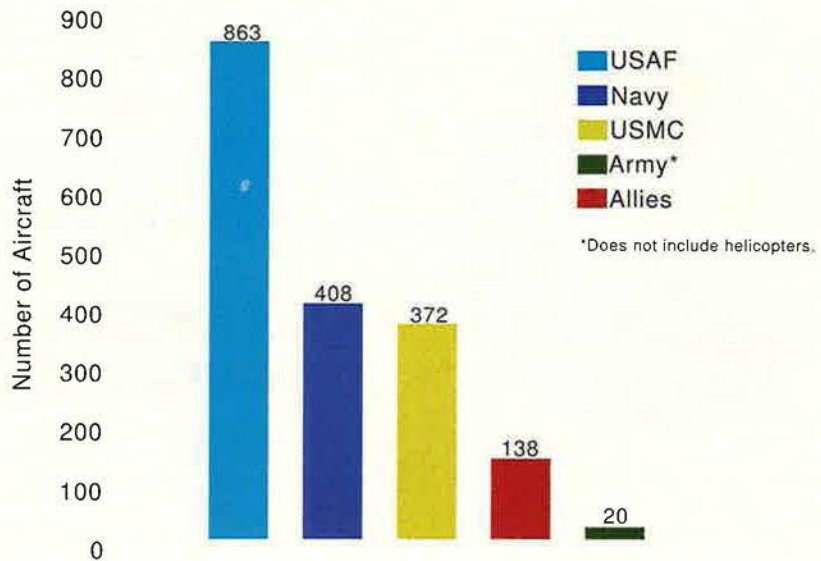
| | | |
|-------------------------|---------------|-------|
| Logistics & maintenance | 21,829 | 39.7% |
| Aircrew (all) | 7,040 | 12.8% |
| Security forces | 4,825 | 8.8% |
| Engineering | 4,592 | 8.4% |
| Medical | 3,104 | 5.6% |
| Communications | 2,431 | 4.4% |
| Command & control | 1,857 | 3.4% |
| Other | 3,757 | 6.8% |
| Services | 1,784 | 3.2% |
| Intelligence | 1,356 | 2.5% |
| Aircrew support | 999 | 1.8% |
| Mission support | 521 | 0.9% |
| Financial/acquisition | 464 | 0.8% |
| Chaplains & support | 143 | 0.3% |
| Investigations | 152 | 0.3% |
| Legal | 80 | 0.1% |
| Historians | 21 | 0.0% |
| Total | 54,955 | |

The air armada in the Gulf comprised 1,801 combat and support aircraft (not counting US Army helicopters).

The Air Force provided 51 percent of the combat aircraft and all of the heavy bombers. Most of the tanker, airlift, and ISR aircraft came from USAF units. The Air National Guard and Air Force Reserve accounted for more than 300 aircraft.

The mission capable rates for most aircraft flying in Gulf War II were quite high. For example, the B-1B, B-2, and B-52 bombers all turned in MC rates above 75 percent. The MC rate for most fighters topped 80 percent.

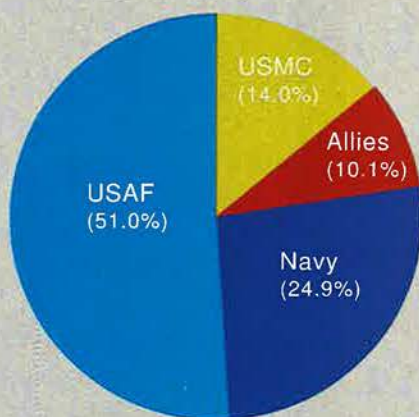
Total Coalition Aircraft



| | Fighter | Bomber | SOF | ISR | C2 | Airlift | Tanker | Other | Total |
|--------|---------|--------|-----|-----|----|---------|--------|-------|-------|
| USAF | 293 | 51 | 131 | 60 | 22 | 111 | 182 | 13 | 863 |
| Navy | 232 | 0 | 0 | 29 | 20 | 5 | 52 | 70 | 408 |
| USMC | 130 | 0 | 0 | 0 | 0 | 0 | 22 | 220 | 372 |
| Army* | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 2 | 20 |
| Allies | 80 | 0 | 14 | 11 | 4 | 10 | 12 | 7 | 138 |

*Does not include helicopters.

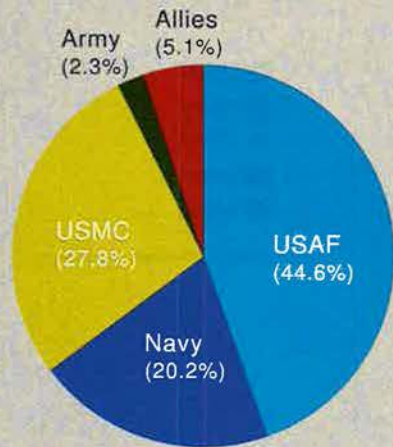
Combat Aircraft



| | Fighter | Bomber | SOF | Total |
|--------|---------|--------|-----|-------|
| USAF | 293 | 51 | 131 | 475 |
| Navy | 232 | 0 | 0 | 232 |
| USMC | 130 | 0 | 0 | 130 |
| Army* | 0 | 0 | 0 | 0 |
| Allies | 80 | 0 | 14 | 94 |

*Does not include helicopters.

Support Aircraft



| | ISR | C2 | Airlift | Tanker | Other | Total |
|--------|-----|----|---------|--------|-------|-------|
| USAF | 60 | 22 | 111 | 182 | 13 | 388 |
| Navy | 29 | 20 | 5 | 52 | 70 | 176 |
| USMC | 0 | 0 | 0 | 22 | 220 | 242 |
| Army | 18 | 0 | 0 | 0 | 2 | 20 |
| Allies | 11 | 4 | 10 | 12 | 7 | 44 |

ANG and AFRC Aircraft

| | ANG | AFRC | Total |
|--------------|------------|-----------|------------|
| A-10 | 47 | 12 | 59 |
| B-52 | 0 | 6 | 6 |
| C-130 | 72 | 6 | 78 |
| E-8 | 9 | 0 | 9 |
| EC-130 | 1 | 0 | 1 |
| F-16 | 45 | 6 | 51 |
| HC-130 | 0 | 4 | 4 |
| HH-60 | 3 | 6 | 9 |
| KC-135 | 57 | 22 | 79 |
| MC-130 | 2 | 6 | 8 |
| Total | 236 | 68 | 304 |

Mission Capable Rates, USAF Aircraft

| Type | Aircraft | Percent |
|---------|----------|---------|
| Attack | A-10 | 85.0% |
| | AC-130 | 91.0% |
| Bomber | B-1 | 79.4% |
| | B-2 | 85.0% |
| | B-52 | 76.7% |
| Fighter | F-15C | 82.6% |
| | F-15E | 84.1% |
| | F-16C | 73.9% |
| | F-16CG | 84.0% |
| | F-16CJ | 80.4% |
| | F-117 | 89.3% |
| Tanker | KC-10 | 81.7% |
| | KC-135 | 86.4% |
| Airlift | C-130 | 88.4% |
| | C-20 | 100.0% |
| | C-21A | 96.4% |
| ISR | E-3B | 80.7% |
| | E-8C | 70.0% |
| | EC-130E | 87.8% |
| | EC-130H | 97.8% |
| | RC-135 | 80.8% |
| | U-2 | 79.1% |
| SOF | HH-60 | 88.5% |
| | MH-53M | 82.0% |
| | UH-60A | 100.0% |
| UAV | MQ-1 | 77.2% |
| | RQ-1 | 76.6% |
| | RQ-4 | 74.1% |

Verbatim

By John T. Correll, Contributing Editor

No Pork, No Promotions

"This is a problem created by the Air Force that can easily be solved by the Air Force."—*Will Hart, spokesman for Republican Sen. Larry E. Craig of Idaho, who put a hold on promotions of 850 USAF officers because the Air Force did not station four more C-130 aircraft at the Air National Guard base in Boise, Idaho, New York Times, June 9.*

No Freedom Fries for Him

"I doubt he'll be coming to the ranch any time soon. There are some strains in the relationship, obviously, because it appeared to some in our Administration and our country that the French position was anti-American."—*President George Bush, about French President Jacques Chirac, interview with NBC's Tom Brokaw, April 25.*

The Airhead and the Arrogant

"It was clear that we hadn't hit it off. He thought I was some kind of airhead academic, and I thought he was rather an arrogant young member of Congress. Probably we were both right."—*Vice President Dick Cheney on his first meeting (in 1968) with Defense Secretary Donald H. Rumsfeld, Hudson Institute, May 13.*

Bizarro History

"I see no difference between the invasion of Iraq and the invasion of Poland in 1939."—*Scott Ritter, former UN weapons inspector, to Berliner Zeitung newspaper, cited in London's Daily Telegraph, May 7.*

Our Fault, Of Course

"Thanks to President Bush's decision to ignore the United Nations and go it alone in Iraq, the world body suffered a huge loss of political credibility."—*Reporter Helen Thomas, Hearst Newspapers, May 16.*

Booed Off the Stage

"We have forfeited the goodwill, the empathy the world felt for us after 9/11. ... As we revel in our military prowess—the sophistication of our military hardware and technology, for this is what most of the press coverage consisted of in Iraq—we lose sight of

the fact that just because we have the capacity to wage war it does not give us the right to wage war."—*New York Times reporter Chris Hedges, in a May 17 graduation speech at Rockford College (Ill.), before his microphone was unplugged and the audience booed him off the stage, Rockford Register Star, May 20.*

Advice for the Leader

"Most, if not all, Europeans have absolutely no problem with accepting US leadership—we have accepted it for 50 years—but please give us enlightened leadership."—*Wolfgang Ischinger, German ambassador to US, UPI, May 4.*

Red, White, and Brutal

"What has become painfully clear is that Iraq was no immediate threat to the United States, and many of us here said so before the war. Ravaged by years of sanctions, Iraq did not even lift an airplane against us. ... It's becoming all too clear that the smiling face of the United States as liberator is quickly assuming the scowl of occupier. The image of the boot on the throat has replaced the beckoning hand of freedom."—*Sen. Robert C. Byrd (D-W.Va.), Washington Times, May 22.*

White House Defers

"The configuration of our force and who ought to be fighting where—that's going to be up to the generals. That's how we run our business here in the White House. We set the strategy and we rely on our military to make the judgments necessary to achieve the strategy."—*President Bush, deferring to the Pentagon on the question of women in combat, in remarks to the press, May 8.*

McGovernism Made Clear

"The best way to support our troops is to keep them out of needless wars such as Iraq and Vietnam. The best way for America to play a constructive role internationally is to support the United Nations and to work toward expanding international trade, aid, and investment while protecting our workers and the environment. An internationalist would also support the

Kyoto Protocol on global warming, the International Criminal Court, the Anti-Ballistic Missile Treaty, and an international ban on land mines."—*George S. McGovern, 1972 Presidential candidate, on commentary that the Democratic Party "is moving away from McGovernism and back to its international roots," Washington Post, May 12.*

Badness Not All Bad

"The high commissioner thinks it is not a bad thing in itself if a country that violates human rights sits on the commission. It's the best way to catch their attention and make them aware of the issues."—*Spokeswoman for Sergio Vieira de Mello, UN high commissioner for human rights, on UN Commission on Human Rights, which includes Libya (as chair), China, Congo, Cuba, Saudi Arabia, Sudan, and Zimbabwe, Christian Science Monitor, May 7.*

Union Warning

"Fight the Rumsfeld Plan or Say Goodbye to Your Job as You Know It!"—*American Federation of Government Employees, AFL-CIO, on Pentagon's proposed National Security Personnel System, www.afge.org.*

Weak on Terrorism

"We have let al Qaeda off the hook. We had them on the ropes and close to dismantlement, and then we moved resources out of Afghanistan and Pakistan to fight the war in Iraq. We let them regenerate."—*Sen. Bob Graham (D-Fla.), Presidential candidate and former chairman of the Senate Intelligence Committee, New York Times, May 18.*

Rebalancing the Total Force

"We've got to be careful not to overuse the Guard and Reserve, and we haven't, but what we might be doing is overusing certain key capabilities. ... In certain specialties, we have called on them time and time again. So probably what we need to do is rebalance."—*Thomas F. Hall, assistant secretary of defense for reserve affairs, New London (Conn.) Day, May 16.*



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for ground support is ground.]

C-17

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Early and late, the Air Force went downtown with swift, time-critical attacks.

The Baghdad S

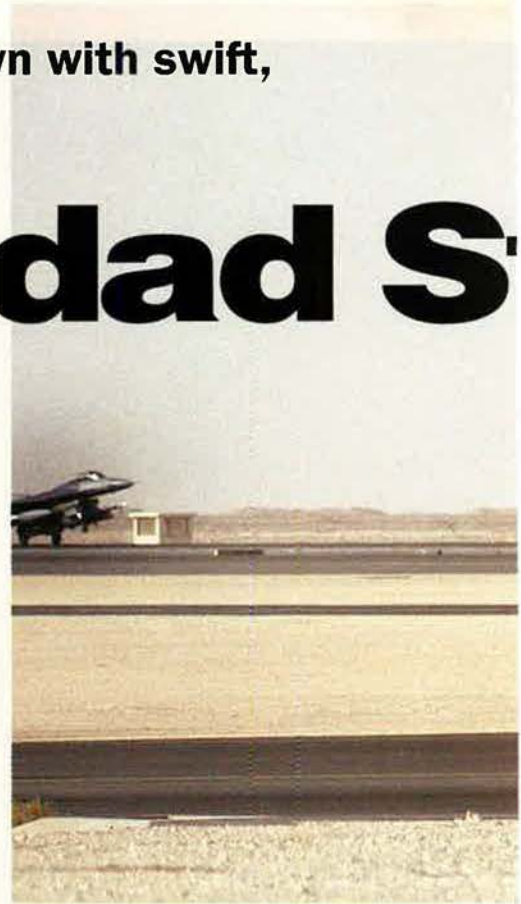
By Adam J. Hebert, Senior Editor

THE Air Force opened and closed Gulf War II with raids on time-critical Baghdad targets. On the first night, F-117 fighters attempted a decapitation strike. The final attempt occurred 18 days later, when a B-1B struck a suspected Saddam Hussein meeting place. This is the story of these book-end attacks.

In the early morning hours of March 20 (Baghdad time), planners at USAF's combined air operations center in Saudi Arabia had just finished a briefing on the probable course of the first night of the forthcoming air war. Then came word that Operation Iraqi Freedom would actually begin that night—and it would not be following the script.

The officers at the CAOC were told they needed to prepare a stealthy F-117 fighter to strike a bunker in downtown Baghdad.

The coalition air boss, Air Force Lt. Gen. T. Michael Moseley, told CAOC planners that he owed the President an answer to a question: "Could this mission be accomplished, and if so, what is the risk?" Air



USAF photo by SSgt. Cherie A. Thurby



USAF photo by SrA. Christina M. Rumsey

Clockwise from upper left: (1) The first of the two F-117s that participated in the bunker strike returns to al Udeid AB, Qatar, the morning of March 20. (2) The second Nighthawk arrives moments later as an F-16 departs. (3) Weapons loaders in Southwest Asia equip a B-1B with a dozen 2,000-pound JDAMs and 1,000-pound "bunker busters." Left: A B-1B takes off from Andersen AFB, Guam, for an OIF mission.

trikes



USAF photos by SSgt. Derrick C. Goodie

Force Maj. Clint Highnote, one of the CAOC officers present, viewed the mission as “very high risk,” but informed Moseley that, in his opinion, it could be done.

Shortly after, a CAOC officer placed a call to mission planners at al Udeid AB, Qatar. The CAOC wanted to know how long it would take to get a pair of F-117s in position to strike a specific set of coordinates in downtown Baghdad. The goal was to complete the Baghdad strike before dawn, which was only a few hours away.

Up to that point, the F-117 pilots at al Udeid had been reviewing targets for the planned air war, but they dropped that task and quickly turned to the urgent mission at hand. Within 15 minutes, the al Udeid planners announced that, though the timelines were extremely tight, they could carry out the mission if Air Force maintainers could get two aircraft ready quickly.

What touched off the flurry was fresh intelligence that Saddam was holed up in a specific bunker for the

night. Planners had a rare opportunity to kill the elusive Iraqi leader. That might sink the regime even without war, they thought.

The Time Factor

The problem was that it would be dawn in about four hours. Standard F-117 mission preparation could take six hours. Then the Qatar-to-Baghdad flight would take more than two additional hours. So, under normal timelines, the F-117s, which have always gone to war at night, would be forced to fly over Iraq in broad daylight, creating unacceptable risk.

Obviously, both planning and mission preparation had to be compressed.

At about 1:30 a.m., planners selected two F-117s for the mission. They were to be piloted by Lt. Col. David F. Toomey III and Maj. Mark J. Hoehn. The mission was far from routine, and both aircraft would experience malfunctions on the way to Baghdad. However, a series of coincidences, hard work, and luck brought success minutes after dawn.

The first complication concerned the choice of weapon. Planners wanted the fighters to drop the best available munition, which was the EGBU-27 precision guided bomb. The problem was it had never been used in combat.

The EGBU-27 was unlike any of the fighter’s normal munitions. The “E” in the designation signified that these laser guided bombs had been enhanced with guidance from Global Positioning System satellites. Moreover, they were equipped with inertial navigation. Thus, each EGBU-27 could be guided to a precise location in three different ways.

However, the new guidance systems had arrived at al Udeid a mere 24 hours earlier.

In the most fortuitous coincidence imaginable, test officials back at Edwards AFB, Calif., just six hours earlier had certified that the F-117 was capable of delivering two of the new weapons simultaneously. Hoehn called the timing “dumb luck.”

Also lucky was the fact that maintenance teams that day had per-



aircraft radios before takeoff, and a malfunction meant Hoehn had to fly silent because he had no secure communications capability. He was only able to talk while refueling over Iraq, when his F-117 connected to the KC-135's intercom. In this way, Hoehn verified that the mission was still on.

After tanking, the stealth fighters split up and took separate routes to the target area. The sun was starting to come up. "It was getting pretty light" by the time he reached Baghdad, Hoehn recalled. "I could see the outlines of houses and buildings."

The decision to use the new weapons proved critical. Standard GBU-27s offer pinpoint attack capability through their laser guidance, pro-

formed a significant amount of maintenance and other work that greatly shortened mission-preparation time. Ground crews had done low observable "prep work" on the fighters, getting much of the time-consuming stealth maintenance out of the way. Further, Air Force maintainers had already loaded two of the EGBUs onto one of the mission aircraft, "to do a show and tell," Hoehn said. This meant only one F-117 needed to have the new weapons loaded when the tasking came from the CAOC.

Combat preparation of the fighters began immediately. The plan called for the F-117s to take off as soon as possible. Hoehn said he was already sitting in the aircraft "as they tightened the last lugs" on his bombs. Less than three hours after the first CAOC call, the two stealth fighters roared northward into the nighttime sky. It was 3:38 a.m.

At this point, the pilots were hoping they would have adequate support from other coalition aircraft but did not know exactly what those aircraft might be. In fact, at departure, the Air Force had not assigned a specific tanker to the Nighthawks.

Desensitization

Hoehn and Toomey soon were thankful that Washington had, weeks earlier, dramatically intensified Operation Southern Watch, the enforcement of the "no-fly zone" over southern Iraq. Highnote said the increased air activity had desensitized the Iraqi air defense establishment to the presence of large numbers of American



At top, one of the F-117 mission aircraft lands at al Udeid after the successful strike against the target in downtown Baghdad. Here, one of the deployed stealth fighters returns to Holloman AFB, N.M., on April 16. The silhouettes painted below the canopy represent 16 successful combat missions.

aircraft flying through its airspace.

In fact, said Highnote, more than 30 mission-support aircraft already were in the air by the time the F-117s took off. "This was not a cold start," he explained. The coalition had to launch only two EA-6B electronic warfare aircraft. All other mission aircraft were airborne.

Part of the game plan, Highnote said, was to move around large numbers of aircraft over Iraq to create "distractions" and allow the F-117s to slip into Baghdad unnoticed.

The hurried pace brought more complications, however. Officials did not have time to test the mission

providing accuracy superior to that offered by GPS guidance. On this morning, however, Baghdad was obscured under low-level clouds, which would have interfered with laser tracks. Thus, guidance had to come from satellite signals.

Each of the two F-117s released two bombs, which plummeted toward the bunker in which Saddam Hussein was believed to be sleeping. Release came at 5:30 a.m., 13 minutes after dawn but only five hours after the pilots first heard that such a mission might be in the offing.

The attack's swiftness, said Hoehn, was "unprecedented."

The strike caught Iraqi defenses completely off guard. Defensive anti-aircraft fire did not begin until the aircraft had completed the attack and were racing out of the Baghdad area.

Back at the CAOC, Highnote recalled, there was not much to do but wait and watch for confirmation that the attack had taken place. There was much uncertainty about the mission, he said, most notably because it was not known if the Iraqi air defenders would be awake and alert. As he noted, "It could have been very difficult had [the Iraqis] done things differently."

The first indication the F-117s had successfully reached their target came from the UK's Sky News, which reported massive explosions in the Iraqi capital.

Free-For-All Flight

Hoehn said the flight back to base was "pretty much a free-for-all." The Nighthawks were instructed to join up with any tankers they could find. Hoehn and Toomey did so, touching down at al Udeid 4.5 hours after takeoff.

Air Force officers did not know then and do not know even now if they succeeded in decapitating the Saddam regime. They do know the strike allowed the coalition to seize the initiative, which it never relinquished.

"We knocked that regime off balance, and we kept them off balance," Hoehn said. "Whether or not we got

[Saddam], he was never a significant factor after that," Highnote added.

It is also true that the EGBU-27 immediately became the F-117's premier weapon. According to Air Force data, 98 of them were delivered during the conflict, compared to only 11 of the traditional, predominantly laser versions.

Less than three weeks later, on April 7, coalition air planners got another "pop-up" opportunity. Intelligence sources on the ground in Baghdad reported that Saddam Hussein was seen entering a restaurant with other top leadership officials. If bombs could be put on the target quickly enough, they might be killed.

It might have been the actual Saddam, or it might have been one of his many doubles. Or perhaps it was neither. Whatever the reality, attack planning began.

Just 47 minutes after the tip was received, the explosions of four satellite guided bombs obliterated the target area. This mission could have been completed in even less time, according to officials; they say most of the 47 minutes was consumed in the discussion about whether or not to attack.

After officials made the "go" decision, it took the B-1 crew only 12 minutes to do the job.

The bomber, nicknamed *Search and Destroy*, had just come off a tanker and was flying over western Iraq when a call came in from an

orbiting E-3 AWACS aircraft. The AWACS battle manager on the line said a critical target had to be destroyed. He added that this particular leadership target was "the big one."

The Right Stuff

This was the type of operation for which the fast, long-duration, heavy-punching B-1B was ideally suited, said Col. James M. Kowalski, commander of the 405th Expeditionary Wing hosting all 11 Lancers in theater. During the conflict, a B-1 was in the air over western Iraq at all times, ready to strike emerging targets. Meanwhile, another bomber would be returning to base, with a third en route to the "orbit" area.

In an interview, Kowalski described the continuous in-out shuffling of bombers as a "synchronized ballet," adding that the constant presence of B-1s armed with 48,000 pounds of guided weapons created a "suffocating presence" over Iraq. Thwarting the launch of ballistic missiles was the primary B-1 mission.

The speed, range, and payload of the B-1 Lancers made it possible for these bombers to act as "roving linebackers" over Iraq, said Kowalski. During the war, only 36 percent of the B-1 targets were preplanned and included in the air tasking order. The other two-thirds were assigned later, frequently hit by a bomber that was returning to base.

On the day of the B-1 raid, it took 35 minutes for the critical intelligence tip to reach the Lancer's crew. In that time, the information went to the CAOC, on to the National Imagery and Mapping Agency for development of coordinates, then back to the Gulf, where the B-1 was selected as the best asset to do the job. Finally, the targeting information was forwarded to the E-3 for tasking.

Things were progressing quickly in Gulf War II. By April 7, US aircraft were operating over Baghdad with impunity. US forces had already moved into the capital city. Air supremacy had been declared over all of Iraq the day before. And B-1 crews had grown accustomed to their role of providing persistent, on-call firepower.

Although the danger from enemy air defenses over Iraq was never fully



The crew of the B-1 Search and Destroy. From left: Capt. Chris Wachter, aircraft commander; Capt. Sloan Hollis, pilot; Lt. Col. Fred Swan, weapons systems officer; and 1st Lt. Joe Runci, WSO.

eliminated, Capt. Chris Wachter, the B-1's pilot, said enemy defenses were not always a threat. "I've flown on missions that have gone right over the heart of Baghdad, where [there are air defense] threats, and seen absolutely nothing—no one's shooting at me," Wachter told reporters. "Other times, it's kind of nonstop," he added.

For operations such as this one, a B-1 would be assisted by a comprehensive strike package. Officials say typical supporting aircraft would include an EA-6B Prowler to jam enemy air defenses, two F-16CJs to destroy enemy radar and missile sites, one E-3 AWACS battle management aircraft, and a tanker.

"We'd heard that sort of thing be-



USAF photo by SSgt. Jessica Kochman



USAF photo by SSgt. Cherie A. Thurby

Top: A weapons loader prepares a GBU-31 JDAM for installation aboard a B-1B. Above: The B-1 was ideally suited for striking emerging targets in Iraq because of its heavy payload, long loiter time, and speed. The Bones deployed for Gulf War II stayed in the air around the clock and demonstrated a 79.4 percent mission capable rate.

fore," Kowalski said about the "big one" tasking, and high-priority targets were something the crews took in stride.

A Different Feel

Still, attacking a priority leadership target isn't like attacking an ammunition dump. It has a different feel to it. "We understand the situation," Lt. Col. Fred Swan, a weapons systems officer, told reporters. "It's not like you're some detached being up there just throwing weapons out." He said the crew members can hear the stress in

voices, and "there's a lot of thought going into what you're doing [and for] the safety of people on the ground."

Officials explained that two of the weapons used in the attack were Joint Direct Attack Munition GBU-31s with hard-target penetrators that burrow into the ground before detonating. The other two JDAMs were GBU-31s with 25-millisecond delay fuses, which followed the "bunker busters" into the crater.

Kowalski noted that use of the penetrating warhead effectively cuts the explosive weight of a weapon in

half; thus, a 2,000-pound bomb becomes a 1,000-pound-class bomb. This is "a little more useful for the planners when they look into a dense environment," such as the residential neighborhood targeted in this raid.

Kowalski said the ability to hit a target with such swiftness put the Air Force inside the enemy's decision loop, meaning USAF could act faster than the enemy could react. When an aircraft can lay precision bombs on a leadership target in just 12 minutes, "they're defenseless," he said.

In addition, said Kowalski, the B-1B's crew could have shaved the elapsed time by another six minutes had the target in question been considered "fleeting" and the bomber flown to Baghdad at max speed. As it was, said Swan, the supersonic B-1 headed to the target at subsonic speed, and only "a couple" of minutes were needed to program the coordinates into the weapons.

The Lancer continued its sortie after destroying the target area. It flew on to Tikrit in northern Iraq, hit a surface-to-air missile site, and struck an airfield during its 10.5-hour sortie.

It was unclear whether either the March 20 or April 7 strike had succeeded in ending the life of a vicious dictator. However, the world has received no incontrovertible proof of Saddam's existence since the first attack. If he is alive, he certainly is not advertising the fact—or his location. ■

Long before they went into combat, US forces had gotten the goods on their Iraqi foe.

The Iraqi File

By Richard J. Newman

OPERATION Iraqi Freedom produced one of the truly decisive victories in military history. One reason for the outcome was that United States forces possessed one of the most decisive advantages that any nation has ever held over a foe. Not all of it concerned state-of-the-art hardware and superior training, either.

For months before the start of the war, the American military gathered intelligence on Iraq and built comprehensive dossiers of threats, targets, and enemy tactics. That preparatory work helped US forces pinpoint critical vulnerabilities, identify potential collateral damage, and use just the right weapons to destroy the enemy in record time.

USAF Lt. Gen. T. Michael Moseley, the combined force air component commander of Operation Iraqi Freedom, broadly hinted at the ad-

vantage in an April news conference. "We've certainly had more preparation, pre-hostilities, than perhaps some people realize," said Moseley.

Planning for Gulf War II actually began while another war—Operation Enduring Freedom in Afghanistan—was still under way.

Shortly after the Sept. 11, 2001, terrorist attacks in New York and Washington, D.C., US Central Command shifted posture on Iraq from defensive to offensive. "There was a conscious effort to switch to looking at the removal of the regime," said Lt. Col. Dave Hathaway, a Central Command planner.

War planners began studying Saddam Hussein's regime in detail, trying to gauge the stress points and centers of gravity that, when attacked, could precipitate the collapse of the entire government struc-

ture. That led to some familiar courses of action, along with some new ones.

Target: Republican Guard

Like Desert Storm in 1991 and every US air campaign since, Gulf War II focused on strategic targets such as the regime's command and control network, its leadership and headquarters structures, and air defense forces. Unlike Gulf War I, however, war planners placed special emphasis on attacking the Republican Guard, said to be the most proficient of Saddam's fielded forces, and the Special Republican Guard, an even more elite cadre of loyalists who provided security for Saddam and his minions.

"We assessed that they would not give up," said Hathaway.

Because American strategists did not expect Iraq's regular army units

USAF photo by SSgt. Cherie A. Thurby



An F-16 from the 35th Fighter Wing, Misawa AB, Japan, takes on fuel from a KC-135 Stratotanker from McConnell AFB, Kan., in mid-March. The F-16 was flying a mission in support of Operation Iraqi Freedom.

to fight very hard, they concluded that elite units would be the key barrier blocking the path of US forces to the heart of Saddam's power, in Baghdad. That's why they were the targets of much of the leafletting that occurred in the days and weeks prior to the war, when printed messages, dropped from US aircraft, urged Iraqi commanders and troops to turn on Saddam, with detailed instructions about how to position their troops and vehicles to signal surrender and avoid US air attacks.

As defense officials tell it, American agents even reached key Republican Guard commanders, contacting them by telephone and e-mail, encouraging them to give up and save themselves and their troops. Had that happened, said officials, Central Command might have achieved the objective of causing "early collapse" of Saddam's regime. Planners thought that was possible, though not likely. In that scenario, Saddam would have been overthrown by his own troops in an armed uprising before US forces ever attacked.

Because the Republican Guard divisions did not capitulate, coalition airpower hammered them from the beginning of the air war, first with precision strikes against a small number of key targets and later with crushing blows from B-52 heavy bombers dropping both unguided iron bombs and precision weapons. That was a shift from Desert Storm, when



USAF photo by TSgt. Jack Braden

ISR crews, such as this E-3 AWACS team from Tinker AFB, Okla., began funneling vital intelligence information into a database in mid-2002 while flying in support of Operations Northern and Southern Watch.

these units came in for heavy bombing only after other target sets had been worked over.

By early April—after barely two weeks of combat—Moseley was able to report, "The preponderance of the Republican Guard divisions that were outside of Baghdad are now dead."

While Central Command war planners were dissecting the strengths and weaknesses of the Iraqi regime, US targeteers and intelligence experts began building an extensive database of targets and other objects and terrain features throughout Iraq. Beginning in mid-2002,

they started compiling imagery from satellites, U-2 spy aircraft, and other intelligence sources and producing a grid map that covered every square foot of the California-sized country.

Grid Works

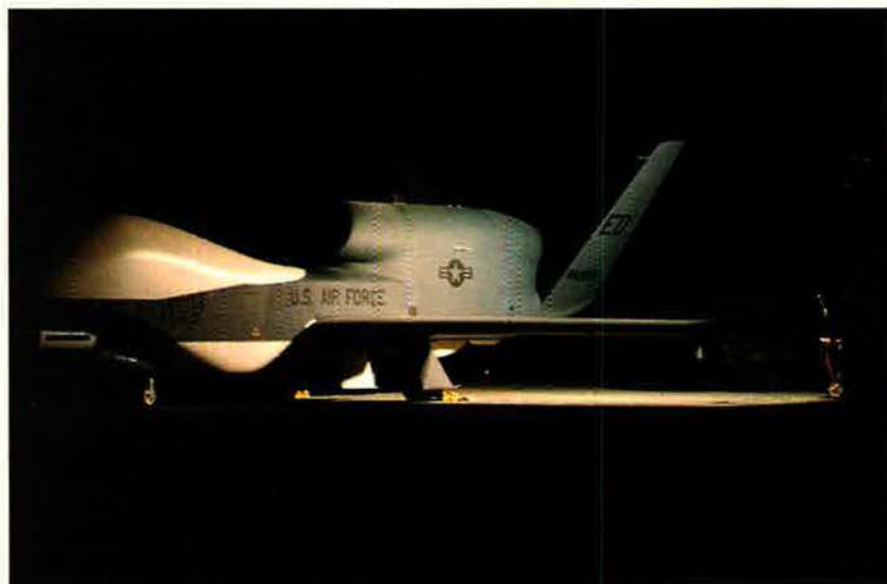
The grids were broken down further into squares of varying size. In the open desert, these imaginary squares might stretch for miles in length and breadth. In Baghdad, however, each square represented an area no larger than a city block. Every building in Baghdad was numbered so that soldiers on the ground calling in air strikes on a specific area would be able to refer to unique entries in the database instead of using imprecise language to describe buildings or other features.

"When you're down on the ground in a city, and that third apartment building on the left is the one with the guns in it, well, what you're seeing on the ground can be totally different from what you see in the air," noted a Pentagon official.

Moreover, Central Command spent a year practicing and perfecting close air support in urban settings, experimenting with ways to use the smallest possible weapon and minimize collateral damage.

By late last summer—when the debate on Iraq was just beginning to reach the top of the agenda in world capitals—Air Force crews had already begun training for some of the

USAF photo by SSgt. Reynaldo Ramon



The RQ-4A Global Hawk unmanned aerial vehicle was part of a suite of intelligence-gathering equipment that played a vital role in shutting down Iraqi anti-aircraft defense systems.

most critical challenges of a war with Iraq.

At Nellis AFB, Nev., Air Force pilots and US Special Operations Forces on the ground began practicing how to locate and destroy Scud-type ballistic missiles that Saddam might be able to launch at bases housing US troops in Kuwait or Saudi Arabia, as he did during the first Gulf War.

Of even greater concern was the prospect Saddam would initiate Scud attacks against Israel, in a reprise of the first Gulf War. In 1991, the United States persuaded Israeli leaders to resist a counterattack on Iraq, which could have escalated into a much broader Middle East war. This time, Israeli Prime Minister Ariel Sharon warned that Israel would respond to



USMC photos by Gunnery Sgt. Matthew M. Smith



Iraqi forces placed trucks filled with Scud missiles in trailers parked between houses on residential streets. Iraq was unable to launch a single Scud attack during the war. A time-sensitive target team focused on finding and tracking Scuds and other high-priority, mobile targets.

any Iraqi attacks, a pledge made more ominous by the possibility that Iraqi missiles headed toward Israel might contain chemical or biological warheads, which would have prompted an even more decisive Israeli response.

At Nellis, American air and ground forces worked hard to overcome one of the biggest problems of Gulf War I: The extended lapse of time between identification of a threat such as a Scud missile and delivery of weapons on it. Usually, an American satellite could detect a launch the moment a missile was fired. Also,

US space forces could demarcate a relatively small area from which it had been fired. However, it normally took several hours to process the intelligence, deliver it to combat forces, and get aircraft airborne. By the time coalition aircraft arrived, the launcher had invariably been moved on a transporter truck.

"We rehearsed this three or four times out at Nellis," Moseley recounted. "We rehearsed the command and control of this. We rehearsed all of the orchestration and lash-up of supporting and complementing assets. ... My question to

my folks was, 'What do we now know [that is] different [from] what we knew in January 1991?'"

Not Talking

Moseley and his cohorts know the precise answer to that question, but they aren't talking. The results may speak for themselves, since Saddam's forces didn't manage to fire a single Scud during the war.

American officials have made oblique references to the effectiveness of Special Operations Forces, which operated freely in western Iraq out of staging areas in Jordan, helping identify and destroy Iraqi missile launchers. Moseley referred to a whole suite of new and proven intelligence-gathering gear as playing a key role in shutting down Iraqi Scuds.

As the air boss put it, "We've got Global Hawk, we've got Predator, we've got various versions of the U-2, we have [Joint] STARS, we've got a fine radar on the B-1, we've got fine systems ... on [the] F-16 and A-10, we've got an incredibly capable and lethal set of Special Operations Forces with a variety of systems, all being brought to bear on this particular problem."

While the war plans were being built around the front-line warriors on the ground and in the air, CENTCOM also built a deep bench of experts who would help compress the "kill chain"—the series of steps between initial identification of a target and an attack on it.

Last fall, Central Command began establishing several teams of

analysts who would study specific target sets or other aspects of the air campaign, always looking for faster and more effective ways to prosecute the war. Some were based at the combined air operations center in Saudi Arabia, the nerve center for the air war. Others were scattered across bases such as Ramstein Air Base in Germany and Langley AFB, Va., Beale AFB, Calif., and Nellis within the United States.

A time-sensitive target team focused on Scuds and other high-priority targets that were often mobile and usually fleeting. A team that studied weapons effectiveness scrutinized bomb damage assessments to make sure Central Command operators were getting the bang for the bomb.

The team studied strikes on bunkers and other hardened targets, for example, and learned that some penetrating bombs were more effective than expected. They recommended that in certain cases where two bombs were typically dropped to make sure one of them bore through to the target, one bomb might be sufficient.

Another team of analysts studied airfields located throughout Iraq, trying to detect anything that might help the US forces prevent Iraqi jets from getting airborne.

In December, the team started studying all of the intelligence they could get relating to Iraqi airfields. By the time the war started, the analysts could tell at a glance whether anything out of the ordinary seemed to be occurring.

Nearly four months of cramming helped SSgt. Brandy Hudson, an imagery analyst based at Langley, notice something fishy about some photograph images. Looking over some pictures of one airfield, she quickly picked out a surface-to-air missile system that had not been there on pictures shot only five hours earlier. After a quick call from Langley to the targeting cell located at Prince Sultan Air Base in Saudi Arabia, Central Command sent a fighter to attack the SAM. It was destroyed less than an hour after Hudson noticed it.



USAF photo by MSgt. Ronny Przyauscha

Two F-15Es from the 379th Air Expeditionary Wing fly over the desert on April 14. Teams of analysts spent months familiarizing themselves with Iraq's airfields and terrain. When they saw something unusual, the fighters would go in.

In building its vast portfolio of intelligence, Central Command had an enormous leg up: It had been flying patrols over nearly half of Iraq for 12 years, enforcing the northern and southern no-fly zones established by the United Nations in 1991. Pilots on those missions have always been able to return fire if threatened by Iraqi forces on the ground. However, the Pentagon last summer permitted the Air Force to conduct a more aggressive campaign to whittle down Iraqi air defenses.

Heightened Presence

"From June of last year until the initiation of hostilities, we increased our presence in the no-fly zones to enforce the Security Council resolutions," said Moseley. "By doing that, [the Iraqi forces] shot at us more, and, in doing that, we were able to respond more on items that threatened us."

That included not only stepped-up attacks on anti-aircraft guns and similar sites but also a thorough effort to map out the fiber-optic vaults and even some of the wiring that connected different nodes of the air defense network and allowed the Iraqis to exercise centralized command and control. Surveillance jets, for example, carefully noted where there appeared to be any con-

struction or repair of the air defense network.

"I can see where trenches have been built, and I'm going to remember where I saw that backhoe," one senior Pentagon official recalled thinking.

Between March 1 and the start of the war on March 20 (Baghdad time), pilots flew 4,000 strike and support sorties in the no-fly zones, "shaping the battlefield" by knocking out radars and air defense guns and cutting fiber-optic links.

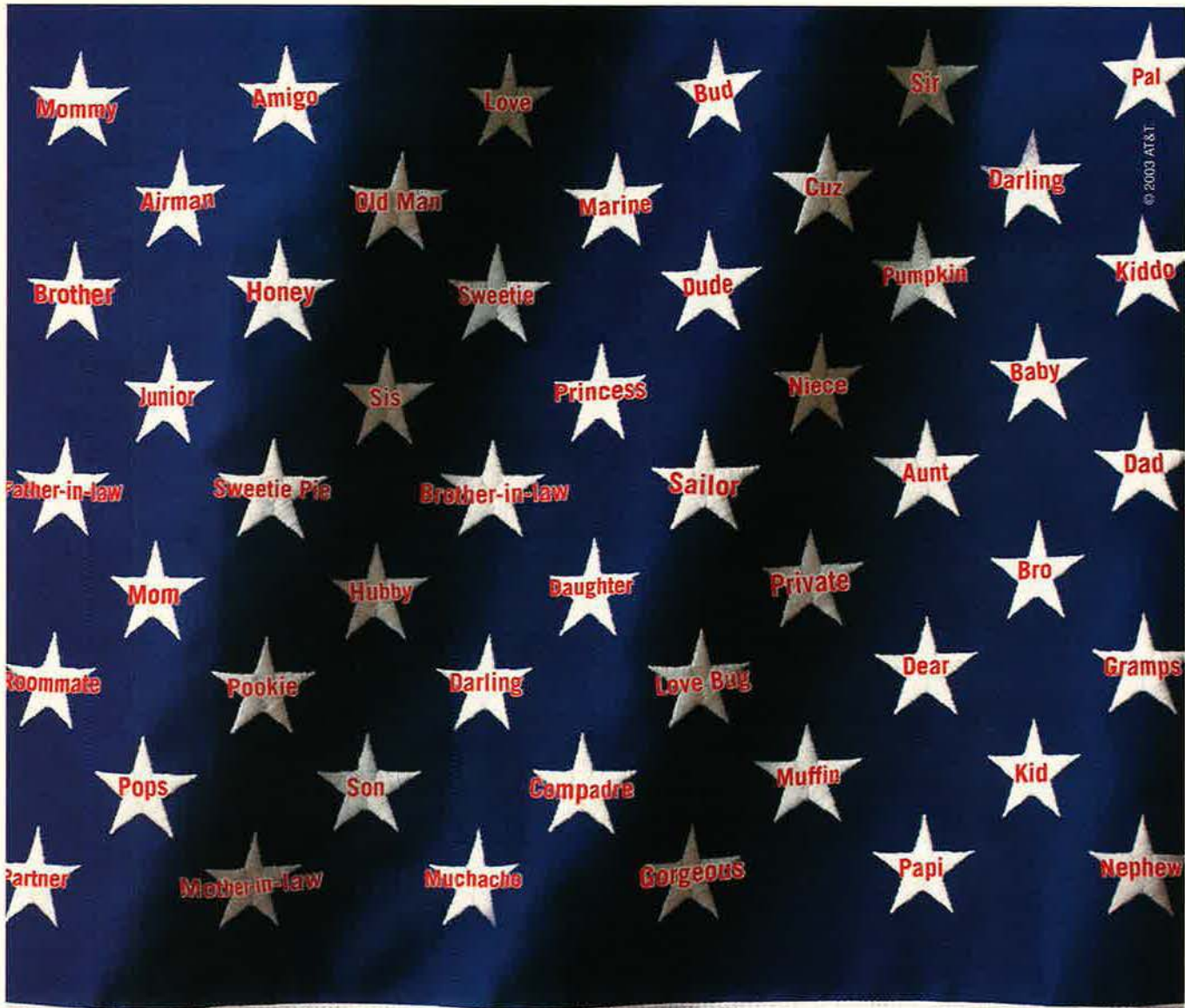
"That was brilliant," said retired Air Force Lt. Gen. Thomas G. McInerney.

The preliminary work against the air defense network got one important task out of the way before the war even started. This gave coalition air forces a running start once the first bombs fell and ground troops crossed from Kuwait into Iraq. Jets were able to fly with virtual impunity in support of the troops in southern Iraq, and combat sorties turned quickly to strategic targets in Baghdad and elsewhere.

The outcome of all of those attacks may have looked inevitable, but all of Central Command's diligent homework helped eliminate unpleasant surprises. "This was not one of those classic battles where it goes to a fever pitch and it unravels," said the senior Pentagon official. "We laid out the plan and we flew the plan. There was no great 'Eureka.'"

Richard J. Newman is a former Washington, D.C.-based defense correspondent and senior editor for US News & World Report. He is now based in the New York office of US News. His most recent article for Air Force Magazine, "Grim Days for the Airlines," appeared in the February issue.

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To the men and women of the Armed Forces—a heartfelt thanks.

It would be “the end of civil service as we know it,”
but is that bad?

Rumsfeld Tackles the Civil Service

THE federal Civil Service dates back for more than 100 years, but it was jelled into its present form by the Classification Act of 1949.

The Classification Act reflected the world as it was then. More than 70 percent of the government jobs consisted of clerical work, and 75 percent of the workers were in the lower grades, GS-7 and below.

The assumptions of 1949 did not anticipate the situation today, when clerical workers are in the minority and only 30 percent of federal civilians are in grades GS-7 and below.

“In the age of the computer, the federal government is still using—with relatively minor modifications—a compensation system that was custom-built for the process-obsessed age of the file clerk,” said Kay Coles James, director of the Office of Personnel Management. “A structure that regarded performance differences as negligible in the context of highly standardized clerical routines has lasted to a time when the nature of knowledge work makes performance differences a crucial element in the value of many jobs.”

In today’s system, “performance does not matter very much,” James said in a 2002 white paper. Pay increases depend chiefly on remaining on the employment rolls instead of on meeting or exceeding performance expectations.

Rep. Tom Davis III (R-Va.), chairman, House Government Reform Committee, agrees with James. “Civil Service is more of a seniority system than a merit system,” he said.

Hiring new people is a drawn-out process under Civil Service rules,

making it difficult to compete in the marketplace for the occupational specialties most in demand. Disciplinary actions are subject to extensive review, and poor performers must be given a “performance improvement period” before action can be taken against them.

“In one case at the Defense Logistics Agency, it took nine months to fire an employee—with previous suspensions and corrective actions—who had repeatedly been found sleeping on the job,” said Deputy Secretary of Defense Paul D. Wolfowitz.

Last year, Congress authorized the new Department of Homeland Security to depart from traditional Civil Service procedures in hiring and firing.

Pentagon Seeks Major Change

This spring, Secretary of Defense Donald H. Rumsfeld called for sweeping changes that go far beyond anything seen at Homeland Security. His plan is to introduce a whole new personnel system for the 700,000 civilian employees of the Department of Defense.

Rumsfeld’s proposal was the lead item in a 205-page legislative package, “The Defense Transformation for the 21st Century Act,” that the Pentagon sent to both houses of Congress on April 10.

The heart of the package was the “National Security Personnel System,” which would exempt the Defense Department from many current rules on how civil servants are hired, fired, promoted, and paid. It would authorize the Secretary of Defense to “establish, and from time

By John T. Correll

to time adjust, a human resources management system" for the department.

It would feature pay for performance, replacing the present procedure in which pay is based mainly on longevity and seniority.

"Most of the plan has been tried before here and there across government: pay for performance, a faster hiring process, more managerial authority, and streamlined job descriptions," said Paul C. Light, a professor at New York University and a senior fellow of the Brookings Institution, writing in the *Washington Post* on May 9. "But because the proposal covers more than a third of the federal workforce, contains unreviewable authorities for the Secretary that have never been tried, and comes on the heels of the Homeland Security breakout, it would effectively mark the end of the Civil Service as we know it."

The key portion of Rumsfeld's proposal is entitled "Transformation of Civilian Personnel." It accounts for only 33 pages of the 205-page document, and that includes a "section-by-section analysis," written by the Pentagon lawyers. Of that, draft legislation for the National Security Personnel System is 17 double-spaced pages.

The package includes a mixed bag of other proposals—ranging from extension of term and age limits for general and flag officers to environmental exemptions and the elimination of 183 Pentagon reports to Congress—but these have gotten less public notice. Attention has fixed on the big plans for Civil Service.

Details Not Specified

One of the startling things about the National Security Personnel System is the absence of detail on what the Pentagon actually proposes to do. The requested powers for the Secretary of Defense are stated in very broad terms.

"We are not being asked to approve a new personnel plan," said Rep. Jim Cooper (D-Tenn.). "We are being asked to allow the Secretary to think up a new plan."

David S.C. Chu, undersecretary of defense for personnel and readiness, said the Pentagon's intention is to draw on alternative civilian personnel management approaches demonstrated over the past 20 years

in test programs involving 30,000 civilian employees. Chu pointed to a summary of these approaches published recently in the Federal Register. "We need the authority to extend these best practices to the entire Department of Defense," said Chu.

However, Cooper pointed out, "There is no statutory language that requires you to follow these recommendations. You're asking us to buy your good intentions."

Rep. Henry A. Waxman (D-Calif.) was likewise suspicious of the proposal. "It gives the Secretary of Defense a blank check to undo, in whole or in part, many of the Civil Service laws in the United States code," said Waxman. "These provisions have been adopted over the past century to ensure that our federal government did not become a patronage system."

The draft prescribes extraordinary powers for the Secretary of Defense. It produced this exchange between Chu and Rep. John M. Spratt Jr. (D-S.C.) at a recent House Armed Services Committee hearing:

"Spratt: I keep coming across this phrase in the draft, 'at the Secretary's sole, exclusive, and unreviewable discretion.' ... Those are strange words for the government of the United States of America. ... What is the remedy in case the Secretary abuses that enormous authority?"

"Chu: I'm not a lawyer. ..."

"Spratt: I am. And I'm telling you this is—this is a hell of a grant of authority."

Nobody is more opposed to the bill than Bobby L. Harnage Sr., national president of the American Federation of Government Employees, whose union represents some 600,000 federal workers.

"It's about unbridled power to move money and jobs to political favorites, cronies, relatives, and concubines," Harnage thundered. "DOD's legislative proposal amounts to nothing more than giving the Secretary of Defense the power to decide which laws and regulations he'd rather do without."

Davis, the Virginia Republican, said that objections were coming mainly from unions and their supporters. "You have a handful of union bosses who are afraid of losing their power," Davis told the *Washington Times*. "The unions give millions to

the Democrats, and now they're calling in their marker."

Moving Fast

The House moved out promptly. In April, Davis and Rep. Duncan Hunter (R-Calif.), chairman of the House Armed Services Committee, jointly introduced the proposal as H.R. 1836, the Civil Service and National Security Personnel Improvement Act.

It passed Davis's committee, with minor modifications, on May 7. Hunter's committee sent the Civil Service reforms forward May 13 as a recommended part of the defense authorization bill.

The Senate was slower to move. Sen. John Warner (R-Va.), chairman of the Senate Armed Services Committee, deferred to the Senate Governmental Affairs Committee on the Civil Service portions of the Pentagon draft.

Some members of Congress thought the bill was moving too fast.

"Congress received this 200-page bill two weeks ago, on the day we left town before the recess," said Rep. Ike Skelton of Missouri, the ranking Democrat on the House Armed Services Committee. "Its scope is absolutely enormous. ... This bill seeks to make the most sweeping changes to the Department of Defense since the Goldwater-Nichols legislation. ... The Goldwater-Nichols bill was developed over a period of five legislative years. And this committee will have less than three weeks to consider these sweeping changes. ... I have serious reservations about the substance of many of the proposals."

Wolfowitz stuck by the desire for urgency when he appeared before the House Government Reform Committee on May 6.

"We understand it would be ideal if there were more time for you to consider this bill," said Wolfowitz. "But we also recognize the fact that if we were to delay and not get on this year's defense authorization bill, this legislation may not become law until late 2004 or even 2005."

Waxman objected, "Now that the Defense Department has marched through Iraq in three weeks, it intends to do the same with Congress."

Wolfowitz noted that the final bill may not have reached Congress until April 10 but that DOD officials, in the months leading up to formal

delivery, met with members and staff on more than 100 occasions to discuss various provisions.

That prompted Waxman to reply, "On the Democratic side of the aisle of this committee, which has primary jurisdiction over the Civil Service issues, we haven't had any consultation with anyone until the proposal was laid out before us. ... We also heard last week from the unions that they weren't consulted about it either."

A mild dissent was heard from Republican Sen. Saxby Chambliss of Georgia. "We agree with the Department of Defense that we need to give as much flexibility as possible when it comes to civilian employees," Chambliss told the newspaper *Roll Call*, "but I'm not prepared to say today that I want to give complete control over civilians to the department. This is such a major restructuring. I'm not going to do something that major in a two- or three-day period."

The Civil Service package passed the House May 22 by a vote of 361-68 as part of the defense authorization bill. However, it was not included in the authorization bill adopted by the Senate, leaving the final decision to be ironed out in conference.

The Problem With Civil Service

Most criticisms of the Pentagon's proposal were about the rushed timing and the lack of specificity. There is considerable agreement that Civil Service is in dire need of reform.

Davis, opening a hearing of the House Government Reform Committee, said that "it takes an average of five months to hire a new federal employee; 18 months to fire a federal employee; pay raises are based on longevity rather than performance; and the protracted collective bargaining process set up in Title 5 can delay crucial action for months and in some cases years. On top of all that, the vast majority of federal employees themselves recognize that dealing with poor performance is a serious problem in their agencies."

At a hearing of the House Armed Services Committee, Hunter added, "If you need a position filled, you need to do something quickly. And, instead of being able to have a civil servant do it and wait that three months, it's easier simply to order a

sergeant to do it, because he's under the direct chain of command in the military. And he marches out smartly and gets it done. But the preferable thing to do is to keep the sergeant in his military billet and use a civil servant, if possible, if you could qualify him quickly."

Chu, testifying April 29, said that "in the Iraqi theater of operations, only 1,500 of the 9,000 civilians supporting the effort are defense civilian employees. The rest are contractors. We should have the flexibility to identify, deploy, and sustain more of our civilian workforce in these operations, when necessary."

Rumsfeld himself argued the reform case at a May 14 Senate hearing. "Today we have some 320,000 uniformed people doing what are essentially nonmilitary jobs," Rumsfeld said, "and yet we are calling up Reserves to help deal with the global war on terror. The inability to put civilians in hundreds of thousands of jobs that do not need to be performed by men and women in uniform puts unnecessary strain on our uniformed personnel and added cost to the taxpayers. This has to be fixed."

Writing on the op-ed page of the *Washington Post*, Philip K. Howard, a lawyer and author of *The Death of Common Sense: How Law Is Suffocating America*, described the endless delays that go with attempted disciplinary actions. He said that, according to data from the Office of Personnel Management, 64,000 federal employees were designated "poor performers" in 2001. However, only 434 of these were dismissed.

"After Sept. 11, 2001, the US Customs Service immediately reassigned its best inspectors to better secure our northern border," Howard said. "The union filed a legal proceeding claiming that the reassignments required a nationwide survey of interested civil servants, from which choices should be made on the basis of seniority."

The Pentagon's manpower chief, Chu, said that changing or enlarging an employee's duties is a major problem. "Under the current system," he said, "you have to rewrite the job description [and] recompute the position, which actually leads to some employees declining to be considered for expanded responsibilities, for fear they won't win the next competition."

Donald Devine, a former director of the Office of Personnel Management, is a strong supporter of the proposed changes. "The prognosis for reform has never been brighter," Devine wrote in a column for the *Washington Times*. "War is simply too important to be left to union micromanaging or in the hands of an incompetent executive who has been inappropriately promoted simply because he or she had seniority."

National Security Personnel System

The new system, according to the section-by-section analysis in the Pentagon package, "would feature streamlined recruitment and candidate ranking, universal pay banding for five career groups, supervisory pay, and simplified appointments, assignments, and reductions in force."

■ **Pay for Performance.** Edward C. Aldridge, then undersecretary of defense for acquisition, technology, and logistics, told Congress that the pay-for-performance approach has worked well in test programs.

"You probably will get some criticism of it, but it's mostly from those people who are not performing," Aldridge said. "They don't like it because they are not given the automatic pay raises every year. This system pays for performance, not for attendance. ... The people who are the high performers—who are the ones you really want to keep—love it. And some of the lower performers do not."

In February, the US Merit Systems Protection Board newsletter summarized the results of an ongoing demonstration project at the Air Force Research Lab. "The average 2002 pay increase for employees in this demonstration project was 5.8 percent," the newsletter said. "The largest was 31.8 percent. Just as importantly, employees who have not made significant contributions to organizational performance often choose to work elsewhere."

Harnage and AFGE oppose this approach. "At a minimum, if performance-based contingent pay is on an individual-by-individual basis, the message is that the work of lone rangers is valued more than cooperation and teamwork," Harnage testified in April. "Further, it states at the outset that there will be designated losers. Everyone cannot be a winner; someone must suffer."

"If an employee has performed so badly that a salary reduction is appropriate, there is the opportunity for a limited salary reduction in the pay-for-performance approach that we would recommend," Chu told Congress. "The employee, of course, has the right to appeal those decisions."

The major difficulty with pay-for-performance systems is figuring out how to rate an employee's performance. "Most existing federal performance appraisal systems, including a vast majority of DOD's systems, are not currently designed to support a meaningful performance-based pay system," said David M. Walker, comptroller general and head of the General Accounting Office, in testimony May 1 to the House Armed Services Committee.

Apparently, however, Walker does not regard this as an insurmountable problem. In April, he requested Congressional approval for GAO to create a performance-based pay system for its own employees.

■ **Pay Banding.** The Defense Department plan calls for doing away with the General Schedule, with its traditional grades GS-1 through GS-15. Replacing it would be a system comprising five career groups with their corresponding "pay bands." DOD no longer would grant step increases or across-the-board annual raises.

It would be possible to offer higher starting salaries. The Merit Systems Protection Board says, "A high performing employee could move to the top salary of a pay band much more quickly than is possible in the GS system. In contrast, a low or marginal employee might get no incentive pay and only part—or even none—of the general increase."

The notice in the Federal Register identified these five career groups, or "CGs":

■ **CG1 Scientific and Engineering Research.**

■ **CG2 Professional and Administrative Management.**

■ **CG3 Engineering, Scientific, and Medical Support.**

■ **CG4 Business and Administrative Support.**

■ **CG5 College Cooperative Education Program.**

Every occupational specialty fits into one of these groups. Firefighters, for example, would be part of CG4.

■ **Easier Hiring.** Chu told the House

Armed Services Committee, "We are not going to succeed if we send our representatives, as I do, to college job fairs and we tell young men and young women, 'I'll let you know in three months whether you have a job.' The next table—where GE sits, where Microsoft sits—they're telling ... the quality college graduate, 'You have a job. I'll check your references. As long as those pan out, it's yours.' We're not going to succeed if it takes three months to change someone's job qualification."

The proposal also gives the Secretary of Defense considerable latitude in hiring "highly qualified experts" and in contracting for "personal services" to carry out the national security mission. Federal retirees, age 55 and older, could be hired for periods of two years without loss of their pensions "to fill needs that are not otherwise met by civilian employees."

■ **Labor Relations.** The bill would allow the Department of Defense to engage in collective bargaining at the national level in lieu of dealing with 1,366 union locals. Some union leaders see this as further evidence that the Pentagon's real agenda with this proposal is union busting.

They also complain that they were not consulted before the Defense Department sent the proposal to Congress, but DOD insists that is not the case. "We have listened to our employees and to labor, which is different than saying 'labor unions,' before we designed this system," Chu said.

Rep. Steny H. Hoyer (D-Md.), whose district has a big population of government workers, is not convinced. "This measure was conceived, as I understand it, by a handful of the President's closest advisors in the department and perhaps in the White House as well, without any public input," Hoyer said. "Regrettably, not a single federal employee group was consulted, not one."

■ **Precedence Over OPM.** Regulations for the National Security Personnel System would be "prescribed jointly" with the Office of Personnel Management, but in case of disagreement, the Pentagon's view prevails.

OPM supports the reorganization proposal. At an April hearing, Cooper, the Tennessee Democrat, rhetorically asked Dan G. Blair, OPM's deputy director, why OPM is so compliant. "If you're so willing to con-

cede—what?—one-third of your jurisdiction, why you don't resign in protest, or why you don't, you know, have something more significant to say at a historic moment like this?"

Chester A. Newland, a professor of public administration at the University of Southern California, maintains that "OPM, which is already cut down to where it's almost a toothless Chihuahua, will really amount to nothing" after the changes have been made.

■ **Reduction in Force.** In GAO's assessment, the legislation would allow the Department of Defense to revise reduction-in-force (RIF) rules to place greater emphasis on employee performance.

House Del. Eleanor Holmes Norton, a Democrat of the District of Columbia, said she knew from personal experience the undesirability of seniority and tenure as the basis for force reductions. "But why do people go to tenure?" she asked. "They go to tenure because, in 100 years of the Civil Service, nobody has been able to come up with anything other than arbitrary ways to ... lay off people."

Chu replied, "We shrank the armed forces—the uniformed forces of the United States—by several hundred thousand people in the early years of the 1990s, and we did it with a non-tenure system. We did it with a system that was performance-oriented."

For its part, AFGE said that changing the rules for RIFs would mean just this: "Supervisors could pick and choose."

What About Outsourcing?

Lurking in the background of the debate is the question of outsourcing.

Federal departments and agencies have identified 850,000 government jobs—about half of them in the Defense Department—that could potentially be put out for bid to private contractors, prompting union leader Harnage to say the Administration had "declared all-out war on federal employees."

The interim goal of the Office of Management and Budget is to outsource 15 percent of these positions by July 2004.

Wolfowitz, in testimony on the transformation act, said, "This bill doesn't address the issue of outsourcing. It's a major concern that's obviously in separate actions in leg-

isolation. We are seeking authority to outsource those things that we think are not appropriate for federal employees."

Rumsfeld told Congress in February, "There is no reason ... that the Defense Department should be in the business of making eyeglasses, when the private sector makes them better, faster, and cheaper."

The unions have taken this as a threat, but Rumsfeld's proposal indicates that he wants to change the Civil Service, not dismantle it. He has been under fire constantly for his refusal to increase the military strength of the armed forces. He agrees the troops are stretched too thin, but argues that the problem can be relieved by transferring military support jobs to civilians, either government employees or contractors.

"Consider: We have more than 300,000 uniformed personnel doing jobs that should be done by civilians," Rumsfeld said in an op-ed column in the *Washington Post* May 22. "That means that nearly three times the number of troops that were on the ground in Iraq during Operation Iraqi Freedom are doing non-military jobs that should be done by civilian personnel."

A big reason for that, he said, is that, under the present system, it is not possible to manage civilian employees, put them in jobs, give them guidance, and transfer them from one task to another and adjust to requirements in the way it can be done with military people and contractors.

That, in considerable part, is what the reform package is all about.

In his op-ed column, Rumsfeld also took note of Skelton's observation that Goldwater-Nichols took years to pass.

"We do not have four years to wait before we transform," Rumsfeld said. "Our enemies are watching us—studying how we were successfully attacked, how we are responding, and how we may be vulnerable again. In distant caves and bunkers, they are busy developing new ways to harm our people. ... And they are not struggling with bureaucratic red tape fashioned in the last century as they do so." ■

John T. Correll was editor in chief of Air Force Magazine for 18 years and is now a contributing editor. His most recent article "Casualties," appeared in the June issue.

Problems and Exceptions

Several non-Civil Service parts of the Defense Transformation for the 21st Century Act ran into some emphatic resistance in Congress. Among the embattled provisions:

- The Department of Defense wanted to raise the retirement age for general and flag officers from 62 to 68 years—with the possibility of extension to 72 years—and eliminate restrictions on tour lengths for service chiefs and the Chairman and Vice Chairman of the Joint Chiefs of Staff. The House Armed Services Committee cut those provisions from the bill in markup.

- The draft legislation would set aside buy-American rules and "allow the Secretary of Defense to waive domestic source or content requirements when such requirements are not in consonance with security interests."

That aroused fierce opposition from the American Shipbuilding Association, but it drew support from the Aerospace Industries Association. *Defense News* quoted Joel Johnson, an AIA spokesman, as saying, "It is hard to explain to customers [outside the United States] why they should buy planes from us, but we can't buy bits and pieces [of equipment] from them."

Another provision would let a Navy ship be "overhauled, repaired, or maintained in a shipyard outside the United States or Guam, if it is on an extended deployment."

That proposal did not sit well with House Del. Madeleine Z. Bordallo (D-Guam). At a May 1 hearing of the House Armed Services Committee, she claimed it would mean "ships deployed in Asia would steam right past Guam—and Guam has a major ship repair facility—on their way to being serviced in Singapore or wherever they're going."

Her stance was viewed somewhat sympathetically by the committee chairman, Rep. Duncan Hunter (R-Calif.), who represents San Diego. He said commanders might be prone to do repairs in foreign countries in order to get lower prices, but that will only further weaken the US shipyard base. "I have come down on the side of keeping this very fragile part of our industrial base intact," Hunter concluded.

The foreign repair initiative was rejected by both the House and the Senate.

- Almost half of the 205-page legislative package was taken up with a listing and analysis of 183 reports to Congress that the Pentagon would like to dump. Some of them have obviously outlived their value.

One such is "Limitation on Creation of New Federally Funded Research and Development Centers." According to the Pentagon's analysis, "The report is obsolete. DOD has not established a new research and development center since 1984, nor does it intend to establish such a new center in the foreseeable future."

The wisdom of terminating reports on accounting and contracting is less obvious. Four House Democrats—David R. Obey of Wisconsin, Ike Skelton of Missouri, Henry A. Waxman of California, and John M. Spratt Jr. of South Carolina—sent a letter on May 13 to House Speaker Dennis Hastert (R-Ill.) and Minority Leader Nancy Pelosi (R-Calif.). They claimed that eliminating some of these reports would "significantly curtail Congress' ability to monitor the spending of taxpayer dollars at the Defense Department."

They were reluctant to reduce Congressional oversight when "no major part of the Department of Defense has passed the test of an independent audit, ... cannot properly account for over \$1 trillion in transactions, ... [and] is responsible for nine of the 25 highest risk areas in the federal government."

- Environmentalists denounced DOD's bid to strike a new balance between military readiness and environmental regulation, calling it "a sneak attack on critical wildlife protections."

The Pentagon's analysis of the situation says, "In recent years, however, novel interpretations and extensions of environmental laws and regulations, along with such factors as population growth and economic development, have significantly restricted the military's access to and use of military lands and test and training ranges and limited its ability to engage in live-fire testing and training."

For example, Marines today can train on only 200 yards of the 17-mile shoreline at Camp Pendleton, Calif. They are limited by laws and regulations protecting an endangered gnatcatcher and certain types of vegetation, plus environmentalist lawsuits.

The proposal asks for clarification of and exceptions to several laws, including the Marine Mammal Protection Act and Endangered Species Act, to "prevent further extension of regulation." It does not seek to roll back existing regulations.

"As a solidly pro-military member of Congress, I believe the readiness and exceptional training of our troops are of paramount importance and should be taken into account in our environmental laws," Skelton wrote in the *Washington Post* on May 21. "But: the Defense Department has not yet made use of the legal remedies that already exist to accommodate military readiness."

The House on May 21 passed the environmental exemptions, but they were later voted down in the Senate. That leaves the final decision on the matter to a House-Senate panel that will try to reconcile the two views this fall.

The Link



Attempts to produce a pilot training device date back to World War I, but no system proved workable until Edwin A. Link came up with his unique, patented machine in the early 1930s.

The Link Trainer was mounted on a pedestal and would simulate the pitch, roll, dive, and climb motions of actual aircraft. The student pilot manipulated the controls in the "cockpit," while an instructor, seated at a nearby desk, watched as an automatic recorder traced the trainee's "course" on a map. Slipstream simulators and a rough air generator added realism. Most of Link's first sales went to amusement parks, but, after Army Air Corps pilots suffered a series of deadly accidents, the Air Corps bought six Link Trainers to help teach pilots instrumented flight.

Eventually, the US bought thousands of the "pilot makers" as it geared up for World War II.



They are “low-density, high-demand” capabilities—or LD/HDs—

It Means ‘We

By Adam J. Hebert, Senior Editor



FACED with war in Iraq, US military leaders again put a heavy load on a familiar set of scarce, highly valuable Air Force systems and units. Intelligence-surveillance-reconnaissance (ISR) aircraft, battle management airplanes, combat search and rescue teams, stealthy strike systems, combat control teams, and the like all played vital war roles, as they have in most contingencies in recent years.

These kinds of capabilities are constantly overtasked. In fact, they comprise what DOD calls “low-den-

sity, high-demand” systems—LD/HD for short.

The Navy and Marine Corps constantly deploy EA-6B Prowler electronic warfare aircraft, and the Army suffers from a shortage of Patriot air defense systems. However, while all of the services experience LD/HD woes, the heaviest burden falls on the Air Force.

Long before shooting started in Iraq, the Air Force’s E-3 AWACS and E-8 Joint STARS surveillance and battle management aircraft, U-2 spy airplanes, RC-135 electronic intelligence

An HC-130 tanker refuels an HH-60 search and rescue helicopter during Gulf War II. Both of these assets were heavily tasked in the recent Iraq and Afghanistan operations and are on DOD’s list of low-density, high-demand aircraft.

and the Air Force has most of them.

Didn't Buy Enough''

USAF photo by SSGT. Shane A. Cuomo



aircraft, and HH-60 combat rescue helicopters, to name only some, were already in heavy demand and short supply.

In Plain English

Somehow, the funding needed to buy a sufficient number of these systems never seems to arrive. Defense Secretary Donald H. Rumsfeld highlighted the problem in a 2002 speech at the National Defense University, Washington, D.C., when he noted that defense transformation requires not only more new systems but also

“rebalancing” of the military’s weapons and forces.

The Pentagon needs more of its low-density, high-demand assets, Rumsfeld said. He called the term itself “a euphemism, in plain English, for ‘our priorities were wrong, and we didn’t buy enough of what we need.’”

Afghanistan showed the value of unmanned systems, he continued, but also highlighted their limited numbers. According to Rumsfeld, “The department has known for some time that it does not have enough manned

reconnaissance and surveillance aircraft, command and control aircraft, air defense capabilities, chemical and biological defense units, as well as certain types of Special Operations Forces.”

Despite this knowledge, the Pentagon has repeatedly underinvested in these capabilities while “continuing to fund what were, in retrospect, less valuable programs,” Rumsfeld asserted, adding, “That needs to change.”

The Air Force is in a particularly difficult position when it comes to

LD/HD systems, as a majority of the most stressed out platforms are USAF aircraft. All indications are that high-demand capabilities will continue to be overtaxed in the future.

Success and Strain

Shortly before Operation Iraqi Freedom began, Gen. Robert H. Foglesong, USAF vice chief of staff, told a Congressional panel that 18 of the assets the Air Force considers low-density, high-demand were already in "surge."

LD/HD comprises not only manned systems operated by Air Combat Command but also unmanned aerial vehicles such as the MQ-1 Predator and RQ-4 Global Hawk. Also included are eight Air Force Special Operations Command capabilities, including gunships and combat controller teams.

When Operation Iraqi Freedom began, requirements surged through the roof.

The strained systems are in demand for an obvious reason. They offer unique but indispensable capabilities, and warfighting commanders consider them essential. Simply put, one can never have too much intelligence, rescue, or battle management capability—traditional LD/HD areas. Theater commanders always want more.

Further, these capabilities tend to be expensive and difficult to develop, so the Air Force doesn't buy many.

Consequently, systems such as E-3 AWACS, plus crews, are fully



USAF photo by SSGT. Jeremy T. Lock

The MQ-1 Predator unmanned aerial vehicle is in the early stages of production, yet is already coveted by commanders for its reconnaissance and strike capabilities. Here, a Predator is being prepared for a mission in Afghanistan.

tasked in wartime. This happened with the E-3 in the Iraq war—a situation that came less than two years after the US had to turn to NATO E-3s to help defend US airspace in 2001 and 2002, so that the American E-3s could deploy for Operation Enduring Freedom in Afghanistan.

Though few in number and constantly overtaxed, such assets were crucial to the war in Iraq. "LD/HDs won this war, there's no doubt about it," said Maj. Gen. Robert F. Behler, commander of the Air Force Command and Control and ISR Center at Langley AFB, Va. In an interview, he said that time-critical targets were

destroyed in Iraq more effectively than ever before, and "LD/HDs allowed us to do it."

Over Iraq, the AWACS and Joint STARS battle management fleets were in heavy use, directing air traffic and locating and tracking ground targets. According to Lt. Col. Mike Peterson, head of ACC's Airborne C2 Systems Branch, USAF's AWACS fleet had a "full deployment" during Iraqi Freedom, while the smaller E-8 Joint STARS community experienced its largest deployment ever.

Perpetual Motion

The E-8s were in highest demand during OIF, but the AWACS community has had no break since the 9/11 attacks.

The E-3 system and crews have been "kind of pushed to the limit," Peterson said, but the end of hostilities meant they were able to begin returning home for much-needed rest and reconstitution.

There are two ways to resolve the LD/HD issue: either increase density or reduce demand. The Air Force is attempting to do both, but similar efforts have in the past failed to solve the underlying problem.

Gen. Hal M. Hornburg, ACC commander, noted in an April interview that increasing density—that is, the number—of expensive systems is difficult, "so we have to work on the demand part. ... Many of these airframes and systems are not being used as effectively as they should be."

USAF's Low-Density, High-Demand Systems

| | |
|-----------------------------------|-------------------------------|
| AC-130 Gunship | MC-130H Combat Talon II |
| E-3 AWACS | MC-130P Combat Shadow |
| E-8 Joint STARS | MH-53 Pave Low |
| EC-130E Commando Solo | MQ-1 Predator |
| EC-130H Compass Call | RC-135 Rivet Joint |
| Ground Theater Air Control System | RQ-4 Global Hawk |
| HC-130 King | TPN-19 Landing Control Center |
| HH-60G Pave Hawk | U-2 Dragon Lady |
| MC-130E Combat Talon I | |

In addition to the crews of the above systems, USAF also considers the following specialties in the LD/HD category: Combat Control Teams, Pararescue Jumpers, and Security Forces.



Ongoing operations have led to heavy tasking of the high altitude, intelligence-gathering U-2 spyplane. Only 35 of these aircraft remain in active service.

Hornburg maintained that the Air Force could turn to alternative aircraft in some instances as substitutes for AWACS or Joint STARS because all missions “don’t require the full capabilities.”

Therefore, the service needs to work with the warfighting commanders to “sort out the differences” between what is required for a mission and what is merely desired, said Hornburg.

The Joint Staff has been trying to do that for years. The Joint Staff’s Global Military Force Policy attempts to manage use of specific assets by setting priorities, validating requirements, assessing availability, and preparing options for providing the needed capabilities. Warfighting commanders are to specify what must be accomplished, not ask for specific platforms.

Sometimes, the Joint Staff has stepped in and denied theater commander requests for certain assets, notably AWACS aircraft.

Assets assigned to the Global Military Force Policy are updated annually. Systems subject to the force policy are nominated by the services. The policy is in effect during peacetime, which includes periods of contingency operations. The list of systems subject to GMFP is classified, but a Joint Staff spokeswoman noted that the majority of the regulated systems should be readily apparent. The services are fully aware, for example, that there are not enough AWACS birds to go around.



Two USAF pararescuemen are raised to an HH-60 Pave Hawk helicopter at Tallil AB, Iraq, in April. The Air Force considers some of its career fields, including pararescue jumpers, to be in LD/HD status.

The GMFP system has certainly served to moderate the demand for overtaxed systems, but the problem still exists.

Besides trying to suppress the appetite of theater commanders, the Air Force wants to improve the efficiency of the existing LD/HD systems. The service has launched numerous upgrade programs designed to relieve pressure on overstressed systems. The goal is to give the same number of airframes the ability to contribute more. Here, radar and data link improvements are most common. In this regard, Behler singled out the AWACS

for special note. Upgrades are making the back end of the aircraft “much more efficient,” he said, which makes the software faster and the entire AWACS “better.”

Linking Up the Systems

Meanwhile, the Network Centric Collaborative Targeting program will link the E-3’s radar with ground information from the E-8s and intelligence from RC-135 Rivet Joint aircraft. Behler said NCCT is “taking all that [information] and putting it over a data link” so that battle managers can perform collaborative targeting. The hope is that the leverage provided by NCCT will reduce strain on the individual aircraft.

Other efficiencies can be found by realigning assets. For example, the Air Force recently announced a plan

to hand over ACC’s combat search and rescue mission to AFSOC. The change, to take effect Oct. 1, is designed to enhance the efficiency of CSAR missions, “thus increasing mission focus and effectiveness,” according to the USAF news release announcing the change.

This move follows several others that have attempted to increase the availability of rescue assets. Late last year, USAF announced that the active 355th Wing at Davis-Monthan AFB, Ariz., would pick up a CSAR mission, with most of the aircraft—HH-60 Pave Hawk helicopters and

HC-130 refuelers—coming from a Reserve wing in Oregon that is being converted to an air refueling mission.

Meanwhile, the Air Force is extending the service life of some of its HH-60 helicopters and is converting 10 existing WC-130 weather reconnaissance aircraft to HC-130 configuration for CSAR refueling.

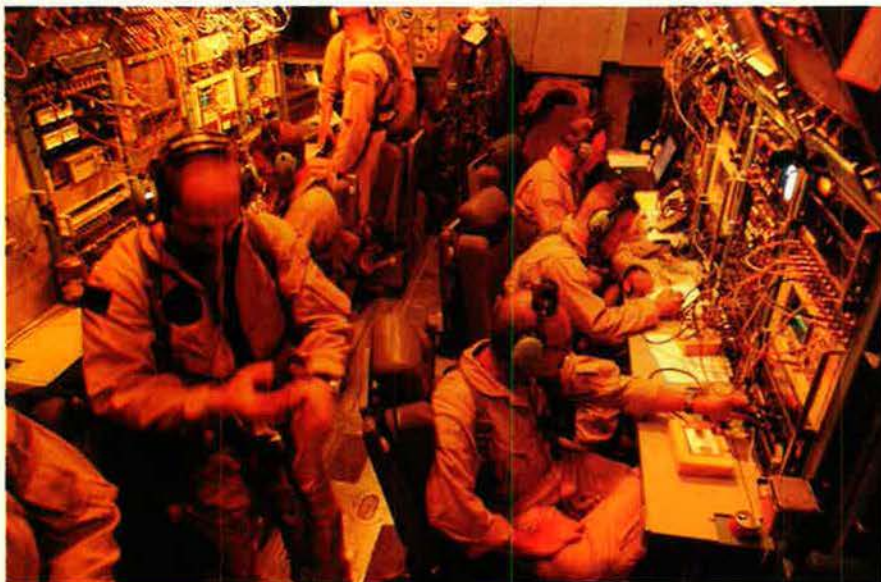
The LD/HD situation did not begin on Sept. 11, 2001, though increased taskings that began with Operation Enduring Freedom have certainly exacerbated the shortages. The problem has been around for a long time. In October 1999, Gen. John P. Jumper told lawmakers that a specific group of systems and their crews had caught the Air Force's attention. Jumper, who was then commander of US Air Forces in Europe and is now Chief of Staff, testified that LD/HD crews had been



USAF photo by SMSgt. Tom McKenzie

The fleet of E-8 Joint STARS aircraft has been in high demand since two developmental systems flew 49 combat sorties during the 1991 Gulf War. Operation Iraqi Freedom was the largest Joint STARS deployment ever.

USN photo by PH1 Aaron Anisarov



The Pennsylvania Air National Guard's EC-130 Commando Solo psychological warfare system from the 193rd Special Operations Wing has flown missions over Iraq's no-fly zones for years, and the pace increased for Gulf War II.

“stretched to the limit” during Operation Allied Force, the air war over Kosovo.

In Allied Force, SOF teams were required to provide the rescue capabilities until ACC's combat search and rescue assets could arrive in Europe. The Air Force “acutely felt” the lack of a permanent theater CSAR capability, Jumper said.

After the conflict, the constant demand for all LD/HD systems meant that the Air Force could not reconstitute them as it did other Air Force assets. In testimony,

Jumper noted, “Heavily tasked ISR and rescue communities have not progressed as well and continue to be heavily tasked.”

A similar situation emerged after the 2001 war in Afghanistan. High-demand units had little chance to recover since warfighting commanders continued to require their specialized capabilities even for low-intensity operations.

This Time, Buy Enough

Most of these overused systems are out of production, so upgrades

can only go so far. Officials are looking ahead to new platforms to help alleviate the pressure, but they also caution that new systems can also reach LD/HD status, unless planners exercise great care.

The first thing USAF can do is avoid acquiring a system that “becomes, at birth, LD/HD,” Hornburg said. He specifically cautioned against limiting purchases of Predator and Global Hawk UAVs. “If we are going to buy, let's buy where it isn't LD.”

He added, “That is one of the arguments that I and many others are trying to make about the F/A-22.”

Unfortunately, making high-density purchases is easier said than done. Future aircraft that could offset shortages in the ISR and stealthy strike categories will include the E-10 multisensor command and control aircraft and the F/A-22 Raptor, but these systems are themselves expensive and face uncertain production futures.

F/A-22 production is currently limited: A Congressionally imposed cost cap could result in a production quantity that makes the Raptor an LD/HD system from birth. And the experience with the inadequate sizes of the AWACS and Joint STARS fleets does not bode well for large purchases of the E-10.

“A lot of people try to do defense on the cheap,” said Hornburg. “Defense is not cheap.”

He added that the Air Force has a

responsibility to acquire only those items that meet genuine warfighter needs, because acquisition dollars are too scarce to waste on “experiments” that belong in laboratories.

USAF will attempt to head off one glaring shortage with a new acquisition.

The HH-60s used for search and rescue are among the most overtaxed of all DOD systems and are aging rapidly. ACC will hand off to AFSOC a plan to seek an expanded fleet, of larger helicopters, to replace these aircraft.

Plans call for 132 medium-lift helicopters to replace the 105 HH-60s, with deliveries expected to begin around 2010. Although desired specifications have not been finalized, both Sikorsky and a Lockheed Martin and AgustaWestland team are expected to offer helicopters to compete for the new program.

Meanwhile, systems such as Predator and Global Hawk are in their production infancies. With continued commitment and funding, these UAVs could buy their way out of low-density status. The case for large fleets was boosted by the systems’ performance in recent operations.

The “Other” Shortages

Not all the shortages exist in easy-to-visualize aircraft. Career fields and capabilities can also become LD/HD, and the service is working to eliminate these “choke points” as well.

Behler called attention to the Air

Force’s combined air operations centers, which are elaborate, centralized air command posts. Only two CAOCs exist—in Saudi Arabia and Qatar. The center in Saudi Arabia proved to be an invaluable asset in coordinating air operations for Iraqi Freedom. Now, however, the Defense Department plans to largely withdraw from Saudi Arabia.

Sometimes the choke points exist not for lack of personnel but for lack of speedy and sophisticated equipment.

“We don’t need more people—we need more efficiency,” Behler said. “We need more machines talking to machines.” If the processing and dissemination choke points can be eliminated, USAF will become much more effective, he added.

The LD/HD systems come complete with their own crews of overtaxed airmen. Some career fields, however, have enough equipment but not enough personnel.

Shortages of pilots, battle managers, and linguists that existed prior to 9/11 have been compounded. New shortages emerged with the new requirements that arose from operations Noble Eagle, Enduring Freedom, and Iraqi Freedom.

“We need more engineers, we need more cops, we need more [intelligence officers],” Hornburg noted. He acknowledged, however, that USAF is not going to get more people.

Air Force officials have followed Rumsfeld’s lead on this issue and

say the service will seek to address personnel shortages through realignments—not by seeking increased end strength. If a series of manpower reviews can free personnel from jobs better handled by civilians, the LD/HD communities stand to benefit.

Top officials have said that once internal reviews are complete, airmen will be directed toward career fields showing the greatest need. Most prominent among the shortages has been the need for nearly 9,000 additional security forces to meet post-9/11 security requirements. But the Air Force also considers AFSOC’s combat controllers and pararescue jumper specialties to be LD/HD.

Even though the Air Force plans to increase manning in some career fields, being overtasked makes it difficult to bring new personnel up to speed.

After training for new E-3 battle managers stalled, USAF allocated additional positions to the AWACS schoolhouse. But during the buildup to OIF, there were no E-3s or crews to spare, so training simply ground to a halt.

“We’ve been working towards an increased crew build,” ACC’s Peterson said, but contingency operations repeatedly complicated those plans.

Fortunately for the AWACS community, taskings and deployments were settling down by the end of April. With a backlog to work through, however, getting a full complement of new AWACS crews trained could take “upwards of a year,” Peterson noted. And that assumes no new operations pop up.

Even if fully staffed, officials point out that battle management systems have nowhere near the density present in other categories of aircraft. Behler noted that USAF has thousands of “shooters” (fighters and bombers) and “movers” (airlifters and tankers) but only a handful of battle management and command and control systems.

Even with the increasing emphasis on using UAVs for ISR and strike missions, there is a considerable deficit to make up before the shortages can be eliminated. However, Behler believes it is not realistic to expect USAF will ever be able to eliminate LD/HD systems.

“The attention is definitely there,” he said, “but we never have enough money. That’s just the way it is.” ■



USAF photo by SSgt. Matthew Hammen

E-3 AWACS aircraft and crews have been in surge mode since the 9/11 terrorist attacks. In 2001 and 2002, NATO E-3s patrolled US airspace, so USAF AWACS could deploy to support the war in Afghanistan.

Fifty years ago in Korea, the shooting war stopped but the Cold War had been fundamentally changed.

The Remembered

By Peter Grier

SHORTLY after noon on July 27, 1953, Capt. Ralph S. Parr Jr. spotted an unfamiliar aircraft. The Air Force pilot was flying an escort mission near Chunggangjin, on the Yalu River, only hours before the newly signed armistice was to bring an end to the Korean War.



War

F-86 Sabres, such as these A models, had a dramatic impact on the course of the Korean War. Still, most sorties were devoted to attacks on ground forces, airlift, and the like.

However, 5th Air Force instructed airmen to keep up the pressure until the appointed time, so Parr turned his F-86 Sabre and made several passes by the stranger. Parr identified it as a North Korean Ilyushin Il-12. With one long burst of gunfire, he sent it spiraling earthward in flames.

That was the war's last air-to-air encounter. Fifty years ago this month, at precisely 10:01 p.m. on July 27, the fighting between US-led United Nations forces and North Korean Communist aggressors came to an end.

When it did, the Korean peninsula was divided in two nations, with



heavily armed forces facing each other across the 38th parallel. So the situation has remained, to this day.

Korea may have been America's "forgotten war," overshadowed by World War II, but in retrospect it was clearly a pivotal event for the US military in general and US Air Force in particular.

At the war's beginning in June 1950, the United States was woefully unprepared to counter North Korea's armed aggression. Force size and the military budget had shrunk to a tiny fraction of their World War II levels. Yet, by the end of the fighting 37 months later, the United States had laid the foundation for the large standing force throughout the Cold War.

The Jet Age

The Air Force expanded. When it began fighting in Korea, USAF was still heavily dependent on propeller-driven fighters and bombers. By the time of the armistice, it boasted an almost all-jet combat force. New aircraft, such as the supersonic F-100 fighter and B-57 tactical bomber, were on the verge of entering the inventory in quantity.

The Air Force's combat experience in Korea was marked by improvisation—at one point, for example, C-47s seeded the roads of Pyongyang with roofing nails in an effort to halt North Korean trucks. However, Air Force operators also learned lessons about close air support, interdiction,

and airlift, lessons that proved to be of great value in years to come.

In the words of the Air Force's official history of the Korean conflict: "The fledgling United States Air Force emerged as a power better able to maintain peace through preparedness."

The Korean War began on June 25, 1950, when North Korean forces stormed southward across the 38th parallel in a carefully planned attack. In the south, Republic of Korea defenders were rocked back on their heels and then routed. President Syngman Rhee fled south with his

government, and President Harry S. Truman ordered the evacuation of US nationals, under protective cover from US airpower.

Fifth Air Force—largest of Gen. Douglas MacArthur's Far East Air Forces (FEAF)—rose to the task. F-82 Twin Mustangs flew overhead while evacuees were loaded onto ships at the port of Inchon during the first hours of fighting. By the night of June 26, the situation had become so dire that embassy officials asked for an airlift to take remaining dependents out. A flight of F-82 fighters, ordered to defend Seoul's Kimp'o



Photo via Robert F. Dorr

Pilots flying F-82 Twin Mustangs, such as this one, scored aerial victories in the war's early days. When Soviet-built MiGs entered the conflict, though, the F-82s were overmatched.



Capt. Ralph Parr describes the last shootdown of the war to Col. Thomas DeJarnette, a 4th Wing group commander. Parr's achievement was the last air-to-air victory of the conflict.

Airfield during this operation, scored the first air-to-air kills of the war.

The big Twin Mustangs were orbiting the field when five North Korean fighters, either Yaks or Lavochkins, swung by. First Lt. William G. Hudson, in pursuit, blew off chunks of one and set its wing afire. He saw its pilot climb out and say something to his observer, who did not respond. Then the pilot pulled his ripcord and parachuted free, while the aircraft rolled over and crashed, the observer still inside.

At least one additional North Korean airplane—possibly three—was shot down in this encounter, but it is Hudson's victory that the Air Force today officially lists as its first of the Korean War.

The airlift of civilians concluded without further interference, but back

in Washington, and at the United Nations in New York, officials and diplomats were viewing the situation with growing alarm. With the Soviet delegate absent in protest against the UN's refusal to admit the People's Republic of China, the UN Security Council passed a resolution calling on UN members to resist North Korea's invasion.

On June 27, President Truman—without consulting Congress—ordered US forces to support the UN in its “police action.” In Tokyo, MacArthur, commander of US Far East Command, began plotting strategy. One of his first moves was to order FEAF to strike at North Korean ground troops with all aircraft at its disposal.

A Cut Too Deep

Unfortunately, not many aircraft were available to the commander of FEAF, Lt. Gen. George E. Stratemeyer. His squadrons were short of everything from F-80 fighters to C-47 transports. In the aftermath of World War II, US flying forces had shrunk by four-fifths, to about 411,277 personnel. Not all of USAF's 48 groups were at full strength or combat ready. In 1948, such downsizing had seemed prudent economy. In the face of North Korea's strike, the cuts appeared to have gone too far, too fast.

Still, FEAF struck back hard with what it had. The US deployed some 921 combat aircraft in the theater by July, flying from bases in Korea and



Photo by Charles Willis via Warren Thompson

Early jets, such as this pair of F-84s, were straight-wing aircraft. The F-84s and F-80s went from a fighter role to that of close air support. By war's end, most USAF aircraft were jet-powered.

Japan. More than half were F-80 fighters, the service's first widely deployed jet fighter. The inventory also included 190 F-51 Mustangs of World War II vintage, valued for their long range and ability to operate from rough strips. Thirty-seven F-82s were available for night and all-weather duty. All of the Air Force bombers were prop-driven models—79 B-26s and 87 B-29s.

Job one was to gain air superiority. USAF achieved this fairly easily; the Soviet-supplied aircraft of North Korean units were old and inferior and North Korean pilots were

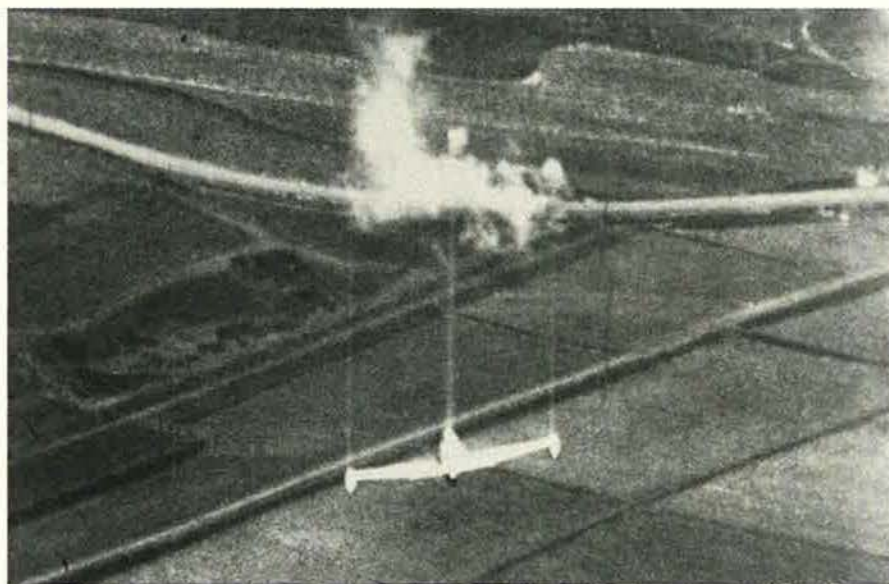
poorly trained. The US estimated that, by August, North Korea still had only a handful of its original 110 combat airplanes.

Job two, attacking North Korean ground troops, was far tougher. North Korea's armies outnumbered US and UN forces, and, aided by the shock effect of their sudden invasion, they made rapid advances to the south. In late summer, UN forces had been driven into a small area covering the approaches to Pusan in the far south-east of the peninsula. In the critical days of July and August, virtually all UN ground forces were dug in on front lines, with only a handful in reserve. It seemed possible South Korea could be lost.

However, the Communists' southward thrust had used up tremendous amounts of North Korean resources, material and human, and Pyongyang was running out of gas. Around the Pusan perimeter, North Koreans proved vulnerable to an extensive close air support campaign. More than 60 percent of Air Force sorties were devoted to attack of forces on the battlefield. In August, FEAF airmen were flying an average of 239 air support sorties per day.

Thus, while the North Koreans mustered some 150,000 troops near Pusan, their armor had been pounded to a shambles. Moreover, airpower kept enemy forces pinned down, so much so that they tended to move and fight mostly at night.

In one memorable mission, Aug.



An Air Force F-80 strafes North Korean vehicles along a road north of the 38th parallel. Allied airpower accounted for 75 percent of kills of North Korean tanks.



World War II-era B-29s were a mainstay of the interdiction effort on the peninsula. The coming of the MiG-15s, however, posed a lethal threat, and USAF soon retired the Superfortress. Here, a B-29 gets an engine change.

16, a total of 98 Air Force B-29 bombers blasted a seven-mile-long strip along the Naktong River, delivering bombs whose blast effect was equivalent to that of 30,000 rounds of standard artillery. After the strike, the bombing commander, Maj. Gen. Emmett O'Donnell Jr., spent more than two hours personally examining the area. He reported that nothing—soldier, truck, or tank—was moving.

Human Waves

On Aug. 31, the North Koreans unleashed a last-ditch offensive. They were cut off from their supply lines and were now desperate for replacement weapons. By early September, Communist generals were sending great human attack waves forward without rifles, instructed to pick up what they could from dead and wounded on the battlefield. On Sept. 15, MacArthur's daring amphibious landing at Inchon took the North Korean units from the rear and effectively ended the first phase of the war. The ROK government returned to Seoul on Sept. 29 even as the North Koreans surrendered or fled en masse.

By fall, UN forces were rolling up the Korean peninsula toward the Yalu, the mighty river that constituted the border between North Korea and China. Though China had indirectly warned Washington that it might intervene if UN forces came too close to its territory, MacArthur

was confident Beijing was bluffing.

"They have no air force," he told Truman. "Now that we have bases for our Air Force in Korea, if the Chinese tried to get down to Pyongyang there would be the greatest slaughter."

Even so, at 1:45 p.m. on Nov. 1, six swept-wing aircraft painted a burned green-silver raced across the Yalu and jumped a USAF T-6 Mosquito forward air controller and a flight of Mustangs. The US aircraft managed to escape, and, back at base, the Mosquito pilot reported the star-

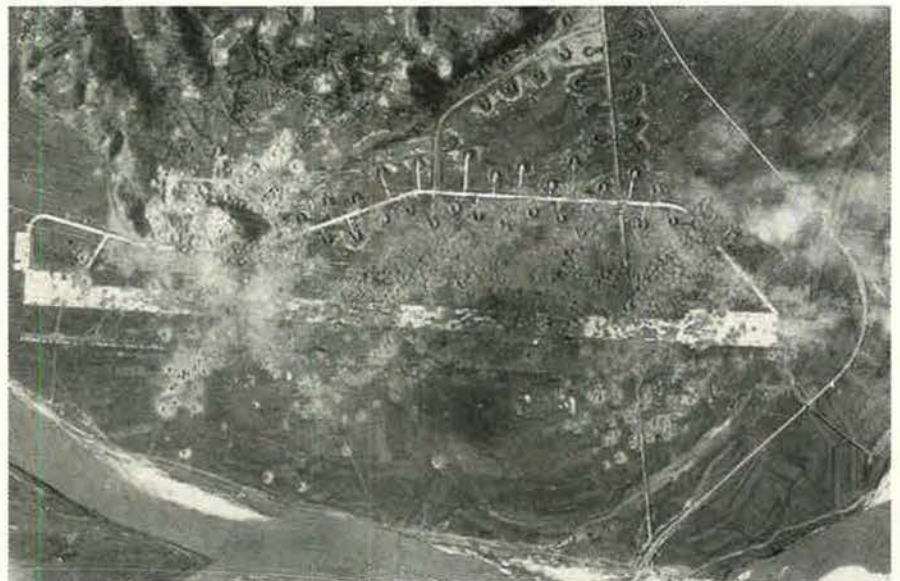
ting news: He believed they had been attacked by Soviet-built MiG-15 fighters.

China thus had served notice of its intentions. On Nov. 25, 180,000 Chinese "volunteer" ground troops entered the war, and the second phase of the conflict began.

In initial wrangles in the area of Korea that would later become famous as "MiG Alley," American pilots in fact weren't facing Chinese. It was only much later that US intelligence determined it was Soviets themselves who were flying the first MiG sorties. Chinese were not allowed to handle the jets in combat operations until some time later.

The Soviets wore North Korean uniforms and attempted to speak Korean while airborne, reading phrases off tablets carried in the cockpit. Snatches of Russian heard on the radio and the sight of "Chinese" with Caucasian features soon raised American suspicion. It was not until the USSR's 1991 collapse and the opening of its archives that such suspicions were confirmed.

The entry of MiG-15s into Korean combat changed the air war. While the hardy F-51s could turn with the jets, particularly at lower altitudes, US F-80 Shooting Stars were slower than the MiGs and generally outclassed. Even more vulnerable were the lumbering B-29s, old now and reclassified as medium bombers but a mainstay of the interdiction effort against transport lines



Taechon Air Field was devastated by a ferocious bombing campaign. In the course of the war, the Air Force flew 720,980 sorties, dropped 476,000 tons of ordnance, and destroyed or damaged 2,100 enemy aircraft.

and depots. Eventually FEAF was forced to end most daylight B-29 operations and use the Superforts primarily at night.

Enter the Sabres

The US would have to fight to regain air superiority, and, with the arrival of large numbers of F-86 Sabres, they did just that.

The first Sabre unit to move to the theater was the 4th Fighter-Interceptor Wing, headquartered at Langley AFB, Va. It got there in record time, though inadequate waterproofing caused most aircraft to suffer from salt spray corrosion during the sea journey from California to Japan. On Dec. 17, 1950, 4th Fighter-Interceptor Wing pilots made their first patrol into MiG Alley. Four enemy aircraft rose to greet



In December 1950, F-86s began arriving in large numbers. The rugged, swept-wing aircraft proved more than a match for the MiGs. Superior flight controls and pilot skill restored US air superiority over the peninsula.



Thirty-eight USAF pilots became aces during the Korean War. Here, Col. Harrison Thyng, Maj. Frederick Blesse, and Capt. Clifford Jolley count off their current victory credits after Blesse's return from a mission.

them, probably believing they were slow F-80s. By the time the confused enemy saw their mistake it was too late.

Lt. Col. Bruce H. Hinton broke downward at more than Mach .95, turned inside one MiG, and gave it a short burst that caused it to begin trailing fuel. When another came into his sights, he fired at a range of about 800 feet, and it rolled and burst into flames. It was the first of what would be 792 F-86 victories over MiG-15s, at a return cost of 76 Sabres.

The F-86 had begun life as a

straight-wing fighter, but experimental versions weren't as fast as the Air Force wanted. At Air Force request, builder North American Aviation studied a captured Messerschmitt Me-262 swept-wing assembly and eventually incorporated the German jet's unique leading-edge slat design into F-86 production models.

The Sabres were far from perfect. They were not supersonic, and their .50-caliber armament did not pack the punch of the MiG's 23 mm and 37 mm cannons. The lighter MiGs could climb and accelerate faster

and reach higher altitudes. They turned tighter in some situations, as well. But MiGs were prone to slip into uncontrolled spins; FEAF estimated that North Korea lost about 35 in this way. Sabres were able to dive faster and were more stable in high-speed turns. F-86 flight controls were superior and its airframe more rugged.

All USAF aces of the Korean War flew Sabres. By war's end, 439 F-86s were on hand in the Korean theater, out of a total combat aircraft strength of 1,459.

China's entry into the war made it clear that any United States attempt to forcibly unify the Korean peninsula risked the detonation of worldwide war. As UN ground forces reeled backward from Chinese attacks in that bleak winter of 1950-51, the US goal changed from military victory to political cease-fire.

This phase of the fighting was a desperate struggle. At no point was US airpower more important to the survival of American troops. To the west, Eighth Army had disengaged from the enemy and begun retreating toward South Korea. To the east, X Corps did the same thing. Behind them, Air Force B-29s, B-26s, and fighter-attack squadrons pounded the enemy's bridges, supply dumps, and forces.

In December, FEAF aircraft flew 7,654 armed reconnaissance and interdiction sorties, killing some 6,700 Communist soldiers. In the first quar-



The prop-driven B-26 pounded the enemy's bridges, supply dumps, and fielded forces. An Invader from the 3rd Bombardment Wing dropped the last bombs of the war, just 24 minutes before hostilities officially ceased.

ter of 1951, USAF aircraft destroyed more than 4,200 vehicles, according to a 5th Air Force estimate.

Backhanded Compliment

The effectiveness of the interdiction campaign can be deduced from the fact that all major Chinese offensives in the first half of 1951 were timed for periods of bad weather, when airpower would be somewhat constrained. In July 1951, as cease-fire discussions got under way, North Korean chief delegate Lt. Gen. Nam Il said it was airpower that had prevented defeat for the UN side. "Without the support of the indiscriminate bombing and bombardment of your air and naval forces, your ground forces would have long ago been driven out of the Korean peninsula by our powerful and battle-skilled ground forces," he said.

Negotiations dragged on for months. Fearful that China was using the lull to replenish front-line forces, FEAF bombers launched an intensive railway interdiction effort—Operation Strangle—that for a time limited the enemy to night truck convoys.

By 1952, this campaign was producing diminishing results, but USAF had turned back a concerted Chinese effort to establish air superiority in the northwest of the country. Through the remaining months of the war, US aircraft applied pressure everywhere north of the 38th parallel.

In a final jab to speed truce negotiations, US commanders authorized attacks against North Korea's irrigation dams. On May 13, 1953, four waves of 59 F-84 Thunderjets attacked the Toksan Dam, about 20 miles north of Pyongyang. At dusk the 2,400-foot-wide earth-and-stone structure was still standing, but it broke in the night, releasing a swirling flood that washed out five bridges on an important rail line, destroyed two miles of the country's main north-south highway, inundated Sunan Airfield, and ripped up five square miles of rice paddies.

Later, Gen. Otto P. Weyland, FEAF commander, would rate the Toksan raid, along with a similar one against the Chasan Dam, as one of the two most spectacular fighter-bomber strikes of the war.

As the armistice point neared, Air Force aircraft continued to carry out operations—almost until the last possible moment. A B-26 from the 3rd Bombardment Wing dropped the final bombs of the war a scant 24 minutes before hostilities officially ceased.

The record shows that, in three years of war, the new Air Force produced a mammoth effort. Of more than one million total sorties by UN

aircraft, 720,980 were flown by USAF crews. The Air Force dropped 476,000 tons of ordnance and destroyed or damaged more than 2,100 enemy aircraft. Its interdiction efforts were a major part of the UN coalition's offensive power. Air forces accounted for 72 percent of all adversary artillery destroyed, as well as 75 percent of all tanks and 47 percent of all troops, according to USAF statistics.

Great Cost

These results came at great cost. USAF suffered 1,841 battle casualties, of which 1,180 were killed in action. It lost 1,466 aircraft to hostile action or other causes.

For the Air Force, the Korean conflict was also the hinge of the jet age. All F-82 Twin Mustangs had been removed from the theater by war's end. F-51 strength had been cut from 190 to 65. Meanwhile, the number of modern F-86 Sabres in the Far East had gone from zero to 184.

As the fighter force turned over, so did the bombers. The Air Force had retired nearly all of its B-29s by the end of 1954, and they were replaced by new B-47 Stratojet aircraft. By 1955 the B-52 Stratofortress would be entering the inventory in substantial numbers, as prop B-36s were phased out of heavy bombardment units.

The war left USAF with a profound appreciation for combat readiness. Washington in general saw what had happened when US military cutbacks tempted Communist aggression, and it was disinclined to let such a thing happen again. At the time, Korea seemed proof positive that the Soviet Union and its satellites were intent on global expansion. Where might they strike next?

The Air Force had 48 active wings when the Korean War began, but shortly thereafter the Pentagon authorized USAF to expand to 143 wings. After the war, President Eisenhower reduced that number only slightly—the new goal was 137 wings. The Cold War was on and in earnest. ■

Peter Grier, a Washington, D.C., editor for the Christian Science Monitor, is a longtime defense correspondent and a contributing editor to Air Force Magazine. His most recent article, "A Memorial on the High Ground," appeared in the April issue.



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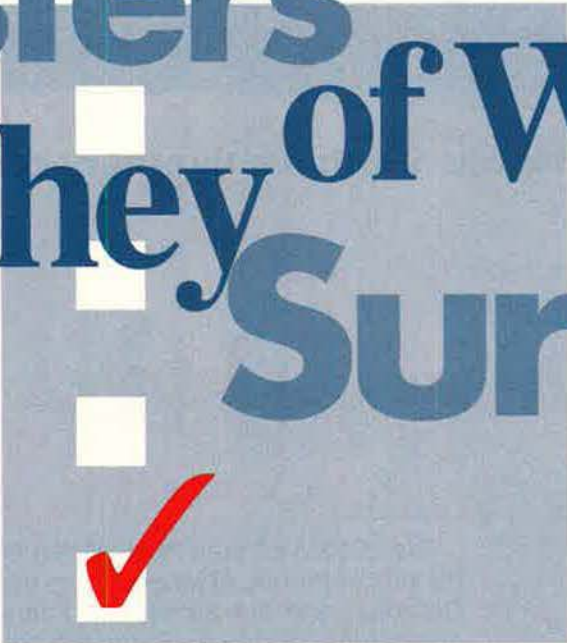
Convention headquarters hotel is the Marriott Wardman Park Hotel in Washington, D.C., 202-328-2000. Housing is also available by calling Accommodations for Washington, D.C., at 1-800-554-2220.

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The Air Force has found a faster, cheaper, better way to track force trends.

Masters They of What Survey

A graphic of a survey form with a red checkmark in the bottom box. The form is a light blue rectangle with four white square checkboxes arranged vertically. The bottom checkbox is marked with a red checkmark. The text 'Masters They of What Survey' is overlaid on the form in a large, blue, serif font.

By Bruce D. Callander

In 1997, the Air Force conducted a survey to gauge the career intentions of its members. The results provided ammunition in the battle to change the military retirement system, flight pay, and housing allowances. Within two years, Congress passed legislation incorporating those changes.

Service officials said the 1997 survey gets much of the credit for that victory.

Getting that legislation “had a lot to do with our ability to provide information from the troops regarding their financial needs,” said Charles Hamilton, chief of the Survey Branch at the Air Force Personnel Center.

The Air Force has conducted surveys of its members for more than 30 years. Most Air Force veterans would remember being polled at some point in their careers, but, unless they served recently, they would not recognize today’s survey process.

The common practice in the early days was to circulate printed questionnaires to the field, where members responded by checking boxes with No. 2 pencils. In 1995, however, USAF began transmitting its surveys electronically to field units and set up its first electronic database of results.

Four years later, USAF survey officials took the process to a new level by introducing the ability to respond via the Internet. And, in 2000, they employed their first targeted e-mail approach.

Faster, Better, Cheaper?

While there are some researchers who question whether Internet surveys really are faster, better, cheaper, or easier to conduct, the Air Force says electronic polling has made responding easier and, consequently, brings in larger returns. It also provides more flex-

ibility in the sampling process. In fact, a RAND study of Internet-based surveys found that USAF has a decided advantage. It is an organization tailor-made for electronic polling because of its standardized e-mail address system, information about its members, and widespread access to computers.

For instance, RAND noted that, in response to a Congressional inquiry, the USAF survey branch designed, implemented, analyzed, and reported an Air Force-wide survey in just 11 days using a combination of e-mail contacts and Web responses.

The ability to reach a wider audience can also be a disadvantage, however.

By using a Web-based poll, "we can survey as many people as we want to," said Hamilton. "And survey them as often as we want to."

That can lead to overkill. "Just because we can survey 100,000 people this week doesn't mean we need to," emphasized Hamilton, adding that there are more advantages than disadvantages to doing electronic polls, "but clearly you can overburden the people with surveys."

One definite plus for electronic polling is that it enables the service to refine both its sample population and questions throughout the process.

"We can look at the data at any point in the collection period," said Hamilton. "If we see, for example, we are short in the E-1, -2, or -3 grades, we can focus our follow-up effort on that group." Since USAF no longer needs to shotgun surveys to get the right sampling, it can save time and money.

Random and Anonymous

Hamilton maintained, though, that the ability to target specific groups does not obviate the need to "do this randomly."

Ensuring anonymity is another concern.

USAF employs "the most advanced information-masking software available," USAF Chief of Staff Gen. John P. Jumper said in a message to Air Force personnel urging them to complete the 2002 Chief of Staff Quality of Life Survey.

According to directives, survey officials must "ensure individual responses are kept confidential" to remove the possibility that an individual could suffer "adverse actions." Such assurance is vital to winning the cooperation of members, insists Hamilton.

**"We never look at an individual's data by name. We have a lot of safeguards in place."
—Hamilton**

"We never look at an individual's data by name," he said. "We have a lot of safeguards in place, and, as a practical matter, we don't have the time to look up a particular person's response. Anyway, we're not interested in doing that."

Hamilton's office comprises only four full-time civilian specialists, but it can draw on the expertise of military behavioral scientists and research analysts. "We bring them in because that military influence lends a lot to our shop," he said. "We need that."

He added that even though he had worked with Air Force surveys for about 25 years, there is a military perspective "civilians might lack."

The AFPC survey branch does not handle all surveys conducted within the service, but it does control those that cover service policies and programs.

"All such surveys have to come into my office for approval," said Hamilton. In fact, he said, it is "much easier" for his office to conduct large-scale surveys, so major commands usually defer to them for most of their command-specific

information. He added, "Not many major commands are doing their own."

At local bases, however, officials may poll their personnel about local subjects, specifically those areas that a base or unit commander has the authority to change. A couple of exceptions to that rule arise if a commander wants to survey civilian personnel. First, the commander must coordinate any survey with the base civilian personnel officer, and, second, if the survey includes questions such as satisfaction with pay or benefits, it must have USAF approval.

There are a lot of base-level surveys going on, "but they are mostly service customer-satisfaction kinds of things," said Hamilton. "Those, we don't get involved in because the commander can make changes based on any input he gets back."

Taboo

Even with official sanction, some polling questions are necessarily taboo.

The Air Force forbids surveys that might harm mission accomplishment and those covering areas of possible intelligence value. Officials label as "potentially inappropriate" such topics as political views, personality assessments, measurement of knowledge or skill, opinions about specific individuals or their job performance, and any topic with responses categorized by ethnic group or sex.

To guard against bias, Air Force units must submit their questions to the survey office for approval.

"You would be amazed at the kinds of questions we sometimes get from customers," said Hamilton. "Some are totally slanted and geared toward getting the answers they prefer." His office's job, he said, is to ensure objective collection of data.

"My staff spends a good deal of time writing questions," he explained. "We have been in this business long enough, too, that we have huge reference library of questions that have been used successfully."

There are also questions that "haven't worked," Hamilton said.

Using electronic surveys means that "broken" questions can be fixed midstream. "If you've got a question

Views From 2002: Retention Up, Manpower Down

Making USAF a Career

The 2002 quality of life survey revealed a "dramatically higher" intent to make the Air Force a career than had been seen in recent years.

| Personnel category | Intent to remain for at least 20 years | |
|--------------------------|--|------|
| | 1999 | 2002 |
| Company grade pilots | 25% | 43% |
| Field grade pilots | 61% | 90% |
| Company grade non-pilots | 52% | 68% |
| Field grade non-pilots | 88% | 93% |
| 1st term enlisted | 24% | 37% |
| 2nd term enlisted | 36% | 58% |
| Career enlisted | 81% | 91% |

Where the Rubber Meets the Road

According to survey officials, about half the force polled in the 2002 survey believes there is a manpower shortfall.

Manpower was in the top two spots in a ranking of eight quality of life concerns. On other issues, responses from the troops were fairly varied. On the same eight issues, officer and enlisted leaders showed a remarkable similarity in their thinking, and both placed manpower as No. 1.

Non-Pilot Officers

Manpower shortage
 Compensation/benefits
 Workplace environment
 Tempo
 Health care
 Housing
 Community/family programs
 Education opportunities

The Troops

Pilots

Tempo
 Manpower shortage
 Compensation/benefits
 Workplace environment
 Health care
 Housing
 Community/family programs
 Education opportunities

Enlisted

Compensation/benefits
 Manpower shortage
 Workplace environment
 Health care
 Housing
 Tempo
 Education opportunities
 Community/family programs

Commanders

Manpower shortage (37%)
 Tempo (29%)
 Compensation/benefits (16%)
 Workplace environment (11%)
 Health care (3%)
 Housing (2%)
 Community/family programs (1%)
 Education opportunities (1%)

The Leaders

Command Chief Master/First Sergeants

Manpower shortage (36%)
 Tempo (28%)
 Compensation/benefits (17%)
 Workplace environment (12%)
 Health care (5%)
 Housing (1%)
 Community/family programs (1%)
 Education opportunities (0%)

Is it Bodies or Skills?

When asked whether there were enough people with the right skills to perform the job, responses from officer and enlisted members were close: More than half said their units don't have the right skills. Asked whether there are enough personnel, slightly more officers than enlisted members believe there are shortages of bodies.

| | Don't Have Right Skills | Short of personnel |
|----------|-------------------------|--------------------|
| Officer | 51% | 54% |
| Enlisted | 53% | 46% |

The survey also found that among officers who believe there is a manpower shortage, 82 percent think the problem is lack of numbers, not lack of skills. About two-thirds of enlisted members agree. Air Force-wide, 91 percent of pilots said the service has too few troops.

that isn't working, or you are getting strange information back, you can go in and change that question," he explained. "You can also do that on the telephone, but with paper-and-pencil surveys, once you have put it out there, you have lost control. You don't know your question is broken until you get it back."

However, he conceded that, despite its obvious advantages, electronic polling is not always the best way to get information. "If we have a topic that may be sensitive, we use telephone surveys," said Hamilton. For instance, if questions need explanation or, based on the response, need different follow-up questions, then his office would employ a telephone survey.

"It's more sensitive in nature," he said, adding, "we haven't done one of these in a couple of years."

Over the years, there's been almost as great a change in the content of surveys as in the manner in which they are conducted. Early polls were relatively limited in scope. They simply took note of such things as the use of base facilities and career intentions.

The New Wave

Eventually, though, the Air Force began to probe further, searching for attitudes and opinions on an ever-wider range of issues. The new direction drew fire from some commanders, who felt the questions delved into matters of morale that were best handled internally.

Despite such reservations, the service persisted. Surveys now poll members about leadership and unit effectiveness as well as traditional quality of life issues.

What also helped win the critics over was the fact that the service was able to use survey data to back its bids for policy changes and legislative improvements. Rather than just plead for pay increases, for example, officials were able to show with some precision how financial problems affected retention rates.

Today, service leaders not only support the use of surveys but often request that polls be initiated on specific subjects, said Hamilton.

When the service faced rising recruiting and retention problems af-

ter the drawdown of the early 1990s, officials struggled to pinpoint the causes and devise remedies. A succession of quality of life surveys helped provide answers.

Respondents voiced typical complaints about pay and promotions but they also surfaced a new irritant:

**USAF has
found through
trend tracking
that its
personnel
generally
do what they say
they will do.**

high operations tempo. A much smaller force was taking on more and more missions with frequent and, in some cases, prolonged deployments.

A 1995 quality of life poll found that 90 percent of officers and 64 percent of airmen had been away on temporary duty during the previous 12 months. Many said the absences caused family problems, delayed their training, and strained their budgets.

The optempo problem, according to that and subsequent surveys, was a major reason cited for leaving the service. Identification of that retention problem was one reason service leaders began to develop the expeditionary force concept as a means to reduce stress levels without compromising the mission. The aim was to spread deployments more evenly among members and make such movements more predictable.

The advent of electronic polling has enabled the Air Force to track trends for issues such as optempo more easily.

"The old surveys were on a piece of paper somewhere in a drawer," said Hamilton. "What we have tried to do with electronic surveys, particularly on the retention side, is go back a number of years and have a single, very comprehensive report." In effect, electronic processing has allowed officials to replace the traditional "snapshot" of opinions at a specific time with a moving picture of members' attitudes as they change and evolve.

The Air Force has found through trend tracking that its personnel generally do what they say they will do.

The survey branch tracked responses for 10 years and found that 73 percent of the company grade officers (lieutenants and captains) who said in 1989 that they planned to leave the service, actually did so by 1999. For first-term airmen, the number was even higher: 83 percent.

That was a sobering fact for officials when they reviewed career intent in the 1999 quality of life survey: some 75 percent of company grade pilots and first-term enlisted members said they did not plan a career in the service. The percentages were fairly dismal for other categories as well.

Normally, USAF would have conducted another QOL survey in 2001, but because of 9/11, it was delayed until late last year. The results, released publicly May 30, show a dramatic rise in those who say they plan to make the Air Force a career. (See "Views From 2002: Retention Up, Manpower Down," p. 78.)

Remarkably, too, despite the service's continuing high operations tempo, participation was very high—"about a 45 percent response rate," Hamilton said. "That's better than some of our past pencil-and-paper surveys." ■

Bruce D. Callander is a contributing editor of Air Force Magazine. He served tours of active duty during World War II and the Korean War and was editor of Air Force Times from 1972 to 1986. His most recent article for Air Force Magazine, "The Citizen Air Fleet," appeared in the June issue.

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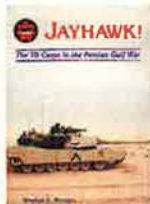
Books

Compiled by Chequita Wood, Editorial Associate

The A-1 Skyraider in Vietnam: The Spad's Last War. Wayne Mutza. Schiffer Publishing, Ltd., Atglen, PA (610-593-1777). 216 pages. \$49.95.



Jayhawk!: The VII Corps in the Persian Gulf War. Stephen A. Bourque. Supt. of Documents, Pittsburgh (866-512-1800). 514 pages. \$52.00.



Splendid Vision, Unswerving Purpose: Developing Air Power for the United States Air Force During the First Century of Powered Flight. History Office, Aeronautical Systems Center. Supt. of Documents, Pittsburgh (866-512-1800). 507 pages. \$69.00.



Combat Legend: F-16 Fighting Falcon. Kev Darling. Stackpole Books, Mechanicsburg, PA (800-732-3669). 96 pages. \$14.95.

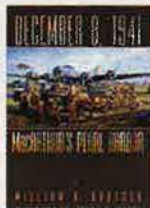


Mastering the Ultimate High Ground: Next Steps in the Military Uses of Space. Benjamin S. Lambeth. RAND, Santa Monica, CA (877-584-8642). 193 pages. \$24.00 (also available at www.rand.org/publications).



Taking Flight: Inventing the Aerial Age From Antiquity Through the First World War. Richard P. Hallion. Oxford University Press, New York (800-451-7556). 531 pages. \$35.00.

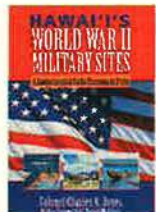
December 8, 1941: MacArthur's Pearl Harbor. William H. Bartsch. Texas A&M University Press, College Station, TX (800-826-8911). 557 pages. \$40.00.



P-38 Lightning: Walk Around No. 30. Larry Davis. Squadron/Signal Publications, Carrollton, TX (800-527-7427). 79 pages. \$14.95.



Terrible Terry Allen: Combat General of World War II—The Life of an American Soldier. Gerald Astor. Ballantine Books, New York (800-726-0600). 374 pages. \$25.95.



Hawaii's World War II Military Sites: A Comprehensive Guide Focusing on O'ahu. Col. Charles A. Jones, USMCR. Mutual Publishing, Honolulu (808-732-1709). 250 pages. \$14.95.

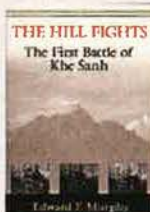


Shot From the Sky: American POWs in Switzerland. Cathryn J. Prince. Naval Institute Press, Annapolis, MD (800-233-8764). 248 pages. \$29.95.

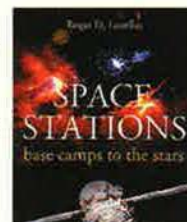


The Vietnam War: A History in Documents. Marilyn B. Young, John J. Fitzgerald, and A. Tom Grunfeld. Oxford University Press, New York (800-451-7556). 176 pages. \$19.95.

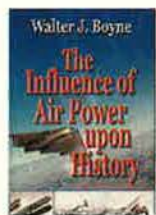
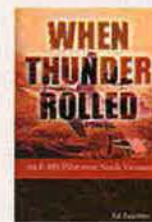
The Hill Fights: The First Battle of Khe Sanh. Edward F. Murphy. Ballantine Books, New York (800-726-0600). 284 pages. \$24.95.



Space Stations: Base Camps to the Stars. Roger D. Launius. Smithsonian Institution Press, Washington, DC (800-782-4612). 262 pages. \$39.95.



When Thunder Rolled: An F-105 Pilot Over North Vietnam. Ed Rasimus. Smithsonian Institution Press, Washington, DC (800-782-4612). 261 pages. \$27.95.



The Influence of Air Power Upon History. Walter J. Boyne. Pelican Publishing Co., Gretna, LA (800-843-1724). 447 pages. \$29.95.



Special Operations: Weapons and Tactics. T.J. Mullin. Stackpole Books, Mechanicsburg, PA (800-732-3669). 175 pages. \$39.95.



The Wright Brothers and the Invention of the Aerial Age. Tom D. Crouch and Peter L. Jakab. National Geographic Books, Washington, D.C. (800-647-5463). 240 pages. \$35.00.

By Frances McKenney, Assistant Managing Editor

Spotlight on a Doolittle Raider

Doolittle Raider Robert L. Hite was honored by fellow members of the **David D. Terry Jr. (Ark.) Chapter** at a March meeting.

The event was in keeping with the chapter's theme for this year—Arkansas Aviation Pioneers—to help celebrate the 100th anniversary of the Wright brothers' flight.

Lt. Col. Kevin Sluss, chapter president, introduced the retired lieutenant colonel to the audience, then recounted the April 18, 1942, bombing raid in which Hite participated. It was led by Jimmy Doolittle and was the first attack on the Japanese homeland since Pearl Harbor.

Hite was copilot of the last of 16 B-25 Mitchells that took off from the US aircraft carrier *Hornet*, 600 miles from Japan. His target was Nagoya. His aircraft bombed oil storage tanks and an airplane factory before heading for what the crew hoped was safe territory in China. Fifteen of the B-25s crash-landed in China. Hite and fellow crew members bailed out near Nanchang, China, and were among eight Raiders captured by Japanese forces.

Hite endured 40 months of captivity, torture, and starvation before his release Aug. 20, 1945, several days after the war ended. Sluss said that Hite went on to serve in Korea and Morocco before turning to a civilian career managing hotels in Arkansas, Oklahoma, and Texas.

After Sluss's remarks, Hite spoke about the meaning of freedom and the importance of the Bible, which had been one of the only books in English given to the prisoners during their captivity.

In the audience at this chapter meeting, held at a local country club, was Jerry Reichenbach, state president, many military retirees, and about 40 JROTC cadets who had been learning about the Doolittle Raiders.

Introducing the Chapter

Rep. Jim McDermott (D-Wash.) welcomed two **Greater Seattle Chapter** leaders to his local office for a visit in April.



Retired CMSAF James McCoy (left) and AFA Board Chairman John Politi (right) present SMSgt. Paul Humphrey Jr. with AFA's James M. McCoy Academic Achievement Award at the Senior NCO Academy graduation in April. Humphrey is from the 78th Civil Engineering Squadron, Robins AFB, Ga. McCoy is also a former AFA board chairman and national president.

I. Fred Rosenfelder, chapter president, and Frederick Sine, community and government affairs vice president, talked with the Congressman about the AFA chapter. Rosenfelder said they offered help in explaining or exploring issues related to the Air Force and defense. Other topics covered were the selection process for the US Air Force Academy, the need to support families of military personnel deployed far from home for long periods, and the chapter's support of cadets at the University of Washington's AFROTC Det. 910.

McDermott was elected to the House in 1988 and is serving his eighth term. He is a member of the Ways and Means Committee. A psychiatrist by training, he served as a lieutenant commander (chief psychiatrist) at Long Beach Naval Station, Calif., from 1968 to 1970.

According to statistics compiled by AFA's Government Relations Department, McDermott is one of 121 members of the House who have served in the military. In the Senate, 35 have military experience.

Rosenfelder said the chapter plans meetings with its other leaders on Capitol Hill and with state and local government officials. The visit with McDermott, he said, "opened a line of communications that will serve us well in the future."

A Leader in Visions

Diane R. Bartels, aerospace education VP for the **Lincoln (Neb.) Chapter**, received an award from the Aviation Institute of the University of Nebraska at Omaha at an institute honors convocation in April.

Bartels accepted the Frank E. Sorenson Award for Pioneering Achievement in Nebraska Aviation Education. It is named for an educator at the University of Nebraska at Lincoln. The Aviation Institute is part of UNO's College of Public Affairs and Community Service.

Along with her many initiatives to promote aviation history and aerospace education in Nebraska, Bartels was specifically cited for her leadership of the Visions of Exploration program. Visions is sponsored by the

Aerospace Education Foundation and *USA Today* newspaper to encourage elementary and middle school students in their study of math, science, and aviation topics.

Bartels has for several years organized an outreach program to bring Visions of Exploration to students at the Santee Sioux American Indian reservation. On one recent visit, she and three AFROTC cadets from the University of Nebraska at Lincoln flew to an airport near the reservation, located on the Iowa-Nebraska border, and spent the afternoon talking to the youngsters. Their wide-ranging presentation covered Visions, military service, and planning for the future. They also visited with high school students at the reservation to encourage them to consider career choices in aviation.

Insight From an Astronaut

Former astronaut Jack R. Lousma spoke at a meeting of the **James H. Straubel (Mich.) Chapter** in March.

Lousma, a retired Marine Corps colonel, received his wings in 1960 and was an attack pilot assigned to the 2nd Marine Air Wing. He became an astronaut six years later and was the pilot for Skylab 3 in 1973. During the 59-day flight, he took two spacewalks outside the space station. Lousma was later commander for the third orbital test flight of the space shuttle *Columbia* in March 1982. He left NASA the next year and returned to his native Michigan. Since then he has been an executive in several companies involved in the development, production, and marketing of innovative high-technology products.

Lousma showed a video to the Straubel Chapter and took questions from the audience. According to Edward S. Papelian, chapter membership vice president, the listeners asked about practical matters: how the astronauts brushed their teeth, how they ate in the environment of weightlessness, and about the spacewalks.

Pioneer at the Podium

San Angelo, Tex., is not only home to the **Concho Chapter**; it's the hometown of Florene Miller Watson, one of the original World War II Women Airforce Service Pilots.

Watson returned to San Angelo in April to speak to the Concho Chapter at an AFA dinner at the Goodfellow Club, Goodfellow AFB, Tex.

Watson, her two brothers, and her father all learned to fly a single-engine Luscomb that her father bought when she was a sophomore at Baylor

Thomas F. Stack, 1919-2003



Air Force Association National Director Emeritus Thomas F. Stack, former Chairman of the Board and National President, died May 15. He was 83 years old.

A resident of Hillsborough, Calif., for more than 40 years, Stack was born in San Francisco on Aug. 9, 1919, and graduated from the University of San Francisco in 1941.

He served in World War II as a navigator with Fifteenth Air Force in Italy. As recounted in *Crusade for Airpower: the Story of the Air Force Association*, Stack's B-24 Liberator was shot down in December 1944 over German-held Yugoslavia. He was on his 11th mission. The bomber's pilot and two crew members died, but Stack and six other survivors received help from the Yugoslavia underground and made it to safety after a month in hiding. He flew a total of 35 missions in Europe.

After the war, Stack earned a law degree from the University of San Francisco and began a private practice in 1948. He became active in many community organizations, serving as president of the San Francisco Public Utilities Commission and advisor to the city's political leaders.

An AFA charter member, Stack was founder and first commander of the association's San Francisco chapter. He was named AFA's Member of the Year in 1956.

Stack served as AFA National President from 1960 to 1961 and as Chairman of the Board from 1961 to 1962. He was a member of AFA's **Golden Gate Chapter**.

University. By the time Pearl Harbor was attacked—on the same day she turned 21—Watson had already earned private and commercial pilots' licenses and was a flight instructor. She was one of only 25 women selected for the original Women's Auxiliary Ferrying Squadron. In 1943, she became the first commanding officer for the WAFs (later the WASPs) at Love Field, Tex.

Watson flew nearly every kind of aircraft used by the Army Air Forces in the war—even though familiarization sometimes consisted of nothing more than hearsay and a few maintenance notes, reported Terrance O. Stuart, chapter VP.

After World War II, Watson earned a master's degree in business administration and taught college for 30 years. She is national chaplain for the WASP organization and is a member of the **Panhandle AFA (Tex.) Chapter**.

In Appreciation

The **Delaware Galaxy Chapter** set up an AFA section at the annual Retiree Appreciation Day at Dover AFB, Del., in March.

More than 300 people attended the information sessions, said chap-

ter member Ronald Love, who joined Chapter President Deborah Yates in manning the AFA tables.

Chapter Secretary Mary E. Frey helped organize the information sessions and an evening recognition dinner, held to thank military retiree volunteers in the community. Donald L. Peterson, AFA executive director, was guest speaker at the dinner. Peterson co-chairs USAF's Retiree Council, along with retired CMSAF Frederick J. Finch.

At Dover, Retiree Appreciation Days are sponsored by the Retiree Activities Office, the 436th Airlift Wing, and Air Force Reserve Command's 512th AW.

Joint Effort

AFJROTC units from 19 high schools in Florida competed in an annual drill competition held in Deltona, Fla., in April. John R. Vick of the **Brig. Gen. James R. McCarthy (Fla.) Chapter** organized the drill competition.

The host, Pine Ridge High School, received the top trophies for overall excellence and best of meet.

AFA chapters donated 49 of the trophies for the meet. Helping present them were Robert F. Cutler, president of the **Gen. Nathan F. Twining**



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AFA/AEF National Report

Chapter; Bonnie B. Callahan and Richard A. Ortega from the **Central Florida Chapter;** and Robert Perry from the McCarthy Chapter.

McCarthy chapter members David R. Cummock, the aerospace education VP, and Marguerite H. Cummock, who is the communications VP, organized the procuring of trophies and assembling of certificates for the cadets.

Harvey W.C. Shelton of the Central Florida Chapter served as master of ceremonies. Cadets from Embry-Riddle Aeronautical University in Daytona Beach, Fla., judged the meet.

Women of Distinction

Bonnie Erbe, host of the PBS program "To the Contrary," headed the list of honorees at the **Thomas W. Anthony (Md.) Chapter's** Women of Distinction banquet held in March at the Officers' Club at Andrews AFB, Md.

Erbe is a Scripps-Howard newspaper columnist with a law degree and nearly 20 years of experience covering national government. Her program features an all-female lineup of news analysts and has been on the air for 11 years.

Other women recognized by the Anthony Chapter included: Vice Adm. Patricia A. Tracey, director of the Navy Staff; Lt. Col. Coennie F. Woods, 89th Airlift Wing public affairs director at Andrews; RCAF Maj. Deborah M. Turner of the Canadian Defense Liaison Staff at the Canadian Embassy in Washington, D.C.; Air National Guard Maj. Kristin K. Brawley, 135th Airlift Squadron, Martin State Airport, Md.; and Civil Air Patrol Lt. Col. Amanda B. Anderson.

Maj. Gen. Lorraine K. Potter, chief of the Air Force Chaplain Service, was keynote speaker for the evening. According to the base newspaper, *Capital Flyer*, which gave the banquet a front-page feature article, Potter spoke about the challenges she had to overcome when she began her Air Force career in the early 1970s.

More AFA/AEF News

■ The **Central Florida Chapter** presented nearly \$7,000 in scholarships to a dozen AFROTC cadets from the University of Central Florida in Orlando. Bryan B. Paul, chapter treasurer, presented \$1,000 scholarships to Robert Rock and Derrick Langley. Other scholarships went to Yalunda Akinloba, Christopher Arnott, Leilani Kashiwabara, Christine Louder, Emmanuel Matos, Christina Simpson,



O.R. Crawford, former AFA Board Chairman, inspects his Curtiss P-40 after an emergency wheels-up landing at Casa Grande Airport in Arizona in March. He was en route to San Marcos, Tex., from an air show at Luke AFB, Ariz., when an electrical short in the Commemorative Air Force warbird cut power to the engine.

Adam Tucci, Joseph Vargas, Samuel Williams, and Christopher Zummo. The presentation ceremony for these Det. 159 cadets took place in April at their 30th annual military ball. Lt. Col.

Timothy D. Wieck, detachment commander and chapter member, helped present the awards.

■ Samuel M. Gardner, Kansas State president, and William Clifford, presi-

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dent of the **Contrails (Kan.) Chapter**, presented the state's AFA Teacher of the Year award to Midgley L. Simmons at a chapter meeting in March. Simmons is an eighth-grade algebra teacher at Abe Hubert Middle School in Garden City, Kan. She received a certificate of achievement, \$250, and a windbreaker with the AFA logo on it. She told a local newspaper that covered the event, "It's an overwhelming honor."

■ Charles P. Zimkas Jr., Colorado state president and member of the **Lance P. Sijan Chapter**, was keynote speaker at Air Force Space Command's banquet for Outstanding Airmen of the Year at Peterson AFB, Colo., in April. Hosted by Lt. Gen. Robert C. Hinson, AFSPC vice commander and also a chapter member, the banquet honored five airmen: SMSgt. James Puscian, 21st Security Forces Squadron; MSgt. Ricky Shaffer, 91st Maintenance Operations Squadron; SMSgt. Robert

AFA Conventions

| | |
|-------------|--|
| July 12 | Washington State Convention, McChord AFB, Wash. |
| July 18-20 | Florida State Convention, Tyndall AFB, Fla. |
| July 18-20 | Pennsylvania State Convention, Washington, Pa. |
| July 18-20 | Texas State Convention, Austin, Tex. |
| July 25-27 | Virginia State Convention, Hampton, Va. |
| July 26 | Iowa State Convention, Sioux City, Iowa |
| Aug. 15-16 | Illinois State Convention, Des Plaines, Ill. |
| Aug. 15-16 | Utah State Convention, Ogden, Utah |
| Aug. 16 | Georgia State Convention, Robins AFB, Ga. |
| Aug. 22 | Missouri State Convention, Lake of the Ozarks, Mo. |
| Aug. 22-23 | Colorado State Convention, Colorado Springs, Colo. |
| Aug. 22-23 | Michigan State Convention, Alpena, Mich. |
| Sept. 15-17 | AFA National Convention, Washington, D.C. |
| Sept. 28 | New Hampshire State Convention, Manchester, N.H. |

McManus, 21st Maintenance Group; TSgt. James Coffey III, 50th SFS; and SrA. David Peachey, 90th SFS. In appreciation for Zimkas's remarks on the achievements of the five airmen, AFSPC donated \$200 to AEF. Zimkas was AFSPC's first senior enlisted advisor (1982-84). ■

Have AFA/AEF News?

Contributions to "AFA/AEF National Report" should be sent to *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Phone: (703) 247-5828. Fax: (703) 247-5855. E-mail: afa-aef@afa.org.

Unit Reunions

reunions@afa.org

5th FS, 52nd FG (WWII). Sept. 21-24 at the Lodge of the Ozarks in Branson, MO. **Contact:** George Angle, 125 N. Market #1720, Wichita KS 67202 (316-263-1201 or 316-682-2086) (jgangle70@msn.com).

11th AF, 343rd FG. Oct. 30-Nov. 2 in Palm Springs, CA. **Contact:** Blaine Mack (760-346-2855) (p-38driver@aol.com).

12th BG, 81st, 82nd, and 83rd Sqs. Sept. 25-29 at the Holiday Inn Downtown in Louisville, KY. **Contact:** Otto Vondrak, 18160 Cottonwood Rd. #411, Sunriver, OR 97707 (541-593-1031) (ovondrak@cmc.net).

13th BS Assn. Sept. 17-21 at the Radisson Downtown in St. Louis. **Contact:** Perry Nuhn, 9067 SE Star Island Way, Hobe Sound, FL 33455 (772-546-1401) (pnuhn@earthlink.net).

34th Air Refueling Sq Assn. Sept. 11-14 at the Hyatt Regency in Wichita, KS. **Contact:** Jim Marshall, PO Box 469, Barnesville, GA 30204 (770-358-0595) (jimmsl@bellsouth.net).

361st FG, Eighth AF (WWII). Oct. 12-15 at the Holiday Inn Downtown in Shreveport, LA. **Contact:** David Landin, 8419 Michael Rd., Richmond, VA 23229 (804-288-5889).

377th Security Police Sq, Tan Son Nhut AB, Vietnam, all years. Jan. 29-Feb. 1, 2004, in Albuquerque, NM. **Contact:** James Stewart, PO Box 67, Montrose, MI 48457-0067 (810-639-5755) (jstewart@centurytel.net).

474th FG Assn, Ninth AF (WWII). Sept. 24-28 in Norfolk, VA. **Contact:** Lloyd Wenzel, 204 Turtle Creek Dr., Tequesta, FL 33469 (561-747-2380).

741st Missile Sq, Minot AFB, ND (1943-2003), including 741st BS and 741st SMS. July 11-13. **Contact:** 2nd Lt. Jason Wyrick (701-727-9081) (davidjasonwyrick@yahoo.com).

3558th CCTS/FTS, Perrin AFB, TX. Sept. 17-21 in Colorado Springs, CO. **Contact:** Bruce Mosier, 20155 Doewood Dr., Monument, CO 80132 (719-481-5813) (mosiermanor@juno.com).

Air Commando Assn/Special Operations. Oct. 10-12 in Fort Walton Beach, FL. **Contact:** (phone: 850-581-0099 or fax: 850-581-8988) (aircommando@aol.com) (http://home.earthlink.net/~aircommando1/).

Air Force Women Officers Associated, including active duty, retired, Reserve, Air Guard, or separated women officers. Nov. 6-9 at the Adams Mark Hotel in San Antonio. **Contact:** Carol Habgood (210-223-6528) (www.AFWOA.org).

OCS Class 1959-A. March 18-20, 2004, in Tampa, FL. **Contact:** D.J. Weber, 927 Royal Oak Blvd., Leesburg, FL 34748 (352-365-0031) (djanmjrweber@aol.com).

P-40 Warhawk Pilots Assn. Oct. 15-19 in Austin, TX. **Contact:** Walt Stueck, 1900 F.M. 3405, Georgetown, TX 78628 (512-863-8688) (wstueck@aol.com).

Pilot Class 44-D, Luke Field, AZ. Oct. 27-29 at the Reno Atlantis in Reno, NV. **Contact:** Harry Gandrup (515-663-4114).

Pilot Tng Class 53-F. Oct. 16-18 at Wright-Patterson AFB, OH. **Contact:** Donald Condra, PO Box 93, Casstown, OH 45312 (937-335-4900) (dardnoc@aol.com).

Small Arms and Combat Arms personnel, including former and present marksmanship instructors. Oct. 10-12 in San Antonio. **Contact:** CATM Assn, PO Box 27538, San Antonio, TX 78227 (www.catm.com).

USAF Medical Service Corps Assn. Sept. 28-Oct. 2 in Biloxi, MS. **Contact:** Ken Mackie (707-422-0573).

USAF/RAF Manston Gp (1950-58). Oct. 7-12 in Dayton, OH. **Contact:** Dick Grace, 5609 Princeton Rd., Hamilton, OH 45011 (513-777-3591) (nona.pa@juno.com).

Vietnam Security Police Assn. Oct. 16-19 at the Holiday Inn Market Square in San Antonio. **Contact:** Don Graham (610-691-6960) (tuyhoa68@att.net) (www.vspa.com).

Seeking members of the **610th AC&W Sq**, including 527th, 618th, and all other southern Japan Radar (GCI) sites, for a reunion in September 2004 in Branson, MO. **Contact:** Marvin Jordahl (904-739-9337) (jordahlmarvin@attbi.com).

Seeking former instructors and students of the **3389th Pilot Tng Sq** for a reunion in Biloxi, MS, in 2004. **Contact:** Chuck Davies, 4435 Monaco, San Antonio, TX 78218 (210-653-1475).

Seeking members of **Class 44-E** for a reunion in Phoenix in 2004. **Contact:** Jerry Chealander, 664 Santa Barbara Ct., Merced, CA 95348 (209-723-7598).

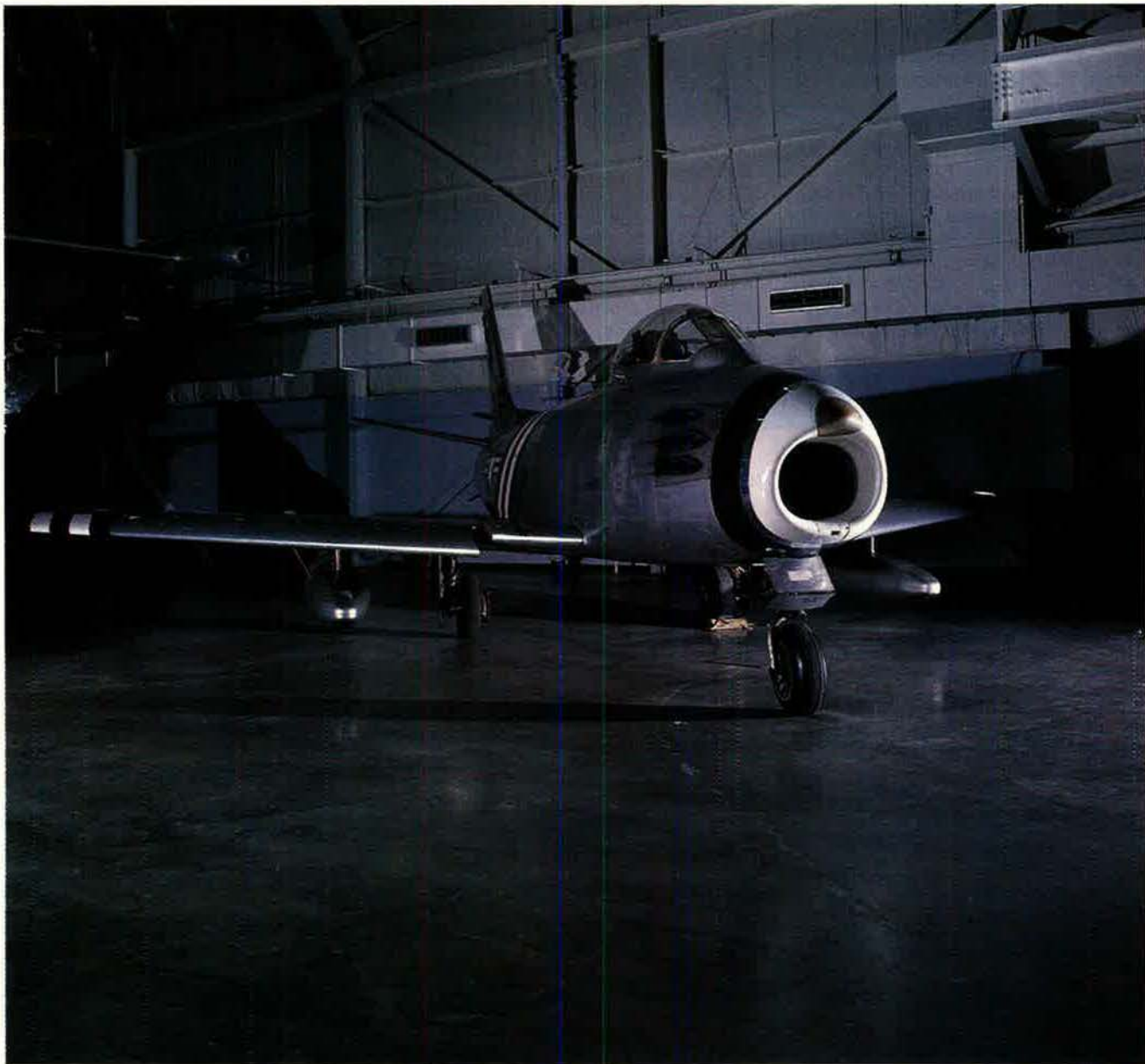
Seeking members of **Pilot Tng Class 57-I** for a reunion in Colorado Springs, CO, in October 2004. **Contacts:** Al Brezinsky, 5216 Stone Crest Dr., Weed, CA 96094 (530-938-1671) or John Doyle, 450 Picasso Ct., Colorado Springs, CO 80921 (719-481-9314). ■

Mail unit reunion notices four months ahead of the event to "Unit Reunions," *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Please designate the unit holding the reunion, time, location, and a contact for more information. We reserve the right to condense notices.

Pieces of History

Photography by Paul Kennedy

The Workhorse



This F-86A Sabre on display at the Air Force Museum was one of more than 6,000 F-86s produced in various models. The A models, USAF's first swept-wing fighter, entered operational service in 1949. It was an F-86A that first encountered the Soviet swept-wing jet fighter, the MiG-15, in December 1950 during the Korean War. Largely because of the F-86, the Air Force was

able to gain and hold air superiority over Korea. Air Force F-86s flew more than 87,000 missions. Against MiGs, it achieved a remarkable kill ratio: 792 MiGs shot down with only 76 Sabres lost. All 38 USAF aces of the Korean War flew F-86s.

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