



At AFA's Orlando symposium, Air Force leaders emphasized USAF's strong focus on the war on the ground.

BATTLEFIELD AIRMEN

By **John A. Tirpak**, Executive Editor, and **Adam J. Hebert**, Senior Editor



Catalyst. This airman, part of a combat control team, walks a desert in Southwest Asia, where specialized troops were key to the focused application of airpower. The Air Force plans to pull together battlefield airmen, of all types, under a common organizational and training structure.

SENIOR Air Force leaders and other top military officials outlined trends, plans, and lessons learned from Operation Iraqi Freedom at the Air Force Association's 20th Air Warfare Symposium in Orlando, Fla.

Specifically, they unveiled what could prove to be a historic new level of Air Force engagement in the nation's ground combat operations.

This year's symposium, held Feb. 13-14, was titled "Integrated Air War in the 21st Century: Lessons Learned From Operation Iraqi Freedom and the Way Ahead."

What follows are summaries of the speakers' presentations and press remarks during the two-day conference. Full transcripts of the formal presentations may be found at www.afa.org.

James G. Roche, Secretary of the Air Force

The Air Force will devote more resources to special operations forces and put more emphasis on directly supporting ground forces, said Air Force Secretary James G. Roche.

The new focus stems from Air Force experiences in the Global War on Terror. Roche cited an Operation Iraqi Freedom action in which some 1,400 SOF troops, working with air and space forces, essentially paralyzed 11 Iraqi divisions. "Not only did they virtually hold terrain with a minimum footprint, they ensured that the 3rd Infantry Division's drive to Baghdad was significantly easier than it would have been had those Iraqi divisions moved south," said Roche.

He directed special attention to what he termed "battlefield airmen"—

USAF personnel on the ground who work directly with land forces. They were "highly effective, controlling large areas with limited forces and ... tailored coalition airpower," he said. This was a powerful lesson that won't be forgotten, Roche asserted.

"Special operations in our Air Force is not and cannot be a peripheral capability. ... Wherever we fight in the future, the capabilities of our special operators will be integral to our success," he said.

Among recent changes, combat search and rescue has been transferred from Air Combat Command to Air Force Special Operations Command, said Roche. He also noted that the Air Force's CSAR community will get a new helicopter as soon as possible.

USAF is developing lighter, all-

weather gear for combat controllers as part of its battlefield airmen project, said Roche. He predicts ground controllers will soon be able to precisely designate targets at a distance of more than six miles, pass data directly to overhead aircraft, and get an electronic receipt stating the time when ordnance will strike the target.

Moreover, the Air Force plans to pull together all battlefield airmen—including combat controllers, pararescuemen, combat weather specialists, enlisted terminal attack controllers, and tactical air control party airmen—under a common organizational and training structure. Roche said that will “strengthen the combat power they bring to the battlefield, whether they bring it as part of ACC or part of AFSOC.”

The Air Force already is committed to buying CV-22s to replace the MH-53 Pave Low helicopters, now nearing 40 years in age, Roche noted. He said the CV-22 will provide unprecedented capabilities for infiltration and extraction of SOF troops and maybe even long-range CSAR. However, it will not be suitable as a gunship, a helicopter tanker, or as a C-130 replacement, Roche asserted.

Roche said the service needs a C-130 replacement and is considering several possibilities. However, he said, each new USAF study seems to come up with alternatives that are not affordable. “If the answer is new



For Tight Spots. USAF will buy F-35Bs—the short takeoff and vertical landing version of the Joint Strike Fighter. The fighter can use small, rugged airfields and thus offer on-call support to troops on remote battlefields.

C-130s to bridge us to some distant future, then we will need to do that,” said Roche.

To strengthen USAF’s support to land forces, the service plans to enhance and extend the life of the A-10 attack aircraft, giving it new engines, new sensors, new weapons, and structural improvements. The A-10 modification program will emulate the B-1B model. In that case, USAF took some airframes out of service and used the savings to upgrade the remainder.

Roche said the service had not yet determined the numbers of A-10s that will be retired early.

Roche announced that the Air Force intends to buy some number of F-35Bs—the short takeoff and vertical landing (STOVL) version of the Joint Strike Fighter. Such a move has been considered for nearly 10 years, but its announcement now illustrates the Air Force’s renewed commitment to ground support. The conventional takeoff version, the F-35A, will still be purchased in far greater numbers, Roche said. It, too, will be oriented to the air-to-ground mission.

In addition, Roche declared a new program to “maximize the strike capability of all our air-to-ground systems” by upgrading targeting and sensor pods on existing aircraft. The Air Force, he said, believes “it’s important that our land forces see us demonstrate our commitment ... to air-to-ground support—both deep interdiction and close air support.”

In 2002, service leaders announced a change for its stealthy new fighter, redesignating the F-22 the F/A-22. That move signaled a mission-parameter shift from primarily air superiority to a balance of air-to-air and ground attack. Because of its speed and stealth, the F/A-22 will offer strong support to special operations forces deep behind enemy lines. Roche noted this year that the service had added new equipment to the Raptor for that purpose.

Roche told *Air Force Magazine* that

News From Orlando

Some of the announcements made at this year’s Air Warfare Symposium:

- The Air Force will buy some number of short takeoff and vertical landing F-35Bs to perform close air support for ground forces.
- The Air Force will re-engine and upgrade a number of its A-10 attack aircraft to keep them in service well into the 2020s. To help pay for this, it will retire some A-10s early and reinvest the savings in the fleet.
- USAF will give F-15Cs new radars and ground-attack capability for use after achieving air superiority.
- The service will fit F-16s with new targeting pods and upgraded radars.
- The FB-22 appears to be the preferred “bridge” capability to provide long-range strike options until more futuristic long-range strike technologies come along.
- USAF would like to bring seven or eight B-1Bs back from storage to enhance ground attack capabilities.
- Air Force Special Operations Command will be given new resources to develop unique systems, possibly to include new aircraft.
- USAF will take up to 10 F-117 stealth fighters out of service to reduce operations and maintenance costs.
- The Air Force will work with the other services to buy new helicopters to replace Vietnam-era machines.

the FB-22—a missionized, somewhat larger version of the F/A-22—is the leading candidate to fill a gap in long-range strike capability, pending the maturation of new technologies for deep strike. He said Air Combat Command will lead a multidisciplinary, multicommand review of options and present recommendations in time for budget deliberations in August.

Gen. John P. Jumper, USAF Chief of Staff

The Air Force and its sister services are reinventing close air support mostly with new concepts of operation, not merely with improvements to hardware, said Gen. John P. Jumper, Air Force Chief of Staff.

Jumper recalled that Operation Anaconda, which took place in Afghanistan in 2002, highlighted communications problems that have long beleaguered the services. In Anaconda, the Army complained, it didn't get enough close air support, although it hadn't even told the Air Force what was being planned until the 11th hour. According to Jumper, Anaconda was an object lesson: "We had not gotten the United States Army, the United States Air Force, the joint force land component commander, the joint force air component commander together at the right level to do the detailed planning needed to make sure the resources were there when that operation kicked off."

That won't happen again, Jumper said.

"We're going to exercise our air and ground together in ways that assure that our Army leaders understand—they know what air and space power can do for them," he said. There will be proper planning with all parties involved, he said.

Elaborating on Roche's announcement regarding the STOVL version of the F-35, Jumper said the airplane will enhance the capability of the air and space expeditionary force (AEF) by helping airmen get into smaller—and therefore more numerous—airfields than is now possible.

The Air Force's shift from platform-based solutions to capabilities-based solutions, said Jumper, is a "formula that works, and it's paying off large for us" in the pitch for resources to senior DOD leaders. The Air Force can now tie its hardware requests directly to "operational results."



USAF photo by Sgt. Lanie McNeal

PJ Practice. Pararescue jumpers load an all-terrain vehicle after a practice jump from a C-130 transport. The Iraq war taught Air Force officials "a powerful lesson" about the importance of battlefield airmen.

Jumper predicted that the same approach should ease pressure on low-density, high-demand assets—those airmen and systems in heavy use and short supply. He said Air Force leaders are trying to work the problem "by making sure that we have proper control over the [combat commander's] appetite for those platforms." The Air Force is pushing the Joint Staff to adopt a joint presence policy, one that tasks USAF, a year in advance, to provide those assets sought by regional commanders. With this policy, he said, an AEF could be equipped more properly and without undue strain.

Jumper told *Air Force Magazine* that enhancing existing platforms—taking advantage of their previously unused capabilities—and bringing on new systems all will reduce the impact of a long-predicted shortfall in capability, referred to as "the fighter bathtub." He said, "If you think about capabilities, then you don't have to worry about platform-centric 'bathtubs.'"

Jumper went on to say that better systems make every sortie more effective and thus reduce the number of aircraft needed. However, he maintained that USAF must still have enough platforms to sustain its AEF rotational base.

In his remarks to the symposium, Jumper said further efforts to reduce stress on the force will come from greater use of the "blended wing" approach—the practice of combin-

ing active forces with either Air National Guard or Air Force Reserve Command forces into a single unit. The concept has already been applied with great success in the E-8 Joint STARS aircraft and in cargo aircraft units. Now, said Jumper, the Air Force is going to do what it "reasonably can to move those benefits into other platforms, such as the fighter world." This would include the F/A-22 Raptor, the next USAF fighter to be fielded.

Jumper also said the Air Force will, in Fiscal 2006 budget deliberations, take a close look at equipping B-52s with wing pods to enable them to perform a standoff jamming mission. He said the pods would replace little-used external fuel tanks and could easily be fitted with electronic warfare pallets.

Gen. Hal M. Hornburg, Air Combat Command

The Air Force will pursue for other legacy systems a similar strategy that it used to successfully draw down and modernize its B-1B fleet, said Gen. Hal M. Hornburg, commander of Air Combat Command. The plan, he said, is to build a "bridge" in capabilities from existing systems to next generation aircraft.

With 32 B-1Bs—roughly one-third of the 93-airplane B-1B fleet—now in storage, the Air Force has been able to properly modernize the remaining 60 airframes. However, Hornburg now thinks the B-1B

drawdown may have gone a bit too far.

The ACC leader told reporters at a press session that he would like to reactivate seven or eight of the 32 mothballed B-1Bs. Congress has directed USAF to return 23 of the B-1Bs to service. Hornburg said that idea “won’t fly” because there is no money to sustain the effort.

Plans call for early retirement of other legacy aircraft, specifically older A-10s. Savings will be used to upgrade those that remain and, thereby, sustain the service’s fighter force until the new F/A-22 and F-35 aircraft come into operational service.

Hornburg called the upgraded fighters a “bridging force.”

The proposed improvements are significant. The entire fleet of F-15Es will be equipped with advanced radars, as will Block 40 and Block 50 F-16s.

Plans for the F-15C are even more dramatic. The air-to-air fighter will not only get a better central computer, but also may receive radar enhancements to give it a strong air-to-ground capability. Recent operations have shown that, once air dominance is achieved, the F-15C is underutilized. Hornburg said there are “jobs that the F-15C needs to do that it cannot do today.”

ACC will upgrade its attack aircraft with new targeting pods to enhance their ability to support ground forces. Older LANTIRN pods will be retired and replaced by modern

Sniper and Litening targeting pods. The changes will make USAF’s A-10s and F-16s more relevant to today’s battlefield, said Hornburg.

He flatly denied rumors that the Air Force wanted to purchase new F-15Es.

He did say, however, that USAF is beginning to ask: “What if some of our transformational acquisitions don’t arrive on time or, for one reason or another, simply don’t make it?” In that event, said Hornburg, “we’ve got to have a mitigation strategy.”

That strategy would not be based upon “one specific airframe,” he said. Backup plans could entail the purchase of more than one type of existing aircraft.

“We must look for something that can be there in case of a slippage, should that occur,” Hornburg said, adding, “I’m not predicting that it will.”

Gen. John W. Handy, Air Mobility Command

Mobility is a premier instrument of national power. That is the basic message conveyed by Gen. John W. Handy, commander of US Transportation Command and Air Mobility Command, at the Orlando symposium.

During Operation Iraqi Freedom, he noted, 56 percent of all Air Force sorties in US Central Command’s area were mobility related. Out of the 50,000 sorties flown since the end of major combat operations on May 1, 2003, some 38,000 involved

AMC assets. More than 70 percent of all Air Force airlift and tanker aircraft have been involved in Southwest Asia operations.

Also, said Handy, air mobility assets played a critical role in the swap of 250,000 troops between Iraq and Afghanistan and the United States and Europe. He said that, on one day alone, USAF had moved 5,600 troops. USAF had never contemplated a troop movement on this scale without using the service’s Civil Reserve Air Fleet, said Handy, but, “today, we’re doing it in a non-CRAF environment.” The Chairman of the Joint Chiefs of Staff has called this the “greatest military logistics feat in history,” said Handy. He added, “I think that’s a bit of an overstatement, but it certainly characterizes the nature of the things that we’re doing.”

Not that mobility operations have been confined to Iraq and Afghanistan. The C-130s of the Air National Guard’s 109th Airlift Wing in New York are now up to about 400 missions to the South Pole and back, as part of the annual closeout of summer operations in Antarctica. Air Force aircraft flew relief equipment into Iran following a major earthquake late last year. C-17s have flown into Libya to take nuclear-related equipment and supplies back to the continental United States.

“I’m thrilled at what we’ve been able to achieve, but we can’t rest on our laurels,” said Handy. There is still room for change. “Speed is what I’m talking about. Speed of mobility—air, land, and sea,” he said.

As recently as Desert Storm, US troops deployed with supplies sufficient for 30 to 60 days of operations. For today’s operations, they take supplies sufficient for only five to seven days. For Gulf War II, AMC launched an aircraft every 12 minutes, 24 hours a day, seven days a week, for 12 weeks straight.

Last fall, the Pentagon took a major step toward correcting what Handy called a logistics seam problem. Secretary of Defense Donald H. Rumsfeld signed a memo giving TRANSCOM ownership of the military’s distribution process.

In January, the command placed a TRANSCOM-like organization on the receiving end of the supply chain. It identified 63 mobility experts—Ph.D.s in logistics, in Handy’s words—from throughout DOD, gave

USAF photo by SSgt. Shane A. Cuomo



Herk. A C-130 crew chief at a forward location conducts a check before takeoff. USAF officials, finding that the C-130 force was lacking in capability to use night vision goggles, directed everyone in AMC to become NVG-qualified.

them a quick dose of training, and deployed them to the CENTCOM theater of operations with the same information technology used by TRANSCOM. They immediately made the system more efficient. Within days of their arrival, forward-based logisticians found that someone had requested 1,700 containers of construction material, needlessly. There were already more construction supplies in the theater than US forces could ever hope to use, so the order was canceled, saving many cargo flights.

Handy also has worked to enhance AMC's Air Mobility Warfare Center. AMC began Eagle Flag exercises earlier this year to train the Air Force's expeditionary combat support forces. Handy, finding that the C-130 force was woefully lacking in night vision goggles capability, directed everyone in the command to become NVG-qualified. He said, "We look forward to a time when we own the night completely on the mobility side."

What does AMC need most? The answer: "I need a mobility capability study because, the truth is, none of us wants to buy more capability than the nation really needs," said Handy.

Gen. Lance W. Lord, Air Force Space Command

Fifty years after the service first entered the space and missile business, the integration of air and space, land and space, and sea and space is coming together, said Gen. Lance W. Lord, commander of Air Force Space Command.

That means the impact of space power in coming decades will be as great as that of airpower in past decades. "It's my view—and, I think, the argument of many—that space is going to have maybe even a greater effect," said Lord.

In Lord's estimation, there were valid reasons that military space developed in an isolated manner—what many term a "stovepipe." Space emerged during the Cold War and was meant to help the US deal with the strategic nuclear threat. By the 1990s, US security requirements had changed radically. In the first Gulf War, the Air Force fought the best way it could with strategic-based systems adapted to a theater context. Global Positioning System receivers were provided as quickly as pos-



USAF photo by A1C Isaac G.L. Freeman

Immortal Hog. An A-10 prepares to land. USAF will upgrade many Warthogs and operate them into the 2020s. To help pay for this, the Air Force will retire some A-10s and reinvest the savings in those that remain.

sible. Strategic missile warning crews added an extra operator whose sole job was to watch for missile launches from Iraq and report directly to the theater commander.

"Those who said Desert Storm was the first space war owe much of the credit to those who took the long-established strategic stovepipes and bent them to focus on the theater," said Lord.

Today, Air Force Space Command is more operationally integrated into, and relevant to, the tactical fight than ever before. Top defense officials have said that military space was an equal partner in Operation Iraqi Freedom. That was then, Lord said. Victory in the next war will require more improvement, and that will require putting aside biases and differences to achieve true air and space integration.

"We must provide the most relevant information about the enemy, as fast as possible, to command and control our forces [in order] to kill targets," said Lord.

During Operation Allied Force, the Air Force, in April 1999, targeted a large multipurpose satellite ground station in central Serbia. The target was destroyed, but so was some of the surrounding infrastructure. Collateral damage wasn't eliminated. In Iraqi Freedom, satellite communications were again a target. Last year, a Predator unmanned aerial vehicle armed with a Hellfire missile struck a satellite dish in downtown Baghdad

temporarily shutting down Iraqi TV. Nearby trucks, a school, and a mosque weren't touched.

"We certainly increased the precision, decreased the collateral damage, and shortened the kill chain," Lord said. However, Iraqi TV remained on the air, said Lord, because Baghdad had set up redundant systems. The lesson here, he said, is that "precision is important, it makes us all better, but our focus needs to be on the overall effect."

New capabilities should help. Air Force Space Command is developing a rapid launch capability with an operationally responsive spacecraft dubbed RASCAL, for Responsive Access Small Cargo Affordable Launch. It will be a low-cost way to put microsattellites into space. It will employ a reusable airplane-like first stage and an expendable rocket second stage. Lord said first launch is set for 2006.

Another new effort—TACSAT, for Tactical Satellite—focuses on building a series of microsattellite prototypes. The first prototype, scheduled for launch this spring, will demonstrate machine-to-machine collaboration with air and space systems.

"Through these developments and many more," said Lord, "space will be more responsive to the theater than ever before."

Gen. Gregory S. Martin, Air Force Materiel Command

The head of Air Force Materiel

Command, Gen. Gregory S. Martin, briefly discussed some of the key capability shortfalls USAF surfaced during what it terms a capabilities review and risk assessment (CRRA).

The CRRA-identified gaps “become ... our touchstones or our guide points” that lead the service’s focus on resources, different concepts of operations, and transformational technologies, said Martin.

Full spectrum defense for bases and forces is one shortfall. Whether in the United States or overseas, in hostile areas or benign ones, he said, “there’s a whole review of operational concepts that you have to conduct if you’re going to properly understand the nature of the threat, and then the types of systems and organizational units and structures that it takes to properly provide base defense and force protection.”

Martin said one new technology would provide protection for mobility aircraft. It is called the Large Aircraft Infrared Countermeasures System. A sensor on the aircraft would detect an incoming infrared missile, which would prompt a directed energy weapon to divert it.

Another CRRA-identified need is construction of a global information grid. The Air Force must have a “self-forming” and “self-healing” network that can pass along information in ways which improve the ability of the force to integrate across horizontal lines.

Battlespace management is another. The Pentagon has not yet reached the point where it can produce effects-based planning that minimizes collateral damage or provides a common operating picture. The goal, said Martin, is to achieve “victory at a rate and at a speed that we’ve never, ever been able to accomplish before.” Such a capability, he added, requires “the ability to understand targets of significance that might be fleeting or mobile, that you only have a short period of time to be able to take out.”

Martin said that theater commanders need real-time battle damage assessments of the effects of air strikes. They need to be able to move quickly to the next set of targets without

Adm. Edmund P. Giambastiani Jr., US Joint Forces Command

The Air Force is an invaluable partner in the development of a coherently integrated joint force, Adm. Edmund P. Giambastiani Jr., commander of US Joint Forces Command, told the AFA symposium audience.

“The Air Force, in my view, has stepped up to the joint plate in a big way,” Giambastiani said.

The Joint Forces commander declared three key operational insights about integration:

- The US does not send any individual service to conduct major operations, but instead deploys its military as a joint force.

- The power of a coherently joint force is now greater than the sum of separate service, interagency, and coalition capabilities.

- Speed kills. Physical and mental speed reduces decision and execution cycles, creates opportunities, denies enemy options, and speeds his collapse.

These insights “had to be proven in the cauldron of combat,” said Giambastiani. He added that it took a significant change in some service cultures before they could accept the message that the power of the joint force is greater than any individual service component by itself.

JFCOM established a lessons-learned team for Operation Iraqi Freedom, placing it in the theater before major combat operations began. It remains there today.

Among its impressions was that integration and adaptive planning topped the list of joint capabilities. “Joint force commanders today will tell you it’s not the plan, it’s the planning,” said Giambastiani. “They understand that the ability to plan and adapt to changing circumstances and fleeting opportunities is the difference between success and failure on a modern battlespace.”

Large-scale vertical and horizontal collaboration is essential to such planning. “This does not mean that everyone knows what is happening at every point in the battlespace at all times,” he said. “Rather, they are clear on understanding commander’s intent and have a persistent awareness of the overall operational environment.”

The powerful synergy created by blending conventional and special operations forces was another major lesson. In Desert Storm, 30 detached SOF teams worked their missions separately from conventional forces. In Iraqi Freedom, the US deployed more than 100 such teams. The chain of command was sometimes surprising—in western Iraq, SOF teams were supporting the air component commander, not his land counterpart.

The sum of the lessons is that “our traditional military planning and perhaps our entire approach to warfare has shifted,” said Giambastiani.

He added, “We want to create the capabilities that will enable us to achieve asymmetric advantages in knowledge, speed, precision, lethality—advantages again that we glimpsed in OIF.”

conducting time-wasting restrikes. New technologies won’t totally eliminate these problems, but they can certainly help, said Martin.

Martin also discussed solving a problem that revolves around what Chief of Staff Jumper has described as “tribes.” Each tribe—or functional entity—within the service has different information management systems and databases. “Overall, we have literally thousands of them in our Air Force, in our military today, all satisfying a valid need for someone to get information about something,” said Martin. Unfortunately,

he added, “the systems are set up to satisfy a functional user, not necessarily the command chain.”

Such “proprietary, closed-loop systems that don’t interact” waste “an awful lot of ... time,” he said.

In the past few years, the service made strides in connecting systems at a lower level—for instance, between finance and personnel—but not at a command level. AFMC has begun working to remedy this problem by setting up a process for commanders to view information from all the separate databases.

Martin said this is a “very exciting job” for AFMC. His command “will not own the systems,” he said, but will try “to figure out the right plan and methodology for bringing it together.” ■

Peter Grier also contributed to this report. Grier is a Washington editor for the Christian Science Monitor, a longtime defense correspondent, and a contributing editor to Air Force Magazine. His most recent article, “The New Drawdown,” appeared in the March issue.