America’s increasing reliance upon military space systems is obvious, not just to the Air Force but to potential adversaries as well. Making certain these space systems are protected from possible enemy disruption must be a top priority, said Air Force Secretary James G. Roche.

“We cannot risk the loss of space superiority,” he said in remarks before the Air Force Association’s 2002 National Convention. “We must and will continue our efforts to protect our space assets and prepare ourselves to counter any enemy’s space assets.”

Space systems, working as force multipliers, have been indispensable at the operational, tactical, and strategic level. Roche said they are no longer simply something “nice to have.”

Soon, Roche predicted, space systems will grow beyond their traditional role as force enhancers and “will play a more active role in preventing, fighting, and winning wars.”

Dual-use capabilities are becoming more prominent, and the line between classified and public space is becoming blurred, he explained. The Global Positioning System is probably the clearest example. It provides precise location and timing data to US and allied military forces for navigation and weapons targeting, but it is also made freely available to the public for use by drivers, hikers, fishermen, and others.

“We must ensure our space architectures remain capable of supporting our military missions as well as our civil users,” Roche said.

The Secretary also discussed acquisition issues, such as “inadequate accountability regimes.” He said the Air Force is ultimately responsible for the performance of its systems, so it must take steps to ensure contractors are motivated by service requirements.

“We’ve recently taken a small but tangible step in that direction,” he announced. Prompted by problems it encountered with the Space Based Infrared System High, the Air Force included a new provision in the contract for the next-generation environmental satellite system.

Twice a year, Roche said, the contract calls for the contractor to share Air Force program reviews with the firm’s board of directors. That way, said Roche, “we’ll have a way of communicating with the board of directors whether or not these companies—which are so highly dependent on us for business—are in fact performing for us.”

He called this a modest step but one that should help avert future cost problems by giving companies greater incentive to accurately forecast costs and enforce financial discipline.

However, not all cost problems can be blamed on the contractors, Roche pointed out. Fluctuating requirements and funding levels can also wreak havoc on programs. One “sad” example of this is the C-17, he said. The airlifter project started out with a requirement for 210 airplanes, was cut to 40, and has gradually been increased back up to more than 200 again. The cost of restructuring the program to accommodate all those changes along the way has been $16 billion, a history that must not be repeated, Roche asserted.

While the C-17 is now performing “magnificently,” he said, “any one of us can think of what we can do...
Gen. John P. Jumper

“The Air Force needs to change its culture and some long-established career paths to fully exploit its new combat wing organization, said Gen. John P. Jumper, Air Force Chief of Staff.

To make this new concept of operations work, one of the first things the service must do is ensure it has the right individuals in charge of maintaining aircraft. “The two hardest things we do in our Air Force [are to] fly and fix airplanes,” Jumper said. There is a well-established flying career path that young pilots can follow to reach leadership positions, he said, but there is no similar path for those who fix airplanes—the maintainers.

Jumper explained that the service expects its operations group and squadron commanders to be “the epitome of leadership in the air.” They should be the best pilots.

“When I fire an ops group commander or a squadron commander, it is probably going to be for an infraction in the air,” he said. “They should be the best pilots.”

However, there are no such obvious role models for maintainers. Young maintenance officers who look up the leadership chain today, Jumper said, see a logistics group commander, a person who stopped maintaining airplanes to get to the other qualifications needed to hold the logistics group position.

Jumper said he wants those who fly and those who fix airplanes to have the same experience factor. “I want the ops group commander to spend his 24 years learning how to fight in the air,” he said. “He should be the best pilot.”

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Jumper said he wants those who fly and those who fix airplanes to have the same experience factor. “I want the ops group commander to spend his 24 years learning how to fight in the air,” he said. The same applies to maintenance officers. No one, said Jumper, will be as good at commanding a maintenance group as the person who spent 24 years in maintenance.

However, Jumper said the “hardest part” in moving the service into its new wing configuration will be filling mission support commander positions. “We have not built a person,” he said, who can be the focal point for setting up an expeditionary presence.

“We have not built a person,” Jumper said, “who can be the focal point for setting up an expeditionary presence. Somebody has got to understand loading the airplane, in-transit visibility, how to bed them down at the far end, how to set up the tent city, where to put the munitions,” Jumper said. Presently this set of skills doesn’t exist in one place.

As the Air Force grows its new mission support commanders, said the Chief, “they are going to be qualified to go off in a major operation and command a tent city.”

He said the campaign in Afghanistan highlighted what is needed to set up a bare base when the necessary permanent infrastructure doesn’t exist. Jumper also noted that setting up and fighting the war on terror has consumed more than 52,000 sorties, half of which have been airlift missions.

Some 13,000 sorties were tanker missions. He said it is the unmatched refueling capability of the US that makes it a global military power. Jumper said, “Tens of thousands of tanker sorties [were needed] to get us where we need to be, and it is routine, it is commonplace, people take it for granted, but we are the only Air Force in the world that can do it.”

Gen. Gregory S. Martin

The need for appropriate transformation has been brought into sharp focus by the strain of handling increased commitments with a smaller force, according to Gen. Gregory S. Martin, commander of US Air Forces in Europe.

Martin said the Air Force can’t maintain its current level of operations without structural changes, because the service finds itself tasked four times as heavily as during the Cold War, but with about 40 percent fewer people.

Airmen “are good, and they are carrying the pack,” said Martin. “But we know we can’t sustain it.”

Despite initial calls for additional end strength and force structure to support Enduring Freedom and Noble Eagle, the Administration instructed the services to seek ways to transform operations so they could make do with the personnel and equipment they have.

Defense Secretary Donald H. Rumsfeld has developed a comprehensive list of critical transformational capabilities, noted Martin.

Martin said they are simple, really: “We must be able to defend our homeland and our forces that may be deployed. ... To project and sustain those forces in times of need. ... To deny the enemy its sanctuary. ... To protect our information operations networks and deny the enemy the use of his. ... To link our joint forces and our coalition forces in a way that they can operate at greater levels of achievement and capability than ever before. And we must be able to protect our space assets.”

Exactly how transformation will be accomplished is still being debated, he said, but whatever the direction chosen, the Air Force will be ready.

He reminded the audience that the service has reinvented itself repeatedly in its 55-year history, and wide fluctuations in manpower levels have accompanied those changes.

Lt. Gen. Daniel James III

The Air National Guard has been carrying a heavy load supporting Enduring Freedom and Noble Eagle over the past year. It needs to know what its long-term commitments are going to be in support of these missions so it can plan appropriately, according to Air National Guard Director Lt. Gen. Daniel James III.

The Guard has been instrumental in making Combat Air Patrols over US cities a reality and in providing the tanker and airlift support necessary for the global war on terror. Even before the September 2001 terrorist attacks, James said the Guard’s operating tempo was high—up to 8,000 Guardsmen were already mobilized. That figure was higher than at any time in the previous 10 years.

After Sept. 11, the Guard’s operating tempo spiked as its units flew more than 45,000 sorties for Enduring Freedom and Noble Eagle. The new duties were heaped on top of the already high operating pace.

“Although we’ve never said we can’t do both,” James said, “the question now comes how long and how much?” The increased burden has been met largely through reserve callups and use of existing aircraft—both temporary solutions.

“How long can we contribute so highly to Noble Eagle and still retain our relevancy for the global missions?” asked James. “As we determine the steady-state requirements for Noble Eagle and the alert posture we must seek, it must be—and there has to be—a Total Force solution.”

The problem is not just one of
strained personnel and stressed equipment, James said. Noble Eagle requirements have affected training and how well the Guard can prepare to support Aerospace Expeditionary Force deployments.

Guard F-16 units with precision guided munitions capability aren’t training for their next AEF deployments if they’re flying CAP, said James. Therefore, he said, the Guard will be taking a close look at which pilots and aircraft are assigned to CAP missions so “we are not misusing or misguiding our resources” to perform Noble Eagle at the expense of combat training.

He called the present situation a great challenge and asked, “What is going to be our new steady state?”

Rebecca Grant

The Defense Department needs to set priorities in its pursuit of a “transformed” military, and one should be the F/A-22, because it can address several crucial needs at once, according to Rebecca Grant, president of IRIS Independent Research.

Several transformational capabilities are embodied in the F/A-22, which will be in ever greater demand as new air defenses and threats develop, Grant said.

Fighters are typically at the leading edge of technological advancement—the F/A-22 is no exception. Compared to legacy fighters, the Raptor’s increased lethality, survivability, and sortie generation capability will allow the Air Force to defeat larger numbers of mobile and fixed targets in the early days of a battle. It will enable follow-on systems to quickly move in.

Even the stealthy B-2 bomber’s effectiveness will be enhanced by F/A-22. The Raptor will help the B-2s to penetrate in daylight against the most lethal air defenses, said Grant.

The ability to efficiently destroy ground targets was a motivating factor in the Air Force’s recent decision to redesignate the F-22 as the F/A-22. Ground-attack capabilities will become increasingly dependent upon information dominance, Grant noted, adding that information fusion is another advantage offered by the F/A-22.

Recent operational experience explains why: Preliminary data from Enduring Freedom showed that up to 80 percent of the targets were “flex targets”—targets unknown to aircrews when they took off.

“That tells us that our airpower now and in the future must be transformed to take full advantage of information dominance,” she said.

One key F/A-22 benefit will be its ability to serve as both a sensor and a shooter, which means it will be able to quickly defeat emerging targets. Data links will enable the F/A-22 to share intelligence with other aircraft, making the Raptor a force multiplier.

How many F/A-22s are needed remains a contentious issue. Grant argues that one squadron of 24 combat-coded Raptors is needed for each Aerospace Expeditionary Force, yielding a requirement of 382 aircraft when attrition, backup, test, and training fighters are factored in. A smaller buy threatens to make the F/A-22 another low-density, high-demand asset.

With its advanced sensors and high speed, though, the F/A-22 can also serve a critical homeland defense role, especially with the rise of new threats, such as cruise missiles. Assigning F/A-22s to continuous Combat Air Patrols would require at least 192 more combat Raptors, said Grant.

She added, “Covering all risks simultaneously requires at least 432 combat-coded F-22s,” which translates to a total buy of more than 700 aircraft.

On the Ground With a Combat Controller

Air Force special operators in Afghanistan were heavily tasked with a series of surveillance and combat missions culminating in key roles during Operation Anaconda, according to Air Force Reserve Command combat controller TSgt. James Hotaling.

Assigned to a coalition special forces team, one of Hotaling’s first tasks was to gather intelligence on a suspected al Qaeda chemical weapons plant. His team, which was inserted into the area by helicopter, drove about 12 miles on four-wheel All-Terrain Vehicles, then walked to an observation location.

“We are there for about two days, watching the bad guys, and lo and behold, a bedouin walks right up to our encampment,” said Hotaling. After the team sent him away, said Hotaling, he ran to the local village to tell the militia.

So Hotaling performed his first escape and evade mission within a week of being in Afghanistan. “We were able to get back to our ATVs, and we were being chased by four Toyota 4Runners that had .50-caliber machine guns mounted on the back of them,” he said.

A Navy P-3 surveillance airplane aided their escape, directing the team to safety, said Hotaling. “We later [called in] a direct-action mission on that chemical production facility,” he added.

Hotaling also received help from above during Anaconda—this time from a Predator unmanned aerial vehicle. He said he was part of a control party directed to “catch the squirts.” When coalition troops engaged al Qaeda forces in the mountains, the team found itself about five miles south of the Army’s 10th Mountain Division units, which were pinned down by unexpectedly heavy al Qaeda resistance in the operation’s opening hours.

“I am too far away to call in any close air support,” he said, as he showed photos of the area to the convention audience. The team’s plan to be relocated by helicopter was scuttled after a surface-to-air missile threat emerged in the valley. They had to walk to a better position.

“Tactically, it was everything you would not want to do,” Hotaling explained. The team had to climb 1,000 feet during a daylight “forced march” of more than three miles—through enemy territory. Further, for this mission, each team member was carrying about 143 pounds of gear. The altitude was about 10,000 feet. “That is completely unacceptable,” he said, adding that Special Operations Command is trying to get lighter equipment to the field.

But the team had one major advantage, Hotaling noted. “We had the Predator, and what he was able to do for us that day was incredible,” he said. “The Predator was actually my point man” and directed the team to safety.

Once established at a new observation point, Hotaling was able to work in conjunction with other combat controllers to call in air support from Air Force A-10 attack aircraft, AC-130 gunships, and other aircraft that ultimately turned the tide of the battle. (See “The Airpower of Anaconda,” September 2002, p. 60.)