

**DEPARTMENT OF DEFENSE APPROPRIATIONS
FOR FISCAL YEAR 2005**

WEDNESDAY, MARCH 24, 2004

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:15 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Cochran, Inouye, Leahy, Dorgan, and Durbin.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE AIR FORCE

STATEMENTS OF:

**HON. JAMES G. ROCHE, SECRETARY
GENERAL JOHN P. JUMPER, CHIEF OF STAFF**

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. I apologize, Mr. Secretary and General. I was Chair of the Senate, and my relief did not show up. But we're happy to have you here this morning. It's an important time for all of us, very important hearing concerning the future of the Air Force.

As you know, some of us just returned from a trip to Iraq and Afghanistan, and I know you're confronted with the difficult task of modernizing the Air Force. We're pleased to have your leadership.

I'll put my statement completely in the record because I am late. [The statement follows:]

PREPARED STATEMENT OF SENATOR TED STEVENS

Secretary Roche, General Jumper, it is good to welcome you back before the subcommittee at this time of importance for the nation and the Air Force. As we meet here today, the Air Force continues to support the nation's forces committed to operations in Iraq and Afghanistan. At the same time you are both confronted with the difficult task of modernizing the Air Force. The country is fortunate to be able to call upon your leadership.

The committee has begun its review of the fiscal year 2005 Defense budget. Clear from the President's request is the Air Force effort to modernize fighters by investing in the F/A-22 and the Joint Strike Fighter, and to commit the Department to the next generation of space capability.

We look forward to hearing today of your priorities in the budget request.

We will make your full statements a part of the committee's record.

Before you proceed, I would like to ask my colleague from Hawaii if he has any opening remarks.

Senator STEVENS. All of your statements are completely in the record, by the way.

Senator Inouye, our co-chairman, do you have a statement?

STATEMENT OF SENATOR DANIEL K. INOUE

Senator INOUE. Yes, I did want to put the rest of my statement in the record. Mr. Chairman, I wish to begin by congratulating the Secretary and the General for the performance of the men and women in the Air Force in Iraq, Afghanistan, and other places around the world. And I'd like to thank all of you and your command, because we are in your debt. Thank you very much for your service.

And may I ask that the rest of the statement be made part of the record?

Senator STEVENS. Yes, sir.

[The statement follows:]

PREPARED STATEMENT OF SENATOR DANIEL K. INOUE

Secretary Roche, General Jumper thank you for being here today to testify before this subcommittee on your fiscal year 2005 budget request.

Gentlemen, I want to begin by congratulating you on the performance of the men and women in the Air Force in Iraq, Afghanistan and around the world.

The last few years have been very demanding on our military with frequent family separations from overseas deployments, periods of intense combat which heighten concern for our loved ones, and the stress that comes from knowing that we are living in a very dangerous era.

Particularly at times like these, it is critical that we demonstrate our support and express our thanks to these fine officers and airmen, and their families.

I look forward to hearing from you today about how the fiscal year 2005 budget request will accomplish this task.

Mr. Chairman, I want to note also that there are several important issues in this budget request. The Air Force is recommending changes in its aviation force structure, with the retirement of ten F-117s. Furthermore, many other adjustments are being contemplated.

For instance, I am told you are considering buying additional F-15 and F-16 fighters, retiring C-5as, and restoring B-1 bombers back to the fleet.

Some of these might prove controversial, and I encourage you to include us in the decision making process as you proceed.

Gentlemen, the proposed budget includes an increase of over \$4 billion in your investment accounts, while the other services did not fare as well. I understand that some of your increase is due to classified activities, but I would like you to address the unclassified increases for space and other programs today and why they are priorities at this juncture.

I look forward to hearing your remarks today on these and other topics as we review the state of the Air Force.

Finally, Mr. Secretary, General Jumper I want to thank each of you for your service to the Air Force and the country. We are in your debt.

Senator STEVENS. Senator Dorgan, do you have a statement?

Senator DORGAN. Mr. Chairman, I do intend to ask some questions today about a number of things, but let me, again, echo your comments and the comments of Senator Inouye. I appreciate the work that the Secretary does, and General Jumper's, and the men and women of the Air Force.

Senator STEVENS. Thank you, sir.

I have a statement from Senator Burns for the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR CONRAD BURNS

Thank you, Mr. Chairman. I would like to thank Secretary Roche and General Jumper for coming to brief this Committee on the Air Force budget, and I thank you for your service to our great Nation. Your airmen are critical to winning this global war on terror. I intend to honor our men and women serving and those who have made the ultimate sacrifice for our country by ensuring that our forces have the resources they need. With 16,000 airmen deployed to 25 locations in southwest Asia, including 12 new bases, our Air Force is fully committed to support the Global War on Terror.

Members of the 120th Fighter wing of the Montana Air National Guard were one of many Air Guard units mobilized and deployed to Saudi Arabia last year in support of the war. As part of the Air and Space Expeditionary Forces (AEF), they have performed superbly. I urge you to ensure the Air National Guard units called to active duty have the most current equipment available. We must depart from the cold war premise that equips the Air Guard with older generation equipment transitioned from Active Duty Air Force units. Today, our Air Force Guard and Reserve components fight beside their active counterparts. I urge you to ensure that all units deployed overseas are equipped with the best technology our country can provide.

We have witnessed the successful employment of unmanned aircraft within our forces. We have seen an increase in the number of Unmanned Air Vehicles in use by our forces at all echelons. Feedback I have seen from the soldiers on the ground is that they wish they had more of these systems, not less. I urge the Air Force to consider expanding the force structure of unmanned aircraft into the Air National Guard. The Air Force would benefit from retention of a strategic reserve of this capability as operational tempo subsides in the coming years, and the Air National Guard would benefit from force structure that could support homeland security or disaster relief missions. I will be interested to hear whether or not you have plans for achieving this balance between the active Air Force and Air National Guard.

I am encouraged by Air Force investments in advanced technology that enables us to maintain superiority in sensor coverage and the ability to provide rapid, precise application of force. This investment is critical to our continued success in operations under our new operational model, which relies on precision engagement weapons and rapid identification of targets to augment traditional firepower and maneuver formations. I would hope that the Air Force continues its investment in the development of cutting edge, creative applications for the warfighter of today and the future.

The key to future combat is knowledge provided by rapid processing of data from pervasive sensors, empowered with quick response precision engagement capability. Air Force programs like satellite communications and space based radar support the growth in bandwidth required of our combat network resulting from integration of high resolution multi-spectral sensors, precision weapons, and maneuver formations.

I read daily of our forces in the field using American ingenuity to develop unconventional solutions to solve the many unconventional problems they face. I appreciate your efforts as the leaders of the Air Force to seek innovation in technology, acquisition processes, and doctrine to meet the challenges of the evolving battlefield.

Again, I thank you for being here today and look forward to the discussion this morning. Thank you.

Senator STEVENS. Senator Cochran.

Senator COCHRAN. Mr. Chairman, I join you in welcoming the distinguished Secretary and Chief of Staff of the Air Force, and commend them on the outstanding leadership they're providing to the Air Force at this very important time.

Thank you.

Senator STEVENS. Maybe I should be late every morning, Mr. Secretary.

We'd get to you quicker this way.

I thank the Senators for their courtesy, and we'd be pleased to hear your statement.

Dr. ROCHE. Thank you, Mr. Chairman. We very much appreciate the comments you made about our wonderful airmen. They really are spectacular young men and women, and we're terribly proud of them.

So, Mr. Chairman, Senator Inouye, and members of the committee, it is our great pleasure to appear before this distinguished committee and to represent the 700,000 Active, Guard, Reserve, and civilian airmen who are engaged in defending our Nation. General John Jumper and I are extremely proud of their achievements and service this past year and the years before that. They have contributed significantly to our Nation's global fight against terrorism, to our military successes in Iraq and Afghanistan, and to our homeland defense mission. They are devoted servants to our Nation, and have our utmost respect and confidence.

And, sir, I would also want to point out how honored I am to serve alongside such an outstanding leader as General John Jumper, a wonderful officer, a superb gentleman, a renaissance man, and a good friend.

Our highest priority continues to be warfighting through delivering capabilities that enable us to remain decisive in combat. Through the efforts of this committee, your colleagues in the Congress, and the dedicated professionals of the Department, we are proud to report we are meeting these objectives.

As highlighted in our written testimony, we continue adapting the Air Force to realize the President's and Secretary Rumsfeld's view of transformation. Our strategy is to exploit the sources of strength that give us the military advantages we enjoy today. Our goal is to build a portfolio of advantages, one that uses operational concepts to guide investments that's relevant to the joint character of warfare and is useful in the increasingly asymmetric conduct of warfare. With the support of this committee, we have delivered combat effects never before imaginable on the battlefield, and we'll sustain this dominance in the future. The portfolio of capabilities, which I will be speaking of, will continue to provide joint force air and space dominance, enable battlefield operations, and produce decisive joint-combat effects.

F/A-22

Let me start with the F/A-22, Mr. Chairman. Today, the F/A-22 is not just a program on a piece of paper, but a real aircraft, a revolutionary aircraft that is moving to the field now. Ten jets assigned to Edwards Air Force Base, California, are completing developmental tests, and they're well into operational tests. At Nellis Air Force Base, Nevada, five Raptors are developing operational tactics and techniques. And at Tyndall Air Force Base, Florida, four jets, and counting, are training pilots.

I recently visited our airmen at Tyndall—I've been to all of the facilities, but most recently at Tyndall Air Force Base—and heard firsthand the glowing reports of this transformational weapons system, from the airmen who maintain it and operate it. In fact, as I departed, two Raptors were taxiing back from another successful mission. Later, I was told that both aircraft landed Code 1, which means they'd be ready to go for its next mission after routine servicing.

With these aircraft in the inventory, we are now focusing on operational testing, expanding the flight envelope, integrating more weapons, and improving our maintenance processes. One year ago, we had completed 16 missile shots. Today, after 5,000 flight test

hours, we've had 47 successful missile shots, and major elements, flight envelope and weapons envelope, are cleared for Initial Operational Test and Evaluation (IOT&E) start. In fact, as General Jumper will tell you, pilots flying the aircraft today believe that if war were to break out, they would like to take the aircraft to war today.

Additionally, through your commitment, stable production of the F/A-22 program is producing cost savings. Earlier this year, we exercised an option to add one F/A-22 aircraft to our LOT-3 contract, increasing our buy to 21 planes for the price of 20. While such dramatic savings won't be available every year, this is happening because of gains in supplier confidence, which led to reduced costs. With 65 percent of aircraft costs associated with over 1,400 suppliers in 46 States, a firm commitment to program stability is absolutely essential to create conditions where suppliers view efficiency gains as a path to increased orders. Again, your commitment to F/A-22 program stability is what has allowed this to happen, and we thank you.

At the same time as we strive for program stability, we are transforming the F/A-22's capabilities. Through deliberate spiral development, we are integrating new avionics and weapons to make it a premier air-to-ground strike system, as well. In addition to obtaining and sustaining air dominance, the F/A-22 will counter existing and emerging threats, such as advanced surface-to-air missile systems of the SA-20 and the SA-400 family, time-sensitive targets, moving targets, and cruise missiles, protecting our Navy colleagues, our deployed soldiers and airmen, or, God forbid, even our homeland, to a greater fidelity than anything we have in our legacy systems.

And we just completed Defense Acquisition Board the day before yesterday, and it was characterized by all members as very encouraging. Members were satisfied. We expect to enter into an initial operational test and evaluation near the end of April, but it'll be event-driven. As of now, we see no impediments to enter.

Also as part of a test, we were required to do a test against the F-15, because there had been requirement that the F/A-22 demonstrate that it was at least twice as good as the F-15 in air-to-air combat. The head of the Air Force test organization tells General Jumper and me that, in fact, the F/A-22 proved to be roughly five times as good as the F-15.

We have also just completed LOT-4 negotiations for 22 aircraft. That means that we are at a position where the recurring cost—not including research and development, but the recurring cost of each airplane is under \$110 million a copy. We are on the price curve, as we had wished to be. And, again, we thank you for the stability that's allowed us to do that.

Our F/A-22 budget request continues much needed program stability and supports its transition from development to operational tests with Initial Operational Capability (IOC) at the end of calendar year 2005. The \$4.8 billion request includes funding for production of 24 aircraft, and continues our smooth ramp-up to 32 jets per year. As you recall from last year, Mr. Chairman, we have decided not to try and go beyond 32 because it would require additional facilities and other things. We much prefer to have some-

thing that's stable, because when you have a stable production line, you can work very hard at finding efficiencies in order to get costs down and get reliability up.

We look forward to the delivery of the first F/A-22 to Langley Air Force Base, Virginia, this November as part of the first operational squadron. IOC is clearly within sight, and the Air Force is postured to deliver this transformational capability, as anticipated, to the Joint Warfighter.

JOINT STRIKE FIGHTER—F-35

With respect to the Joint Strike Fighter, a complementary capability to the F/A-22 should be provided by the F-35 Joint Strike Fighter. This aircraft is expected to provide a sustainable, focused close air-support platform for the Joint Force commander. The benefits potentially to be gained from the F-35 commonality across services and major allies will have no comparison to any system in the fleet today.

With the F-35 only in its second year now of an 11-year development program, we can effectively apply the production quality and Operational Test and Evaluation (OT&E) lessons that we learned on the F/A-22. In fact, every time there's a Defense Acquisition Board meeting on the F/A-22, we require the F-35 team to be there to learn any lessons so that they don't repeat any mistakes we might have made.

Together, these aircraft will be integral to our support of ground forces in various environments flying different profiles. They are not the same aircraft; they are very different aircraft. They are not substitutes; they are complements.

We, in the Air Force, are in the process of improving our commitment to close air-support capability by planning to acquire Short Takeoff and Vertical Landing (STOVL) and STOVL variants of the F-35 to better support land forces, be they Marine, Army, Coalition, or special operators.

In moving our Air Force into the STOVL world, with an emphasis on the short takeoff for air support, we will look to gain training efficiencies by working jointly with the Marine Corps on facility use and course development. Additionally, we are pressing for the early development of STOVL capability in the program cycle to reduce risk.

Right now, there's a weight problem in the F-35 program, and it most greatly affects the STOVL variant. We are working with the Navy and with the people in Acquisition and the Program Office to change the program so that risk reduction on the STOVL becomes one of the paramount things to do in the short-term, because if we cannot build a STOVL aircraft, then we really don't—we should not proceed with the F-35 program.

A STOVL is key for a number of reasons—commonality with the Conventional Take Off and Landing (CTOL), the fact that the Marine Corps are very dependent on it, the fact that we will become dependent on it. If we were merely to be designing a plane to replace the F-16, we would probably have taken a different route.

We believe this is doable, and we believe it is what you would want us to do, which was to find the toughest part of the program and to demonstrate to you that, in fact, the program is a viable

program. Since the Air Force will be taking over this program sometime in June, end of May or June, we are committed to being as transparent as possible to you about the program—when there’s a problem, tell you about the problems; when there’s something good, tell you about something good. Right now we think what we owe you most is to prove that, in fact, the short takeoff and landing aircraft can be developed from this design, and can do it with the amount of weight that’s reasonable.

BOMBERS

With respect to our bombers, Mr. Chairman, during Operation Iraqi Freedom and Operation Enduring Freedom we continue to demonstrate our ability to link air and ground forces with our airmen combat controllers, turning the battlefield air operations from a concept into a reality, and giving Joint Forces the tools they need to bring devastating fires to bear. These young airmen, who operate on the ground, sometimes to the back of forces in remote locations, have proven their worth to our country, and they and their colleagues, as part of our battlefield airmen field, will only be developing over time. And we are working with the United States Army—in particular, General Jumper and General Schoomaker—to assure that, as the Army reorganizes and has smaller maneuver combat units, that we will have the airmen for each of those units to be able to bring air power to bear to support those ground forces.

B-52

A decade ago, we were concerned with the relevance of the B-52. And, as John has pointed out, General LeMay never would have predicted we’d employ B-52s from 39,000 feet in a close air-support mission with such precision, but he would be proud.

And last year, during Operation Iraqi Freedom, reserve B-52 units from Louisiana figured out how to incorporate the Litening II sensor pod on a “BUFF”, and conducted the first combat laser-guided employment. We were able to drop Laser-Guided Bombs (LGBs) from a B-52. The first time the crew saw the targets, they were actually attacking, and it became—these planes became the two weapons of choice for the Combined Forces Air Component Commander (CFACC) in the area, because they could do so much more with them. We are now expanding that to cover about 14 of the B-52s.

At one point, there were those who were writing off the B-1, but we adapted the fleet. Today, we are using it in ways never conceived. We removed the stores bay fuel tank to give it increased carriage capability, and we developed tactics that make it useful for new missions. With increased range and duration over a target area measured in hours because of the changed way we employ this aircraft, and the capability of stacking aircraft in benign areas for execution of time-sensitive or emerging targets, the B-1 and our whole bomber force—have become theater weapons of choice, and we’re especially proud of the men and women who have made the B-1 so effective.

Our bomber fleet of B-1s, B-2s, and B-52s are combat-proven. Thanks to this committee, increased spare-parts funding and your commitment to platform modernization and fleet consolidation have

resulted in record mission-capable rates and a fleet that is more lethal and survivable. We truly have achieved something together, sir.

B-1

Our B-1s achieved their highest mission-capability rate in history thanks to a smaller fleet, improved availability of spares, and the concentration on two bases with the best maintainers split between those two bases, instead of five. We've done well.

B-2

The B-2 fleet story is similar. We currently have 21 B-2 aircraft achieving their best mission-capable rate since its IOC in 1997. With congressional support, shelters are now available to support global B-2 expeditionary operations.

Today, we are investing in future technologies for enabling long-range strike for 2025 and beyond. Over the next year or so, we will determine what form that long-range strike capability will take. Our long-range strike strategy and investment plan will sustain our legacy force and provide a future stealthy, possibly regional bomber to deliver combatant commanders combat effects. When we say "regional bomber", we mean a bomber that is big enough to carry a number of weapons, and stealthy, able to fight or to evade a fight and, thereby, be able to be daytime stealth, because right now all our stealthy systems can only be operated at night. The exact range is to be determined, but could be something like three-quarters that of a B-2 or, for certain design, might even exceed that of a B-2.

C-17

C-17 next, sir. Another warfighting success story rests with a key enabler of our strategic mobility, the C-17, and this committee has been heavily involved in it from the very, very beginning. Therefore, we're proud to say that we have a fleet that now includes 116 aircraft, of which 79 are available for immediate global mobility with a mission-capable rate of 86.7. This is the highest mission-capable rate in our manned-aircraft fleet.

Combat employment of the C-17 has been even more impressive, and would not have been possible without the support of you and your colleagues, Mr. Chairman. For instance, while we were constrained from access by land, 15 Air Force C-17s airdropped over 950 paratroopers from the 173rd Airborne Brigade, and 23 airmen, into Northern Iraq. This successful mission opened Bashur airfield and assured the United States (U.S.) ground forces could be resupplied in the northern part of Iraq. As of today, the C-17 has flown the bulk of U.S. airlift missions supporting Operation Iraqi Freedom and Operation Enduring Freedom flying over 40 percent of all aircraft sorties, delivering 260,000 tons of cargo. The additional 60 C-17s approved in the multi-year buy is a continued step in the right direction to support this nation's airlift requirements. With your committee's support, the C-17 program and the multi-year funding profile provides the stability and maximizes production, while enabling suppliers to gain efficiencies, providing cost savings.

We still believe that the 60 multi-year, as you've allowed us to do it, sir, enables us to save at least \$1 billion over the course of the program. That's equal to four more planes. We are getting 60 planes for roughly the price of 56.

TANKERS

Tankers, Mr. Chairman. As you know, our tanker recapitalization initiative is on hold. The initiative is complicated enough, as you know, so I am in complete agreement with Secretary Rumsfeld's desire to review the program and ensure that it is not tainted in any way.

Meanwhile, we are programming money, starting at fiscal year 2006, to conduct a KCX tanker replacement program, and that has been our plan all along. As a critical joint enabler of U.S. power projection, our global aerial refueling fleet serves Air Force, Navy, Marine Corps, and Coalition aircraft. Recapitalization of the KC-135 fleet, over 540 aerial refueling aircraft, will clearly take years to complete, and their average age, as you are well aware, is roughly 43 years. The Air Force is committed to an acquisition approach for this program that brings the best capability to the Joint Warfighter at the lowest possible cost and in the most efficient manner.

UNMANNED AERIAL VEHICLES

If I may now, I'll just touch on Unmanned Aerial Vehicles (UAVs). We, again, would like to thank this committee for its contribution to our UAV force and remotely piloted aircraft. I know, personally, a number of you were interested in this subject long before the services were, and now I think you can point with pride to your early positions.

Since beginning operations with these transformational systems, you have enabled us to make this a valuable asset in the conduct of modern-day warfare and the prosecution of time-sensitive targets. In just 2 years, these aircraft have evolved from intelligence platforms used to see over the next hill, into systems that can now provide Joint and Coalition Forces with intelligence, surveillance, reconnaissance, target acquisition, and, in the case of the armed Predator, direct attack.

OPERATION IRAQI FREEDOM

During Operation Iraqi Freedom, we further refined Predator capabilities, as well as Global Hawk capabilities, sending realtime Predator feeds to other airborne platforms and to ground forces. Now, in fact, we have 20-some of these units we call Rover 2's, which are the—to downlink instruments from the Predator to the ground forces, that they're going to use in Iraq.

Being able to run five simultaneous combat orbits through advanced technology and tactics development was also demonstrated. Innovations in our laser Hellfire operation saved lives and refined the standards for time-sensitive targeting. Last year, we used Predators, as well as our Global Hawk UAV, to assist in the effort to preclude Scud launches from the western desert of Iraq. Integrated with special operations and other air assets, these unmanned air-

craft allowed small teams to own and control 6 million acres of territory that had been the launching points for dozens of Scud missiles during the 1991 gulf war. With small teams, with that kind of air surveillance, backed up by attack aircraft, we suppressed the western part of Iraq.

Mr. Chairman, I know you know that we, in fact, were able to practice with the same people, the leaders of this, in the western part of the United States night after night after night, quite secretly. Our range is the size of Connecticut. Two Connecticuts make the size of western Iraq. We moved that identical team right over, and these were our Army folk, some Navy, Air Force, some Coalition allies, special operators, who had trained night after night together, and then we moved them.

Working with other intelligence/surveillance/reconnaissance assets, the Predator also provided target acquisition and conducted direct attacks on targets where the chances of collateral damage were high. We loved the story of a pilot named Yvanna, and she took her Predator to remove Baghdad Bob off the airwaves. She had to destroy his satellite dish, antennae, and generator, and it was set up only a few yards away from international media antennae, and very close to a mosque. She operated the Predator slowly, as she said. As you know, Mr. Chairman, this thing only can go 70 knots, at best. But she came in slowly, to be very quiet. She coordinated with the Combat Air Operations Center (CAOC) in the Kingdom of Saudi Arabia. She was flying the vehicle from the United States. She flew over downtown Baghdad. She found the target, made sure that the laser beamed exactly the right spot, and blew it away, and the other media never even noticed. It was a beautiful job, and there was no collateral damage.

GLOBAL HAWK

Another example that we're very proud of is the work of the Global Hawk with our Joint Surveillance Targeting Attack Radar System (JOINTSTARS) working against the Medina Division in the midst of a sandstorm. As my colleague often points out, when people talked about a lull in the war, I don't think they ever asked the commander of the Medina Division, because he was certainly not experiencing a lull, and he found that if he moved, he could be identified, and his units were killed.

PREDATOR

Examples like these reinforce our current plan for a force of 68 Predator A's. We expect many of our ongoing initiatives in this platform to pay big dividends. Developing multi-spectral sensors, improving our weapons integration and communication links remain top priorities for our Predator force.

For Predator B production, General Jumper and I have directed a more deliberate acquisition program to ensure we deliver an effective and sustainable hunter/killer capability to the warfighter. And John just visited the Predator B yesterday, and he may want to comment on it.

We have also reviewed the fielding strategy to get us up to 60 aircraft, the requisite sensors, and ground stations. This will allow

for early deliveries of interim combat capability, support near-term requirements, while ensuring a disciplined development program.

There's a lot we could go on about the Global Hawk, sir. We are going to be ordering 34 of these over the Future Years Defense Plan (FYDP). These were used differently than ever intended during the Iraqi War. Our young teams taught us how these things should be used in ways we never envisioned, and we are just delighted that they have applied their brains and come back with some wonderful new doctrine and tactics.

In space, sir, may I comment that the leadership—under the leadership of Under Secretary of the Air Force Pete Teets, we are working to put our space programs on track. Pete inherited a number of ongoing programs that needed revitalizing. Besides working programs, he has increased the unity of effort among the Air Force, the National Reconnaissance Office, and intelligence community in ways that we have never seen in the past. I can think of no one more knowledgeable to lead our space efforts and our space personnel. Recognizing these space professionals as a segment of warriors requiring special attention, Pete Teets has developed a roadmap designed to develop more in-depth expertise in operational and technical space specialties.

This evolving expertise served us well in Operation Iraqi Freedom, where Air Force General Buzz Moseley was both the CFACC and the senior space authority for all Joint and Coalition space activities. These improvements will continue to enhance space support for the warfighter, bring a joint perspective to our Department of Defense's executive agents—our role as the Department of Defense's executive agent for space.

Our next step in space will be to focus on what we call Joint Warfighting in space, a new initiative that General Jumper and I are trying to undertake. This focus area strives to develop rapidly launched, responsive, and survivable Microsats that advances our ability to protect our space assets and enhances our direct support to Joint Force commanders throughout the globe. Part of that support includes Command and Control (C²) networks. Using both air and space media, we envision a C² constellation that is robust, a protected network, and globally based command and control system that accomplishes all levels of the battle. This network is one that allows machines to do the integration and fusion, but leaves combat experience and judgement to leaders. It uses battlefield management command and control that will consist of command sensors—command centers, sensors, and systems, like space-based radar (SBR), transformational satellite (TSAT) communications, Global Hawk, Predator, other drones, airborne—AMTI and GMTI—that's airborne moving target indicator and ground moving target indicator—distribute a common ground picture in our air operations centers, all geared towards achieving the objectives of the joint battlefield commander. We are at the very early stages, and now we're thinking through what the architecture ought to be.

Mr. Chairman, our 2005 budget supports the Air Force's joint focus. The \$98.5 billion budget request invests in a portfolio of military advantages, advantages that depend on our ability to develop and maintain our airmen, maintain our readiness, improve our infrastructure, and provide decisive effects-based capabilities to the

Joint Force commander anytime, anyplace, under any condition. Our budget request increases both Research Development Test and Evaluation (RTD&E) and procurement to support our emphasis on transformation and modernization, consistent with the strategy we discussed.

FISCAL YEAR 2005 BUDGET REQUEST

In the fiscal year 2005 budget request, we make a significant investment in a number of critical joint systems—14 C-17s, 11 C-130J's, seven Predators, A's and two B's, four Global Hawks, and joint space capabilities, including transformational communications, space-based radar, and military satellite communications (SATCOM). We're also investing in joint weapons, including more than 23,000 Joint Direct Attack Munitions (JDAMs). Our bottom line, Mr. Chairman, is that we are committed to the joint fight. In fact, joint enablers account for roughly 50 percent of the Air Force's real budget growth.

SUPPLEMENTAL APPROPRIATIONS

Finally, we know there are concerns with respect to our ability to continue operating without a supplemental. In the Air Force, we have the ability to cash-flow into fiscal year 2005, preserving our ability of operating at home and abroad. This assumes we get no additional bills in any kind of rebalancing. Right now, we see ourselves about \$2 billion short, and that's because of some bills that have come, plus some other changes inside the Air Force, and we are looking for ways to reprogram to handle those.

Mr. Chairman and members of the committee, I am proud to be a part of the finest Air Force in the world, and I'm honored to be part of the joint team that has done so much to defend America and our interests. With your continued support and the investments—that this budget makes in adapting our force to the demands of this new era, we will continue to deliver for our Nation.

PREPARED STATEMENT

I look forward to your questions. Thank you so much for all your support, sir.

[The statement follows:]

PREPARED STATEMENT OF HON. JAMES G. ROCHE

Mr. Chairman, Senator Inouye, and distinguished members of the committee, the Air Force has an unlimited horizon for air and space capabilities. Our Service was borne of innovation, and we remain focused on identifying and developing the concepts of operations, advanced technologies, and integrated operations required to provide the joint force with unprecedented capabilities and to remain the world's dominant air and space force.

Throughout our distinguished history, America's Air Force has remained the world's premier air and space power because of our professional airmen, our investment in warfighting technology, and our ability to integrate our people and systems together to produce decisive effects. These Air Force competencies are the foundation that will ensure we are prepared for the unknown threats of an uncertain future. They will ensure that our Combatant Commanders have the tools they need to maintain a broad and sustained advantage over any emerging adversaries.

In this strategic environment of the 21st century, and along with our sister services, our Air Force will continue to fulfill our obligation to protect America, deter aggression, assure our allies, and defeat our enemies. As we adapt the Air Force to the demands of this era, we remain committed to fulfilling our global commit-

ments as part of the joint warfighting team. In partnership, and with the continuing assistance of the Congress, we will shape the force to meet the needs of this century, fight the Global War on Terrorism, and defend our nation.

The 2004 Posture Statement is our vision for the upcoming year and is the blueprint we will follow to sustain our air and space dominance in the future. We are America's Air Force—disciplined airmen, dominant in warfighting, decisive in conflict.

INTRODUCTION

In 2003, U.S. and coalition military operations produced unprecedented mission successes—across the spectrum of conflict and around the globe. The joint warfighting team demonstrated combat capability never previously witnessed in the history of conflict. Integrating capabilities from air, land, sea, and space, the U.S. and coalition allies achieved considerable progress in the ongoing Global War on Terrorism. In our most recent engagements, our armed forces fulfilled our immediate obligations to defend America, deter aggression, assure our allies, and defeat our enemies.

The foundation of these achievements can be found in the Department of Defense's (DOD) commitment to teamwork and excellence. Operation IRAQI FREEDOM (OIF) was a joint and coalition warfighting effort from planning to execution. Air, ground, maritime, and space forces worked together at the same time for the same objectives, not merely staying out of each other's way, but orchestrated to achieve wartime objectives. Our air and space forces achieved dominance throughout the entire theater, enabling maritime and ground forces to operate without fear of enemy air attack. Our airmen demonstrated the flexibility, speed, precision, and compelling effects of air and space power, successfully engaging the full range of enemy targets, from the regime's leadership to fielded forces. When our ground and maritime components engaged the enemy, they were confident our airmen would be there—either in advance of their attacks, or in support of their operations. And America's Air Force was there, disciplined, dominant, and decisive.

These operational accomplishments illustrate the growing maturation of air and space power. Leveraging the expertise of our airmen, the technologies present in our 21st century force, and the strategies, concepts of operation, and organizations in use today, the U.S. Air Force continues to adapt to meet the demands of this new era, while pursuing the war on terrorism and defending the homeland.

On September 11, 2001, the dangers of the 21st century became apparent to the world. Today, the United States faces an array of asymmetric threats from terrorists and rogue states, including a threat that poses the gravest danger to our nation, the growing nexus of radicalism and technology. As we continue our work in Afghanistan and Iraq, we stand ready to respond to flashpoints around the world, prepared to counter the proliferation of weapons of mass destruction to unfriendly states and non-state entities.

We are adapting to new and enduring challenges. As we do, we are exploiting the inherent sources of strength that give us the advantages we enjoy today. It is a strategy predicated on the idea that, if we accurately assess our own advantages and strengths, we can invest in them to yield high rates of military return. This approach helps us create a portfolio of advantages allowing us to produce and continue to exploit our capabilities. Our goal is to create a capability mix consistent with operational concepts and effects-driven methodology, relevant to the joint character and increasingly asymmetric conduct of warfare.

Since 1945, when General Henry "Hap" Arnold and Dr. Theodore von Karman published *Toward New Horizons*, the Air Force has evolved to meet the changing needs of the nation—with the sole objective of improving our ability to generate overwhelming and strategically compelling effects from air and now, space. It is our heritage to adapt and we will continue to do so. During this comparatively short history, we became the best air and space force in the world through our focus on the development of professional airmen, our investment in warfighting technology, and our ability to integrate people and systems to produce decisive joint warfighting effects.

The Air Force is making a conscious investment in education, training, and leader development to foster critical thinking, innovation, and encourage risk taking. We deliberately prepare our airmen—officer, enlisted, and civilian—with experience, assignments, and broadening that will allow them to succeed. When our airmen act in the combined or joint arena, whether as an Air Liaison Officer to a ground maneuver element, or as the space advisor to the Joint Force Commander (JFC), this focused professional development will guide their success.

We are also investing in technologies that will enable us to create a fully integrated force of intelligence capabilities, manned, unmanned and space assets that communicate at the machine-to-machine level, and real-time global command and control (C²) of joint, allied, and coalition forces. Collectively, these assets will enable compression of the targeting cycle and near-instantaneous global precision-strike.

As we cultivate new concepts of global engagement, we will move from analog to digital processes and adopt more agile, non-linear ways of integrating to achieve mission success. This change in thinking leads to capabilities including: networked communications; multi-mission platforms which fuse multi-spectral sensors; integrated global intelligence, surveillance, and reconnaissance (ISR); robust, all-weather weapons delivery with increased standoff; small smart weapons; remotely-piloted and unattended aircraft systems; advanced air operations centers; more secure position, navigation, and timing; and a new generation of satellites with more operationally responsive launch systems.

Investment in our core competencies is the foundation of our preparation for future threats. They ensure we have the tools we need to maintain strategic deterrence as well as a sustained advantage over our potential adversaries. Ultimately, they ensure we can deliver the dominant warfighting capability our nation needs.

Potential adversaries, however, continue to pursue capabilities that threaten the dominance we enjoy today. Double-digit surface-to-air missile systems (SAMs) are proliferating. China has purchased significant numbers of these advanced SAMs, and there is a risk of wider future proliferation to potential threat nations. Fifth-generation advanced aircraft with capabilities superior to our present fleet of front-line fighter/attack aircraft are in production. China has also purchased, and is developing, advanced fighter aircraft that are broadly comparable to the best of our current front-line fighters. Advanced cruise missile technology is expanding, and information technology is spreading. Access to satellite communications, imagery, and use of the Global Positioning System (GPS) signal for navigation are now available for anyone willing to purchase the necessary equipment or services. With this relentless technological progress and the potential parity of foreign nations, as well as their potential application in future threats, the mere maintenance of our aging aircraft and space systems will not suffice. Simply stated, our current fleet of legacy systems cannot always ensure air and space dominance in future engagements.

To counter these trends, we are pursuing a range of strategies that will guide our modernization and recapitalization efforts. We are using a capabilities-based planning and budgeting process, an integrated and systematic risk assessment system, a commitment to shorter acquisition cycle times, and improved program oversight. Our goal is to integrate our combat, information warfare, and support systems to create a portfolio of air and space advantages for the joint warfighter and the nation. Thus, we continue to advocate for program stability in our modernization and investment accounts.

The principal mechanisms that facilitate this process are our Air Force Concepts of Operation (CONOPS). Through the CONOPS, we analyze problems we'll be asked to solve for the JFCs, identify the capabilities our expeditionary forces need to accomplish their missions, and define the operational effects we expect to produce. Through this approach, we can make smarter decisions about future investment, articulate the link between systems and employment concepts, and identify our capability gaps and risks.

The priorities that emerge from the CONOPS will guide a reformed acquisition process that includes more active, continuous, and creative partnerships among the requirement, development, operational test, and industry communities who work side-by-side at the program level. In our science and technology planning, we are also working to demonstrate and integrate promising technologies quickly by providing an operational "pull" that conveys a clear vision of the capabilities we need for the future.

We are applying this approach to our space systems as well. As the DOD's Executive Agent for Space, we are producing innovative solutions for the most challenging national security problems. We have defined a series of priorities essential to delivering space-based capabilities to the joint warfighter and the Intelligence Community. Achieving mission success—in operations and acquisition—is our principal priority. This requires us to concentrate on designing and building quality into our systems. To achieve these exacting standards, we will concentrate on the technical aspects of our space programs early on—relying on strong systems engineering design, discipline, and robust test programs. We also have many areas that require a sustained investment. We need to replace aging satellites, improve outmoded ground control stations, achieve space control capabilities to ensure freedom of action, sustain operationally responsive assured access to space, address bandwidth limitations, and focus space science and technology investment programs. This effort will

require reinvigorating the space industrial base and funding smaller technology incubators to generate creative “over the horizon” ideas.

As we address the problem of aging systems through renewed investment, we will continue to find innovative means to keep current systems operationally effective. In OIF, the spirit of innovation flourished. We achieved a number of air and space power firsts: employment of the B-1 bomber’s synthetic aperture radar and ground moving target indicator for ISR; incorporation of the Litening II targeting pod on the F-15, F-16, A-10, and the B-52; and use of a Global Hawk for strike coordination and reconnaissance while flown as a remotely piloted aircraft. With these integrated air and space capabilities, we were able to precisely find, fix, track, target, and rapidly engage our adversaries. These examples illustrate how we are approaching adaptation in the U.S. Air Force.

Ultimately, the success of our Air Force in accomplishing our mission and adapting to the exigencies of combat stems from the more than 700,000 active, guard, reserve, and civilian professionals who proudly call themselves “airmen.” In the past five years, they have displayed their competence and bravery in three major conflicts: the Balkans, Afghanistan, and Iraq. They are a formidable warfighting force, imbued with an expeditionary culture, and ready for the challenges of a dangerous world.

Poised to defend America’s interests, we continue to satisfy an unprecedented demand for air and space warfighting capabilities—projecting American power globally while providing effective homeland defense. This is the U.S. Air Force in 2004—we foster ingenuity in the world’s most professional airmen, thrive on transitioning new technologies into joint warfighting systems, and drive relentlessly toward integration to realize the potential of our air and space capabilities. We are America’s Airmen—confident in our capability to provide our nation with dominance in air and space.

AIR AND SPACE DOMINANCE IN A NEW ENVIRONMENT

The U.S. Air Force ensures a flexible, responsive, and dominant force by providing a spectrum of operational capabilities that integrate with joint and coalition forces. To sustain and improve upon the dominance we enjoy today, the Air Force will remain engaged with the other services, our coalition partners, interagency teams, and the aerospace industry. As we do, we will incorporate the lessons learned from rigorous evaluation of past operations, detailed analyses of ongoing combat operations, and thoughtful prediction of the capabilities required of a future force.

The pace of operations over the past year enabled us to validate the function and structure of our Air and Space Expeditionary Forces (AEFs). Operations in 2003 demanded more capability from our AEFs than at any time since their inception in 1998. However, for the first time we relied exclusively on our AEFs to present the full range of our capabilities to the Combatant Commanders. Through our 10 AEFs, our AEF prime capabilities (space, national ISR, long range strike, nuclear, and other assets), and our AEF mobility assets, we demonstrated our ability to package forces, selecting the most appropriate combat ready forces from our Total Force, built and presented expeditionary units, and flowed them to the theaters of operation in a timely and logical sequence. We rapidly delivered them to the warfighters, while preserving a highly capable residual force to satisfy our global commitments.

More than three-fourths of our 359,300 active duty airmen are eligible to deploy and are assigned to an AEF. Through much of the past year, Total Force capabilities from 8 of the 10 AEFs were engaged simultaneously in worldwide operations. The remaining elements were returning from operations, training, or preparing to relieve those currently engaged. By the end of 2003, more than 26,000 airmen were deployed, supporting operations around the world.

In 2004, we will continue to use the AEFs to meet our global requirements while concurrently reconstituting the force. Our number one reconstitution priority is returning our forces to a sustainable AEF battle rhythm while conducting combat operations. Attaining this goal is about revitalizing capabilities. For most airmen, that will include a renewed emphasis on joint composite force training and preparation for rotations in the AEF. Through the AEF, the Air Force presents right-sized, highly trained expeditionary units to JFCs for employment across the spectrum of conflict.

Global War on Terrorism

The year 2003 marked another historic milestone for the United States and the Air Force in the Global War on Terrorism. Since September 11, 2001, air and space power has proven indispensable to securing American skies, defeating the Taliban, denying sanctuary to al Qaeda and other terrorist organizations, and most recently, removing a brutal and oppressive dictator in Iraq. This Global War on Terrorism

imposes on airmen a new steady state of accelerated operations and personnel tempo (PERSTEMPO), as well as a demand for unprecedented speed, agility, and innovation in defeating unconventional and unexpected threats, all while bringing stability and freedom to Afghanistan and Iraq. The Air Force and its airmen will meet these demands.

Operation NOBLE EAGLE

High above our nation, airmen protect our skies and cities through air defense operations known as Operation NOBLE EAGLE (ONE). The Total Force team, comprised of active duty, Air National Guard, and Air Force Reserve airmen, conducts airborne early warning, air refueling, and combat air patrol operations in order to protect sensitive sites, metropolitan areas, and critical infrastructure.

This constant “top cover” demands significant Air Force assets, thus raising the baseline of requirements above the pre-September 11 tempo. Since 2001, this baseline has meant over 34,000 fighter, tanker, and airborne early warning sorties were added to Air Force requirements.

This year the Air Force scrambled nearly 1,000 aircraft, responding to 800 incidents. Eight active duty, eight Air Force Reserve, and 18 Air National Guard units provided 1,300 tanker sorties offloading more than 32 million pounds of fuel for these missions. Last year, over 2,400 airmen stood vigilant at air defense sector operations centers and other radar sites. Additionally, in 2003, we continued to institutionalize changes to our homeland defense mission through joint, combined, and interagency training and planning. Participating in the initial validation exercise DETERMINED PROMISE-03, the Air Force illustrated how its air defense, air mobility, and command and control capabilities work seamlessly with other agencies supporting NORTHCOM and Department of Homeland Security objectives. The integration and readiness that comes from careful planning and rigorous training will ensure the continued security of America’s skies.

Operation ENDURING FREEDOM—Afghanistan

Operation ENDURING FREEDOM—Afghanistan (OEF) is ongoing. Remnants of Taliban forces continue to attack United States, NATO, coalition troops, humanitarian aid workers, and others involved in the reconstruction of Afghanistan. To defeat this threat, aid coalition stability, and support operations, the Air Force has maintained a presence of nearly 24,000 airmen in and around the region. Having already flown more than 90,000 sorties (over 72 percent of all OEF missions flown), the Air Force team of active, Guard, and Reserve airmen continue to perform ISR, close air support (CAS), aerial refueling, and tactical and strategic airlift.

While fully engaged in ONE and OIF, the men and women of the Air Force provided full spectrum air and space support, orchestrating assets from every service and ten different nations. Of these, Air Force strike aircraft flying from nine bases flew more than two-thirds of the combat missions, dropped more than 66,000 munitions (9,650 tons) and damaged or destroyed approximately three-quarters of planned targets. In 2003 alone, Air Force assets provided more than 3,000 sorties of on-call CAS, responding to calls from joint and/or coalition forces on the ground.

Last year, the Air Force brought personnel and materiel into this distant, landlocked nation via 7,410 sorties. Over 4,100 passengers and 487 tons of cargo were moved by airmen operating at various Tanker Airlift Control Elements in and around Afghanistan. To support these airlift and combat sorties and the numerous air assets of the coalition with aerial refueling, the Air Force deployed over 50 tankers. In their primary role, these late 1950s-era and early 1960s-era KC-135 tankers flew more than 3,900 refueling missions. In their secondary airlift role, they delivered 3,620 passengers and 405 tons of cargo. Without versatile tankers, our armed forces would need greater access to foreign bases, more aircraft to accomplish the same mission, more airlift assets, and generate more sorties to maintain the required duration on-station.

Operations in Afghanistan also highlight U.S. and coalition reliance on U.S. space capabilities. This spanned accurate global weather, precise navigation, communications, as well as persistent worldwide missile warning and surveillance. For example, OEF relied on precision navigation provided by the Air Force’s GPS constellation, over-the-horizon satellite communications (SATCOM), and timely observations of weather, geodesy, and enemy activity. To accomplish this, space professionals performed thousands of precise satellite contacts and hundreds of station keeping adjustments to provide transparent space capability to the warfighter. These vital space capabilities and joint enablers directly leveraged our ability to pursue U.S. objectives in OEF.

Operations NORTHERN WATCH and SOUTHERN WATCH

During the past 12 years, the Air Force flew over 391,000 sorties enforcing the northern and southern no-fly zones over Iraq. With the preponderance of forces, the Air Force, along with the Navy and Marine Corps, worked alongside the Royal Air Force in Operations NORTHERN WATCH (ONW) and SOUTHERN WATCH (OSW). Manning radar outposts and established C² centers, conducting ISR along Iraq's borders, responding to almost daily acts of Iraqi aggression, and maintaining the required airlift and air refueling missions taxed Air Force assets since the end of Operation DESERT STORM. Yet, these successful air operations had three main effects: they halted air attacks on the ethnic minority populations under the no-fly zones; they deterred a repeat of Iraqi aggression against its neighbors; and they leveraged enforcement of United Nations Security Council Resolutions. Throughout this period, our airmen honed their warfighting skills, gained familiarity with the region, and were able to establish favorable conditions for OIF. For more than a decade, American airmen rose to one of our nation's most important challenges, containing Saddam Hussein.

Operation IRAQI FREEDOM

On March 19, 2003, our airmen, alongside fellow soldiers, sailors, marines and coalition teammates, were called upon to remove the dangerous and oppressive Iraqi regime—this date marked the end of ONW/OSW and the beginning of OIF. OIF crystallized the meaning of jointness and the synergies of combined arms and persistent battlefield awareness.

In the first minutes of OIF, airmen of our Combat Air Forces (USAF, USN, USMC, and coalition) were flying over Baghdad. As major land forces crossed the line of departure, Air Force assets pounded Iraqi command and control facilities and key leadership targets, decapitating the decision-makers from their fielded forces. Remaining Iraqi leaders operated with outdated information about ground forces that had already moved miles beyond their reach. As the land component raced toward Baghdad, coalition strike aircraft were simultaneously attacking Iraqi fielded forces, communications and command and control centers, surface-to-surface missile launch sites, and were supporting special operations forces, and ensuring complete air and space dominance in the skies over Iraq. Due to these actions and those during the previous 12 years, none of the 19 Iraqi missile launches were successful in disrupting coalition operations, and not a single Iraqi combat sortie flew during this conflict. Twenty-one days after major combat operations began, the first U.S. land forces reached Baghdad. Five days later, the last major city in Iraq capitulated.

The Air Force provided over 7,000 CAS sorties to aid land forces in the quickest ground force movement in history. Lieutenant General William S. Wallace, Commander of the U.S. Army V Corps said, "none of my commanders complained about the availability, responsiveness, or effectiveness of CAS—it was unprecedented!" As Iraqi forces attempted to stand against the integrated air and ground offensive, they found a joint and coalition team that was better equipped, better trained, and better led than ever brought to the field of battle.

Training, leadership, and innovation coupled with the Air Force's recent investment in air mobility allowed U.S. forces to open a second major front in the Iraqi campaign. Constrained from access by land, Air Force C-17s airdropped over 1,000 paratroopers from the 173rd Airborne Brigade into northern Iraq. This successful mission opened Bashur airfield and ensured U.S. forces could be resupplied.

Before 2003, the Air Force invested heavily in the lessons learned from OEF. Shortening the "kill chain," or the time it took to find, fix, track, target, engage, and assess was one of our top priorities. This investment was worthwhile, as 156 time-sensitive targets were engaged within minutes, most with precision weapons. The flexibility of centralized control and decentralized execution of air and space power enabled direct support to JFC objectives throughout Iraq. Coalition and joint airpower shaped the battlefield ahead of ground forces, provided intelligence and security to the flanks and rear of the rapidly advancing coalition, and served as a force multiplier for Special Operations forces. This synergy between Special Operations and the Air Force allowed small specialized teams to have a major effect throughout the northern and western portions of Iraq by magnifying their inherent lethality, guaranteeing rapid tactical mobility, reducing their footprint through aerial resupply, and providing them the advantage of "knowing what was over the next hill" through air and space-borne ISR.

The Air Force's C²ISR assets enabled the joint force in Afghanistan as well. This invaluable fleet includes the RC-135 Rivet Joint, E-8 JSTARS, and the E-3 AWACS. This "Iron Triad" of intelligence sensors and C² capabilities illustrates the Air Force vision of horizontal integration in terms of persistent battlefield awareness. Combined with the Global Hawk unmanned aerial vehicle and Predator re-

motely piloted aircraft, spaced-based systems, U-2, and Compass Call, these invaluable system provided all-weather, multi-source intelligence to commanders from all services throughout the area of responsibility.

OIF was the Predator's first "networked" operation. Four simultaneous Predator orbits were flown over Iraq and an additional orbit operated over Afghanistan, with three of those orbits controlled via remote operations in the United States. This combined reachback enabled dynamic support to numerous OIF missions. Predator also contributed to our operational flexibility, accomplishing hunter-killer missions, tactical ballistic missile search, force protection, focused intelligence collection, air strike control, and special operations support. A Hellfire equipped Predator also conducted numerous precision strikes against Iraqi targets, and flew armed escort missions with U.S. Army helicopters.

Space power provided precise, all-weather navigation, global communications, missile warning, and surveillance. The ability to adapt to adverse weather conditions, including sandstorms, allowed air, land, and maritime forces to confound the Iraqi military and denied safe haven anywhere in their own country. As the Iraqis attempted to use ground-based GPS jammers, Air Force strike assets destroyed them, in some cases, using the very munitions the jammers attempted to defeat. As Defense Secretary Donald Rumsfeld noted, this new era was illustrated by the coalition's "unprecedented combination of power, precision, speed, and flexibility."

During the height of OIF, the Air Force deployed 54,955 airmen. Ambassador Paul Bremer, Chief of the Coalition Provisional Authority, pronounced, "In roughly three weeks [we] liberated a country larger than Germany and Italy combined, and [we] did so with forces smaller than the Army of the Potomac." Led by the finest officers and non-commissioned officers, our airmen flew more than 79,000 sorties since March of 2003. Ten thousand strike sorties dropped 37,065 munitions. The coalition flew over 55,000 airlift sorties moved 469,093 passengers and more than 165,060 tons of cargo. In addition, over 10,000 aerial refueling missions supported aircraft from all services, and 1,600 ISR missions provided battlespace awareness regardless of uniform, service, or coalition nationality. This was a blistering campaign that demanded a joint and combined effort to maximize effects in the battlespace.

Today, Air Force airmen continue to contribute to the joint and coalition team engaged in Iraq. At the end of the year, 6,723 airmen from the active duty, Reserve, and Air National Guard conducted a wide range of missions from locations overseas, flying approximately 150 sorties per day including CAS for ground forces tracking down regime loyalists, foreign fighters, and terrorists. On a daily basis, U-2 and RC-135 aircraft flew ISR sorties monitoring the porous borders of Iraq and providing situational awareness and route planning for Army patrols in stability and support operations. Providing everything from base security for 27 new bases opened by the coalition to the lifeline of supplies that air mobility and air refueling assets bring to all joint forces, Air Force airmen are committed to the successful accomplishment of the U.S. mission in Iraq.

Other Contingency Operations

In 2003, the Air Force remained engaged in America's war on drugs and provided support to NATO ground forces in the Balkans. Since December 1989, Air Force airmen have been an irreplaceable part of the interagency fight against illegal drug and narcotics trafficking. Deployed along the southern United States, in the Caribbean, and Central and South America, airmen perform this round-the-clock mission, manning nine ground-based radar sites, operating ten aerostats, and flying counter drug surveillance missions. The Air Force detected, monitored, and provided intercepts on over 275 targets attempting to infiltrate our airspace without clearance. Along with our interagency partners, these operations resulted in 221 arrests and stopped hundreds of tons of contraband from being smuggled into our country.

In the Balkans, airmen are fully committed to completing the mission that they started in the 1990s. Today, Air Force airmen have flown over 26,000 sorties supporting Operations JOINT GUARDIAN and JOINT FORGE. These NATO-led operations combine joint and allied forces to implement the Dayton Peace Accords in Bosnia-Herzegovina and enforce the Military Technical Agreement in Kosovo. At the end of 2003, approximately 800 airmen were supporting NATO's goal of achieving a secure environment and promoting stability in the region.

Additionally, the Air Force engaged in deterrence and humanitarian relief in other regions. While the world's attention was focused on the Middle East in the spring of 2003, our nation remained vigilant against potential adversaries in Asia. The Air Force deployed a bomber wing—24 B-52s and B-1s—to the American territory of Guam to deter North Korea. At the height of OIF, our Air Force demonstrated our country's resolve and ability to defend the Republic of Korea and

Japan by surging bomber operations to over 100 sorties in less than three days. This deterrent operation complemented our permanent engagement in Northeast Asia. The 8,300 airmen who are stationed alongside the soldiers, sailors, Marines, and our Korean allies maintained the United Nations armistice, marking 50 years of peace on the peninsula.

Our strength in deterring aggression was matched by our strength in humanitarian action. In response to President Bush's directive to help stop the worsening crisis in Liberia, we deployed a non-combat medical and logistics force to create a lifeline to the American Embassy and provide hope to the Liberian people. An Expeditionary Group of airmen provided airlift support, aeromedical evacuation, force protection, and theater of communications support. Flying more than 200 sorties, we transported and evacuated civilians and members of the Joint Task Force (JTF) from bases in Sierra Leone and Senegal. The 300 airmen deployed in support of JTF-Liberia reopened the main airport in Monrovia, and ensured the security for U.S. military and civilian aircraft providing relief aid.

Strategic Deterrence

The ability of U.S. conventional forces to operate and project decisive force is built on the foundation of our strategic deterrent force; one that consists of our nuclear-capable aircraft and Intercontinental Ballistic Missile forces, working with the U.S. Navy's Fleet Ballistic Missile Submarines. In 2003, these forces as well as, persistent overhead missile warning sensors and supporting ground-based radars, provided uninterrupted global vigilance deterring a nuclear missile strike against the United States or our allies. The dedicated airmen who operate these systems provide the force capability that yields our deterrent umbrella. Should that deterrence fail, they stand ready to provide a prompt, scalable response.

Exercises

The Air Force's success can be attributed to the training, education, and equipment of our airmen. Future readiness of our operations, maintenance, mission support, and medical units will depend on rigorous and innovative joint and coalition training and exercising. This year we are planning 140 exercises with other services and agencies and we anticipate being involved with 103 allied nations. We will conduct these exercises in as many as 45 foreign countries. Participation ranges from the Joint/Combined command post exercise ULCHI FOCUS LENS with our South Korean partners to the tailored international participation in our FLAG exercises and Mission Employment Phases of USAF Weapons School. From joint search-and-rescue forces in ARCTIC SAREX to Partnership for Peace initiatives, our airmen must continue to take advantage of all opportunities that help us train the way we intend to fight.

In addition to previously designed exercises, recent operations highlighted the need for combat support training. During OEF and OIF, the Air Force opened or improved 38 bases used by joint or coalition forces during combat. Our Expeditionary Combat Support teams established secure, operable airfields in Kyrgyzstan, Uzbekistan, Pakistan, and in Iraq. They also built housing, established communications, and erected dining facilities that are still used by other services and follow-on forces today. To prepare our airmen for these missions, we have created EAGLE FLAG, an Expeditionary Combat Support Field Training Exercise. During this exercise, combat support personnel apply the integrated skills needed to organize and create an operating location ready to receive fully mission capable forces within 72 hours. From security forces and civil engineers to air traffic controllers and logisticians, each airman required to open a new base or improve an austere location will eventually participate in this valuable exercise.

Our ranges and air space are critical joint enablers and vital national assets that allow the Air Force to develop and test new weapons, train forces, and conduct joint exercises. The ability of the Air Force to effectively operate requires a finite set of natural and fabricated resources. Encroachment of surrounding communities onto Air Force resources results in our limited or denied access to, or use of, these resources. We have made it a priority to define and quantify the resources needed to support mission requirements, and to measure and communicate the effects of encroachment on our installations, radio frequency spectrum, ranges, and air space. We will continue to work with outside agencies and the public to address these issues. The Air Force strongly endorses the Readiness Range and Preservation Initiative. It would make focused legislative changes, protecting the Air Force's operational resources while continuing to preserve our nation's environment.

Lessons for the Future

As we continue combat operations and prepare for an uncertain future, we are examining lessons from our recent experiences. Although we are currently engaged

with each of the other services to refine the lessons from OIF, many of the priorities listed in the fiscal year 2005 Presidential Budget submission reflect our preliminary conclusions. The Air Force has established a team committed to turning validated lessons into new equipment, new operating concepts, and possibly new organizational structures. Working closely with our joint and coalition partners, we intend to continue our momentum toward an even more effective fighting force.

One of the most important lessons we can draw was envisioned by the authors of the Goldwater-Nichols Act. ONE, OEF, and OIF all validated jointness as the only acceptable method of fighting and winning this nation's wars. In OIF, the mature relationship between the Combined Forces Land Component Commander (CFLCC) and the Combined Forces Air Component Commander (CFACC) led to unprecedented synergies. The CFACC capitalized on these opportunities by establishing coordination entities led by an Air Force general officer in the supported land component headquarters and by maintaining internal Army, Navy, Marine Corps, and coalition officers in his own headquarters. Both of these organizational innovations enabled commanders to maximize the advantages of mass, lethality, and flexibility of airpower in the area of responsibility.

Another lesson is the Air Force's dependence on the Total Force concept. As stated above, September 11 brought with it a new tempo of operations, one that required both the active duty and Air Reserve Component (ARC) to work in concert to achieve our national security objectives. The synergy of our fully integrated active duty, Air National Guard and Air Force Reserve team provides warfighters with capabilities that these components could not provide alone.

Our reserve component accounts for over one-third of our strike fighters, more than 72 percent of our tactical airlift, 42 percent of our strategic airlift, and 52 percent of our air refueling capability. The ARC also makes significant contributions to our rescue and support missions, and has an increasing presence in space, intelligence, and information operations. In all, the ARC provides a ready force requiring minimum preparation for mobilization. Whether that mobilization is supporting flight or alert missions for ONE, commanding expeditionary wings in combat, or orchestrating the Air Force Special Operations roles in the western Iraqi desert, the ARC will remain critical to achieving the full potential of our air and space power.

A third lesson was validation of the need for air and space superiority. Through recent combat operations, the Air Force maintained its almost 50 year-old record of "no U.S. ground troops killed by enemy air attack." Without having to defend against Iraqi airpower, coalition commanders could focus their combat power more effectively. In addition, air and space superiority allowed airmen to dedicate more sorties in support of the ground scheme of maneuver, substantially reducing enemy capability in advance of the land component.

We also need to continue to advance integration and planning—integration of service capabilities to achieve JFC objectives, interagency integration to fight the war on terrorism, and information integration. Integration of manned, unmanned and space sensors, advanced command and control, and the ability to disseminate and act on this information in near-real time will drive our combat effectiveness in the future. Shared through interoperable machine-to-machine interfaces, this data can paint a picture of the battlespace where the sum of the wisdom of all sensors will end up with a cursor over the target for the operator who can save the target, study the target, or destroy the target.

Finally, there are three general areas for improvement we consider imperative: battle damage assessment, fratricide prevention/combat identification, and equipping our battlefield airmen. First, battle damage assessment shapes the commander's ability for efficient employment of military power. Restriking targets that have already been destroyed, damaged, or made irrelevant by rapid ground force advances wastes sorties that could be devoted to other coalition and joint force objectives. Advances in delivery capabilities of our modern fighter/attack aircraft and bombers mean that ISR assets must assess more targets per strike than ever before. Precision engagement requires precision location, identification, and precision assessment. Although assets like the Global Hawk, Predator, U-2, Senior Scout, and Rivet Joint are equipped with the latest collection technology, the Air Force, joint team, and Intelligence Community must work to ensure that combat assessments produce timely, accurate, and relevant products for the warfighters.

We are also improving operational procedures and technology to minimize incidents of fratricide or "friendly fire." In OIF, major steps toward this goal resulted from technological solutions. Blue Force Tracker and other combat identification systems on many ground force vehicles allowed commanders situational awareness of their forces and enemy forces via a common operational picture. Still, not all joint or coalition forces are equipped with these technological advances. We are pursuing Fire Support Coordination Measures that capitalize on the speed and situational

awareness digital communications offer rather than analog voice communications and grease pencils.

A third area we are actively improving is the effectiveness of the airmen who are embedded with conventional land or Special Forces. With assured access to Air Force datalinks and satellites, these "Battlefield Airmen" can put data directly into air-land-sea weapon systems and enable joint force command and control. We have made great progress in producing a Battlefield Air Operations Kit that is 70 percent lighter, with leading-edge power sources; one that will increase the combat capability of our controllers. This battle management system will reduce engagement times, increase lethality and accuracy, and reduce the risk of fratricide. This capability is based upon the good ideas of our airmen who have been in combat and understand how much a single individual on the battlefield can contribute with the right kit.

Summary

The airmen of America's Air Force have demonstrated their expertise and the value of their contributions to the joint and coalition fight. These combat operations are made possible by Air Force investments in realistic training and education, superior organization, advanced technology, and innovative tactics, techniques, and procedures. In the future, our professional airmen will continue to focus advances in these and other areas guided by the Air Force CONOPS. Their charter is to determine the appropriate capabilities required for joint warfighting and to provide maximum effects from, through, and in air and space. This structure and associated capabilities-based planning will help airmen on their transformational journey, ensuring continued operational successes such as those demonstrated in 2003.

ENSURING AMERICA'S FUTURE AIR AND SPACE DOMINANCE

Air Force lethality, mobility, speed, precision, and the ability to project U.S. military power around the globe provide Combatant Commanders the capabilities required to meet the nation's military requirements and dominate our enemies. Consistent with the DOD's focus on Joint Operating Concepts, we will continue to transform our force—meeting the challenges of this era, adapting our forces and people to them, and operating our service efficiently. We will adopt service concepts and capabilities that support the joint construct and capitalize on our core competencies. To sustain our dominance, we develop professional airmen, invest in warfighting technology, and integrate our people and systems together to produce decisive joint warfighting capabilities.

DEVELOPING AIRMEN—RIGHT PEOPLE, RIGHT PLACE, RIGHT TIME

At the heart of our combat capability are the professional airmen who voluntarily serve the Air Force and our nation. Our airmen turn ideas, tools, tactics, techniques, and procedures into global mobility, power projection, and battlespace effects. Our focus for the ongoing management and development of Air Force personnel will be to: define, renew, develop, and sustain the force.

Defining our Requirements

To meet current and future requirements, we need the right people in the right specialties. The post-September 11 environment has taxed our equipment and our people, particularly those associated with force protection, ISR, and the buildup and sustainment of expeditionary operations. Our analysis shows that we need to shift manpower to stressed career fields to meet the demands of this new steady state, and we are in the process of doing this. We have realigned personnel into our most stressed specialties and hired additional civilians and contractors to free military members to focus on military specific duties. We have also made multi-million dollar investments in technology to reduce certain manpower requirements. We have redirected our training and accession systems and have cross-trained personnel from specialties where we are over strength to alleviate stressed career fields, supporting the Secretary of Defense's vision of moving forces "from the bureaucracy to the battlefield."

Since 2001, we've exceeded our congressionally mandated end strength by more than 16,000 personnel. In light of the global war on terrorism and OIF, DOD allowed this overage, but now we need to get back to our mandated end strength. We are addressing this issue in two ways: first, by reducing personnel overages in most skills; and second, by shaping the remaining force to meet mission requirements. To reduce personnel, we will employ a number of voluntary tools to restructure manning levels in Air Force specialties, while adjusting our active force size to the end strength requirement. As we progress, we will evaluate the need to implement additional force shaping steps.

We are also reviewing our ARC manpower to minimize involuntary mobilization of ARC forces for day-to-day, steady state operations while ensuring they are prepared to respond in times of crisis. Since September 11, 2001, we've mobilized more than 62,000 people in over 100 units, and many more individual mobilization augmentees. Today, 20 percent of our AEF packages are comprised of citizen airmen, and members of the Guard or Reserve conduct 89 percent of ONE missions. We recognize this is a challenge and are taking steps to relieve the pressure on the Guard and Reserve.

In fiscal year 2005, we plan to redistribute forces in a number of mission areas among the Reserve and Active components to balance the burden on the Reserves. These missions include our Air and Space Operations Centers, remotely piloted aircraft systems, Combat Search and Rescue, Security Forces, and a number of high demand global mobility systems. We are working to increase ARC volunteerism by addressing equity of benefits and tour-length flexibility, while addressing civilian employer issues. We are also looking at creating more full-time positions to reduce our dependency on involuntary mobilization.

We are entering the second year of our agreement to employ Army National Guard soldiers for Force Protection at Air Force installations, temporarily mitigating our 8,000 personnel shortfall in Security Forces. As we do this, we are executing an aggressive plan to rapidly burn down the need for Army augmentation and working to redesign manpower requirements. Our reduction plan maximizes the use of Army volunteers in the second year, and allows for demobilization of about one-third of the soldiers employed in the first year.

Future Total Force

Just as in combat overseas, we are continuing to pursue seamless ARC and active duty integration at home, leveraging the capabilities and characteristics of each component, while allowing each to retain their cultural identity. We continue to explore a variety of organizational initiatives to integrate our active, Guard, and Reserve forces. These efforts are intended to expand mission flexibility, create efficiencies in our Total Force, and prepare for the future. Today's Future Total Force team includes a number of blended or associate units that are programmed or are in use. The creation of the "blended" unit, the 116th Air Control Wing at Robins Air Force Base, Georgia, elevated integration to the next level. With an initial deployment of over 730 personnel, and significant operational achievements in OIF, we are now examining opportunities to integrate active, Guard, and Reserve units elsewhere in order to produce even more measurable benefits, savings, and efficiencies.

The reasons for this type of integration are compelling. We can maximize our warfighting capabilities by integrating active, Guard, and Reserve forces to optimize the contributions of each component. Reservists and Guardsmen bring with them capabilities they have acquired in civilian jobs, leveraging the experience of ARC personnel. Integration relieves PERSTEMPO on the active duty force. Because ARC members do not move as often, they provide corporate knowledge, stability, and continuity. Finally, integration enhances the retention of airmen who decide to leave active service. Because the Guard and Reserve are involved in many Air Force missions, we recapture the investment we've made by retaining separating active duty members as members of the ARC.

Renewing the Force

To renew our force, we target our recruitment to ensure a diverse force with the talent and drive to be the best airmen in the world's greatest Air Force. We will recruit those with the skills most critical for our continued success. In fiscal year 2003, our goal was 5,226 officers and 37,000 enlisted; we exceeded our goal in both categories, accessing 5,419 officers and 37,144 enlisted. For fiscal year 2004, we plan to access 5,795 officers and 37,000 enlisted.

In the Air Force, the capabilities we derive from diversity are vital to mission excellence and at the core of our strategy to maximize our combat capabilities. In this new era, successful military operations demand much greater agility, adaptability, and versatility to achieve and sustain success. This requires a force comprised of the best our nation has to offer, from every segment of society, trained and ready to go. Our focus is building a force that consists of men and women who possess keener international insight, foreign language proficiency, and wide-ranging cultural acumen. Diversity of life experiences, education, culture, and background are essential to help us achieve the asymmetric advantage we need to defend America's interests wherever threatened. Our strength comes from the collective application of our diverse talents, and is a critical component of the air and space dominance we enjoy today. We must enthusiastically reach out to all segments of society to ensure the

Air Force offers a welcoming career to the best and brightest of American society, regardless of their background. By doing so, we attract people from all segments of society and tap into the limitless talents resident in our diverse population.

In addition to a diverse force, we also need the correct talent mix. We remain concerned about recruiting health care professionals and individuals with technical degrees. To meet our needs, we continue to focus our efforts to ensure we attract and retain the right people. We will also closely monitor ARC recruitment. Historically, the Air National Guard and Air Force Reserve Command access close to 25 percent of eligible, separating active duty Air Force members with no break in service between their active duty and ARC service.

Developing the Force

Over the past year, we implemented a new force development construct in order to get the right people in the right job at the right time with the right skills, knowledge, and experience. Force development combines focused assignments and education and training opportunities to prepare our people to meet the mission needs of our Air Force. Rather than allowing chance and happenstance to guide an airman's experience, we will take a deliberate approach to develop officers, enlisted, and civilians throughout our Total Force. Through targeted education, training, and mission-related experience, we will develop professional airmen into joint force warriors with the skills needed across the tactical, operational, and strategic levels of conflict. Their mission will be to accomplish the joint mission, motivate teams, mentor subordinates, and train their successors.

A segment of warriors requiring special attention is our cadre of space professionals, those that design, build, and operate our space systems. As military dependence on space grows, the Air Force continues to develop this cadre to meet our nation's needs. Our Space Professional Strategy is the roadmap for developing that cadre. Air Force space professionals will develop more in-depth expertise in operational and technical space specialties through tailored assignments, education, and training. This roadmap will result in a team of scientists, engineers, program managers, and operators skilled and knowledgeable in developing, acquiring, applying, sustaining, and integrating space capabilities.

Sustaining the Force

The Air Force is a retention-based force. Because the skill sets of our airmen are not easily replaced, we expend considerable effort to retain our people, especially those in high-technology fields and those in whom we have invested significant education and training. In 2003, we reaped the benefits of an aggressive retention program, aided by a renewed focus and investment on education and individual development, enlistment and retention bonuses, targeted military pay raises, and quality of life improvements. Our fiscal year 2003 enlisted retention statistics tell the story. Retention for first term airmen stood at 61 percent, exceeding our goal by 6 percent. Retention for our second term and career airmen was also impressive, achieving 73 percent and 95 percent respectively. Continued investment in people rewards their service, provides a suitable standard of living, and enables us to attract and retain the professionals we need.

One of the highlights of our quality of life focus is housing investment. Through military construction and housing privatization, we are providing quality homes faster than ever before. Over the next three years, the Air Force will renovate or replace more than 40,000 homes through privatization. At the same time, we will renovate or replace an additional 20,000 homes through military construction. With the elimination of out-of-pocket housing expenses, our Air Force members and their families now have three great options—local community housing, traditional military family housing, and privatized housing.

Focus On Fitness

We recognize that without motivated and combat-ready expeditionary airmen throughout our Total Force, our strategies, advanced technologies, and integrated capabilities would be much less effective. That is why we have renewed our focus on fitness and first-class fitness centers. We must be fit to fight. And that demands that we reorient our culture to make physical and mental fitness part of our daily life as airmen. In January 2004, our new fitness program returned to the basics of running, sit-ups, and pushups. The program combines our fitness guidelines and weight/body fat standards into one program that encompasses the total health of an airman.

TECHNOLOGY TO WARFIGHTING

The Air Force has established a capabilities-based approach to war planning, allowing us to focus investments on those capabilities we need to support the joint warfighter. This type of planning focuses on capabilities required to accomplish a variety of missions and to achieve desired effects against any potential threats. Our capabilities-based approach requires us to think in new ways and consider combinations of systems that create distinctive capabilities.

Effects Focus: Capabilities-Based CONOPS

The Air Force has written six CONOPS that support capabilities-based planning and the joint vision of combat operations. The CONOPS help analyze the span of joint tasks we may be asked to perform and define the effects we can produce. Most important, they help us identify the capabilities an expeditionary force will need to accomplish its mission, creating a framework that enables us to shape our portfolio.

- Homeland Security CONOPS leverages Air Force capabilities with joint and interagency efforts to prevent, protect, and respond to threats against our homeland—within or beyond U.S. territories.
 - Space and Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance CONOPS (Space and C⁴ISR) harnesses the integration of manned, unmanned, and space systems to provide persistent situation awareness and executable decision-quality information to the JFC.
 - Global Mobility CONOPS provides Combatant Commanders with the planning, command and control, and operations capabilities to enable timely and effective projection, employment, and sustainment of U.S. power in support of U.S. global interests—precision delivery for operational effect.
 - Global Strike CONOPS employs joint power-projection capabilities to engage anti-access and high-value targets, gain access to denied battlespace, and maintain battlespace access for required joint/coalition follow-on operations.
 - Global Persistent Attack CONOPS provides a spectrum of capabilities from major combat to peacekeeping and sustainment operations. Global Persistent Attack assumes that once access conditions are established (i.e. through Global Strike), there will be a need for persistent and sustained operations to maintain air, space, and information dominance.
 - Nuclear Response CONOPS provides the deterrent “umbrella” under which conventional forces operate, and, if deterrence fails, avails a scalable response.
- This CONOPS approach has resulted in numerous benefits, providing:
- Articulation of operational capabilities that will prevail in conflicts and avert technological surprises;
 - An operational risk and capabilities-based programmatic decision-making focus;
 - Budgeting guidance to the Air Force Major Commands for fulfilling capabilities-based solutions to satisfy warfighter requirements;
 - Warfighter risk management insights for long-range planning.

Modernization and Recapitalization

Through capabilities-based planning, the Air Force will continue to invest in our core competency of bringing technology to the warfighter that will maintain our technical advantage and update our air and space capabilities. The Capabilities Review and Risk Assessment (CRRRA) process guides these efforts. Replacing an outdated threat-based review process that focused on platforms versus current and future warfighting effects and capabilities, our extensive two-year assessment identified and prioritized critical operational shortfalls we will use to guide our investment strategy. These priorities present the most significant and immediate Air Force-wide capability objectives.

We need to field capabilities that allow us to reduce the time required to find, fix, track and target fleeting and mobile targets and other hostile forces. One system that addresses this operational shortfall is the F/A-22 Raptor. In addition to its contributions to obtaining and sustaining air dominance, the F/A-22 will allow all weather, stealthy, precision strike 24 hours a day, and will counter existing and emerging threats, such as advanced surface-to-air missiles, cruise missiles, and time sensitive and emerging targets, including mobile targets, that our legacy systems cannot. The F/A-22 is in low rate initial production and has begun Phase I of its operational testing. It is on track for initial operational capability in 2005. A complementary capability is provided by the F-35 Joint Strike Fighter, providing sustainable, focused CAS and interservice and coalition commonality.

We also recognize that operational shortfalls exist early in the kill chain and are applying technologies to fill those gaps. A robust command, control, and sensor portfolio combining both space and airborne systems, along with seamless real-time communications, will provide additional critical capabilities that address this short-

fall while supporting the Joint Operational Concept of full spectrum dominance. Program definition and risk reduction efforts are moving us towards C⁴ISR and Battle Management capabilities with shorter cycle times. The JFC will be able to respond to fleeting opportunities with near-real time information and will be able to bring to bear kill-chain assets against the enemy. Additionally, in this world of proliferating cruise missile technology, our work on improving our C⁴ISR capabilities—including airborne Active Electronically Scanned Array or AESA radar technology—could pay large dividends, playing a significant role in America's defense against these and other threats. To create this robust command and control network, we will need a flexible and digital multi-service communications capability. We are well on our way in defining the architecture to make it a reality. The capabilities we are pursuing directly support the Department's transformational system of interoperable joint C⁴ISR.

There is a need for a globally interconnected capability that collects, processes, stores, disseminates, and manages information on demand to warfighters, policy makers, and support people. The C² Constellation, our capstone concept for achieving the integration of air and space operations, includes these concepts and the future capabilities of the Global Information Grid, Net Centric Enterprise Services, Transformational Communications, the Joint Tactical Radio System, and airborne Command, Control, and Communication assets, among others.

One of the elements of a sensible strategy to maintain U.S. power projection capabilities derives from a global aerial refueling fleet that serves Air Force, Navy, Marine Corps and coalition aircraft. Our current fleet of aging tankers met the challenges of OEF and OIF but is increasingly expensive to maintain. The fleet averages more than 40 years of age, and the oldest model, the KC-135E, goes back to the Eisenhower Administration. Recapitalization for this fleet of over 540 aerial refueling aircraft will clearly take decades to complete and is vital to the foundation and global reach of our Air Force, sister services, and coalition partners. The Air Force is committed to an acquisition approach for this program that will recapitalize the fleet in the most affordable manner possible.

Capabilities-driven modernization and recapitalization efforts are also taking place on our space systems, as we replace constellations of satellites and ground systems with next generation capabilities. The Evolved Expendable Launch Vehicle has completed six successful launches. Using two launch designs, we will continue to seek responsive, assured access to space for government systems. Space-Based Radar will provide a complementary capability to our portfolio of radar and remote sensing systems. We will employ internet protocol networks and high-bandwidth lasers in space to transform communications with the Transformational Satellite, dramatically increasing connectivity to the warfighter. Modernization of GPS and development of the next-generation GPS III will enhance navigation capability and increase our resistance to jamming. In partnership with NASA and the Department of Commerce, we are developing the National Polar-orbiting Operational Environmental Satellite System, which offers next-generation meteorological capability. Each of these systems supports critical C⁴ISR capabilities that give the JFC increased technological and asymmetric advantages.

Space control efforts, enabled by robust space situation awareness, will ensure unhampered access to space-based services. Enhanced space situation awareness assets will provide the information necessary to execute an effective space control strategy. However, we must be prepared to deprive an adversary of the benefits of space capabilities when American interests and lives are at stake.

Additional capability does not stem solely from new weapon system acquisitions. It results from innovative modernization of our existing systems. One example is incorporating a Smart Bomb Rack Assembly and the 500 lb. version of the Joint Direct Attack Munition into the weapons bay of the B-2. In September of 2003, we demonstrated that the B-2 bomber is now able to release up to 80 separately targeted, GPS-guided weapons in a single mission. This kind of innovation reduces the number of platforms that must penetrate enemy airspace while holding numerous enemy targets at risk. The second order consequences run the gamut from maintenance to support aircraft.

We will also address the deficiencies in our infrastructure through modernization and recapitalization. Improvements to our air and space systems will be limited without improvements in our foundational support systems. Deteriorated airfields, hangars, waterlines, electrical networks, and air traffic control approach and landing systems are just some of the infrastructure elements needing immediate attention. Our investment strategy focuses on three simultaneous steps: disposing of excess facilities; sustaining our facilities and infrastructure; and establishing a sustainable investment program for future modernization of our facilities and infrastructure.

Finally, we need to continue to modernize and recapitalize our information technology infrastructure. To leverage our information superiority, the Air Force is pursuing a modernization strategy and information technology investments, which target a common network infrastructure and employ enterprise services and shared capabilities.

Science and Technology (S&T)

Our investment in science and technology has and continues to underpin our modernization and recapitalization program. Similar to our applied-technology acquisition efforts, the Air Force's capability-based focus produces an S&T vision that supports the warfighter.

The Air Force S&T program fosters development of joint warfighting capabilities and integrated technologies, consistent with DOD and national priorities. We will provide a long-term, stable investment in S&T in areas that will immediately benefit existing systems and in transformational technologies that will improve tomorrow's Air Force. Many Air Force S&T programs, such as directed energy, hypersonics, laser-based communications, and the emerging field of nanotechnology, show promise for joint warfighting capabilities. Other technology areas, such as miniaturization of space platforms and space proximity operations, also show promise in the future. Through developments like these, the Air Force S&T program will advance joint warfighting capabilities and the Air Force vision of an integrated air and space force capable of responsive and decisive global engagement.

Capabilities-Based Acquisition / Transforming Business Practices

To achieve our vision of a flexible, responsive, and capabilities-based expeditionary force, we are transforming how we conceive, plan, develop, acquire, and sustain weapons systems. Our Agile Acquisition initiative emphasizes speed and credibility; we must deliver what we promise—on time and on budget. Our goal is to deliver affordable, sustainable capabilities that meet joint warfighters' operational needs.

We continue to improve our acquisition system—breaking down organizational barriers, changing work culture through aggressive training, and reforming processes with policies that encourage innovation and collaboration.

Already, we are:

- Realigning our Program Executive Officers (PEOs).*—By moving our PEOs out of Washington and making them commanders of our product centers, we have aligned both acquisition accountability and resources under our most experienced general officers and acquisition professionals.
- Creating a culture of innovation.*—Because people drive the success of our Agile Acquisition initiatives, we will focus on enhanced training. Laying the foundation for change, this past year 16,500 Air Force acquisition professionals, and hundreds of personnel from other disciplines, attended training sessions underscoring the need for collaboration, innovation, reasonable risk management, and a sense of urgency in our approach.
- Reducing Total Ownership Costs.*—With strong support from the Secretary of Defense, we will expand the Reduction in Total Ownership Cost program with a standard model ensuring that we have accurate metrics.
- Moving technology from the lab to the warfighter quickly.*—Laboratories must focus on warfighter requirements and researchers need to ensure technologies are mature, producible, and supportable. Warfighters will work with scientists, acquisition experts, and major commands to identify gaps in capabilities. With help from Congress, we have matured our combat capability document process to fill those gaps. During OIF, we approved 37 requests for critically needed systems, usually in a matter of days.
- Tailoring acquisition methods for space systems.*—In October 2003, we issued a new acquisition policy for space systems that will improve acquisitions by tailoring acquisition procedures to the unique demands of space systems.

Transformation of our business processes is not limited to acquisition activities. Our Depot Maintenance Strategy and Master Plan calls for financial and infrastructure capitalization to ensure Air Force hardware is safe and ready to operate across the threat spectrum. Our increased funding for depot facilities and equipment modernization in fiscal year 2004–09, along with public-private partnerships, will result in more responsive support to the JFC. We expect to maximize production and throughput of weapon systems and commodities that will improve mission capability.

Our logistics transformation initiative will revolutionize logistics processes to improve warfighter support and reduce costs. The goal of the Air Force's logistics transformation program, Expeditionary Logistics for the 21st Century, is to increase

weapon system availability by 20 percent with zero cost growth. Our current initiatives—depot maintenance transformation, purchasing and supply chain management, regionalized intermediate repair, and improved logistics command and control—will transform the entire logistics enterprise.

Our depots have put some of these initiatives into place with exceptional results. In fiscal year 2003, our depot maintenance teams were more productive than planned, exceeding aircraft, engine, and commodity production goals and reducing flow days in nearly all areas. Implementation of “lean” production processes, optimized use of the existing workforce, and appropriate funding, all contributed to this good news story. In addition, our spares support to the warfighter is at record high numbers. In 2003, supply rates and cannibalization rates achieved their best performance since fiscal year 1994 and fiscal year 1995, respectively. Fourteen of twenty aircraft design systems improved their mission capable rates over the previous year, with Predator unmanned aerial vehicles improving by 11 percent, and B-1 bombers achieving the best mission capable and supply rates in its history. Thanks to proper funding, fleet consolidation, and transformation initiatives, spare parts shortages were reduced to the lowest levels recorded across the entire fleet.

Financing the Fight

An operating strategy is only as good as its financing strategy. And similar to acquisition, logistics, and other support processes, our finance capabilities are strong. We are taking deliberate and aggressive steps to upgrade our financial decision support capability and reduce the cost of delivering financial services. Our focus is on support to our airmen, strategic resourcing and cost management, and information reliability and integration. The initiatives that will get us there include self-service web-based pay and personnel customer service, seamless e-commerce for our vendor payment environment, budgets that link planning, programming, and execution to capabilities and performance, financial statements that produce clean audit opinions while providing reliable financial and management information, and innovative financing strategies.

INTEGRATING OPERATIONS

The Air Force excels at providing communications, intelligence, air mobility, precision strike, and space capabilities that enable joint operations. Our airmen integrate these and other capabilities into a cohesive system that creates war-winning effects. Integration takes place at three levels. At the joint strategic level, integration occurs between interagencies and the coalition. Integration also takes place within the Air Force at an organizational level. At its most basic level, integration takes place at the machine-to-machine level to achieve universal information sharing which facilitates true integration at every level.

Integrating Joint, Coalition, and Interagency Operations

The ever-changing dynamics of global events will drive the need to integrate DOD and interagency capabilities and, in most cases, those of our coalition partners. Joint solutions are required to produce warfighting effects with the speed that the Global War on Terrorism demands. Fully integrated operations employ only the right forces and capabilities necessary to achieve an objective in the most efficient manner. We must also integrate space capabilities for national intelligence and warfighting.

We are pursuing adaptations of our C² organizations and capabilities to support this vision. While the Air Force’s global C² structure has remained relatively constant, throughout our 57-year history, the demands of a changing geopolitical environment have stressed current C² elements beyond their design limits.

We have conducted an extensive review of our C² structures to support the National Security Strategy objectives of assure, dissuade, deter, and defeat as well as the SECDEF’s Unified Command Plan. We will enhance our support for the JFC and our expeditionary posture through a new Warfighting Headquarters Construct. This will enable the Numbered Air Forces to support Unified Combatant Commanders in a habitual supported-supporting relationship. Working with their strategy and planning cells on a daily basis will ensure that Air Force capabilities are available to the JFC’s warfighting staff. This new headquarters will provide the Combined Air Operations Center (CAOC) with sufficient staff to focus on planning and employment of air, space, and information operations throughout the theater.

We are also adapting the capabilities of our CAOCs. The CAOCs of each headquarters will be interconnected with the theater CAOCs, all operating 24 hours a day, seven days a week. They will be operated as a weapons system, certified and standardized, and have cognizance of the entire air and space picture. This reorganization will increase our ability to support our Combatant Commanders, reduce redundancies, and deliver precise effects to the warfighters. As we near completion

of the concept development, we will work with the Secretary of Defense and the Congress to implement a more streamlined and responsive C² component for the Combatant Commanders and national leadership.

Integrated operations also depend on integrated training. We continue to advance joint and combined interoperability training with our sister services and the nations with which we participate in global operations. The Joint National Training Capability (JNTC) will improve our opportunities for joint training. The aim of the JNTC is to improve each service's ability to work with other services at the tactical level and to improve joint planning and execution at the operational and strategic levels. The Air Force has integrated live, virtual, and constructive training environments into a single training realm using a distributed mission operations (DMO) capability. JNTC will use this DMO capability to tie live training events with virtual (man-in-the-loop) play and constructive simulations. Live training in 2004—on our ranges during four Service-conducted major training events—will benefit from improved instrumentation and links to other ranges as well as the ability to supplement live training with virtual or constructive options. These types of integrated training operations reduce overall costs to the services while providing us yet another avenue to train like we fight.

Integrating Within the Air Force

The Air Force is continuing to strengthen and refine our AEF. The AEF enables rapid build-up and redeployment of air and space power without a lapse in the Air Force's ability to support a Combatant Commander's operations. The Air Force provides forces to Combatant Commanders according to the AEF Presence Policy (AEFPP), the Air Force portion of DOD's Joint Presence Policy. There are ten AEFs, and each AEF provides a portfolio of capabilities and force modules. At any given time, two AEFs are postured to immediately provide these capabilities. The other eight are in various stages of rest, training, spin-up, or standby. The AEF is how the Air Force organizes, trains, equips, and sustains responsive air and space forces to meet defense strategy requirements outlined in the Strategic Planning Guidance.

Within the AEF, Air Force forces are organized and presented to Combatant Commanders as Air and Space Expeditionary Task Forces (AETFs). They are sized to meet the Combatant Commander's requirements and may be provided in one of three forms: as an Air Expeditionary Wing (AEW), Group (AEG), and/or Squadron (AES). An AETF may consist of a single AEW or AEG, or may consist of multiple AEWs or AEGs and/or as a Numbered Expeditionary Air Force. AETFs provide the functional capabilities (weapon systems, expeditionary combat support and command and control) to achieve desired effects in an integrated joint operational environment.

One of our distinctive Air Force capabilities is Agile Combat Support (ACS.) To provide this capability, our expeditionary combat support forces—medics, logisticians, engineers, communicators, Security Forces, Services, and Contracting, among several others—provide a base support system that is highly mobile, flexible, and fully integrated with air and space operations. ACS ensures responsive expeditionary support to joint operations is achievable within resource constraints—from creation of operating locations to provision of right-sized forces. An example of this capability is the 86th Contingency Response Group (CRG) at Ramstein Air Base, organized, trained, and equipped to provide an initial "Open the Base" force module to meet Combatant Commander requirements. The CRG provides a rapid response team to assess operating location suitability and defines combat support capabilities needed to establish air expeditionary force operating locations.

Another example of ACS capability is the light and lean Expeditionary Medical System (EMEDS) that provides the U.S. military's farthest forward care and surgical capability. Air Force medics jump into the fight alongside the very first combatants. Whether supporting the opening of an air base or performing life saving surgeries, these medics bring an extraordinary capability. They carry backpacks with reinforced medical equipment, permitting them to perform medical operations within minutes of their boots hitting the ground. Complementing this expeditionary medical capability is our air evacuation system that provides the lifeline for those injured personnel not able to return to duty. The other services and our allies benefited greatly from this capability in OEF and OIF. The Army and Navy are now developing a similar light and lean capability. The success of EMEDS is also apparent in the reduction of disease and non-battle injuries—the lowest ever in combat.

Horizontal Machine-to-Machine Integration

We also strive to increasingly integrate operations at the most basic level—electron to electron. Victory belongs to those who can collect intelligence, communicate information, and bring capabilities to bear first. Executing these complex tasks with

accuracy, speed, and power requires assured access and the seamless, horizontal integration of systems, activities and expertise across all manned, unmanned, and space capabilities. Such integration will dramatically shorten the kill chain.

Machine-to-machine integration means giving the warfighter the right information at the right time. It facilitates the exchange of large amounts of information, providing every machine the information it needs about the battlespace and an ability to share that information. In the future, we will significantly reduce the persistent challenges of having different perspectives or pictures of the battlefield. Examples would be to ensure that the A-10 could see the same target as the Predator or to guarantee that the F-15 has the same intelligence about enemy radars as the Rivet Joint.

We want a system where information is made available and delivered without regard to the source of the information, who analyzed the information, or who disseminated the information. It is the end product that is important, not the fingers that touch it. The culmination of the effort is the cursor over the target. It is an effect we seek, and what we will provide.

The warfighters' future success will depend on Predictive Battlespace Awareness (PBA). PBA relies on in-depth study of an adversary before hostilities begin in order to anticipate his actions to the maximum extent possible. We can then analyze information to assess current conditions, exploit opportunities, anticipate future actions, and act with a degree of speed and certainty unmatched by our adversaries. PBA also relies on the ability of air and space systems to integrate information at the machine-to-machine level and produce high-fidelity intelligence that results in a cursor over the target. The result—integrated operations—is our unique ability to conduct PBA and impact the target at the time and place of our choosing. This machine-to-machine integration will include a constellation of sensors that create a network of information providing joint warfighters the information and continuity to see first, understand first, and act first.

The C² Constellation is the Air Force capstone concept for achieving the integration of air and space operations. Our vision of the C² Constellation is a robust, protected network infrastructure, a globally based command and control system to encompass all levels of the battle and allow machines to do the integration and fusion. It uses Battle Management Command and Control and Connectivity and consists of command centers, sensors, and systems like the U-2, Space Based Radar, the Distributed Common Ground System, and our CAOCs. Given the C² Constellation's complexity, the Air Force recognizes the need for an architecture to address myriad integration issues—methodically—so all elements work in concert.

SECURING AMERICA'S NEXT HORIZON

Armed with the heritage of air and space power in combat, the lessons learned from our most recent conflicts, and the powerful advances in technology in the 21st century, we stand ready to deliver decisive air and space power in support of our nation. Whether called to execute a commanding show of force, to enable the joint fight, to deliver humanitarian assistance, or to protect our nation from the scourge of terrorism, we will deliver the effects required. Our ability to consistently answer the call is our dividend to the nation, a result of our sustained investment in people, technology, and integration.

Our portfolio of advantages provides dividends on the battlefield. We bring to bear a diversified collection of capabilities, which answer the needs of a spectrum of combat and humanitarian operations. As one would with any investment, we will monitor, maintain, and adjust our investments as needed to reflect the demands of a dynamic environment. Transformational initiatives in the way we organize, train, and equip reflect such adjustments, changes that will result in significant gains for our force, for the joint team, and for our nation. Yet, we will not shift our focus from the core competencies that have provided the foundation for our success and continue to do so. The success of the Air Force resides in the airmen who employ the technology of warfighting through integrated operations with our joint and coalition partners. This is our heritage and our future. This is America's Air Force.

STATEMENT OF GENERAL JOHN P. JUMPER

Senator STEVENS. General Jumper.

General JUMPER. Well, I would like to make a statement. Mr. Chairman, Senator Inouye, members of the committee, thank you for the opportunity to sit here. It's a pleasure to sit here with Dr. Roche and to work for a boss who spends so much energy caring

for our people and helping us all make sure that we do the right thing as an Air Force for our Nation.

I'd also like to thank you, Mr. Chairman, and members of the committee, who take the time to go out and see our airmen, soldiers, sailors, and marines personally throughout the world when they are deployed. It's one thing for me to go out there and tell them how important they are. It's much more effective when we have the representatives of the people go out and send that message. I cannot tell you how important that is, and I thank you, sir, for your efforts to do that. I've watched you, Mr. Chairman and Senator Inouye, for many years, and I know that wherever there's a crisis, you all show up, and usually together, and it's a very powerful message that you send.

AEROSPACE EXPEDITIONARY FORCE

Sir, the Air Force, over the last 10 years, has recreated itself from a contingent—from a cold war operation coming out of the cold war years into a contingency-based operation that we work with our Aerospace Expeditionary Forces (AEF). We have 10 Aerospace Expeditionary Force packages that we actually used for the first time in 1999 in the air war over Serbia. But to prosecute Operation Enduring Freedom and Operation Iraqi Freedom, we had to call 8 of 10 of these packages forward in order to completely deal with the situation.

We opened 36 bases in the process of this. Sixteen of those bases continue to be open today. At the height of operations, we had over 72,000 American troops and Coalition partners living in Air Force tents throughout the ADR. Today, that number is about 17,000 at bases where we have support responsibilities. We continue to engage across the spectrum of conflict, as you know, from the counter-drug mission to patrolling the skies over America, to those deployed operations that I mentioned.

We are now in the process of reconstituting our force. It will take some time to get us completely reconstituted, but, just this month, we've started back in a normal rotation cycle with most of our people, even as we have two-plus AEF packages still deployed forward, dealing with the Operation Iraqi Freedom.

Sir, even though you know that our AEF packages are serving us well, we can't do this, any of it, without a Total Force and a joint team effort. Secretary Rumsfeld has challenged us to make sure that everyone we have in uniform is doing the job that's required of someone in uniform. I can report to you, sir, that daily, 47 percent of our active-duty force is committed directly to the mission of the combatant commanders throughout the world. As you know, we're still flying 150 sorties a day over Iraq, and some 50 sorties a day over Afghanistan, to include mobility sorties, strike sorties, air-refueling sorties, intelligence, surveillance, reconnaissance, and close air-support missions.

For our mobility forces, the tempo remains about 50 percent above the pre-9/11 activity. We owe the success of these mobility missions to the great contribution that we get out of our Air National Guard and Air Force Reserve. They make up more than 50 percent of this mission-area capability.

In the skies—or in the Aerospace Expeditionary Force packages that we deploy, each one of those packages consists of 20 to 25 percent of the Air National Guard or the Air Force Reserve. We put our Total Force to good use, and it works for us very well. In Operation Noble Eagle, patrolling the skies over the United States, which we've been doing now for 2½ years, over 80 percent of that effort is borne by the Air National Guard or the Air Force Reserves.

GUARD AND RESERVE

Since 9/11, we have mobilized some 36 percent of our total Guard and Reserve. Today, about 6 percent remain activated, mobilized, and serving throughout the world. We integrate the Guard and Reserve with our daily activity, as the boss mentioned—with blended wings. We have the 116th Air Control Wing at Robins Air Force Base, which is our JOINTSTARS unit, that is a combination of Air National Guard and Active Duty Air Force in the same unit. The command of that unit rotates. Today, it happens to be commanded by an Air National Guard officer. This is working very well, although we still have work to do in trying to get the laws synchronized that will allow us to have common judicial standards and other standards. We will continue to work with you to get that achieved.

Again, I want to thank the employers of our Nation who allow these Guard and Reserve members to come on active duty and to deploy. They, too, serve, because they give up probably the most capable part of their work force to come on active duty, put on the uniform and deploy, and they do a magnificent job for us. So we are very grateful to the employers in all the States who allow this to happen.

As we look to the future, I worry about capabilities that we have to deal with. Secretary Roche spoke of the F/A-22, which is going to be necessary as we look forward to the threat of cruise missiles, as we look forward to new generations of surface-to-air missiles that in some places of the world are being deployed today, as we look at a new generation of fighter aircraft, such as the Su-37.

Mr. Chairman, today we brought along three members that belong to you, sir. These are members of the fighter wing in Elmendorf Air Force Base in Anchorage, and I'll ask them to stand, Colonel Greg Neubeck, Captain Mark Snowden, and Captain Pete Fesler. These three gentlemen are F-15 pilots. They have just returned from an exercise in a country we haven't exercised with for some years, and they were able to fly their F-15s against some of these new fighters that we talk about. We can't discuss it here today, but in closed session I'd enjoy the opportunity at some point in the future to come and talk to you about the results of their trip. I think you would find the information very revealing. The Secretary and I are proud to bring along these three great young Americans who serve this country so well. Thanks, guys.

Senator STEVENS. Welcome gentlemen, and thank you, General. They obviously come from the top of the world and have a very fine home.

General JUMPER. Yes, sir.

Senator STEVENS. I'm going to have to ask you, General, if you can summarize pretty quickly. I've got to tell you that we have a vote starting at 10:30. We'll stay here until—or 11:30—

RECRUITING AND RETENTION

General JUMPER [continuing]. I will do that, Mr. Chairman.

Let me just say that as far as our retention and recruiting, we're meeting all of our goals, not only in the active, but in the Guard and Reserve, and it's truly a great Air Force team.

Sir, I appreciate the opportunity to sit before you here today, and I look forward to your questions.

Senator STEVENS. Thank you very much.

We do thank you very much. And those are wonderful statements.

Gentlemen, because of the timeframe—I've discussed this with Senator Inouye—we'll take 5 minutes each, and then we'll see what questions we might have in the second round. We'd urge you to keep your responses as short as possible.

TANKERS

I congratulate you, Secretary Roche, in being willing to talk about the tankers. We all have, you know, sort of, lash marks across our back because of the fact we tried to accelerate the IOC for those tankers. What is the IOC going to be under the current situation?

Dr. ROCHE. IOC, I don't have it exact in my head. The first one will show up—if we do the normal KCX, the first one won't show up until 2010, so it'll be a few years after that before we have IOC. Had we been able to effect release in the first year that it was made available to us by the Congress, we would have had something like 80 planes available by 2010, and we would have had IOC.

Senator STEVENS. And the average age is somewhere about 43 years today—

Dr. ROCHE. Forty-three years. And, remember, the Secretary of Defense has the program in a pause, so it's not that we've rejected the lease that the Congress agreed to last time; it's in a pause.

Senator STEVENS. Well, the net result is, we delay the IOC, and we engender the growth of foreign-constructed tankers to meet our needs. I think that we will have done a disservice to this country. I hope that—pray to God that we'll solve this problem soon. It is just a jurisdictional fight between Members of the Senate, as far as I'm concerned. But I do think that you've taken too much heat on the subject.

SPACE PROGRAMS

Let me go to the basic problem of this budget, as I see it. You've got budget requests for three Air Force space programs, transformatonal communications, the Evolved Expendable Launch Vehicle (EELV) launch—space launch—space-based radar more than doubles in fiscal year 2005. Those programs alone would grow about additional 30 percent by 2006, and we plan to go ahead and

move into full-rate production of the F/A-22. Can all those programs survive under the trend line of the budget today?

Dr. ROCHE. We have not been optimistic about the trend line and it is one of the reasons that I brought down the production rate from 22 to 32 per year, instead of going up to 56. I did this in order to smooth things out so we could address other subjects.

The space programs of the United States are old, sir. They, too, need to be recapitalized. We don't talk about them as often as we probably should. A number of those systems have done very well because they have just been built so beautifully, but they need to be recapitalized. Space-based radar, as a part of a portfolio of sensors that can be used for intelligence and for tactical operations, is a necessary thing. We believe that, as we see our budget, we can smooth these in. Yes, sir.

F/A-22

Senator STEVENS. What's the IOC now for the F/A-22?

Dr. ROCHE. It should be the end of calendar year 2005, sir.

Senator STEVENS. Someone asked me the other day why we're building the F/A-22. What's the threat?

Dr. ROCHE. I would like to meet in a closed session and tell you about some of the new aircraft, but certainly there are existing surface-to-air missile systems now that, if not dealt with by something like the F/A-22, will deny airspace to us for land operations, for any other support operations. There are emerging threats, like cruise missile threats, that only the F/A-22 can handle because of its super-cruise. Its capabilities are such that it replaces a number of other aircraft. We will become far more efficient in the use of our airmen by having far more capable airplanes. We'll have fewer of them, but we'll be able to use the crews much more often. So it's a combination of the threat, the efficiency, and the move into new technology, which enables you to not have to spend the kind of funds we have to spend now on maintenance, the fact that our F-15 fleet is roughly 22-plus years old, and the F-15Es are the young part of that. We have flight restrictions on some of our F-15Cs because of some problems in the vertical stabilizers.

Senator STEVENS. Well, I thank you. This committee did save the C-17. We saved the Predator. We saved the V-22. And as far as I'm concerned, we're going to save the F-22.

Senator Inouye?

Senator INOUE. Mr. Chairman, I concur with you.

Mr. Secretary, on the F/A-22, about 20 months ago, you added a new, robust air-to-ground capability. And, as such, the Secretary of Defense suggested that the cost could go up by \$11.7 billion over a 10-year period. Has that been factored into the budget?

Dr. ROCHE. Sir, the Secretary of Defense didn't do it; it was the General Accounting Office, if I'm not mistaken, Senator Inouye. They took an honest-to-goodness wish list from our Air Combat Command that goes until the plane is dead. Now, we're going to keep this plane for 30 years, so there will be things that one might think of doing 20 years into the future. The work that we are doing to make—to enhance the capability of this airplane for air to ground—it already has some capabilities—will actually, in some cases, save money. We'll put a new radar on that's 40 percent

cheaper than the existing radar. We'll incorporate the smaller-diameter bomb, which will be done for lots of other reasons. So the amount of money that we have planned that we will actually spend is budgeted, and is less than \$3.5 billion, and that's for all the aircraft that come after it.

Now, just as a comparison, sir, over the same FYDP period we'll invest \$2.5 billion in just doing upgrades to the B-2 bomber. There are only 21 of them.

Senator INOUE. Has the change made the full-rate production decision a little later now? You were going to do it in December 2004.

Dr. ROCHE. The full production decision for the F/A-22, sir, will be, again, a function of how well we do in initial operational test and evaluation (IOT&E). We have worked out every problem we can think of. We have issues associated with IOT&E sortie generation and meantime between maintenance hours that are really an attempt to interpolate from what our measures after 100,000 hours of flight (which won't happen until 2008) to what they ought to be today. We believe that, barring something we can't see now, we should enter IOT&E at the end of April. That's in 2004. The full-rate production decision would be at some point thereafter; again, it will be event driven. But we are ramping up slowly, with your help. We went to 20 airplanes, 22 airplanes; this budget, 24 airplanes, to get to 32 without incurring additional cost by rushing.

BOEING CORPORATION

Senator INOUE. As a result of certain alleged incidents by Boeing employees, Senator Rudman was asked to conduct an investigation, and, as a result of that, he said that despite problems that have occurred, "We believe it would be both unfair and incorrect to conclude that the company treats ethics and compliance matters lightly." And then he further went on to say that, "Boeing programs are robust and confirm that the company pays significant attention to ethics and compliance matters."

Have these results or findings had any impact on the progression of replacing the tanker fleet?

Dr. ROCHE. I'm certain that they've been an input to the Inspector General's review. There is an Inspector General review. There's also a Defense Science Board look, across the board. There's a group from the Industrial College of the Armed Forces who were looking at, "How innovative was our approach? And what lessons are to be learned?" We, clearly, can't take action based on Senator Rudman's report, but I know that that has been an input to the Inspector General's thinking.

END STRENGTH

Senator INOUE. I believe you're planning to downsize your force end strength. How do you propose to do that?

Dr. ROCHE. We are, at this point, Senator, a little under, sir—about 16,000 over and above our end strength, and it is—we're suffering from riches, Senator. We just took stop-loss off last July. We had anticipated that our airmen would return to the normal sequence, which is: we lose 37,000 a year, we recruit 37,000 a year. With a lot that you have done, in terms of benefits, 100 percent

housing, a whole series of things, we are exceeding our retention rates, we have pilots coming back, and we finished 40 percent of our recruiting for this fiscal year last year. So we're having to see if some of our airmen would like to transition earlier into the Guard and Reserve, to get on with, maybe, their academic life. We are trying to not lose faith with any of these men and women who have had faith in us, but they like serving our Air Force, and there is a sense of esprit that I know you've seen when you've dealt with them over in the Area of Responsibility (AOR). They have a sense of self worth, that they're doing something terribly important, and they want to stay. We're trying to adjust this so maybe we can have more of them migrate to our Guard and Reserve.

John?

General JUMPER. Senator, we do not want to kick anybody out of the Air Force that wants to stay. And we lived through—in the late 1980s and early 1990s, we lived through involuntary separations. It was destructive for the morale of the service. We will ask your help to make sure that we don't have to kick out anybody that doesn't want to go, even as we try to get down to our authorized numbers as quickly as we can.

Thank you, sir.

Senator INOUE. Thank you very much.

Senator STEVENS. Senator Dorgan.

Senator DORGAN. Mr. Chairman, thank you very much.

First, let me say to the Secretary that I'm really pleased that you're not moving over to the Army. I know that was a long and tortured period for you, but, frankly, I think you've done a wonderful job, and I appreciate your commitment to the United States Air Force and to this country's security.

BASE REALIGNMENT AND CLOSURE

Let me ask a question about base closing, if I might. The base closing commission proposition that has everyone nervous, I expect. And let me ask whether—as you understand it, whether this base closing round is going to look at nearly every Air Guard and Reserve facility. The reason I ask that question is, in the 1995 background only a handful of Air Guard and Air Force Reserve facilities were actually evaluated. What's your impression of what will happen in this base closing commission round?

Dr. ROCHE. We really believe in the Total Force. We would like everyone to be looked at. We are doing it slightly differently. We're doing it in accordance with the congressional law and regulation, but we're starting out taking that very seriously, in terms of what is the force structure we expect to see around 2020–2025. Because we've always noted that we'll be replacing 750 F-15-like aircraft with roughly 400 F/A-22s. Our Air Force will be getting smaller. What are the systems we think we'll need for the contingencies in the future? What are those capabilities? Where are they best deployed inside the United States? How much overseas basing will we have to do? Just go through the capabilities. Then we're going to look at things like ranges. As you know, supersonic range is a critical to us. Other air ranges are critical to us. Then keep working our way down, in terms of what kinds of systems tend to be

for the Atlantic-Pacific. Which are swing systems? How do we deal with Operation Noble Eagle?

We believe as we go through that, plus the work that's being done by the joint staff of where is there commonality of training, hospitals, other things, that the answer will start to come out pretty obviously.

Guard is working on its own, doing some very innovative thinking about how they can better integrate with the Active Force, or complement it.

Senator DORGAN. As you know, my State houses two air bases, one at Minot, one at Grand Forks—one B-52, one a tanker base—as well as an Air Guard Base in Fargo.

Dr. ROCHE. And missiles.

B-52

Senator DORGAN. And missiles in the Minot base, as well—at the Minot base. Let me ask you how you see the role for the B-52 and also the role for the core tanker base as we move forward.

Dr. ROCHE. I can't speak of any specific base with respect to the systems.

Senator DORGAN. Yeah.

Dr. ROCHE. We see the B-52 as a system that we fly very differently. We fly slower, higher. We picked 90 of the best of the 700 that were built. These are the planes that did not fight in Vietnam. Some of the tankers that were associated with those B-52s are also in good shape, even though they're old, and they would be the tankers we would expect to fly when they're roughly 70 years old, even if we began recapitalizing now. We see the B-52 having a future for the next, say, 10, 20 years. But we now are looking at how to replace the platform.

Senator DORGAN. Well, the B-52 is estimated to be out 30 years, is it not?

Dr. ROCHE. It is, and we'll track both the costs of it and how many we'll use, how many we'll use for standoff jammers. But bomber capabilities are located where they are in the United States for very good reasons; it's because they swing. Originally, the northern States had them, because we went over the top.

B-2

Now we've found that when we place the B-2, it is wise to put a bomber facility in the center of the United States so it can swing to the Atlantic or the Pacific. For example, Dyess Air Force Base in Texas, just to name one that's not in your State, sir, needs ranges nearby. These are important things for us to take into account as we look at placement.

TANKER FLEET

Senator DORGAN. Will your ability to maintain the tanker fleet be substantially affected by the 767 issues?

Dr. ROCHE. We think that we will not replace the full 550 KC-135s with 550 new wide-body tankers. We'd like to—it may not all be 767s by the time you go over 20-so years to do it, but it'll still be, we think, something above 400, sir.

GLOBAL HAWK

Senator DORGAN. And have you—when will you describe a basing plan for the Global Hawk, the full contingent of Global Hawks?

Dr. ROCHE. Right now—you remember, in Iraq our Global Hawk fleet consisted of one airplane.

General JUMPER. That's correct.

Dr. ROCHE. And as these come in, we will be trying to do that. We have been showing the members as many of our roadmaps as we have finished. So we've shown a tanker roadmap, we've shown a C-130 roadmap, lifter roadmap. We would continue to do that, to share our thinking early with various members.

In terms of Global Hawk, right now, Beale Air Force Base is the right place for them to be, because of their closely associated mission with the U-2. Over time, as we use these—and there will be other remotely-piloted aircraft, the UAVs—we will be picking locations for them.

F/A-22

Senator DORGAN. Mr. Chairman, let me make one additional comment. First of all, I agree with the Chairman's comment about the F/A-22. I think that's a critically important weapons program for us to maintain air superiority long into the future. I think Global Hawk and Predator programs have been extraordinarily valuable, and I would commend the Air Force and the men and women who run those systems.

BASE REALIGNMENT AND CLOSURE (BRAC)

And then I finally want to say, again, many of us are very, very nervous about this base closing commission process. I looked to the report that was issued today by the Pentagon. It's very hard for us to quite understand exactly where the magnifying glass is placed here, but we've got some great bases. And I'm not altogether sure, having watched the Pentagon plan in the long term, that we know what's going to happen 5 and 10 years from now with respect to our needs. And to be talking about a commission that sizes the military for 20 years, I'm not all that convinced that we ought to move as aggressively as you think, Mr. Secretary, and others in the Pentagon think. But, you know, again, I think we'll work through that, and I appreciate very much your appearance here today.

Dr. ROCHE. Thank you for your thoughts. I would say we are trying to factor in the fact that we cannot predict the future. So we're trying to hedge, and we're trying to hedge in many ways.

Senator STEVENS. Senator Leahy.

Senator LEAHY. Thank you, Mr. Chairman.

Before this started, I had a chance to talk with the Secretary and General Jumper before the hearing, and, it's interesting, we were referencing back to the Secretary's time when he was here with "Scoop" Jackson. I'm looking around the committee. You and I and Senator Inouye and, I believe, Senator Cochran all served here when Senator Jackson was here. He was one of the giants, the real giants, of the Senate, and one who did, as you do, Mr. Chairman, formed those bipartisan coalitions that are so very, very necessary in these defense bills. And I mean that as a compliment to both

you and Senator Jackson and, of course, to Secretary Roche, who's tried the same way; I think one of the reasons why the Air Force is doing so well and why it has such support up here. I've also had some of these discussions with General Jumper, and we—our discussions have ranged everywhere from what it's like growing up in small-town America to where the Air Force is going to be well into the 21st century with the kind of threats and the unpredictability—as you said, Mr. Secretary, the unpredictability of the future.

General Jumper, if I might—this is probably one of those rare times that a parochial question has ever come out from a member of the Appropriations Committee, but I am the co-chair of the U.S. Senate National Guard Caucus, along with Senator Kit Bond of Missouri, and we have close to 90 Members of the Senate, most of the Senate. We strongly support your effort to transform the Guard's and the entire Air Force capability to meet the Nation's needs. I think, probably more than any time since I've been in the Senate, we see the integration and the need of using the Guard with our regular forces, certainly in Iraq and Afghanistan, and being prepared in that second, third, and fourth wave if we need it.

I talked with you about a proposal I've been working on with the Air National Guard unit in my home State of Vermont, the F-16 unit. This F-16 unit, Mr. Chairman, is the one that, immediately after—now, by “immediately,” I mean immediately after—the attack on New York City, in September 11, they were flying cover, and flew cover for weeks on end, around the clock, over New York City. Flying based out of Vermont, it doesn't take them very long to get to New York City. And, of course, you had tankers basically parked up there, and they just ran around the clock.

Under our proposal, the Active Force would send many of its pilots and maintenance personnel to the Vermont Guard for a tour that would increase integration among the Guard and the Active Force, allow the Active Force to take advantage of the high level of experience we have up there. I understand it would actually save money, in the long run. I'd also mention that the Burlington area is a very nice place to live, having lived there all my life—all my life, so far. It would be a great retention tool. And I'm wondering, General, if you'd give me an update of where this proposal stands in the Air Force.

GUARD AND RESERVE

General JUMPER. Well, Senator Leahy, as you are aware, we currently have a great number of initiatives going on with the Guard and Reserve especially the Air National Guard, as the Secretary mentioned. This notion of bringing active duty and National Guard units together is working very well for us in Georgia right now. It's only proper we also look at it the other way not only consider bringing the Guard and Reserves to the active units, but look at it the other way around. As we also look at what makes sense with regard to consolidations of units that are in close proximity to one another and other such ideas that you're aware of that we're actively pursuing in the Air Force.

So, sir, I think that this idea has merit. It is certainly worth us considering and taking advantage of the great opportunity to live in some of our cities around the world that we don't normally have access to. So it's under consideration right now, sir.

Senator LEAHY. General, will you or your staff keep me posted on how it goes? Because I want to—I really do have a very strong interest in this, and not just from a parochial—I go to bat for the Vermont Guard, because they do a superb job there, always at the top level of preparedness, fitness, and all the rest. And I would—I'm a typical enough Vermonter, I wouldn't go to bat like that unless they were that good. I just think it can work well. I also think that, from our—the east coast still is a danger area. I'll put this—other questions in the record for both of you.

But I'm just curious, is this in the budget?

General JUMPER. Sir, this would—as far as I understand it, it would have to be a part of a BRAC consideration to talk about how we adjust forces if it's in any significant numbers. But it's part of the overall consideration, under military value, that we are dealing with, as part of that process.

Dr. ROCHE. If I may, sir, I think it's a legitimate——

Senator STEVENS. The gentleman's time has expired.

Senator LEAHY. Could I just hear his answer to just that one question, Mr. Chairman?

Dr. ROCHE. Very briefly. The Guard is looking at a number of innovative things, and they're all being listed. And General "Danny" James is doing a terrific job of working with his colleagues to be part of the solution to this problem, not part of the problem.

Senator STEVENS. Senator Cochran.

COLUMBUS AIR FORCE BASE

Senator COCHRAN. Mr. Chairman, thank you.

Mr. Secretary, General Jumper, I'm fresh back from a trip to my State, where I had the pleasure of cutting a ribbon at Columbus Air Force Base for a new facility, a radar approach control facility, part of a control-tower facility, as well, that will be ensuring that we'll have one of the most modern training facilities for pilots in the country. We already are very proud of the fact that, at Columbus, one-third of the Air Force pilots are trained there. Over 468 during fiscal year 2003. And not long ago, we participated in a ceremony in Jackson, where the Air National Guard received the first C-17, and training is underway there. We're really proud of the fact that that's occurring in our State, as well, and also that Keesler Air Force Base continues to train, I guess, as many people as any Air Force base training facility anywhere, 40,000 students each year. We have the largest medical facility, medical group in the Air Force—is also located at Keesler Air Force Base. So we're very interested in the Air Force's budget request. We're very interested in your requirements and helping make sure that this committee responds to your needs.

C-17

I think that it's very clear that you're embarking on some important new modernization efforts. The C-17 is one example. And we hope that—the procurement schedule, as I understand, may be

going up from your earlier expectations of your needs. Could you tell us what your expectation of a procurement schedule is for the C-17? Is your budget sufficient to give you what you need?

Dr. ROCHE. Senator, we have this multi-year for 60 that we're involved in at this time, and that will give us a total of 180. There are two things that will drive the follow-on decision. One is, the joint staff is looking at what the mobility needs are for our Total Force—all Army, Navy, Air Force, and Marines—to update what was done a number of years ago, in terms of how much lift is required. They will finish that at some point here in the not-too-distant future. That will then feed into us, in terms of what we need to be able to do in million ton miles per day (MTMS/DAY).

The second issue that we are attempting to resolve is whether or not the C-5As can be modernized through the Reliability Enhancement and Re-engining Program (RERP). We're going to do it for all the B models, which are the newer C-5s. We're going to do the avionics for all of the A models. And the issue is, if the A's are in good enough shape to be able to have service life extension, then that would then compensate. If the number of MTMS/DAY required goes up, if the C-5As are not worth investing in, then clearly the other thing we'd do is get more C-17s. But this is in flux right now. We have an Air Force Fleet Viability Board, which is independent, looking at the A's, as we speak. We expect that report to come to John and me by the end of April, end of the month. We'll start to then get a sense of what the condition of the A's are. We're waiting for U.S. Transportation Command (USTRANSCOM) to finish with the joint staff, its desires for lift. Then, from that, we'll come and make a decision on the follow-on procurement. We have a few years before we have to get to that.

GLOBAL HAWK

Senator COCHRAN. One other procurement item that you mentioned was the Global Hawk. You said you were going to ask for funds for four of those. That sounds like just a few. Do you have any question about the effectiveness or the importance of it in the recent Iraqi Operation?

Dr. ROCHE. It's four in the budget; it's 34 in the Future Years Defense Plan (FYDP).

Senator COCHRAN. I see.

Dr. ROCHE. And, in fact, as we often point out, General Tommy Franks was very kind to John and me. He allowed us to put systems into Afghanistan that were really not ready for prime time. We had a couple of Global Hawks, as you know, auger in. We had a couple of Predators auger in. But we learned so much that by the time Iraqi Freedom came, we had terrific responsiveness from the Global Hawk. It's done beautifully, and we anticipate it being part of our inventory for a great deal of time.

AIRBORNE LASER

Senator COCHRAN. One of your defensive missile programs is the airborne laser program; the primary mission, knocking down ballistic missiles during the initial boost phase of flight, and using, as I understand it, an Air Force platform for that purpose. What is

the status of that, and what is the outlook? Do you have anything you can tell us about the progress being made in that program?

Dr. ROCHE. John has had a personal interest for a long time, and I'd like to let him answer.

General JUMPER. Sir, we've purchased the first airplane that will be the test bed for the laser, and the laser system's scheduled to fire on the ground, I believe, by the end of this year. Then it will be disassembled, put into the airplane, and further tested.

There have been problems with the airplanes, or with the system, as you can imagine, something this complex. When I talk to the scientists and engineers that are dealing with this, there is still great confidence that this thing is going to work. So it's funded appropriately to complete the engineering, to do the demonstrations, and to make sure that we are successful in what we have done so far, and it will all revolve around our ability to get a successful shot out of this thing in the next year or so. So I'm very confident, and I appreciate your interest in it.

Dr. ROCHE. And, as you know, it's in the Missile Defense Agency's budget, it's not in ours, sir. We view it like uncles looking at it. It's the experiment that ought to be done.

Senator COCHRAN. Yeah.

Dr. ROCHE. If it works, it's going to be fantastic.

Senator COCHRAN. Yeah.

Thank you, Mr. Chairman.

Senator STEVENS. Senator Durbin.

Senator DURBIN. Thank you very much, Mr. Chairman.

Secretary Roche, General Jumper, thank you for joining us today, and thank you for your service to our country.

I'd like to ask you another parochial question, which you can certainly expect from members of the panel from time to time, and it's one of interest to me, as well as Speaker Hastert, Congressman Costello, and Congressman Shimkus. In fiscal year 2004, Congress provided \$12.2 million to continue the C-9 mission at Scott Air Force Base for an additional year while a study was being completed on the mission of the 932nd Airlift Wing. In January, that study was released, and concluded that the men and women of the 932nd could meet the increased operational support aircraft, (OSA), requirements of the Air Force. And I know other studies are going on, but I wanted to ask you what your plans are to meet OSA requirements since the C-9As are scheduled to retire very soon, in fiscal year 2005, and it appears that we've not provided any funding to continue the mission. I know you have C-40s on your unfunded requirements list, but what do you plan to do between now and fiscal year 2007, when the C-40s reach—

Dr. ROCHE. I'll ask John to see if my memory is shaky on this, Senator. We believe that the C-9's at Scott ought to be retired. We'd like to flow the C-9C aircraft from Andrews to Scott, and then backfill Andrews with new C-40s. That's the plan. We'd like to be able to get that more defined over the next couple of years.

We have found that the medical evacuation planes, especially—we have so many other systems that do that well that that's not the purpose, but we still need, in the center of the country, the kind of capabilities that were contained in the C-9 fleet at Scott,

and we'd like to maintain it by flowing aircraft to Scott from Andrews.

C-40S

Senator DURBIN. Should you receive funding, how many C-40s will you acquire, at what cost?

Dr. ROCHE. Oh, sir, may I get back to you—

Senator DURBIN. Certainly.

Dr. ROCHE [continuing]. For the record?

[The information follows:]

SECRETARY OF THE AIR FORCE,
Washington, May 10, 2004.

The Honorable RICHARD J. DURBIN,
United States Senate,
Washington, DC 20510.

DEAR SENATOR DURBIN: Thank you for your continued support of the United States Air Force and particularly the men and women of Scott Air Force Base (AFB). During my testimony before the Defense Subcommittee on March 23, 2004, you asked me to explain what the Air Force plan is for Scott AFB once the C-9s leave.

The Air Force has identified a requirement for three C-40s at Scott AFB IL on our fiscal year 2005 Unfunded Priority List. If funding were appropriated for these aircraft, the Air Force Reserve Command's 932d Airlift Wing, along with an Associate Active Duty unit, would operate them. To facilitate a transition from the C-9A to the C-40, we have developed a bridge plan using C-9Cs.

C-9As would remain at Scott until replaced with C-9Cs from Andrews AFB MD. Beginning in fiscal year 2005 the Air Force will transfer C-9Cs to Scott AFB. As a C-9C arrives at Scott, a C-9A would retire. The intent is to continue to operate at least three C-9s until C-40Cs arrive.

According to the plan, two C-40Cs would deliver in fiscal year 2007 and one in fiscal year 2008, though we will make every effort to deliver the first C-40C in fiscal year 2006. As a C-40C arrives at Scott, a C-9C would retire.

I trust this response clarifies our intent for C-40s and the 932 AW mission. On behalf of the men and women of the Air Force, let me convey my gratitude for your interest and support.

Sincerely,

JAMES G. ROCHE.

Should the Air Force receive fiscal year 2005 funding it would acquire three C-40C aircraft for Scott AFB, IL.

Total cost for purchasing and establishing the C-40C operation at Scott follows. The cost includes sustaining the current C-9A operation at Scott during fiscal year 2005.

[In millions of dollars]

	Fiscal year 2005
Aircraft purchase (3x C-40C)	225.0
C-9A Fiscal Year 2005 Sustainment	8.3
C-40C Site Activation	12.4
O&M	3.8
MILCON	6.0
Total	255.5

Dr. ROCHE. I believe the number of planes is three, and I'm—
General JUMPER. We need to get back to you on that, sir.

Dr. ROCHE. Yes, sir.

Senator DURBIN. That's fine.

When would the Air Force be able to assume the operation and maintenance costs for those aircraft?

General JUMPER. For the new C-40s?

Senator DURBIN. Right.

General JUMPER. Sir, I think that once we got them, we'd be able to—it would probably be a part of a contract that would come with the airplanes, and we'd be able to assume it right away.

Dr. ROCHE. The beginning of it would be a warranty period. There might be some—

General JUMPER. Right.

Dr. ROCHE [continuing]. Some contract logistics support, because we don't have a big fleet of these. Anything we have a big fleet of, we have a strategy to migrate eventual maintenance to our depots.

Senator DURBIN. And I want to make sure—maybe you've answered this, but I want to make certain I understand it—where will the C-40s be stationed, and what unit will they be assigned?

Dr. ROCHE. They will replace C-9Cs at Scott Air Force Base assigned to the 932nd Airlift Wing.

Senator DURBIN. C-40s at Andrews?

C-9AS

What is the bridge plan, since the C-9As will be retiring soon?

Dr. ROCHE. To move planes from Andrews to Scott.

Senator DURBIN. Do you know what the cost will be for fiscal year 2005?

Dr. ROCHE. Sir, I'm sorry, not off the top of my head.

Senator DURBIN. Are there any C-9Cs that are noise compliant?

General JUMPER. No, sir, there are not.

Senator DURBIN. What will it take—

General JUMPER. Sir—

Senator DURBIN [continuing]. Will it take to make them—

General JUMPER [continuing]. It's not only noise compliant, it's compliant with all the avionics restrictions that are coming down the road. I don't have a number, but it would be huge. We can get you that number.

[The information follows:]

None of our C-9Cs are stage III noise compliant. The Air Force plans to primarily use the C-9Cs for CONUS travel, where hush kits are not currently required.

Based on the USMC experience with equipping their two C-9B aircraft with hush kits, it would cost approximately \$2.5 million per aircraft. The cost to equip the three C-9Cs and spare engines (\$2 million) is estimated at approximately \$9.5 million.

Due to increase weight of the hush kits (approximately 300 lbs.), the C-9C will experience reduced range and/or reduced capacity (cargo and passenger loads).

GUARD AND RESERVE

Senator DURBIN. May I ask you another question? Because I note that you're not only responsible for the active Air Force, but have responsibilities for the Guard and Reserve. What are your projections about recruitment and retention for Guard and Reserve units, based on current activations?

Dr. ROCHE. Yes, sir. We're delighted to answer this one. These are fabulous people. Only about 35 percent, or less, of our Air National Guard and Air Force Reserve have been mobilized in these conflicts. We have something like 6 percent mobilized at this time. When we asked them about recruiting, because we were worried, and we had a conscious plan after Operation Enduring Freedom to make sure that our commands did not hold on to guardmen and

reservists more than they needed to be. We said we had an ethical requirement to return these colleagues back to their normal lives. We created the program of thanking every single employer. We sent a pin, replicating something that was done in World War II, to each employer to say, "Thank you for what you've done for these fighters."

Their recruiting seems to be doing fine. Sometimes you scratch your head and say these are people who are so dedicated and so patriotic that they go through all kinds of family disruptions in order to serve their country. They're truly wonderful.

We are also trying to have our excessive active duty members, who we can, migrate to the Guard and Reserve to complete their obligated service, a program we call Palace Chase, which we're thinking of expanding. So we very much worry about the Guard and Reserve because we're so dependent on them.

General JUMPER. Right now, sir, we're meeting 100 percent of our goals in both Active, Guard, and Reserve, for both recruiting and retention.

Senator DURBIN. Mr. Chairman, I would just say, I'm glad to hear that. That's great information. It says quite a lot about the men and women serving us in the Guard and Reserve, as well as our active duty. It is unfortunate, and I hope to change soon, the fact that activated Guard and Reserve Federal employees don't receive the same type of consideration from their employer as many in the private sector.

Dr. ROCHE. And the States.

Senator DURBIN. And States. Some States do, some don't. But, clearly, we should set an example. Ten percent of the Guard and Reserve in America are Federal employees, and, once activated, they don't receive the same helping hand that many private employers are providing activated Guard and Reserve.

Dr. ROCHE. It's a mixed bag, Senator. There are some private employers, who, after 2 months, don't support. There are others, who are very patriotic, who have borne the cost. Every time I find one of them, I thank them. When I find a particularly outrageous case of a private employer, I've been known to pick up the phone and call the Chief Executive Officer (CEO) and have a chat.

Senator DURBIN. Oh, I'm glad you do. I just hope the Federal Government will set an example. Thank you.

Thank you, Mr. Chairman.

Senator STEVENS. Thank you very much.

Gentlemen, we have 10 minutes left, and we're going to set a clock for 3 minutes for each one of us to ask questions, if you'll agree.

Let me just make a statement and ask one question. I'm told that the tankers flew 6,193 tanking sorties in Iraq alone during this past period, and that they've off-loaded over 417 million pounds of gas to be used in the ground vehicles. That shows how critical those tankers are to us. And I do hope that we can proceed further.

My question is, Is it possible, in this open session, to talk about the sorties that have been flown by the F/A-22s, sorties in this

testing period, routinely against adversaries like souped-up F-15s? Can you tell us what happened, and give us a little description of that?

Dr. ROCHE. If I may, just put—

Senator STEVENS. John, can you do that?

Dr. ROCHE. 12,000 tanker sorties out of 99,000—12,000 are tankers.

General JUMPER. Sir, we've got more than 5,000 hours of testing on the F/A-22 airplane now. The guys that are flying against it are our very best. And the testimony that comes back to me is, "When we fly against the F/A-22, we never see a thing, and we're dead before we know it." Like Dr. Roche said, we have received testimony from the guy who has been commanding our test efforts, and is a seasoned fighter pilot of many years. He said, "If we went to war today, this is the airplane I'd want to take." It goes on and on. So it's very, very positive, sir.

Senator STEVENS. These guys behind you, were they part of that group?

General JUMPER. Sir, these are F-15 pilots. There's no doubt that they'll be flying F/A-22s someday, and they know what the airplane can do. They talk to their buddies, and they know what the airplane can do.

Senator STEVENS. Just being a little provincial, I hope you stick around. I have asked for a photographer. I'll send a picture home with you—

General JUMPER. Yes, sir. You bet.

Senator STEVENS [continuing]. Here.

Senator Cochran.

Senator COCHRAN. Mr. Chairman, I'm curious to know what progress we are making in the protection of our aircraft in the Iraqi theater. I know there's an infrared laser capability that's being developed and tested. Is this an effective defense against missiles that are aimed at our aircraft that are in tankers and other similar aircraft?

MISSILE WARNING RECEIVER

Dr. ROCHE. There are a number of levels of protection. There's the—we basically have a warning receiver, missile warning receiver, that tells you something's shot at you, and then you have a countermeasure you deploy. You can have difficulties with both. The countermeasures that are the most widespread are flares. There's a system called directional infrared countermeasures (DIRCM), which is on our special operating C-130s. There's a derivative of it, called LAIRCM, which is large aircraft infrared countermeasure system. Given the fact that there are components of this that are produced by a series of companies, there's only so much that can be done in a period of time, we are spreading these out over a number of our C-17s, C-130s, and Special Operations aircraft. We have a classified number now installed. We are doing it in such a way that we can put some capability on almost all of our large aircraft C-5s, as well. As we get enough of these systems, we'll start adding systems to each airplane. They have been extensively tested down at White Sands over and over and over. They were retested again most recently when we had concerns about

Iraq. When those systems are installed, the result, so far, is they've been very, very effective.

SPACE-BASED RADAR

Senator COCHRAN. There's also an effort to move forward with a space-based radar system. Could you give us a report on the status of that?

Dr. ROCHE. Yes, sir. It's in its architectural phase. One of the issues that we're trying to work out is to—how much money do you want to have in the space-based radar part, as compared to how much do you want to have in atmospheric systems. There are things that space-based radar can do that clearly you could otherwise not do—circle the world in a short period of time, look deep inside a denied territory. But there are certain technical things that can be done by systems like JOINTSTARS or the upgrade to JOINTSTARS, called multi-platform radar technology insertion program (MP-RTIP), which is a module improved radar that would go on E-10A command and control aircraft, that can do for the ground forces what space-based radar cannot do. Therefore, we believe this is a portfolio, and the portfolio to have some space-based radar, but we would not want to have all our eggs in that basket; you'd want to go across, so that you can do both synthetic aperture radar imagery, as well as moving target indicators, as well as large sweeps of the globe. So it's complementary.

JOINT STRIKE FIGHTER (JSF)

Senator COCHRAN. The Joint Strike Fighter, multi-role fighter, that is under development, I understand the aircraft has been experiencing some development problems, the most widely publicized having to do with the overall weight of the aircraft. You mentioned this. You touched on this in your statement. What is the outlook for this program?

Dr. ROCHE. The first point I'd like to make, Senator, is that this is an airplane. It's one of our complicated airplanes. If you look at the history of our aircraft, we demand enormous amounts from them, and they are never what the viewgraphs say. The JSF is going from the viewgraph stage of an airplane to real drawings, real weight measurements, real component measurements, en route to being developed. It's only completed two of what was originally a 10-year development program. Now it's two of an 11-year development program. Weight has come up. You would expect that about this time. I can sit here and predict what kinds of problems we're going to see in 2008, because they're natural in the development of these systems.

Is the weight a terminal problem? We don't think so. But because it most severely affects the short-takeoff and landing airplane, we believe it prudent and right in our responsibilities to work that problem soonest, without disrupting the program, and to put all the attention on risk reduction of the STOVL version. If we can get the weight down, more thrust out of the engine, and possibly flying it slightly differently; you don't have to keep every constraint the same so that it's an effective weapons system, then we would like to proceed with the program.

But we are very attentive to it, especially now that the Air Force wants to purchase some of the STOVL units. So we and the Marines are joined at the hip on this.

Senator COCHRAN. Thank you, Mr. Chairman.

Senator STEVENS. I do hope you'll mobilize, as much as you can, the support for the F/A-22. I recall that the B-1, the B-2, the 117, C-17, you think of any new system that was right on the line of becoming right up to IOC, it's been just attacked viciously. But they're always in favor of the systems that are over the horizon. Okay? Now, this system is needed, and I hope we can get the support we need, here in Congress, to maintain it.

I thank you all for what you're doing, and I do really commend you for what we saw when we went into Iraq and Afghanistan and Pakistan, and Kuwait. Our generation was called—what? The—

Dr. ROCHE. The Greatest Generation.

Senator STEVENS [continuing]. Greatest Generation. Well, we spawned a greater generation. Those kids that are out there now are much better than we ever were, and they're doing a wonderful job, men and women now. And, I'll tell you, it's just an absolute privilege to be able to visit them. So we thank you for giving us a lift over.

Dr. ROCHE. I repeat what John Jumper said, these young people are thrilled when you take the time in your schedule to spend some time with them.

Senator STEVENS. Both Dan and I wish we could be reincarnated right now and see some of these systems and be able to fly them. You know?

I did fly the V-22, yes.

ADDITIONAL COMMITTEE QUESTIONS

If there are any additional questions, they will be submitted to you for your response.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTION SUBMITTED TO HON. JAMES G. ROCHE

QUESTION SUBMITTED BY SENATOR PETE V. DOMENICI

F-117 STEALTH FIGHTER

Question. The F-117 Stealth Fighter has provided the United States with a low-observable first strike capability for nearly 20 years. On day-one, hour-one of Operation IRAQI FREEDOM, Stealth Fighters delivered precision munitions on an Iraqi leadership target. F-117s also struck highly valuable, heavily defended targets during the conflict in Serbia. The F-117 has proven itself to be the "tip of the spear" of America's military might. The fiscal year 2005 Air Force budget proposes to reduce 20 percent of the Stealth Fighter force. (10 of 50 aircraft) It is my understanding that the Air Force has performed a risk-analysis of the proposed retirement. I am concerned, however, that this Committee has not had sufficient time to review this important Air Force decision.

Given the F-117's proven capability, do you think it might be prudent to delay this retirement decision so Congress has more time to gather further information?

Answer. As you well know the F-117 has served our Nation well for many years. We believe it is prudent and timely to retire a specific portion of them enabling the Air Force to fully support and sustain the remaining aircraft and capitalize on other Air Force transformational capabilities. Therefore, we would prefer to act now as

outlined in the fiscal year 2005 President's Budget. As always, we welcome discussion on this and other subjects of interest to you.

QUESTIONS SUBMITTED TO GENERAL JOHN P. JUMPER

QUESTIONS SUBMITTED BY SENATOR PETE. V. DOMENICI

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SUPERSONIC TRAINING STUDY

Question. As you know, the fiscal year 2003 DOD Authorization bill began a process of evaluating airspace at Cannon Air Force Base for supersonic flight training. The purpose of this study is to provide more realistic training for our pilots by allowing them to fly supersonic speeds at lower altitudes.

Can you provide me with an update on the progress of the Environmental Impact Study associated with this supersonic training initiative?

Answer. On December 31, 2003, the Air Force began the Environmental Impact Statement (EIS) process by having the Notice of Intent published in the Federal Register. That was followed by a series of public scoping meetings in late January 2004. In December 2004, after extensive AF and FAA coordination and review, we expect to publish the Draft EIS for public and agency review. Hearings will then be held to receive comment on the Draft EIS. A Record of Decision is expected in fall 2005.

SUBCOMMITTEE RECESS

Senator STEVENS. We're going to reconvene on March 31 to consider the President's request for the intelligence community.

Thank you very much.

[Whereupon, at 11:33 a.m., Wednesday, March 24, the subcommittee was recessed, to reconvene at 9 a.m., Wednesday, March 31.]