

**DEPARTMENT OF THE AIR FORCE**

**PRESENTATION TO THE ARMED SERVICES COMMITTEE**

**UNITED STATES SENATE**

**SUBJECT: FISCAL YEAR 2006 AIR FORCE POSTURE**

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## **INTRODUCTION**

Today's security environment is characterized by change and ambiguity. The future will include a variety of challenges, including the risk of catastrophic attacks on the homeland, and the possibility of disruptive technological breakthroughs by our adversaries. The number and character of potential U.S. adversaries are growing, as states and non-state actors acquire advanced technology and even weapons of mass destruction. We can foresee the near-term threats posed by ballistic and cruise missiles; chemical, biological, radiological, and nuclear weapons; advanced double-digit surface-to-air missiles; and sophisticated combat aircraft. We should also anticipate computer network attacks and attacks on other critical infrastructure, including space networks. Not only must we be prepared to confront these known threats, but we also must be ready for unexpected, disruptive breakthroughs in technology that may undercut traditional U.S. advantages. Maintaining a strong defense able to overcome and defeat these threats remains an imperative for our nation. Currently, the Air Force can command the global commons of air and space, and significantly influence the global commons of sea and cyberspace; however, we cannot maintain this advantage using yesterday's technology in the systems and air and space vehicles of our current force structure. Recapitalizing our aging systems is our number one challenge.

We are meeting these challenges head on. With capabilities-based planning; investments in modernization, science and technology; Airmen development; and a focus on integration, we will transform into a more lethal force.

We are working with equal intensity to increase the integration and effectiveness of the joint and interagency team. The Air Force is responsible for several missions essential to the successful prosecution of any joint expeditionary operation: we provide the persistent intelligence and communications networks that deliver decision-quality information to the joint force commander; we provide global mobility in the airlift and tanker forces that move people and equipment anywhere on the planet; and we provide rapid strike by employing an umbrella of kinetic and non-kinetic strike capabilities to deliver precise, tailored effects. For America to hold its military advantage, the Air Force must continue to improve its vital national capabilities. This means anticipating the battlespace effects required in the future; we must begin today to create the force we will need tomorrow. The Air Force must adapt for the future without degrading its ability to conduct operations now and in the near term. At the same time, we must recognize fiscal constraints and remain a responsible custodian of the taxpayers' dollar. We have developed a long-range plan to allocate resources, balance risks, and shape the force to protect our nation – a comprehensive Future Total Force (FTF).

Within FTF, we are restructuring our organizations for the decades ahead. The organizational concept within FTF leverages the strengths of all three components (Active Duty, Air Force Reserve, and Air National Guard), as well as anticipated advances in technology, to create the effects needed in tomorrow's battlespace. FTF encompasses all domains: space, air, ground, and information. Most importantly, it capitalizes on our most potent, flexible resource:

our Airmen.

Our Airmen are a vital national resource. A key element in their development is continuing to adapt the force structure to support expeditionary operations. We face the paradox of suffering shortfalls in certain high-demand career fields while exceeding our overall congressionally authorized end strength. Therefore, we have enacted several programs to reduce the total number of Air Force personnel while reinvigorating career fields experiencing shortfalls.

As this century unfolds, technological innovation is accelerating at an unprecedented pace. Our challenge is to quickly convert laboratory ideas into battlefield effects. This entails more than creating new weapon systems; it means adopting a developmental culture that is inherently agile and responsive, enabling state-of-the-art technologies to reach the battlefield in real time. Such institutional agility will allow us to aggressively divest our legacy systems, while fielding the capabilities needed to meet new strategic challenges.

We have the finest Airmen employing the most advanced technology. We are integrating operations with those of the other Services and our coalition partners. Air and space power is an essential component of a joint warfighting team and a critical force multiplier for our Soldiers, Sailors, and Marines. Our paramount responsibility is to provide air and space dominance over the battlefield to enable the freedom of maneuver necessary for the success of joint and coalition operations.

Whether strengthening the capabilities of Airmen on the battlefield; enabling joint service net-centric operations; furnishing more airlift and aerial refueling

capability; or establishing an Air Component Coordination Element with ground force commanders, the Air Force is committed to increasing support to the joint warfighter. The United States Air Force makes the whole team better.

## **AIR AND SPACE POWER TODAY**

Even as the Air Force moves forward with the Future Total Force, we are engaged around the globe. Across many continents and missions and in air and space, the Air Force is a complete partner with our sister Services, inter-agency partners, and friends and allies.

### **Global War on Terrorism**

Since the shockwaves of September 11<sup>th</sup>, 2001, the Air Force has been integral to conducting and enabling joint and coalition operations in the Global War on Terrorism (GWOT). Across three campaigns, Operation NOBLE EAGLE (ONE), Operation ENDURING FREEDOM (OEF) and Operation IRAQI FREEDOM (OIF), the Air Force capabilities of rapid strike, global mobility, and persistent command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) helped defend the air sovereignty of North America; break Taliban control of Afghanistan; identify, target, and destroy al-Qaeda terrorist nests in Afghanistan; overthrow Saddam Hussein's regime; and conduct reconstruction and counter-insurgency operations in Iraq. Although the threat of terrorist attacks against the United States remains, the joint team – strengthened by the Air Force – has made substantial progress in putting terrorists on the defensive and developing the new security partnerships essential for a sustained GWOT.

## **Operations IRAQI FREEDOM and ENDURING FREEDOM**

The Air Force continues joint operations against Taliban remnants and Iraqi insurgents. At the close of 2004, we maintained nearly 31,000 Airmen in the region – including 5,000 Air National Guardsmen and 2,500 Air Force Reservists – and were flying 225 sorties a day over Iraq and Afghanistan. Having already flown more than 250,000 sorties, the Total Force team of Active, Guard, and Reserve Airmen continues to perform aeromedical evacuation, persistent C4ISR from air and space, close air support, aerial refueling, and intertheater and intratheater airlift, while successfully adapting to the dynamic environment of asymmetric warfare.

While certainly prominent in Major Combat Operations, rapid strike has continued to enhance joint warfighting during reconstruction and stability operations.

Strikes against Taliban forces and Iraqi insurgents show the enduring need for strike capabilities and the capability of the Air Force to strike time-sensitive targets with minimal collateral damage. The Air Force is bolstering this capability with the deployment of 500-pound Joint Direct Attack Munitions now in theater, development of the Small Diameter Bomb, and development of directed energy weapons capable of delivering precise and tailored effects in adverse environments.

Not only are Airmen directly overhead in Iraq and Afghanistan, but Airmen from as far away as Nevada also are controlling remotely piloted aircraft critical to persistent C4ISR and rapid strike missions. For instance, Predator aircraft are able to transmit their live video pictures to ground-based targeting teams that are

equipped with the prototype Remote Operations Video Enhanced Receiver (ROVER) system. Linking rapid strike and persistent C4ISR to forces on the ground, ROVER has been used repeatedly to detect, target, and destroy improvised explosive devices (IEDs), mortars, rockets, and other insurgent activities across the region. Bolstering these capabilities are Tactical Airborne Reconnaissance System (TARS) equipped F-16s flown by deployed Air National Guard units. The digital cameras on the TARS pod allow the pilot to conduct reconnaissance while simultaneously providing close air support. Integrating these two missions is the essence of responsive reconnaissance and integral to Air Force support to ground forces.

To help defeat IEDs, the Air Force has fielded Specialized Explosive Detection Dogs and upgraded three flying platforms that specifically focus on detecting and defeating IEDs. In the future, we will deploy IED Defeat Field Teams to further study where Air Force unique systems can make an impact.

To ensure uninterrupted sustainment of our deployed forces and unhindered global mobility, several initiatives are being implemented to enhance aircraft protection capabilities, including upgrades to existing aircraft defensive systems, accelerated installation of new systems, and improvements in software and flare dispensing patterns. These improvements will increase the capability to detect and defeat shoulder-fired missiles being used against our mobility aircraft.

Recently, these mobility assets have been used to reduce the need for ground convoys on supply routes in Iraq. Flying above the IEDs and ambushes that challenge convoys, the use of Air Force airlifters like the C-130 and C-17 has

reduced the number of trucks in convoys by nearly 350 trucks per day. Operations in Iraq and Afghanistan also highlight the importance of space-based C4ISR capabilities to U.S. and coalition forces. These capabilities have become integral to effective warfighting operations and include precision position, navigation and timing; secure communications; global weather; launch and support operations; persistent worldwide missile warning; and intelligence gathering. OIF and OEF relied on the all-weather precise position, navigation, and timing capability provided by the Air Force's Global Positioning System (GPS) constellation, satellite communications (SATCOM), and timely observations of weather and enemy activity. Carrying out time-sensitive targeting of Iraqi leadership and other critical targets during major combat operations, nearly 40 percent of all munitions used in OIF were GPS-guided and unaffected by the driving sand storms and inclement weather. Holding the ultimate high ground, Air Force space professionals keep a constant vigil over a global battlespace – planning, acquiring, maintaining and operating the systems that sustain America's decisive advantage in space.

### **Operation NOBLE EAGLE and Homeland Defense**

The Air Force's principal Homeland Defense mission is Air Defense and preserving the air sovereignty of the United States and its territories. Since 9/11, over 37,000 fighter, aerial refueling, and airborne early warning sorties have been flown in defense of the United States, while over 1,800 air patrols have responded to actual incidents and suspicious flight operations. A mission that leverages the Air Force Reserve, Air National Guard, and Active Duty



components, the Citizen Airmen of the Air National Guard have primary responsibility for providing alert aircraft at 17 of 18 sites.

Moving beyond internal Air Force organization, the Air Force also has worked extensively with joint, interagency, and combined organizations to improve the effectiveness of Homeland Defense activities.

Exercises like DETERMINED PROMISE-04 and UNIFIED DEFENSE-04 illustrated how rapid strike, persistent C4ISR, and global mobility can be seamlessly integrated with other agencies, and prove critical to supporting U.S. Northern Command and the Department of Homeland Security.

The Civil Air Patrol provides additional capability to Northern Command, federal agencies, and state and local governments in the Global War on Terrorism.

Located throughout all 50 states, the District of Columbia, and Puerto Rico, the Civil Air Patrol leverages the skills and vigilance of 64,000 non-paid volunteers in over 1,700 units to bolster the Nation's defense.

### **Other Contingency Operations**

In addition to operations at home and Southwest Asia, the Air Force supported multiple operations around the globe in 2004. Complementing our permanent presence in Northeast Asia, we bolstered the deterrence of North Korea with the continuous deployment of six B-52 bomber aircraft to the American territory of Guam. The 8,400 Airmen stationed in South Korea alongside Soldiers, Sailors, Marines and our South Korean allies are critical to regional stability, and have maintained the United Nations armistice on the Korean peninsula for over 51 years.

In the Balkans, Airmen have flown over 27,000 sorties in support of Operations JOINT FORGE and JOINT GUARDIAN. 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 2004, approximately 475 Airmen were supporting NATO's goal of achieving a secure and stable environment.

Since December 1989 and throughout 2004, Airmen have been a critical 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, eight aerostats and five ground-based radars provide round-the-clock detection and monitoring of air space. Operating these C4ISR installations, Airmen detected, monitored, and provided intercepts on hundreds of targets attempting to infiltrate U.S. airspace without proper clearance. Along with our joint and interagency partners, these operations resulted in hundreds of arrests and stopped thousands of pounds of contraband from being smuggled into the U.S.

Additionally, the Air Force is heavily involved in providing humanitarian relief to people in need around the globe. Most recently the Air Force deployed aircraft and Airmen to assist in relief efforts for the Southeast Asian countries struck by tsunamis. In the initial days, C-130s and KC-135s, flying 21 missions, delivered over 120 tons of food, water, medical supplies, vehicles, and personnel to assess relief assistance. In another region of the world, the Air Force provided airlift and logistical support to the deployment of African Union peacekeepers to the war

torn area of Darfur in Sudan. Also, during recent elections in Afghanistan, we airdropped water and food to remote areas to help ensure a secure and smooth voting process.

Supporting all of these Air Force operations is a robust training program that allows our Airmen to train like they fight. Competition for scarce air, land, and water resources threatens to further encroach onto our installations, ranges, and air space – vital national assets for developing and testing new weapons, training forces, and conducting joint exercises. The Air Force supports legislative, regulatory, and management initiatives that protect Air Force operational capability while sustaining, restoring, and modernizing our natural infrastructure.

### **Air and Space Expeditionary Force**

The Air and Space Expeditionary Force (AEF) is how the Air Force organizes, trains, equips, and sustains forces to meet defense strategy requirements outlined in the National Military Strategy and Strategic Planning Guidance. Including the Active Duty, Air Force Reserve, and Air National Guard, the Air Force is divided into ten AEFs and an enabler force to support and sustain global expeditionary operations. Each AEF provides a portfolio of effects-based capabilities for the Combatant Commander. These capabilities are immediately available in two AEFs continually postured for rapid deployment. The remaining eight AEFs are in various stages of redeployment, rest, training, or deployment preparation but could rapidly deploy to a combat area if needed. When necessary, the full capability of the Total Force can be realized by surging the remaining AEFs.

During 2004, worldwide requirements of OIF, OEF, and GWOT placed high demands on our Expeditionary Combat Support (ECS) forces, long-range bombers, security forces, and other units. Due to this increased tempo, selected Air Force forces are still deployed at nearly twice the numbers that AEF policy defines as “sustainable.” To adapt to this new set of circumstances, we changed our AEF deployment length from 90 days to 120 days, and the AEF cycle from fifteen months to twenty months. The greater deployment length allows greater continuity for expeditionary commanders in the field.

### **New Triad**

The National Military Strategy impacts our strategic forces as well. The Department of Defense’s new defense strategy of employing a capabilities- vs. threat-based approach to planning led to the ongoing transformation of the existing triad of US strategic nuclear forces (intercontinental and sea-launched ballistic missiles, and bomber aircraft) into a New Triad composed of a diverse portfolio of systems. The elements of the New Triad will contain non-nuclear and nuclear “strike capabilities;” active and passive defenses; and research and development and industrial infrastructure for developing, building, and maintaining offensive forces and defensive systems.

### **Worldwide Force Protection Challenges**

The United States faces an array of asymmetric threats from terrorists and rogue states necessitating a new Force Protection concept of Integrated Base Defense. The new concept draws from recent lessons learned and defines a Force Protection role for every Airman as a defender of bases and critical assets. We

are also developing a wide range of offensive and defensive capabilities to include new ground sensors, unmanned aerospace sensors, a common operating picture, and a command and control suite that links these sensors to remotely operated weapons and robotic systems. Non-lethal weapon systems have the potential for bringing a revolutionary set of capabilities to commanders. Countering and defending against chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) weapons is another element of Force Protection and Integrated Base Defense. To prevent adversary acquisition or development of these weapons, neutralize their capabilities, and restore essential operations and services after an attack, we are implementing a Counter-CBRNE Master Plan. This will improve our ability to meet operational needs, while maximizing joint cooperation and leveraging existing institutions and capabilities.

## **AIR AND SPACE POWER, TOMORROW THROUGH THE FYDP**

### **Base Realignment and Closure 2005**

Base Realignment and Closure (BRAC) 2005 is the primary means by which the Air Force will optimize current infrastructure to enhance both warfighting capability and efficiency for the future. Taking a comprehensive, 20-year view, BRAC 2005 will allow the Air Force to realign the posture of our forces to better address the new challenges we face. Through creation of innovative organizational and basing solutions, the Air Force will facilitate joint and multi-component missions, reduce inefficiencies, and free up valuable resources to recruit quality people, modernize equipment and infrastructure, and develop the capabilities needed to meet 21<sup>st</sup> century threats.

While doing this we will remain focused on our three core competencies, which enable us to create the effects required on the battlefield of the future:

Developing Airmen, Technology to Warfighting, and Integrating Operations. By focusing on these areas the Air Force has created a program through the Future Years Defense Program, which optimizes the return on our resources.

### **Developing Airmen**

To adapt to dramatic changes in force structure and the security environment, we established a set of strategic goals to focus our personnel mission.

#### Force Shaping

We are on track to bring active duty end strength to the congressionally authorized level of 359,700 by the end of fiscal year 2005. This planned reduction shapes the future force without jeopardizing career field health.

The Force Shaping plan has two phases: 1) increase voluntary separations and retirements, and 2) further increase voluntary separations while simultaneously reducing programmed accessions. Phase 1, implemented in February 2004, was used to judge retention behavior and ensure a measured approach to reducing end strength. Phase 2, begun in May 2004, opened the aperture to allow more service members an opportunity to leave active duty. Additionally, we significantly reduced the Selective Reenlistment Bonus (SRB) program from 146 to 62 enlisted skills, resulting in a significant decrease in first term reenlistment rates; and we continue to review further reduction of SRB skills.

Other Force Shaping initiatives include the PALACE CHASE program – early separation from Active Duty to serve with the Air National Guard or Air Force

Reserve – waiving of active duty service commitments, and resurrection of the Career Job Reservation Program to correct skill imbalances and re-train first-term Airmen into needed skills. Additionally, we took advantage of the statutory authority that allows 2 percent of colonels and lieutenant colonels with two years time-in-grade to retire in grade instead of waiting the normal three years; and some Air Force Reserve Officer Training Corps graduates may now go directly into the Air National Guard or Air Force Reserve.

In fiscal year 2004, we lowered accession goals by approximately 3,000. In fiscal year 2005, we continued to lower our accession goals, and have temporarily limited enlisted accessions to only the 58 most critical combat and combat support skills.

The results of our Force Shaping efforts are positive, facilitating the migration of personnel into critical shortage specialties while reducing manpower to ensure we meet authorized end strength requirements by the end of fiscal year 2005.

### Rebalancing the Force

As we return to our authorized end strength, relief is flowing to “over stressed” career fields. This is a multi-step process, but our guiding principle is simple – we will properly size and shape the force to meet the needs of the Air Expeditionary Force. We are drawing down prudently, designating specialties and specific year groups within those specialties where we have more people than we need. At the same time, we are correcting our skill imbalances by realigning manpower and expanding training pipelines.

We are also taking a hard look at where our people serve. We have Airmen

serving outside the Air Force who don't deploy as part of an Air Expeditionary Force. They serve in joint and defense agency positions, some of which require uniformed people; however, others do not. Through military-to-civilian conversions and Competitive Sourcing initiatives, we are returning these Airmen “to the fold.”

The Guard and Reserve play a critical role in this endeavor. Today, 25 percent of the air expeditionary packages are composed of Air National Guard and Air Force Reserve volunteers. As we take steps to ensure the long-term health of our Active Duty forces, we must do the same for our Citizen Airmen.

#### Recruiting/Retention

While reducing accessions is a tool currently being used to bring the force down to authorized levels, it is imperative that we continue to renew and replenish the ranks with targeted recruiting. For fiscal year 2005, we plan to access nearly 19,000 enlisted members and just over 5,000 officers – a 44 percent reduction from normal enlisted recruiting levels and a slightly lower level of officers compared to fiscal year 2004.

As outlined under Force Shaping, a significant one-year reduction in our recruiting goal is part of a deliberate effort to reduce force size without jeopardizing long-term health. A one-year reduction will create a temporary decrease offset by the number of personnel accessed in preceding and subsequent years. We are committed to returning to normal recruiting targets as quickly as possible. Continued congressional support of our recruiting and marketing programs will greatly enhance the Air Force's competitiveness in a



dynamic job market.

A critical element for success is the ability to offer bonuses and incentives where we have traditionally experienced shortfalls. To protect this valuable resource we ensure active senior leadership management, including semi-annual reviews of which career specialties, and which year groups within those specialties, are eligible for bonuses. Congressional support for these programs, along with increases in pay and benefits and quality of life initiatives, have greatly helped us retain Airmen and their families.

#### Personnel Service Delivery Transformation

To achieve the Secretary of Defense's objective of shifting resources "from bureaucracy to battlefield," personnel services are being overhauled. Our Personnel Service Delivery Transformation dramatically modernizes the processes, organizations, and technology by which we support Airmen and their commanders. Routine personnel transactions, for instance, may now be done "on-line."

As a result, we deliver higher-quality personnel services with greater access, speed, accuracy, reliability, and efficiency. We programmed the resulting manpower savings to other compelling Air Force needs over the next six years. This initiative enhances our ability to acquire, train, educate, and deliver Airmen with the needed skills, knowledge, and experience to accomplish Air Force missions.

#### National Security Personnel System

Our civilian workforce will go through a significant transformation as well with

implementation of the Department of Defense National Security Personnel System (NSPS). NSPS is a simplified and more flexible civilian personnel system that will improve the way we hire, assign, compensate, and reward our valuable civilian employees. This modern, agile human resource system will be responsive to the national security environment, while preserving employee protections and benefits, as well as the core values of the civil service.

Implementation will begin as early as July 2005.

NSPS design and development has been a broad-based, participative process including employees, supervisors and managers, unions, employee advocacy groups, and various public interest groups. Employees slated for conversion to the new system will be included in groupings called Spirals. Spiral One will include approximately 85,400 General Schedule and Acquisition Demonstration Project, U.S.-based Air Force civilian employees and will be rolled out in three phases over an 18-month period. The labor relations provisions of NSPS will be implemented across the Department this summer as well. NSPS is the most comprehensive new Federal personnel system in more than 50 years and a key component in the Department's achievement of a total force structure.

### Culture of Airmen

We completed an Air Force-wide assessment of our sexual assault prevention and response capabilities, knowing we were not where we needed to be in addressing this societal problem that has serious readiness implications. A Campaign Plan was approved, and we are implementing specific initiatives to better understand the problem of sexual assault, do everything within our ability

to prevent it, and prepare ourselves to provide consistent and continuing care for victims when it occurs.

In response to an increased suicide rate among Airmen, we re-emphasized, and continue to stress, the need for Airmen to look after one another. Commanders and co-workers are rethinking the way Airmen interact with one another, calling attention to behavioral indicators and risk factors associated with suicide. Safety and risk management are also being emphasized to reduce the number of accident-related fatalities. We are weaving this mindset into the very fabric of our culture.

All Airmen have a responsibility to get involved, pay attention and ensure the health and well being of their wingman. It's not a program, it's a mindset; a cultural shift designed to take better care of our most valuable resource – our people.

#### Air Reserve Component (Air Force Reserve and Air National Guard)

Recruiting and retaining quality service members are top priorities for the Air Force Reserve. Despite the strains mobilization places on the personal and professional lives of Reserve members, volunteerism remains high. In fiscal year 2004, and for the last four years, Air Force Reserve exceeded its recruiting goal. Despite the long-term effects of high operations and personnel tempo, Air Force Reserve end-strength was within 0.7 percent of fiscal year 2004 congressionally mandated requirements.

Reduced success in attracting military Air Force members who are separating from Active Duty has steered the Air Force Reserve toward recruitment and

accession of non-prior service members. To meet the resulting increased training demand, 4,000 training slots per year are now allocated and funded for the Air Force Reserve. In addition, the Air Force Reserve is taking advantage of the previously mentioned PALACE CHASE program, which allows Active Duty members the opportunity to move to the Air Force Reserve or Air National Guard. These experienced members are then placed into critical career skills.

Complementing the Air Force Reserve, the Air National Guard plays a vital role in support of the Homeland Defense mission and force transformation. The ability of the Air National Guard to achieve recruiting and retention goals through fiscal year 2006 will help determine how well the Air Force assumes new missions and supports Homeland Defense.

As the Air Force Reserve and Air National Guard continue to surge to meet operational requirements, we are examining existing law and policy that govern enlisted incentives and related compensation with an eye toward identifying changes that will encourage volunteerism. The reserve enlisted bonus program is a major contributor to attracting and retaining both unit and individual mobilization augmentee members in critical career fields. To enhance retention, we are ensuring relevant compensation statutes reflect the growing reliance on the Air Force Reserve and Air National Guard to accomplish Air Force missions. We continue to explore enhanced bonus authorities, which will provide the flexibility to target our most pressing needs.

In addition, the Aviation Continuation Pay, the Career Enlisted Flyers Incentive Pay, and Aircrew Incentive Pay continue to be offered to retain our rated officer

and enlisted personnel. We expanded the Air Force Reserve Special Duty Assignment Pay (SDAP) program by including an additional six career fields to enhance recruiting and retention, improve program alignment, and provide parity to Air Force Reserve members. The expansion authorizes the payment of SDAP to a reservist qualifying in the same skill and location as their Active Duty counterpart.

The Air Force has made great strides in increasing education benefits for our Air Force Reserve and Air National Guard members, offering 100 percent tuition assistance for individuals pursuing an undergraduate degree and continuing to pay 75 percent for graduate degrees. In addition, we appreciate the President proposing and Congress enacting enhanced Montgomery GI Bill benefits for reserve and Guard members who have served lengthy deployments.

The fiscal year 2005 National Defense Authorization Act (NDAA) made permanent several authorities providing enhanced Health Care/TRICARE benefits for Air Force Reserve and Air National Guard members. For members with delayed-effective-date orders to serve on active duty in support of a contingency operation for more than 30 days, the new legislation permanently authorizes TRICARE eligibility for up to 90 days prior to the member's activation date for eligible members and their families. Additionally, the NDAA extended the Transitional Assistance Management Program benefit period from 60 and 120 days to 180 days for eligible members and their families.

### Training

Distributed Mission Operations (DMO) is the cornerstone for Air Force training

transformation. It is a readiness initiative to train warfighters as they expect to fight using simulation and high-fidelity architecture to link training at dispersed locations. DMO will reduce travel costs and operations tempo while providing mission rehearsal in an operationally realistic environment to maintain combat readiness and provide support to operations. It will prepare and assess Air and Space Expeditionary Forces and prepare AOC weapon systems, including Joint Force Air Component Commanders, for real-world missions. As an integration effort, DMO will leverage existing and emerging programs and technologies to fill gaps in total team training, rehearsal, and operations support.

Due to the continuing high operations tempo, the Air Force is filling over 1,900 positions in 16 different combat support skills for the U.S. Army in deployed locations – one of those skills is combat convoy operations. As a result, we established the Basic Combat Convoy Course to supplement Army training. This comprehensive, self-contained course emphasizes small unit leadership, teamwork, weapons training, and tactical convoy operations, greatly improving convoy operations and personnel survivability. It also reduced total training time in Kuwait from approximately six weeks to one.

#### Housing and Military Construction

Through military construction and housing privatization, we are providing quality homes faster than ever. Over the next two years, we will renovate or replace nearly 36,000 homes through privatization, and an additional 11,000 homes through military construction.

Still, Airmen primarily live in communities near our installations. Basic Allowance

for Housing increases have reduced their average out-of-pocket costs over the past few years, and will eliminate out-of-pocket costs altogether in 2005; allowing greater flexibility for Airmen who reside off base.

Investment in dormitories continues to accelerate in order to provide superior housing to our unaccompanied members – evidenced by nearly 4,400 dormitory rooms programmed for funding over the next four years. Approximately 75 percent of these will address existing inadequate dormitory conditions. Our new “Dorms-4-Airmen” standard is designed to increase camaraderie, social interaction, and accountability by providing four single occupancy bedroom/bathrooms with a common kitchen and living area in each module. The combination of the new standard and the Air Force’s unit integrity assignment policy provides an excellent platform to increase interaction within the same unit. Finally, the remaining dormitory program jumpstarts a buy-out of inadequate “pipeline” dormitories – those dorms that house young enlisted students during their initial technical training. Pipeline dormitory standards provide a large living area for two students, two walk-in closets, a bathroom, and a separate vanity for each occupant. All substandard dorms will be replaced by 2009. Knowing the Air Force provides for a family’s housing needs allows every Airman to focus on the mission.

Airmen’s performance and morale is directly influenced by quality work centers as well. Therefore, we’ve placed significant emphasis on recapitalizing and improving work facilities. We’ve focused investment in training facilities to ensure a quality technical and mission-oriented learning environment. Similarly, we’ve

implemented a plan to ensure all fitness centers meet current Air Force standards by 2011. Finally, we've continued our focus on providing quality childcare facilities.

### Battlefield Airmen

Airmen are engaged beyond the airbase; bringing technology to warfighting on the ground using advanced systems to designate targets, control aircraft, rescue personnel, and gather vital meteorological data. The Air Force is optimizing this family of specialties, known as Battlefield Airmen. So far, we have identified program management, acquisition, and sustainment synergies across the Combat Rescue, Combat Control, Terminal Attack Control, and Special Operations Weather functional areas. Because Air Force personnel are an integral part of the battlespace, we are also identifying common training requirements for these Airmen.

We need to organize Battlefield Airmen for maximum effectiveness in the modern battlespace. In addition, we must train Battlefield Airmen in the skills required to maximize airpower, and standardize that training across those specialties with different Battlefield Airmen skills. Finally, we want to equip our Battlefield Airmen with improved and standardized equipment for missions in the forward and deep battlespace.

This will expand commanders' abilities to employ battlefield airpower experts who can introduce unequalled accuracy, responsiveness, flexibility, and persistence into designated air operations.

Joint Terminal Attack Controllers (JTACs), a subset of Battlefield Airmen, direct



the action of combat aircraft engaged in close air support and other offensive air operations from a forward position. For the first time, JTACs will be recognized across the Department of Defense as capable and authorized to perform terminal attack control in accordance with a joint standard. The Joint Close Air Support Executive Steering Committee directed the drafting of a Memorandum of Agreement defining the qualifications, certifications, and currencies these JTACs must possess and maintain.

In addition to night vision equipment, JTACs carry a hardened laptop computer and multi-channel radio. We've significantly reduced the weight these Battlefield Airmen must carry while simultaneously providing them with the ability to do such things as designate targets several kilometers away. We must further decrease the weight of their gear while increasing the capabilities and interoperability of their equipment with other air, space, and ground assets. This combination of technology facilitates the direct transfer of information to combat aircraft, minimizing errors in data transfer. To that end, the Integrated Air-Ground Imaging Initiative: enables the A-10 to send digital targeting information instead of lengthy voice briefings; provides a LITENING or Sniper Targeting Pod video down link to the JTAC; and equips our JTACs with a multi-channel video receiver. This equipment will increase situational awareness, assist in combat identification, maximize first-attack success, shorten the kill-chain, and ultimately provide better support to ground forces.

### **Technology-to-Warfighting**

#### Capabilities-based Concepts of Operation

The Air Force has established a capabilities-based approach to both war planning and force development, allowing focused investments on those capabilities needed to achieve the battlespace effects required by the joint warfighter. Our capabilities-based approach frees us from platform-centric force planning, leading to new ways of thinking and innovative combinations of systems.

The Air Force has developed seven concepts of operation (CONOPS) – six operational and one supporting foundational concept – for capabilities-based planning. The CONOPS define the effects we can produce across the span of joint tasks we may be tasked to perform, and help us identify those capabilities an expeditionary air force will need to achieve the desired battlespace effects. They also provide an operational context for determining how good our capability levels need to be and assessing how close we are to that objective.

- Homeland Security CONOPS leverages Air Force capabilities with joint and interagency efforts to prevent, protect, and respond to threats against our homeland.
- Space and Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) CONOPS encompasses the integration of manned, unmanned, and space systems to provide persistent situational awareness, space control, and decision-quality information.
- Global Mobility CONOPS provides 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.

- Global Strike CONOPS employs joint power projection capabilities to engage anti-access and high-value targets, gain access to denied battlespace, and maintain that operational 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 via the Global Strike CONOPS, there will be a need for persistent and sustained air, space, and information operations.
- Nuclear Response CONOPS provides the deterrent “umbrella” under which conventional forces operate and, should deterrence fail, provides options for a scalable response.
- The Agile Combat Support CONOPS details the capability to create, protect, and sustain Air and Space Forces across the full spectrum of military operations. It is the foundational, crosscutting, and distinctive capability that enables Air Force Operational Concepts.

The CONOPS approach articulates operational capabilities that will prevail in combat and avert technological surprises. Through capabilities-based planning, we will continue to invest in our core competency of bringing technology to the warfighter, which will maintain our technical advantage and keep our air and space capabilities up to date.

#### Capabilities Review and Risk Assessment

The Capabilities Review and Risk Assessment (CRRA) process is the starting point for Air Force force planning and capabilities development. It replaced an outdated threat-based review process that focused on platforms instead of warfighting effects and the capabilities needed to achieve them. The CRRA requires a focus on capabilities and fosters development of innovative solution sets. The CRRA uses our six operational concepts and the foundational Agile Combat Support concept to examine and assess our Air Force capabilities now and in the future.

During the CRRA cycle, Risk Assessment Teams, composed of experts drawn from all specialties in the Air Force and supported by models, simulations, and other analytical tools, consider the requirements of the CONOPS. They review existing and planned programs, Science and Technology activities, and non-material factors. They determine the Air Force's ability to deal with an adverse event and the impact on achievement of the joint warfighting effects if the Service fails to provide the capability. Any shortfalls are screened against documented Lessons Learned and Combatant Commander Integrated Priority Lists.

The CRRA provides senior Air Force leaders an operational-, capabilities-, and risk-based focus for investment decision-making. It uses operational warfighting effects as the drivers for Air Force resource allocation, while also protecting public health and natural resources.

#### Recapitalization/Modernization

The number one challenge for the Air Force is the need to recapitalize our aging systems. For example, our aircraft fleet now averages 23 years old. To

determine the viability of these aging fleets, we chartered the Air Force Fleet Viability Board (AF FVB) in 2004 to establish a continuous, repeatable process for conducting fleet assessments. The AF FVB completed its first assessment, of the C-5A, in July 2004, and is currently studying the 43-year-old KC-135 fleet. The principles we applied this year during the CRRRA process ensured sufficient readiness to support the Global War on Terrorism while transforming the force and maintaining an acceptable level of risk. We have proposed recapitalization and modernization project funding necessary to extend today's legacy forces while bridging to required future systems.

Our primary modernization program is the F/A-22 Raptor. The F/A-22's revolutionary low observable technology, supercruise (Mach 1.5 without afterburner), integrated avionics, and exceptional maneuverability will guarantee America's air dominance and joint force freedom of operation. The F/A-22 program is transitioning from development to full rate production and fielding, where the aircraft will join an integrated air and space force capable of responsive and decisive global engagement.

The program entered Initial Operational Test and Evaluation (IOT&E) last April to evaluate its operational effectiveness and suitability. Air-to-air capabilities were successfully demonstrated, and initial air-to-ground capabilities were demonstrated with successful testing of the Joint Direct Attack Munition. In parallel with IOT&E, F/A-22 aircraft deliveries continue at Tyndall Air Force Base, Florida, where the first cadre of operational F/A-22 pilots is training. The 27<sup>th</sup> Fighter Squadron at Langley Air Force Base, Virginia, is on track to establish

Initial Operational Capability for the F/A-22 in December 2005.

Complementing the tremendous capabilities of the F/A-22 is the F-35 Joint Strike Fighter, an important element of the Joint Warfighter's Tactical Aircraft Modernization plan. For the Air Force, it will recapitalize today's F-16 and A-10 combat capabilities. Specifically, it will provide affordable and survivable precision engagement and global persistent attack capabilities. Optimized for all-weather performance, the F-35 will destroy an enemy's ability to attack or defend. In 2004, the F-35 program successfully addressed early design maturity challenges. The Service Acquisition Executive responsibility also switched from the Navy to the Air Force. In this capacity, we will continue to develop the three basic aircraft variants and coordinate the interests of the Navy and Marines, along with our numerous international partners.

Remotely Piloted Aircraft have demonstrated their combat value in the Global War on Terrorism. The RQ-1/MQ-1 Predator continues to transform warfighting; providing persistent intelligence, surveillance, and reconnaissance; target acquisition; and strike capabilities against time sensitive targets. Used in every Air Force operation since 1995, Predator has amassed over 100,000 flying hours. Today, with U.S.-based flight and mission control, Predator is truly providing a revolutionary leap in how we provide military capability. Equipped with an electro-optical, infrared, and laser designator sensor, and armed with Hellfire missiles, Predator not only shortened the sensor-to-shooter timeline – the sensor is now the shooter.

We are developing the ability to operate multiple aircraft from a single ground

station – in effect, multiplying our overall combat effectiveness over the battlefield. We are also developing and deploying a larger, more capable, and more lethal variant – the MQ-9 Predator B. The MQ-9 Predator B will employ robust sensors to automatically find, fix, track, and target critical emerging time sensitive targets.

By contrast, Global Hawk is a high altitude, long endurance, remotely piloted aircraft that provides robust surveillance and reconnaissance capabilities.

Through the innovative use of synthetic aperture radar and electro-optical and infrared sensors, Global Hawk provides the warfighter unrelenting observation of intelligence targets in night, day, and adverse weather. Since its first flight in 1998, Global Hawk has flown over 5,000 hours – over half of that time in combat. Global Hawk provides superior intelligence, surveillance, and reconnaissance data while deployed in support of the Global War on Terrorism. While cruising at extremely high altitudes, Global Hawk can collect information on spot targets and survey large geographic areas, providing military decision-makers the most current information about enemy location, resources, and personnel.

Dissemination and ground support exploitation systems consistently deliver timely intelligence to bring immediate advantage to combat operations. Despite its developmental status, Global Hawk is in constant demand by Combatant Commanders.

The C-17 production program continues to be a success story for the joint warfighting community. We are on schedule to receive the 180th of these force multipliers in 2008. In concert with C-5 modernization programs, C-17

acquisition is the critical enabler for meeting established airlift requirements in support of the current force-planning construct. Currently, the Joint Staff, Office of the Secretary of Defense, and Air Mobility Command are reviewing mobility requirements in light of the new National Military Strategy and the Global War on Terrorism. This Mobility Capabilities Study will provide a basis for determining future wartime airlift requirements. In the meantime, the C-17 has been the airlifter of choice in contingency operations. During Operation ENDURING FREEDOM, C-17s airdropped over two million humanitarian rations. In Operation IRAQI FREEDOM, the C-17 performed the largest troop airdrop since Operation JUST CAUSE in Panama, opening the Northern Front during initial operations.

Tomorrow's enabling capabilities will be hosted on a variety of systems to include the E-10A aircraft. The E-10A is being developed to identify and track enemy, friendly, and neutral forces, as well as non-combatants. It will provide persistent intelligence, surveillance, reconnaissance, and environmental data, and fuse multi-source information into a common operating picture. In addition, it will find, fix, track, and target low flying cruise missiles and moving surface targets. The E-10A program and its Multi-Platform Radar Technology Insertion Program, in conjunction with other weapon system platforms, will give the Combatant Commander a seamless picture of the battlespace and an integrated defense against the cruise missile threat. This capability allows friendly forces to respond to time-sensitive opportunities with decisive force.

We must also recapitalize our aging aircraft tanker fleet. Based on the



completion of the KC-135 Recapitalization Analysis of Alternatives, the air refueling portion of the Mobility Capabilities Study, and the results of the Air Force Fleet Viability Board study, the Air Force anticipates Department of Defense direction to execute the KC-135 recapitalization program of record. This program will support both the 2005 National Defense Authorization Act, which authorized purchase of up to 100 tanker aircraft through a multi-year contract, and the 2004 Defense Appropriations Act that established a \$100 million tanker replacement transfer fund.

Capabilities-driven modernization and recapitalization efforts continue on space systems as well; as we modernize our critical constellations and capabilities across the spectrum of navigation, weather, communication, missile warning, launch, surveillance, and ground systems.

The Evolved Expendable Launch Vehicle (EELV) fields two launch designs to provide assured access to space for government systems. The Transformational Communications Satellite will employ Internet Protocol networks and high-bandwidth lasers in space to dramatically increase warfighter communications connectivity. Modernization of Global Positioning System (GPS) and development of the next-generation GPS III will enhance navigation capability and improve resistance to jamming. In partnership with NASA and the Department of Commerce, the Air Force is developing the National Polar-orbiting Operational Environmental Satellite System, which offers next-generation meteorological capability. We are well on the way to deployment of the Space Based Infrared System, a transformational leap in capability over our aging

Defense Support Program satellites. The Space-Based Radar effort has been refocused on developing a system that meets the needs of both military and intelligence community users. Each of these systems support critical Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities that give the Joint Force Commander increased technological and asymmetric advantages.

Space superiority efforts are enabled by comprehensive space situational awareness (SSA) and defensive and offensive counterspace capabilities. Enhanced ground-based and new space-based SSA assets will provide the necessary information to gain and maintain space superiority. With respect to defensive counterspace, we maintain a diversified ground-based command and control network and are developing increased protection for our satellites and space-based services to ensure the capabilities are there in time of battle. We also recently fielded the counter-communications system to deny these same services to our adversaries. A well-balanced architecture will enable execution of an effective space superiority strategy.

Our Depot Maintenance Strategy and Master Plan calls for major transformation in financial and infrastructure capitalization. To support this plan, the Air Force increased funding in fiscal years 2004-2009 for depot facilities and equipment modernization. We also began a significant push to require weapon system managers to establish their product support and depot maintenance programs early in the acquisition cycle, and to plan and program the necessary investment dollars required for capacity and capability. Additionally, we are partnering with

private industry to adopt technologies to meet capability requirements. The result – enhanced warfighter support.

Finally, improvements to our air and space systems will require improvements in our foundational support systems. Deteriorating 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.

#### Expectation Management/Spiral Development/Systems Engineering

To improve effectiveness in providing technology to the warfighter, we've enacted several new acquisition policies. Expectation management, spiral development, and renewed emphasis on systems engineering will eliminate technological surprises and reduce weapon system delivery cycle times.

Expectation management means better collaboration between the warfighting and acquisition communities during the life cycle of a weapon system. At least yearly, general officers from the major commands and acquisition community will formally review the cost, schedule, and performance of acquisition programs. Beginning with frank discussion about the "art of the possible," these sessions will subsequently inform decision makers about the ramifications of evolving requirements and funding changes.

With a spiral development acquisition process, we expect to deliver a baseline combat capability to the warfighter faster than a process which focuses solely on

a “100 percent solution.” This approach increases flexibility to respond to the ever-changing nature of external threats and resource fluctuations. Building on a solid systems engineering foundation, we expect to maximize improvements in communication and development strategy, paying dividends in transitioning technology to warfighting faster, and at reduced cost.

Systems engineering ensures that contractor-proposed solutions are both consistent with sound engineering principles and are spiral capable. It is the chief means by which we can hedge against technology risk. We must have the capability to proceed smoothly from one spiral development effort to the next; capturing as much capability as current technology and funding can produce. Under the direction of the Service Acquisition Executive, Milestone Decision Authorities will now review a program’s proposed approach to systems engineering prior to approving Acquisition Strategy Plans. Indeed, systems engineering performance is so critical to our capability to transition technology to the warfighter, that it is included among contractor incentives. Many of the above approaches are already in use.

In our space system acquisition, we will continue to emphasize the transition from “cost as the primary driver” to “mission success as the primary driver.” We will also continue to stress the importance of budgeting to the most probable cost – with realistic reserves – and the value of independent cost assessments, program assessments, and reviews. Maintaining sufficient reserves is essential to effectively execute these challenging National Security Space Programs.

#### Transforming Business Process

By leveraging the availability of global information, we are achieving significant operational advantages. All Air Force Concepts of Operation rely heavily on critical information resources that are available “on the network” and delivered through a net-centric operating environment that is robust, secure, and available. To maintain information superiority, the Air Force must target a common infrastructure and fully leverage enterprise services and shared capabilities. To ensure the most efficient infrastructure, we are identifying enterprise-wide information resource solutions. These solutions are designed to deliver and implement efficiencies, which allow us to accelerate horizontal information integration, reduce information exchange barriers, reduce the total cost of information delivery, and shift resources to support warfighter operations and weapon system modernization.

For example, we reduced operating costs over the last two years by consolidating our networks and servers that provide Information Technology (IT) services. More important, networks are more stable with increased uptime and lower failure rates. We have improved our security with a better computer defense posture and are able to deploy patches and updates to the field quickly, resulting in fewer successful intrusions and denial of service incidents. In addition, the stand up of the Air Force Network Operations and Security Center will advance our consolidation efforts and real-time monitoring of performance, configuration control, and security posture.

The GeoBase program provides standardized installation mapping and visualization support to Airmen through deployment of integrated aerial

photography and geospatial data layers. These IT products support the joint warfighter common operating picture, minimize wasteful and potentially dangerous redundant data collection efforts, and enable cross-service situational awareness and decision-making capabilities.

IT Portfolio Management ensures IT investments align with Air Force priorities and produce measurable results. Annual Air Force-wide portfolio assessment ensures scarce resources are managed through the Capital Planning Investment Control processes: select, control, and evaluate. Senior leadership support of Portfolio Management enables the Air Force to gain greater visibility into resources from an IT enterprise perspective.

Likewise, we are transforming financial management by procuring and implementing a modern commercial-off-the-shelf accounting system that will produce accurate, reliable, and timely information. We are also streamlining and centralizing our customer service organizations and processes to invest more resources towards value-added demands while reducing the cost of transaction-oriented tasks. The result will be a smaller, but more efficient organization with enhanced financial management skills that can partner with stakeholders to make informed financial decisions based upon real-time information.

#### Department of Defense Teleport Program

The DoD Teleport program is the expansion of Defense Satellite Communications System's Standardized Tactical Entry Point (STEP) program. Teleport builds on the existing STEP program concept and was approved for initial development in 1998. Seven STEP sites have been selected to be

upgraded to six Teleports: Defense Information Systems Network Northwest, Virginia; Fort Buckner, Japan; Wahiawa, Hawaii; Camp Roberts, California; Lago di Patria, Italy; and Ramstein Air Base/Landstuhl, Germany (combined Teleport site). Teleport extends services to the deployed user, providing secure and non-secure telephone service; secure and non-secure Internet Protocol routing; and video teleconferencing through worldwide satellite coverage between 65 degrees North and 65 degrees South latitudes. DoD Teleport provides these services through a variety of satellite communication systems, including the use of commercial satellites.

#### Air and Space Operations Center Weapon System (AOC WS)

The AOC WS is the focal point where command and control of all air and space power is harnessed to deliver combat effects to the warfighter. To make this center more effective, we made it a weapon system – and we man it and train like it's a weapon system: certified and standardized. We've injected the technology to increase machine-to-machine connectivity by developing the software and procedures to enable information fusion and accelerate the decider-to-shooter loop. We expect to have all five of our AOC weapon systems (known as Falconers) fully operational by fiscal year 2006.

#### **Integrating Operations**

The Air Force provides a global presence and response capability for the National Military Strategy that gives warfighters timely and reliable access to all human, materiel and information resources. With our expeditionary approach to warfighting, we are relying more heavily on global operational support processes

and extensive reachback – the ability to support overseas operations from stateside locations. We are modernizing these processes and related systems. Key to this modernization is the establishment of common and interoperable capabilities such as a single Air Force Portal and data repository within the classified and unclassified domains. Over the past 18 months, we have designed and implemented the Global Combat Support System-Air Force program – a set of capabilities that support our vision and objectives. Using these capabilities, we have rapidly integrated legacy and newly developed applications and services, drawn information from global sources to provide a composite view of information, and eliminated the costly requirement for each program to purchase and support unique hardware and system software.

#### Operations Support Modernization Program

The Air Force's Operational Support (OS) transformation is a seven to ten year journey. By focusing on effectiveness and contribution to warfighting effects, we can identify the early steps in this transformation journey, and accelerate the delivery of changes that contribute to the core mission of the Air Force.

In May 2004, a Commanders' Integrated Product Team (CIPT) issued the Operational Support Modernization Program (OSMP) Flight Plan. The plan identified four OS critical processes – Deployment Management, Operational Response, Agile Sustainment, and Focused OS Command and Control. The plan identified three enablers of OS transformation – providing Shared Authoritative Data, executing an Integrated Workflow, and providing a Common Operational Support Picture.



Money has been set aside from fiscal year 2005 to fiscal year 2009 to fund modernization and transformation efforts under the Operational Support Modernization Initiatives (OSMI). This venture capital funding provides seed money for innovative ideas, allowing organizations to accelerate delivery of capabilities to the warfighter to improve effectiveness.

In 2004, the CIPT established organizations that have captured a significant portion of the operational support enterprise architecture; coordinated the OSMI-04 analysis and decision process; developed a draft version of the OS Concept of Operations for Business Modernization; and initiated a Lean re-engineering process within the OS community while establishing the foundation for the cooperation and coordination of Business Modernization efforts among the Air Force Domains and Major Commands. The present Lean efforts focus on three OS critical processes: AEF Deployment Management, OS Command & Control, and Full Spectrum Threat Response, and are aimed at the needs of the warfighter.

In 2005, the CIPT expects to realize the initial benefits of the OSMP Flight Plan, including managing the OS processes and portfolio, fielding initial capabilities, beginning horizontal integration, increasing breadth of efforts, and engineering additional critical processes. Over the long term, CIPT hopes to institutionalize capabilities-based operational support.

OS modernization promotes Air Force-wide transformation efforts, ensuring a cross-functional, cross-major command, enterprise approach with the goal of a fast flexible, agile, horizontally integrated OS process and system infrastructure.

Likewise, warfighters and decision-makers are dependent on information generated and shared across networks worldwide. Successful provision of warfighting integration requires an enterprise approach of total information cycle activities including people, processes, and technology. To best leverage current and emerging technologies with warfighting operational and legal requirements, we are establishing a new organization in 2005, Networks & Warfighting Integration-Chief Information Officer (SAF/NWI-CIO). This new organization will absorb and consolidate the Deputy Chief of Staff for Warfighting Integration, Chief Information Officer, and Communications Directorate within the Secretariat. The organization will be led by an active duty Lieutenant General.

Our logistics transformation provides a recent example of these transformation efforts. While current logistics operations are effective, sustainment costs are rising. In fiscal year 2003, the Air Force spent over \$27.5 billion in operations and sustainment of weapon systems and support equipment. The costs will continue to escalate unless current logistics processes and associated information systems are improved.

The Expeditionary Logistics for the 21<sup>st</sup> Century (eLog21) Campaign is the Air Force's logistics transformation plan, and it is essential to our overall Air Force Transformation program. The eLog21 goals are straightforward: a 20 percent increase in equipment availability by 2009 and a 10 percent reduction of annual operations and support costs by fiscal year 2011. The savings gained through eLog21 will provide the resources to support our warfighters by getting the right equipment to the right place, at the right time, and at the right price.

At the core of this effort is a comprehensive examination of the core processes used to support warfighters. A few years ago, Air Force Materiel Command began a comprehensive process improvement effort called “Lean” within our three Air Logistics Centers. “Lean” produced, and will continue to produce, substantial results. For example, Robins Air Force Base, Georgia, freed up 20,000 square feet of valuable industrial floor space to support expanded activities. We seek to expand this transformational approach to base level maintenance, installation support, and training activities.

There are many other facets of eLog21 that will leverage these improvements: expanding the regional repair concept we have employed in many deployed areas; streamlining the supply chain through better collaboration with vendors; using commodity councils that are responsible for managing the purchasing of weapon system components; and leveraging the power of information technology through enterprise resource planning, known as the Expeditionary Combat Support System.

Ultimately, eLog21 is about our people. The most important factor will be our ability to tap into the ideas and energy of the thousands of logisticians who keep our Air Force operating every day. It is not just a staff project or a new information technology. It is a team of Airmen developing new concepts in global mobility.

## **TOWARD NEW AIR AND SPACE HORIZONS**

### **Future Total Force**

As we move into the 21<sup>st</sup> century, the Air Force faces increasing modernization

and recapitalization challenges, increasingly hard to define adversaries, and constrained budget realities. While we possess weapon systems to meet today's challenges and are investing in cutting edge technology and highly capable, highly trained personnel, we must make transformational changes to maximize the capability these advances provide. To accomplish this, the Air Force has developed a modified force structure and new organizational construct – the Future Total Force (FTF).

FTF provides the Air Force the capability and organizational flexibility to address the near-term challenges of aging systems and emerging missions.

Furthermore, FTF will increase the Air Force's ability to deploy in support of combat while maintaining a credible force to continue necessary stateside training missions and Homeland Defense.

In the future, the Air Force will shift investment from “traditional” combat forces with single mission capabilities to multi-role forces, and aggressively divest itself of legacy systems. The result is a force structure with expanded capability to combat irregular, catastrophic, and disruptive threats, while maintaining the capability to combat “traditional” threats.

This smaller but more capable force will provide for modernization and recapitalization of selected weapon systems, allowing us to commit more resources to networked and integrated joint enablers. Overall, this modified force structure increases support to the joint warfighter. With more airlift and aerial refueling capability; more capable space constellations; persistent air-breathing ISR; and new ways to think about close air support, the future Air Force will

provide more of the capabilities demanded by the joint force.

As part of this overall effort, the Air Force has developed an organizational construct that capitalizes on the inherent strengths of the Air Force's three components: the Active Duty, Air Force Reserve, and Air National Guard. In order to capitalize on these strengths, we based the FTF organizational construct on the successful associate model. Associate units are comprised of two or more components that are operationally integrated but whose chains of command remain separate.

Towards this vision, new organizational constructs will integrate Air Force Reserve and Air National Guard personnel with their Active Duty counterparts in virtually every facet of Air Force operations.

One of the key strengths of the Air Force Reserve and Air National Guard is higher personnel experience levels relative to Active Duty personnel. Increased integration will allow us to "rebalance" these experience levels, seasoning our Active Duty personnel through exposure to senior Reserve and Guard members. This also allows our Active Duty pilots to gain experience flying operational sorties while capitalizing on Reserve and Guard experience in an instructor capacity.

In addition to enhancing our efforts on the battlefield, Air Force Reserve and Air National Guard members give us unsurpassed tools to conduct Homeland Defense missions. While still involved in expeditionary operations, FTF will increase the role of the Reserve and Guard in emerging stateside missions – a perfect fit for our Citizen Airmen. These changes will not only improve our

operational effectiveness, but will reduce reliance on involuntary mobilization, providing more stability for Citizen Airmen and their civilian employers.

The FTF, a modified force structure and new organizational construct, will give us the needed capabilities to meet future strategic challenges. Along with FTF, the Air Force has instituted initiatives in several key areas for the future.

### **Science and Technology**

The Air Force is committed to providing the nation with the advanced air and space technologies required to protect our national security interests and ensure we remain on the cutting edge of system performance, flexibility, and affordability. Air Force Science and Technology (S&T) investments are focused on achieving the warfighting effects and capabilities required by the Air Force Concepts of Operations.

By focusing on the technologies we believe we will need in the next 10 to 25 years, we have made great strides in the information technology, battlefield air operations, space operations, directed energy, and sensors areas. We are pursuing key technologies, for example, sensors to identify concealed targets; automated information management systems essential to net-centric warfare; and countermeasures for Man-Portable Air Defense Systems. Other technologies, such as laser communications to increase data transfer rates or advanced micro air vehicles to provide persistent intelligence, surveillance, and reconnaissance, will increase future warfighting capabilities.

### **Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance**

Our goal is to achieve joint horizontal Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) integration and interoperability for the entire joint force. The vision is a seamless and ubiquitous network where space, air, and terrestrial assets have global machine-to-machine connectivity; where warfighters are armed with decision dominance, speed, and precision; and where weapon systems and platforms are “network-enabled.”

#### The Airborne Network for ConstellationNet

The Air Force provides transportation layer components of the overall Department of Defense Global Information Grid under an effort we call ConstellationNet. The ConstellationNet is the information transport network (space, air, and ground) that allows a free flow of information rapidly accessible and presented to warfighters at the right time and right place to create the Combatant Commander’s desired effects. The key to achieving information superiority is developing a robust space and air network that provides connectivity to network enabled platforms, fused intelligence, and real-time command and control. We are building the architecture and infrastructure that connects these platforms, creating a network in the sky.

The space and air network will leverage evolving technologies and bring about the network-centric operations capabilities of Internet Protocol-based networks to overcome the current challenge of making the information exchange between platforms completely interoperable without degrading performance. These new technology standards and protocols will be incorporated through programs like

the Joint Tactical Radio System, the Transformational Communications Satellite System, and the Global Information Grid-Bandwidth Expansion.

#### The Ground Network for ConstellationNet

The Combat Information Transport System (CITS) provides the Air Force ground segment of the ConstellationNet. CITS is structured into three components. The first is the communications transport component, which delivers high-speed and high-capacity network backbone capability for the distribution of voice, video, data, sensor, and multimedia information inside the base campus, as well as the gateway off the base to the Defense Information Systems Network and Global Information Grid Bandwidth Expansion locations. The second component is Net Battle Management. This component provides the capability to Air Force Network Operations and Security Centers (NOSCs) to centrally command and control the Air Force ConstellationNet across space, air, and ground information transport domains. To command and control the network, the NOSCs must have the ability to control the flow, routing, and traffic priorities of information based on mission requirements. Additionally, they must have the ability to grant and deny access to the network based on mission need and threat to the Global Information Grid. This leads to the third component of CITS, Net Defense. The Net Defense component integrates and fields information assurance capabilities across the ground component, to prevent unauthorized access to ConstellationNet.

The Air Force envisions machine-to-machine communication between platforms, manned and unmanned, on the ground, in the air, and in space. To command



and control these interactions, the Air Force has initiated an effort called Warfighting Headquarters.

### **Warfighting Headquarters**

We are transforming our command and control structure by establishing new Warfighting Headquarters (WFHQ), positioned globally, and replacing our old Cold War structures to provide the Joint Force Commander with the most effective means to command and control air and space forces in support of National Security objectives. This new standing command structure consists of the Commander of Air Force Forces (COMAFFOR), the COMAFFOR's personal and special staffs, and the Air Force Forces functional staff. These forces will be organized and resourced to plan and deliver air and space power in support of U.S. and Unified Combatant Commander (UCC) strategies at a core capability level on a daily basis, further easing the transition from peacetime to wartime operations. The WFHQs are also structured to assume responsibilities immediately as the Combined or Joint Force Air Component Commander, and with the appropriate augmentation from the UCC, could assume the role as a Joint Task Force headquarters. The Warfighting Headquarters will also leverage the increased capabilities developed through Joint Warfighting Space.

### **Joint Warfighting Space**

The Air Force is intensifying its focus on operationally responsive space – the ability to rapidly employ responsive spacelift vehicles and satellites and deliver space-based capabilities whenever and wherever needed. The first step in achieving a global Operationally Responsive Space capability is the Joint

Warfighting Space (JWS) concept. JWS will provide dedicated, responsive space capabilities and effects to the Joint Force Commander in support of national security objectives. The concept seeks immediate and near-term initial operating capabilities to meet pressing Joint Force Commander needs, and a Full Operational Capability beyond 2010. Additionally, the Air Force envisions that JWS system capabilities will evolve as technology advances and the needs of the theater commander change.

In the near-term, JWS will exploit existing off-the-shelf technologies from each Service. It will enhance and incorporate space capabilities in joint training and exercises, increase space integration in the Air Expeditionary Force, and allow the Joint Force Commander to take advantage of the many synergies provided by multi-service space professionals. Lessons learned from JWS in exercises and crisis employment will initiate changes to space doctrine and help the Air Force, fellow Services, and joint community develop innovative space-derived effects.

As technologies mature, JWS will bring the Joint Force Commander enhanced, dedicated capabilities that eliminate gaps in present-day space operations. The long-term plan envisions a fully capable expeditionary force, ready and responsive to theater warfighters' needs at the operational and tactical levels of war.

When fully operational, the JWS capability will deliver responsive near space (i.e., the area above the earth from ~ 65,000 to 325,000 feet altitude) and on-orbit capabilities to directly support the Joint Force Commander. If required, JWS

squadrons could deploy from stateside to operate near space assets or integrate JWS capabilities into theater operations.

### **Improving Close Air Support and Battlefield Airmen**

To increase its rapid strike capabilities in the close battlefield, the Air Force is examining new ways to improve upon its joint close air support (JCAS) mission, as well as implementing a way to better train personnel for the employment of air and space power.

By combining the payload, long-loiter, and high-altitude capacity of bombers with precision munitions, improved command and control, and precise targeting, we have expanded our ability to conduct CAS. Performing CAS at high altitude with great precision and persistence is a major advancement in joint operations with land forces. Using laser and Global Positioning System-guided bombs such as the Joint Direct Attack Munition (JDAM), and with direct communications with a ground controller, a variety of aircraft are able to drop large numbers of JDAMs very close to friendly troops, destroying the enemy with massive, yet tailored, firepower. This capability provides day/night and all-weather support to ground forces.

Today, primarily fighter and bomber aircraft, like the A-10, B-52, and F-16, conduct CAS. As these aircraft begin to reach the end of their service lives, F-35A Conventional Takeoff and Landing (CTOL) and F-35B Short Takeoff and Vertical Landing (STOVL) variants will become the Air Force's workhorses for CAS and other missions.

The F-35B STOVL variant offers a capability to operate with advancing U.S.

Army, Marine, and Special Operations forces in a non-linear, dynamic battlefield. In addition, the F-35B will have commonality and interoperability with F-35s operated by other Services and Allies, facilitating Joint and Coalition operations. Additionally, Tactical Air Control Party Modernization Program improvements are transforming close air support control from reliance on voice communications during day/good weather conditions to digital/video and night/all-weather capability. The Remote Operations Video Enhanced Receiver kit provides real-time video from remotely piloted aircraft and other video transmitters. It includes computers, software, and data link operations, and can transmit targeting information as well as formatted and free-hand messages. Laser range finders and laser designators provide the ability to take full advantage of precision and near-precision munitions. Quickly and accurately identifying and relaying target information not only makes our forces safer by allowing engagement of enemy forces in minimum time, but also reduces the risk of engaging the wrong target.

### **Joint Unmanned Combat Air System**

The Air Force has also emphasized the Persistent Ground Attack mission for the next-generation Joint Unmanned Combat Air System capability demonstration program. This system will undergo an operational assessment in the 2007 to 2010 timeframe.

Under development is an integrated Surface Moving Target Indicator (SMTI) network composed of manned and unmanned air and space assets that will enable the Combatant Commander to remotely find, fix, track, target, and engage moving targets. Lessons learned from Operations DESERT STORM,

ENDURING FREEDOM, and IRAQI FREEDOM reflect the growing importance of SMTI. This proven capability shortens the kill chain by providing the warfighter the ability to “put a cursor on the target.” By linking future SMTI capability to find, fix, and track a moving target to the F/A-22 and F-35 capability to target and engage that same target, we achieve a transformational battlefield capability.

### **Long-Range Strike**

To further refine its rapid strike capabilities, the Air Force is transitioning its Long-Range Strike strategy to focus on effects instead of platforms. We view long-range strike as the capability to achieve the desired effects rapidly and/or persistently on any target set in any environment anywhere at anytime. The Air Force is responsible for conducting long-range strike missions as part of the Global Strike Concept of Operations. Our forces must be responsive to multiple Combatant Commanders simultaneously and able to strike any point on the planet.

Today, we provide deep strike capabilities through a variety of platforms and weapons. Future capabilities must continue to enhance the effectiveness of the system. Responsive capabilities combine speed and stealth with payload to strike hardened, deeply buried, or mobile targets, deep in enemy territory, in adverse weather, with survivable persistence in the battlespace.

### **Special Operations Forces**

We are emphasizing the unique effect produced by the synergy of Special Operations Forces (SOF) and rapid strike, and evolving requirements for SOF in the Global War on Terrorism. As part of meeting these new mission sets, we will

continue to work in an increasingly joint environment with our sister service SOF units, and in concert with U.S. Special Operations Command. Our SOF units will enhance Army operations concepts resulting in a wider dispersion of ground forces across the battlefield.

New mobility platforms such as the CV-22 Osprey and the Advanced Air Force Special Operations Forces Mobility Platform will add a new dimension in the ability to conduct SOF operations. Additionally, the F/A-22 will be a key enabler of forward operational access for joint forces. The Raptor will use its stealth and supercruise capabilities to support SOF and other maneuver elements deep in enemy territory, in what would otherwise be denied airspace.

Closely related is the need to rapidly recover and extract personnel. We have begun the Personnel Recovery Vehicle Program, seeking to achieve initial operational capability in fiscal year 2013 and replace the aging HH-60 combat search and rescue aircraft.

We will continue to leverage our highly trained, highly motivated SOF personnel and develop technologies to devise a smaller, harder-hitting, faster-reacting, highly survivable force that maximizes the element of strategic and tactical surprise to defeat America's current and potential adversaries.

## **SUMMARY – ON COURSE FOR THE FUTURE**

The Air Force of the future makes the whole team better. Built around the 2025 Force and its accompanying organizational construct, the Future Total Force, the Air Force will be a more capable, smaller force. As such, the future Air Force increases the capability and flexibility of the joint force – and, subsequently,

increases options for the Secretary of Defense and the President. These military options will be crucial to the defense of the nation as the United States continues to wage the GWOT while transforming and strengthening the joint force for any future contingency.

The Air Force offers an unparalleled set of combat capabilities to directly influence any joint or interagency operation, as well as the enabling capabilities to improve joint warfighting capabilities on the ground, on or under the sea, and in the air and space. Recognizing that no Service, or even DoD, can achieve success by itself, the Air Force has focused on increasing the integration and effectiveness of the joint force and interagency team.

To achieve new levels of integration and effectiveness, the Air Force will take advantage of the United States' long-held command of the global commons – air, sea, space, and cyberspace. The Air Force intends to extend its current air and space power advantage. As part of the joint force, the Air Force is positioned to leverage its persistent C4ISR, global mobility, and rapid strike to help win the GWOT, strengthen joint warfighting capabilities, and transform the joint force – while minimizing risk.

To accomplish this requires focused investment in our people, science, and technology; and recapitalization of our aging aircraft and weapon systems.

As threats change and America's interests evolve, we will continue to adapt and remain the world's premier air and space force. Together with our fellow Services, we stand resolute, committed to defending the United States and defeating our enemies.