Even with a calmer Iraq, USAF is still at war in Afghanistan—and with its budgets.

The Two Wars of the Air Force

By John A. Tirpak, Executive Editor

The conflict in Iraq has largely wound down, but the Air Force continues to battle in two other hot wars. One is the ongoing fight in Afghanistan, and the other is against costs.

For the foreseeable future, the demands of those campaigns will limit sharply how much of its aging aircraft and weapons inventory the Air Force can afford to modernize.

Such was the forecast delivered by senior Air Force and defense leaders at the Air Force Association’s annual Air & Space Conference, conducted in mid-September just outside Washington, D.C. These officials provided a snapshot of the evolving Air Force providing essential enabling capabilities to the Afghan war effort, even as the service struggles to hedge its bets and prepare for bigger threats that may one day thrust the Air Force back into the role of lead wartime service.

Vice Adm. William E. Gortney, director of the Joint Staff, spoke to the conference on behalf of Joint Chiefs of Staff Chairman Adm. Michael G. Mullen. Gortney said the war in Afghanistan is “trending” in the right direction, but warned that a short-term resolution is doubtful.

The Afghan conflict defies traditional measures of progress, he said, and perhaps many more years of struggle lie ahead. The end will likely come not with an obvious defeat of the enemy, but as a subjective judgment call of US leaders.
At the same time, speakers agreed, corrosive national budget deficits make hoped-for modest increases in defense spending unlikely. The Pentagon will have to find money for needed modernization from within, by slashing overhead costs and by limiting funding only to those programs that serve immediate war needs or provide critical long-term capabilities.

**Enormous Challenges Ahead**

USAF Chief of Staff Gen. Norton A. Schwartz, in a forum with most of the service’s four-star leaders, put the situation in perspective. He said, “People are dying, and as long as people are dying, this team ... is going to do what’s necessary” to prevail in the current fight.

Addressing the conference, Schwartz said the Air Force “will find itself in an increasingly significant role in the decades that lie ahead” as the rest of the force depends on it for intelligence-surveillance-reconnaissance, precision attack, and rapid mobility. USAF will also be the guarantor of two of the three legs of the strategic triad.

However, USAF will also work to ensure that it can continue to control the high ground in air, space, and cyberspace. It will maintain or develop new means to counter increasingly tough threats posed not only by nations but nonstate actors with access to high-technology gear. The Air Force will also prepare for the day when—as was the case in Operations Desert Storm, Allied Force, or Enduring Freedom—it will be “called upon to fulfill a leading role. ... The Air Force will again see its flag on the marquee and its centrality unquestioned.”

There are enormous challenges ahead, though, Schwartz said. He predicted that defense budgets will “continue to level or perhaps even decline,” and that as personnel costs rise and purchasing power declines, finding a good balance between all of the demands on the Air Force will become “that much more elusive.”

USAF is being forced to do some recalibration, and “we might even break some glass along the way,” but “we will not shy away from difficult
decisions,” Schwartz asserted. “We will work through them and any uncomfortable repercussions to do what is necessary to make our force more versatile and more ready to succeed.”

Painful Decisions

Last year, such decisions included terminating the F-22 fighter and ordering the early retirement of some 250 other fighters to free up funds to buy new F-35s and upgrade combat aircraft. This year, the difficult decisions include scaling back a new combat search and rescue helicopter program. This is a painful decision, as CSAR personnel are already deployed roughly half the time, and the existing HH-60 aircraft are old and underperforming.

Schwartz also said that while the service is hoping for a new long-range strike platform—he used the term “penetrating bomber”—he emphasized that it will not be a lone-wolf aircraft capable of performing all conceivable missions such as electronic warfare, ISR, nuclear strike, and battlefield communications by itself. Instead, it will be part of a “family” of systems, both old and new, that will collectively allow USAF to penetrate denied or contested airspace.

“We are likely to face more sophisticated, more capable anti-access measures that are specifically designed to challenge our ability to project expeditionary power,” Schwartz warned. Anti-access or area-denial systems abroad have become “more networked, accurate, and effective,” and the Air Force will need the tools to circumvent or defeat them. These capabilities “can compel friendly forces either to accept higher risks or be forced to operate, disadvantaged, at greater distances.”

Long-range strike “will be an evolutionary approach to balance existing, evolving, and new capabilities, not a vast and prohibitively expensive multiphase acquisition program,” Schwartz said.

The system, along with the entire panoply of Air Force attack capabilities, must inflict a cost penalty on adversaries, Schwartz said. They must be compelled to spend inordinately on countermeasures, air defenses, redundant systems, or by “dispersing assets or burying them ever deeper.”

Air Force Secretary Michael B. Donley, in his speech, said the bomber should have the ability to “range the planet,” but must not “repeat the painful experience” of previous failed programs that reached too far, technologically, or were too narrow in what they could do, or too expensive to buy in required numbers. These problems have historically led to “cancellations or low inventories.” The Air Force wants a new bomber fleet size that it can operate for 30 years at an affordable cost, and unit cost will be “a key factor.”

Donley said the LRS aircraft will be oriented toward the conventional mission in its first iteration, since that is the chief role bombers have served in during the last 20 years.

However, Schwartz also acknowledged that at the top level of the Pentagon, which is taking a big role in defining the LRS platform to ensure that it fits in with what the other services are doing, the debate “rages on” about exactly what capabilities it should have, and resolution of the controversy may not come quickly—perhaps not even in time for the Fiscal 2012 budget request.

Essential Core Functions

The Air Force is working with the Navy on the new AirSea Battle concept of operations that will allow the two services to share capabilities, Schwartz said. “We cannot just pursue increasingly expensive advanced technologies,”
Air Force Magazine / November 2010

In January, a group of airmen are slated to begin the first-ever Network Warfare Operations instructor course at the US Air Force Warfare Center at Nellis AFB, Nev. This new start may seem inconsequential, but to Air Force Space Command’s Gen. C. Robert Kehler, it could turn out to be one of the most important steps in cementing the nascent cyber mission in day-to-day operations.

In years past, starting a similar class for space at the warfare center was “the single most important thing” in integrating space forces with the overall force, Kehler asserted during his Sept. 14 remarks at AFA’s Air & Space Conference at National Harbor, Md.

“It is not a hard sell to convince me and others that we need to do the same thing for cyber,” he explained.

The airmen in that inaugural cyber class will become the cadre of instructors for subsequent students, said Kehler.

Cyber is still a growing and evolving mission for the Air Force and military overall. Over the past year, the Air Force has made tremendous strides, including the standup of 24th Air Force, its new cyber operations arm headquartered at Lackland AFB, Tex., and aligned under AFSPC.

“I am very ... comfortable and pleased with [how far] we have come in a very short time regarding cyber. ... I think we’ve positioned ourselves very well,” said Kehler.

However, he acknowledged that the entire process is still a learning experience.

“I think that the standup of the 24th is helping us understand a lot more about what cyberspace really is—and what it isn’t,” said Kehler. “We know changes will have to be made. We know that we will evolve as time goes by.”

More airmen are joining the cyber mission each day, he said, noting that the Air Force’s first undergraduate cyber training class will graduate in December from six months of instruction at Keesler AFB, Miss.

Over time, the Air Force leadership might realize that the current organizational setup for cyber is not ideal, said Kehler.

“We’ll have to see how this goes as we evolve and get smarter,” he said.

“I don’t know five years from now what Air Force Space Command looks like.” Once all of the cyber pieces are up and running, Kehler said, “it will be a great time for us to sit and look at whether ... we are positioned the right way organizationally.”

For now, having cyber and space, two of USAF’s three operational domains (air is the third) situated under Space Command doesn’t feel overwhelming, he said.

The cyber-security picture for the nation, as a whole, is less settled, according to two retired Air Force generals who also spoke at the conference. Protecting the nation’s cyber networks is a daunting task, and one that is fragmented and lacking cohesion. For some, there are also concerns over the US military’s role.

“Defense is very, very dominant in this cyber domain,” said retired USAF Gen. Michael V. Hayden, former CIA director, but America’s “political culture is having a great deal of difficulty in getting comfortable with defense dominance.”

The Department of Defense established US Cyber Command at Fort Meade, Md., in May to oversee the US military’s networks. CYBERCOM is a subunified command that reports to STRATCOM.

The thought of the military potentially exercising an active defense of the networks—and intruding into the civil-commercial realm—strikes some inside and outside of the US government enterprise as worrisome, said Hayden. After all, the United States is still “adrift” when it comes an overarching cyber policy, he said. “We don’t have the big ideas settled yet,” he said.

There’s not even a standard definition for what constitutes a cyber attack, said retired Gen. Ronald E. Keys, former head of Air Combat Command.

“If you come in my house at midnight and the alarm goes off, I’m coming down the stairs with a loaded shotgun. [If] you come into my computer at midnight, even if an alarm goes off, nothing’s going to happen,” said Keys.

He said the “return on investment is very high” for cyber attackers who face essentially “no penalty” for their misdeeds. Accordingly, he called for changing that calculus by making it “hard” and “dangerous” for them to act. “We have to make it clear that there is a penalty when you’re caught,” said Keys.

Schwartz asked industry attendees to expend maximum effort to lower system costs and innovate to provide better equipment at a faster rate. The challenges facing USAF demand “unity” between the service and its vendors, he said.

“We cannot afford ‘business as usual,’” Schwartz observed, asking

he insisted, explaining that by pooling resources where it makes sense to do so, the Navy and Air Force can control air, space, and cyber “more efficiently and more effectively.”

AirSea Battle “must develop into a permanent, well-institutionalized” organization with operational concepts and acquisition strategies, he asserted.

Donley said he and Schwartz are building an Air Force program that can be fulfilled—eliminating the waste of setting unreasonable expectations that don’t pan out after vast amounts are spent pursuing them.

The Air Force has marching orders not to “get overextended with more programs and resource commitments than we can afford,” Donley said. The service is concentrating on “the top few acquisition modernization programs essential to each core function,” and on providing the funds necessary to ensure success.

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The Air Force is on a campaign to improve its acquisition system, Donley reported, from improving the value obtained to getting speedier results. He pointed out that the Big Safari program has been successful in delivering quick-turn capabilities such as today’s MC-12 program, and the streamlined acquisition approach used to obtain the F-117 attack aircraft in the 1980s is still pursued by the Rapid Capabilities Office. USAF’s Operationally Responsive Space Office, he said, is developing both satellites and launch systems that can quickly reconstitute or augment space systems “at the speed of need.”

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contractors to take “a longer view of promise and likely reward” versus “the vagaries of the quarterly board report.”

Ashton B. Carter, undersecretary of defense for acquisition, technology, and logistics, said the Pentagon is “in a new era, and we need to manage to that new reality.”

Addressing the conference, Carter said it will be impossible to provide US troops the equipment they need “unless we learn to deliver better value” with the defense dollars available.

He described a new Pentagon plan to find $100 billion in savings from overhead costs. This is money the services would be allowed to keep and plow back into modernization programs “so that we do in essence have continuous growth in the part of the budget that really matters.” He described the figure as “a reasonable goal,” based on the assumption that after nearly a decade of unquestioned and growing defense budget, “some fat” has crept into it.

Carter lauded the Air Force for a number of initiatives that lead the way in acquisition reform and set an example for the other services. He said USAF is improving its acquisition “tradeoff” by establishing program executive officers for the purchase of services, an effort that has “already delivered great results.” He also cheered the Air Force’s drive to save money through performance-based logistics contracts and in cutting “unproductive processes and bureaucracy.”

Toward that end, Carter said the LRS program will reflect lessons learned on the Navy’s next generation ballistic missile submarine. DOD was “able to trade inessential capability for cost,” and on a $100 billion program, “this is nontrivial,” Carter noted.

The LRS “has to be done the same way, where we embark on something that we’re going to actually be able to afford to have. Otherwise, we’re planting the seeds of disappointment.”

**The National Interest**

Carter said a “technologically healthy and financially attractive defense industry—is in the national interest,” and that profit is reasonable. The Pentagon, he said, is moving toward contracts that better reward good performance on the contractor’s part, and aim for lower costs on the DOD side with less reporting and unnecessary red tape.

Carter also lauded the Air Force’s pursuit of higher standards in the nuclear mission, saying that it had been stabilized and “put ... on a steady course” after years when it drifted without support “for anything.” The Nuclear Posture Review has set a departmentwide course, and “the logjam is broken” on the way ahead for the nuclear missions, he said.

It is a “fiduciary duty of the department to make sure that it hands on to the future a vibrant technology base,” Carter asserted, explaining that “I don’t mean jobs. I mean skills.” The skills of aerospace design and manufacturing, “if we allow them to erode, will be difficult to recreate and ... cannot be found in the commercial economy.”

He said that termination of the Air Force’s last next generation bomber ef-

fort caused the Pentagon concern about the industrial base. Carter’s office is working with USAF to find ways to keep “key technical areas” of industry engaged in productive work until the LRS program really gets going.

Marion C. Blakey, president and CEO of the Aerospace Industries Association, also voiced concern about the health of the industrial base. Addressing the conference, Blakey said that although commercial and civil aviation is “on the rebound,” AIA’s members are concerned a downturn in defense could “drive down the entire aerospace industry.”

In the budget deliberations ahead, Blakey said, the industrial base must be a principal consideration of defense officials because US leadership in the global industry is at risk.

“...The stakes are very high,” Blakey asserted.

She also said that if economic considerations must be paramount, it’s worth noting that aerospace enjoys the highest positive balance of trade—$56 billion last year—of any US industry, making its health key to the nation’s economic well-being.

In a presentation on the health of the industrial base, industry panelists noted the US now has no new combat aircraft in development for the first time since the dawn of military aviation.

Christopher M. Hernandez of Northrop Grumman said he’d like to see the Pentagon keep contractor design skills alive with “X-plane” contracts to explore futuristic technologies that would actually be built and flown. Darryl W. Davis of Boeing said his company is pursuing some design work on its own, but can’t do that forever if the Defense Department doesn’t make clear there could be a business payoff in the future.

At a time of stiff constraints on defense spending, the Air National Guard continues to provide an amazing return in investment, said Gen. Craig R. McKinley, head of the National Guard Bureau.

When Air Guardsmen are mobilized, they cost the same as active duty airmen, but over a career, they provide strategic depth at a cost of about 15 percent versus a career active duty airman, he said.

The Guard has also gotten the message on costs, he said. Whereas “four or five years ago,” state Air Guard units would have “fought to the death” to
preserve some flying missions deemed unaffordable, they now see a future in new missions such as cyber and remotely piloted aircraft operations. Guardsmen are doing their part to pick up expertise in these areas while helping the Air Force determine an affordable approach to these missions.

McKinley said there are some who would like to see the National Guard focus almost exclusively on homeland defense missions, but that would result in it being a “constabulary force,” ill-suited to backing up active forces in war.

One area that should be largely immune from the constraints of tight budgets is strategic nuclear deterrence, US Strategic Command chief Gen. Kevin P. Chilton told the conference. “Numbers should follow strategy; strategy should not be built around numbers,” Chilton said. He said a strategy-driven approach to nuclear deterrence was pushed by STRATCOM and adopted in the Nuclear Posture Review.

A Changing Workforce

However, it’s time to “reverse a 15-plus-year trend of benign neglect” of the nation’s strategic forces, Chilton said. He noted that the Space Based Infrared System, which he was assured in 2008 would be launched soon, is now a further two-and-a-half years late and may not launch until next spring or later.

“It is past time to mitigate the risk to our deterrent posture in this first critical element of missile warning and attribution,” he said. More resources need to be applied to redundant satellite, airborne, and ground communications, he said. While these are the “least sexy” elements of deterrence, they are essential and must not be allowed to erode to a condition where they are in any doubt at all.

Chilton said it’s time to get going on a replacement for the Minuteman III ICBM. It will take an acquisition cycle of 10 to 12 years to develop a missile, plus a preambule of several years for an analysis of alternatives.

That means that if the Minuteman is to be replaced starting in 2025—and completely phased out by 2030—there’s no time to lose.

Finally, Chilton said the basic infrastructure of designing, developing, and testing nuclear weapons needs continuous attention, and “a lot of investment is required.” It will still be necessary to have facilities that can process plutonium and uranium, and “you take care” of the people who know how to do these jobs, or the skills will perish.

Gen. C. Robert Kehler, head of Air Force Space Command (and nominated to replace Chilton at STRATCOM), said his organization is conducting its own review of wartime space and cyber lessons to see if there are ways to improve combat support. The Air Force must get more value out of the space assets it has, rather than simply demand more platforms, and it will strive to continue to be innovative in squeezing more capability from them, Kehler said.

He also is concerned that the nature of the workforce in space and cyber is changing. After years of outsourcing, the service is once again “insourcing,” and there is a challenge of assigning civilian people to do these critical missions when they often have to go to forward areas alongside their uniformed counterparts. It is an issue that “is getting worked hard,” Kehler reported.

 Asked by a reporter whether his remarks—and those of other USAF leaders at the conference—were meant to send the message that the Air Force of the past is gone and not coming back, Schwartz said he was addressing himself to those who worry about the Air Force’s role in the future. “I’m no Pollyanna,” Schwartz said. “These are tough times. And we will get through this. That was the message.”