
UNITED STATES
AIR FORCE
Posture
Statement
2004

THE SECRETARY OF THE AIR FORCE
CHIEF OF STAFF, UNITED STATES AIR FORCE
WASHINGTON DC

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 commitments 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 enclosed 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.

JOHN P. JUMPER
General, USAF
Chief of Staff

JAMES G. ROCHE
Secretary of the Air Force

AMERICA'S AIR FORCE

Vision

Global Vigilance, Reach, and Power

Core Values

Integrity First
Service Before Self
Excellence in All We Do

Core Competencies

Developing Airmen
Technology-to-Warfighting
Integrating Operations

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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 U.S. 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 frontline 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 frontline 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.

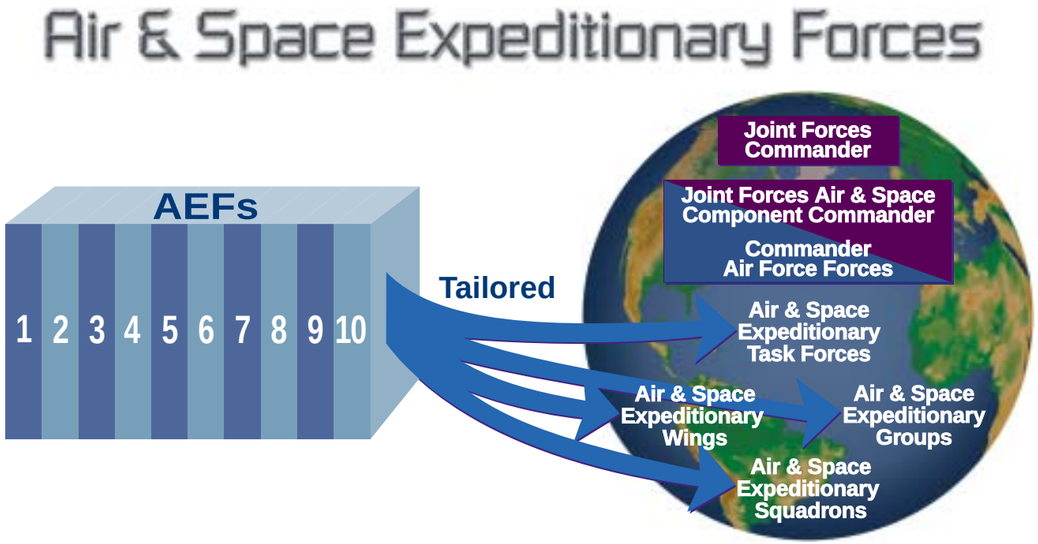
Global War on Terrorism

The year 2003 marked another historic milestone for the U.S. 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.

Greenland
Iceland
Norway
Denmark
Netherlands
United Kingdom
Belgium
Germany
Poland
Lithuania
Russia
Ukraine
Czech Repub
Romania
France
Croatia
Kosovo
Georgia
Bosnia
Portugal
Spain
Italy
Bulgaria
Turkey
Greece
Uzbekistan
Kyrgyzstan
Korea
Japan
Azores
Cyprus
Iraq
Afghanistan
Morocco
Kuwait
Iran
Egypt
Saudi Arabia
Bahrain
Qatar
Pakistan
Algeria
United Arab Emirates
Oman
Hong Kong
Guam
Canada
United States
Mexico
Hawaii
Guantanamo Bay
Puerto Rico
Antigua
Aruba
Curacao
Colombia
Ecuador
Mauritania
Senegal
Gambia
Chad
Nigeria
Djibouti
Thailand
Philippines
Malaysia
Kwajalein
Sierra Leone
Liberia
Cote d'Ivoire
Cameroon
Singapore
Sao Tome
and Principe
Uganda
Diego Garcia
Ascension
Zambia
Mozambique
Botswana
Australia
South Africa
Chile
Antarctica

- Combat Operations
- Non-Combat Ops
- Humanitarian Aid
- Airlift Support
- Space Activity
- Joint/Combined Exercises

USAF Operations Across the Spectrum of Conflict in 2003



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 NOBLE EAGLE**—Air Force aircraft are involved in daily operations securing America's skies—to date we have flown 34,600 fighter, tanker, airlift and AWACS sorties.*

***Operation ENDURING FREEDOM**—Since October 2001, coalition aircraft have flown over 125,000 sorties to support theater operations—the Air Force has flown 72 percent of these combat missions.*

Operation ENDURING FREEDOM—Afghanistan

Operation ENDURING FREEDOM—Afghanistan (OEF) is ongoing. Remnants of Taliban forces continue to attack U.S., 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, land-locked 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

***Operation ENDURING FREEDOM, Shkin Fire Base, Afghanistan**—An Airman sets up an antenna that he will use to talk to aircrews via SATCOM.*

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 19 March 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.

***Operation IRAQI FREEDOM, Bashur Airfield, Iraq**—An airman mans an airfield entry control point. In the background, Marine Corps CH–46 and HH–53 helicopters bring the 26th Marine Expeditionary Unit to the base.*

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

***Operation IRAQI FREEDOM**—A B–2 takes off for a mission while other aircraft from the 40th Air Expeditionary Wing prepare to launch from a deployed location.*

***Operation IRAQI FREEDOM**—Security Forces airmen of an Air Force Contingency Response Group await a static line jump into Tallil AB, Iraq.*

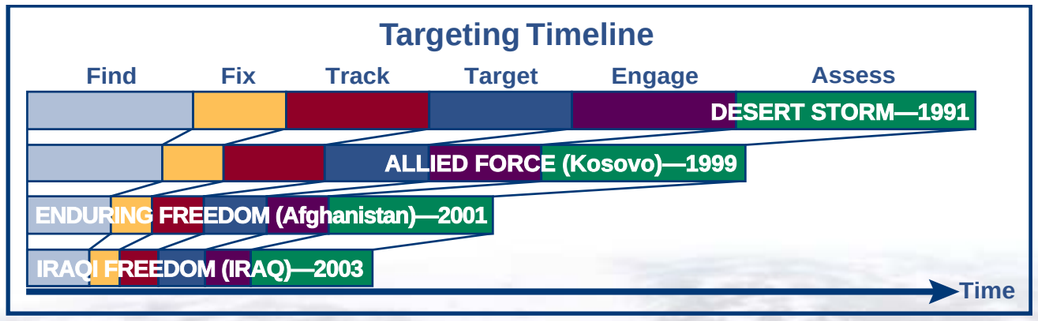
those during the previous 12 years, none of the 19 Iraqi missile launches were successful in disrupting coalition operations, and not a single Iraqi combat sortie flew during this conflict. Twenty-one days after major combat operations began, the first U.S. land forces reached Baghdad. Five days later, 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.

***Operation IRAQI FREEDOM**—A–10 pilot surveys the battle damage to her airplane that was hit over Baghdad during a close air support mission—"Our guys [on the ground] were taking fire and you want to do everything you can to help them out, that's our job, that's what we do."*

***Operation IRAQI FREEDOM**—Denied access by land and sea, C–17s prepare to launch the largest airborne mission since Operation JUST CAUSE (December, 1989). U.S. Air Force safely delivered 1,000+ members of U.S. Army's 173rd Airborne Brigade into northern Iraq and successfully opened the northern front against Iraqi forces.*

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.



Time-sensitive or time-critical targets pose one of the toughest challenges to Combatant Commanders. Successful prosecution of these high value, mobile, or fleeting targets of interest continues to create strategic effects for this nation. Shortening the "kill chain" remains one of the Air Force's top requirements.

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 remotely piloted aircraft, spaced-based systems, U–2, and Compass Call, these invaluable systems 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 U.S. 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.

***Operation IRAQI FREEDOM**—From 19 March to 14 April 2003, Coalition Air Forces conducted the most precise air campaign in history flying over 10,000 strike sorties and dropping 37,000+ munitions—69 percent were precision guided. During DESERT STORM, precision munitions accounted for only 9 percent of the total weapons employed.*

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."

***Cape Canaveral Air Force Station**—On December 21, 2003, a Delta II rocket carrying a GPS satellite was launched—a total of 29 GPS satellites are now in orbit.*

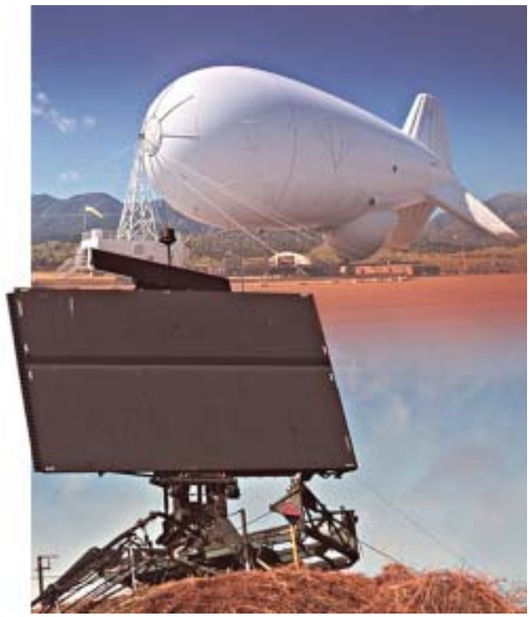
During the height of OIF, the Air Force deployed 54,955 airmen. Ambassador Paul Bremer, Chief of the Coalition Provisional Authority, pronounced, "In roughly three weeks [we] liberated a country larger than Germany and Italy combined, and [we] did so with forces smaller than the Army of the Potomac." 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 U.S., 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.

***Operation JOINT FORGE and JOINT GUARDIAN**—Air Force continues to support operations in the Balkans flying over 1,300 fighter, tanker, and airlift sorties in 2003.*



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

***Andersen AFB, Guam**—During Operation IRAQI FREEDOM, Air Force operations in the Pacific remained a deterrent to potential adversaries in the region. A B–1B takes off as a B–52 taxies past—surge operations generated over 100 sorties in less than three days.*

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.

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***Operation SHINING EXPRESS, Liberia**—Marines with the Southern European Task Force offload from an Air Force HH–60G Pavehawk helicopter after it lands at the U.S. Embassy in Liberia. The 398th Air Expeditionary Group provided personnel recovery and emergency evacuation for the Humanitarian Assistance Survey Team and the Fleet Antiterrorism Security Team.*

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 U.S. 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.

***Andersen AFB, Guam**—During exercise COPE NORTH, a Japanese pilot explains the features of his aircraft to U.S. Air Force crew chiefs.*

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.

***Air Force Test and Training Ranges "Vital National Assets"**—An F–16 CJ pilot fires an AGM–65D Maverick missile at a target during an air-to-ground Weapons System Evaluation Program named Combat Hammer.*

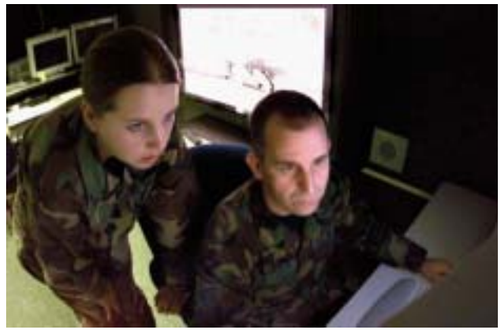
Our ranges and air space are critical joint enablers and vital national assets that allow the Air Force to develop and test new weapons, train forces, and conduct joint exercises. The ability of the Air Force to effectively operate requires a finite set of natural and fabricated resources. Encroachment 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.



Operation IRAQI FREEDOM—*Imagery analysts from the active force and National Guard team together at Langley AFB, VA to interpret data from a Predator via satellite feed.*

Operation IRAQI FREEDOM—*Major General Leaf led the Air Component Coordination Element (ACCE)—chief CFACC representative to the CFLCC. The ACCE developed air and space strategy and coordinated missions with the CFLCC.*

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,

A significant portion of Air Force combat power is derived from our Air Reserve Components—72 percent of our tactical airlift, 42 percent of our strategic lift, 52 percent of our air refueling capability, and more than one-third of our strike fighters.

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.

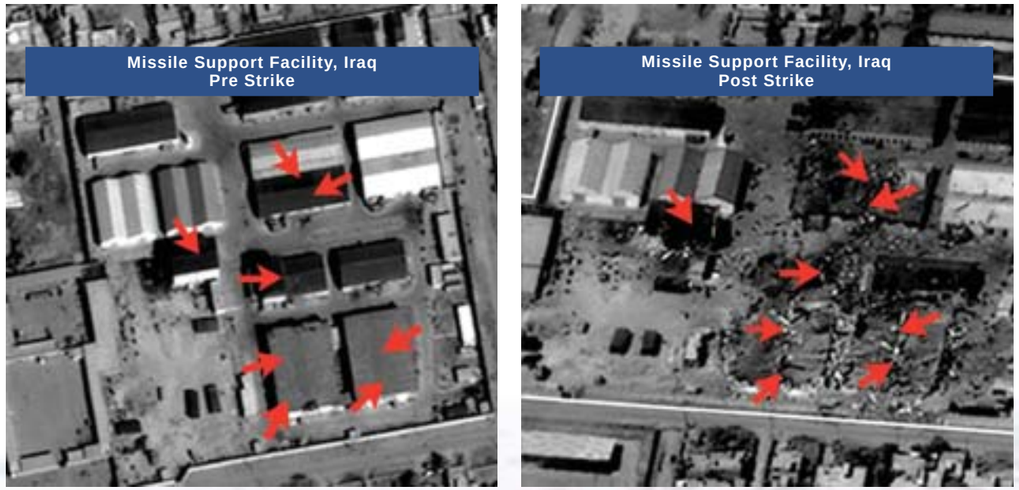
We also need to continue to advance integration and planning—integration of service capabilities to achieve JFC objectives, interagency integration to fight the war on terrorism, and information integration. Integration of manned, unmanned and space sensors, advanced command and control, and the ability 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

Operation IRAQI FREEDOM—*The Combined Air Operations Center is the nerve center in which we accomplish Command and Control of air and space warfare. The art of commanding air and space power lies in integrating airmen and their systems to produce the desired effects the warfighter needs.*

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 commander's ability to efficiently employ combat power is dependent upon precision location, precision identification, and precision assessment.

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.

Operation IVY CYCLONE—*Tactical air control airmen eye targets on the horizon near Kirkuk, Iraq as part of the operation to root out and destroy insurgents.*

We have made great progress in producing a Battlefield Air Operations Kit that is 70% 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 FY05, 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.

Blended/Integrated Unit

Personnel assigned to the same wing or squadron—Active, Guard, Reserve, civilian—that are administrativelyseparate, but organizationally and operationally combined.

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.

***Operation IRAQI FREEDOM**—Aircrew members walk down the flightline at an air base in the Middle East. The three officers were assigned to the 379th Air Expeditionary Wing and flew combat missions during Operation IRAQI FREEDOM.*

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 FY03, 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 FY04, 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.

***Operation IRAQI FREEDOM**—Air traffic controllers from Kadena AB, Japan control the airspace around Baghdad International Airport.*

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 FY03 enlisted retention statistics tell the story. Retention for first term airmen stood at 61%, exceeding our goal by 6%. Retention for our second term and career airmen was also impressive, achieving 73% and 95% 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.

***Offutt AFB,NE**—Newly constructed base 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 (CRRA) 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 complimentary 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 shortfall 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.

***Tyndall AFB, FL**—The first operational Raptor was delivered to the Air Force's F/A–22 schoolhouse on September 26, 2003.*

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 then 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

This KC–135E model, built in 1958, is still serving today with the Air Force Reserve, shown here flying over the Adriatic Sea supporting Operation JOINT FORGE.

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.

The EELV types, Delta IV and Atlas V, provide scalable launch capability for a wide variety of U. S. satellites.

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.

***Barksdale AFB, LA**—February 2003, a B–52 with the Litening II targeting pod drops a GBU–12 laser guided bomb during an operational utility evaluation. The integration of the targeting pod, originally scheduled for June 2003 was accelerated to improve the capabilities of combat B–52s to drop laser-guided munitions in Operation IRAQI FREEDOM.*

***Whiteman AFB, MO**—September 2003, a single B–2 demonstrated the capability to precisely drop 80 Joint Direct Attack Munitions on 80 different targets.*

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

Our investment in science and technology (S&T) 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.

***Kirkland AFB, NM**—The Air Force's Starfire Optical Range uses three laser beams to accurately measure rapid changes in the earth's atmosphere. This data is used to maximize the power and range of the developmental Airborne Laser Program.*

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 FY04–09, 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% 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.

On 6 January 2003, this Coriolis satellite was launched to provide ocean surface wind vector measurements and early warning of coronal mass ejections. It was developed in partnership with the Navy, Air Force Research Lab, and NASA Goddard Space Flight Center, and will provide risk reduction for the National Polar-orbiting Operational Environmental Satellite System.

Our depots have put some of these initiatives into place with exceptional results. In FY03, 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 FY94 and FY95, respectively. Fourteen of twenty aircraft design systems improved their mission capable rates over the previous year, with Predator unmanned aerial vehicles improving by 11%, 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 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

***Operation IRAQI FREEDOM**—Aero-medical evacuation technicians carry a patient from the Medical Airlift Staging Facility (MASF) to a C-130 at Baghdad International Airport. The MASF consists of 15 personnel and is responsible for moving sick and wounded out of the combat environment and into the air evacuation system.*

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 & 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.