

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
SENATE ARMED SERVICES
COMMITTEE STRATEGIC
FORCES SUBCOMMITTEE

STATEMENT OF

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BEFORE THE

SENATE ARMED SERVICES COMMITTEE

STRATEGIC FORCES SUBCOMMITTEE

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Introduction

Mister Chairman, Senator Vitter and distinguished members of the subcommittee, it is an honor to appear before you today as an Airman and as the Commander of Air Force Space Command (AFSPC).

I am proud to lead and represent the nearly 40,000 Active Duty, Guard and Reserve Airmen; government civilians; and contractors who assure strategic deterrence and deliver space-based capabilities to United States Strategic Command (USSTRATCOM), Joint Force Commanders, the Services, the Intelligence Community, civil agencies, commercial entities and allies. The men and women of AFSPC serve around the globe from AFSPC Headquarters, Fourteenth Air Force (14 AF), Twentieth Air Force (20 AF), the Space and Missile Systems Center (SMC), the Space Innovation and Development Center (SIDC), and a host of deployed and forward locations.

This has been an exciting and eventful year for AFSPC. Within the Air Force, we witnessed two historic decisions in 2008: the assignment of cyberspace responsibilities to AFSPC and the establishment of Air Force Global Strike Command (AFGSC). While in the midst of implementing these decisions for the nuclear and cyberspace missions, reinvigorating the Air Force's Nuclear Enterprise remains the highest priority for the Air Force and Air Force Space Command.

Our mission is to provide an integrated constellation of space and cyberspace capabilities at the speed of need, and our vision is to be the leading source of emerging and integrated space and cyberspace capabilities. At AFSPC, we look forward to

assuming the lead role for cyberspace within the USAF. Air Force operations in the air, space, and cyberspace domains are mutually-supporting and reciprocally-enabling; the cyberspace domain is inextricably linked to the other domains in which the US military operates. Not only must we protect these domains, we must also properly integrate them with the other operational domains to create Joint warfighting effects significantly greater than the sum of the parts. Our capabilities are woven through Joint operations, weapons networks, and civil and economic activities ranging from missile warning to the position, navigation, and timing (PNT) signals we provide both for military use and as a free, international utility.

Space and cyberspace capabilities shape the American approach to warfare, are embedded in an ever-more effective arsenal of modern weaponry and are threaded throughout the fabric of our warfighting networks. Our space-based capabilities are absolutely vital to the Joint fight. Yesterday's irregular warfare is today's regular warfare; asymmetric warfare is the new norm. Space capabilities contribute across the spectrum of regular and irregular combat and non-combat operations and provide Joint commanders a decisive advantage. Space is no longer just the high ground; it is a critical Joint enabler and force multiplier.

The Airmen of AFSPC provide land-based strategic deterrence through our Intercontinental Ballistic Missile (ICBM) fleet led by 20 AF, conduct space operations and acquisition via 14 AF and SMC, and will soon execute cyberspace operations as part of the future 24 AF. These missions are being accomplished by our space professionals every day at 15 wings and 44 locations spanning the globe. It is my distinct pleasure to outline the strategic way forward for AFSPC and to describe for you

our plan to develop, acquire, employ and execute Air Force space, missile, and cyberspace capabilities in an increasingly complex, dynamic and challenging global environment. The space, nuclear, and cyberspace capabilities acquired with your help and support, and delivered by AFSPC Airmen, will help maintain America's freedom, security, and prosperity.

The Way Forward

AFSPC activities in 2008 included comprehensive, concerted efforts to deliver space and missile capabilities, develop and care for our Airmen and their families, and encourage collaboration across the space enterprise. In addition, we made significant progress in modernizing our force and made great strides toward improving our acquisition processes with new strategies and actions. AFSPC is proud of its 2008 achievements; achievements that will serve as building blocks towards progress in 2009. AFSPC's strategic way forward will focus on delivering the space, nuclear, and cyberspace capabilities our Joint Force Commanders require today and into the future. To do this, we have outlined five goals that serve to guide our efforts.

AFSPC Goal: Guarantee a Safe, Credible, Ready Nuclear Deterrent Force with Perfection as the Standard

To support the Air Force's priority of "Reinvigorating the Air Force Nuclear Enterprise," AFSPC will guarantee a safe, credible, ready, nuclear deterrent force with perfection as the standard. Nuclear deterrence remains the ultimate backstop of US security, dissuading opponents and assuring allies of America's military commitment to defend our Nation, its allies and friends. Our Nation's security relies heavily on the remarkable attributes of the ICBM force and the dedication and professionalism of those

who proudly secure, maintain, and operate the Minuteman III weapon system. Over the course of 2009-2010, we will meet daily USSTRATCOM operational requirements; invest in sustainment, infrastructure, and our industrial base; continue to restore our nuclear culture; and transition the ICBM force to Air Force Global Strike Command.

In response to feedback and direction from the Secretary of Defense, Air Force Blue Ribbon Panel, Defense Science Board, Admiral Donald Investigation and others, we undertook a comprehensive set of actions to address deficiencies and re-establish excellence across the Air Force nuclear enterprise. Our roadmap, "Reinvigorating the USAF Nuclear Enterprise," is the strategic plan to restore a culture of discipline, establish clear organizational structures, and increase investment in critical operational and sustainment areas. Perfection, precision, and reliability are our performance standards. In recent months, all of our missile wings have undergone rigorous Nuclear Surety Inspections (NSI) to ensure the utmost standards—and all three wings satisfactorily passed their follow-on inspections.

As for the Minuteman III fleet, we are within two years of completing an extensive 10-year sustainment effort. As part of this comprehensive initiative, all three solid propellant motor stages have been removed and re-poured. In addition, the guidance systems and post-boost vehicles have been replaced with current technologies. These upgrades will ensure the Minuteman III is fully operational until at least 2020.

The American people depend on the US Air Force to deliver safe, credible and reliable nuclear deterrence capabilities, and we will do so. Our Airmen perform the nuclear deterrence mission with pride, professionalism, and a solemn commitment to the highest standards.

AFSPC Goal: Deliver Assured Combat Power to the Joint Fight

AFSPC will continue to deliver assured combat power to the Joint fight. In addition to the Airmen deployed “in-place” manning ICBM launch control centers and space operations centers around the clock, in 2008 we forward-deployed nearly 4,000 AFSPC Airmen to Operations ENDURING and IRAQI FREEDOM and Joint Task Force-Horn of Africa in support of on-going counterinsurgency operations. As a result, 49 AFSPC Airmen were awarded Bronze Stars while engaged in military operations in the United States Central Command (USCENTCOM) Area of Responsibility (AOR). Today, we have over 1,200 AFSPC Airmen continuously forward-deployed.

In an environment that’s more uncertain, complex, and changing than ever before, most historic military leaders would not recognize today’s irregular warfare landscape. Although our Nation and its interests must still be protected from hostile forces and strategic threats, today’s security challenges are more diverse and dispersed. Emerging threats are fleeting, scattered globally, may strike anywhere, anytime, and increasingly take advantage of the space and cyberspace domains. There is a growing reliance from Joint Force Commanders on space-based capabilities to provide vital services across the global commons. Our Airmen are enabling GPS signals to ensure we’re putting Joint Direct Attack Munitions on targets from aerial platforms and assuring the reliability of Blue Force Tracking for soldiers on the ground. Warfighters depend on military satellite communications (MILSATCOM) in austere environments for data, imagery, and streaming video feeds from Unmanned Aircraft Systems (UAS). Today, our forces are interconnected, have world-wide cognizance, and strike with greater speed and precision than any military in history providing

overwhelming and decisive results with minimal collateral damage. Our continuous need for global communications, GPS, missile warning, weather forecasting and world-wide intelligence, surveillance, and reconnaissance continues to be met by space systems in the face of evolving warfare.

In 2009-2010, we will continue to improve Space Situational Awareness (SSA), execute the Space Protection Strategy, increase GPS navigational accuracy and signal security, modernize MILSATCOM, assure and exploit new Overhead Persistent Infrared (OPIR) capabilities, and transform the launch enterprise.

Space Protection Program

Another history-making "first" occurred in March 2008 when AFSPC and the NRO established the Space Protection Program (SPP). The purpose of this program is to develop an integrated approach to protect critical defense, intelligence, civil, and commercial space systems that support national security.

In response to Congressional direction, AFSPC and the NRO delivered the first Space Protection Strategy to Congress in August 2008. The SPP strategy was approved by the Deputy Secretary of Defense and identified mission critical investments, capability improvements, and critical interdependencies. Complementing the SPP Strategy, AFSPC also finalized a new roadmap for the SSA mission area along with an interim architecture.

Space Situational Awareness

In concert with the SPP initiative, AFSPC continued efforts to develop a cost effective strategy to protect space capabilities, while striking the right balance among awareness, hardening, countermeasures, reconstitution, and alternate means. The

Integrated Space Situational Awareness (ISSA) program provides USSTRATCOM, Joint Functional Component Command for Space (JFCC-SPACE) and the Joint community an integrated source of historical, current and predictive space events, threats, and space activities.

In a dramatic display of teamwork and excellence, AFSPC developed the first-ever training procedures and exercises for a real-world intercept mission, Operation BURNT FROST. We ensured personnel at the Joint Space Operations Center (JSpOC) at Vandenberg Air Force Base, CA, were properly trained and our senior leaders possessed accurate and timely location of the target satellite, potential impact locations, and possible environmental effects. During the mission, we provided a glimpse of the future by transforming the legacy “hub and spoke” space surveillance network into a collaborative, net-centric operation providing real-time SSA and sensor-to-sensor hand-offs. Through subsequent orbital tracking and cataloguing efforts, we’ve determined every bit of debris created from the intercept has since de-orbited.

The importance of SSA continues to grow as the space domain becomes an increasingly contested and crowded environment. Issues common to other domains remain unresolved for space. As a Nation, we have gaps in the operational space domain not found in other domains across the global commons. The Iridium collision with a Russian communication satellite is a recent example highlighting the critical need for advanced Space Situational Awareness.

Commercial and Foreign Entities (CFE) support is one of our top initiatives. The CFE Support Program was created in 2004 to focus on safety of flight in orbit for government, commercial, and foreign satellite operators in the US and around the

world. Under our current pilot program, we are equipped, manned, and resourced to provide Conjunction Assessment (CA) analysis for capabilities critical to national security and homeland defense. An ever-changing space environment continues to become further crowded with increasing amounts of debris and new entrants. This has challenged our capability in the midst of declining resources and greater demand for basic CA and advanced services.

In an effort to improve our capabilities, we are augmenting our CFE resources and communicating the expanded services to the CFE community. AFSPC will expand and automate our processing and analytical capabilities thereby enabling expanded CA services and in the fall of 2009, we will transition our CFE pilot program to USSTRATCOM to continue long-term operations and support from the JSpOC. Our goal remains to provide SSA services to legitimate and trusted CFE users ensuring space flight safety and freedom of action in space.

Schriever War Game Series

The recurring AFSPC Schriever Title 10 War Game series has proven insightful in identifying key operational and policy issues. Having just wrapped up our Schriever V War Game in March 2009, we are now reviewing key issues involving space deterrence, capability employment, and national space policy considerations with senior Air Force and other national decision-makers. Schriever V clearly identified areas requiring additional emphasis, policy development, resources and analysis. It also demonstrated the far-reaching importance of space to combat operations, policy execution, and diplomacy. We are now underway with plans for Schriever VI, and we look forward to increased international and industry participation.

Position, Navigation and Timing

The Global Positioning System (GPS) continues to provide highly accurate position, navigation and timing signals enabling Joint combat operations around the world. GPS is a free global utility that serves as an enabler for economic transactions influencing the global economy by more than \$110 billion annually. Throughout 2008, AFSPC operated the most precise, largest-ever GPS constellation and took its first big step towards deploying GPS III when we awarded a contract in May 2008 to build eight of the Block IIIA satellites. Complementing the space segment, we replaced the unsustainable legacy GPS Master Control Station ground segment with the Architecture Evolution Plan (AEP) and Launch Anomaly and Disposal Operations (LADO) Systems. AEP improves GPS accuracy, provides the capability to operate the GPS IIF satellites, and affords increased protection of the military's GPS M-code. LADO provides critical launch operations support and on-orbit operations for the GPS constellation. The transition to both the AEP and LADO system was seamless and transparent to users across the globe. In 2008, our acquisition team began developing the Next-Generation Operational Control Segment (OCX). This segment is not only required to launch and sustain GPS IIIA space vehicles on orbit, but is essential to moving the GPS system towards robust, effects-based operations.

At the same time, plans are well underway to launch, deploy and begin operating the first GPS IIF space vehicle by December 2009. These new vehicles will broadcast the first operational L5 signals, thereby providing civilian users an additional, higher powered signal. This signal is protected by internationally recognized safety of life spectrum rules ensuring robust quality of service with minimal interference.

Military Satellite Communications

As our MILSATCOM capability continues to grow, so does the age of our fleet. Aged in many cases beyond their design lives, Milstar and the Defense Satellite Communications System-III (DSCS-III) will have to continue to provide critical communications services for the Nation's protected and non-protected military and diplomatic activities while we deploy the next generation of advanced MILSATCOM capabilities.

With the commencement of mission operations over the first Wideband Global SATCOM (WGS) satellite in April 2008, we demonstrated a ten-fold increase in our wideband SATCOM capabilities providing the warfighter increased data, voice, video, and imagery. Additionally, we validated and accepted the geographically separated Backup Satellite Operations Center at Vandenberg Air Force Base. This \$2.7 million effort supports Milstar, DSCS, and WGS operations.

Looking towards the future of MILSATCOM, we began preparations to accept the first Advanced Extremely High Frequency (AEHF) communications satellite in 2010. We look forward to the AEHF system as it will increase the protected communications data rate more than five-fold and afford more coverage opportunities than what Milstar provides today. Not only will AEHF provide enhanced national command and control satellite networks for the President, Secretary of Defense, and our Combatant Commanders, it will also ensure warfighters receive critical information such as the air and space tasking orders, operational plans, and time-phased force and deployment data. We transitioned to an innovative \$1.25 million operations center and began training Subject Matter Experts (SME) in preparation for our next generation satellite

system. Deployment of WGS and AEHF allows us to close the gaps in the areas of volume, data rates, protected communications, and net-centricity for the warfighter and our Nation's leadership.

Intelligence, Surveillance, and Reconnaissance

The Space Based Infrared System (SBIRS) will provide the Nation with critical comprehensive missile warning, missile defense, technical intelligence, and battlespace awareness information well into the 21st Century.

In November 2008, the SBIRS Mission Control System Backup – Highly Elliptical Orbit (HEO) facility and HEO-1 payload were accepted for operational use, followed by USSTRATCOM certification in December 2008. The second HEO payload is now on-orbit and undergoing checkout. The exceptionally high quality of HEO infrared data has led to additional exploitation initiatives providing major long-term benefits to our Joint Force Commanders.

As the SBIRS HEO-1 system was certified for operations and is providing critical data to warfighters, the SBIRS Geosynchronous Earth Orbit (GEO-1) and GEO-2 space vehicles made significant assembly, integration and test progress. We will continue satellite testing and integration and look forward to launch readiness testing in FY10.

The future of OPIR is the Third Generation Infrared Satellite (3GIRS) currently undergoing research and development. In 2009-2010, we will continue down the path of wide field of view technology maturation activities. We have received wide field of view sensor prototypes and are on contract for a scientific experiment on a commercial rideshare mission in 2010.

Space Control

As the Air Force enters its 18th year of continuous combat operations in the Persian Gulf, AFSPC continues to provide sustained counterspace capability to USCENTCOM and is in its fifth year of continuous presence in theater with the defensive counterspace system – SILENT SENTRY. The resounding success of the SILENT SENTRY has led to the Rapid Attack Identification Detection and Reporting System (RAIDRS) Block 10 program, which detects and geolocates satellite communications interference via fixed and transportable ground systems.

Operationally Responsive Space

The ORS program is also focused on the Joint fight. AFSPC partnered across the space enterprise and responded to three urgent warfighter needs in communications, SSA, and ISR. We addressed the warfighters' requirements through a variety of innovative approaches to include: accelerated delivery of demonstration efforts, explored alternative uses of on-orbit capability, expanded use of commercial assets, and military utility experimentation with a tactical communications satellite. In addition, we began development of ORS Sat-1 to meet a critical USCENTCOM ISR requirement.

Launch Enterprise Transformation

Assured access to space is paramount to providing space capabilities to the warfighter. AFSPC continues to deliver 100% space launch mission success -- one mission at a time. Within our launch community, we witnessed the continuation of our winning streak with an unprecedented string of 61 successful national security space launches including the 23rd consecutive successful launch of the Atlas V and Delta IV

Evolved Expendable Launch Vehicles (EELVs). Following a 22-month, \$300 million launch site modification effort, the first west coast Atlas V successfully delivered a critical NRO satellite into orbit. We recently launched the GPS IIRM-20 onboard a Delta II in March, as well as the second WGS satellite in April onboard an Atlas V. Additionally, AFSPC supported two world-wide tests of the Ground-based Mid-course Defense long-range missile interceptor system.

In a broader context, AFSPC continues to advance our Space Launch Enterprise Transformation (LET) effort to posture our command for the future of assured access to space. The LET focuses on three initiatives: transformation of launch services acquisition, upgrading the launch range architecture, and fully leveraging Total Force Integration (TFI). While the military launch business has long been recognized as a key contributor to space, we understand the significance of fostering the growth of commercial launch capabilities.

AFSPC Goal: Forge a Battle-Ready Team by Attracting, Developing and Retaining America's Best

To support the Air Force's priority of "Developing and Caring for Airmen and Their Families," AFSPC is forging a battle-ready team by attracting, developing and retaining America's best. During 2009-2010, we will improve training and professional development programs, establish viable career pathways, and guarantee quality of life programs for our members and their dependents. We are taking the necessary steps to care for our Airmen and their families. While we undertake comprehensive organizational realignment, AFSPC is working hard to ensure a seamless transition of the land-based nuclear deterrent to Air Force Global Strike Command and to establish

processes for deliberate development of nuclear expertise among our ICBM professionals. At the same time, we're preparing for the integration of the cyberspace mission by carefully crafting a professional development program that guarantees appropriate education, training and skill sets for this unique and challenging mission area and its synergies with our space professionals.

Developing Airmen

AFSPC further defined space and missile training as well as professional qualification and development relationships with Air Education and Training Command allowing us to focus on our Organize, Train and Equip (OT&E) activities. Contributing to our educational efforts, the National Security Space Institute (NSSI) continued to enhance its reputation as the center for top-quality space education and training for students of all ranks across the Department of Defense and related government agencies. In 2008, the NSSI taught 77 courses to over 1,500 students. We also established an ICBM Advanced Course at the NSSI providing two weeks of mission-focused education for the operations, maintenance, security and helicopter personnel who operate, sustain and secure our ICBM force. Furthermore, we institutionalized attendance at the Air Force Nuclear Weapons Center's Nuclear Management Fundamentals Course for all inbound commanders who will serve at our nuclear units, and we are developing a focused ICBM Weapons Instructor Course (WIC) at the USAF Weapons School (USAFWS) at Nellis Air Force Base, NV.

Families and Quality of Life

AFSPC recognizes the critical roles our families play as integral members of the Air Force team. In AFSPC, we extended the Air Force's wingman culture to our families

to help nurture success on the home front. AFSPC aggressively improved the quality of life where Airmen work and live by awarding \$143 million in 2008 for a host of revitalization initiatives to include family housing, a dormitory, and child development center. In addition, American Recovery and Reinvestment Act stimulus funds of \$145.5 million are being invested across the command for modernization of base infrastructure and military construction (MILCON). For 2009, we have \$31.5 million in MILCON projects for dorm renovation, facilities construction, and other key projects across the Command.

AFSPC Goal: Modernize and Sustain AFSPC's Enduring Missions and Mature

Emerging Missions

To support the Air Force's priority of "Modernizing Our Air and Space Inventories, Organizations and Training," AFSPC will modernize and sustain AFSPC's enduring missions and mature emerging missions. Throughout 2009-2010, we will transition cyberspace capabilities to AFSPC and stand-up a new operational Numbered Air Force (NAF). We will also finalize a basing location and establish cyberspace training and acquisition processes through which we will present cyber forces to the Joint Force Commanders.

In 2008, AFSPC increased the depth and breadth of Air Reserve Component (ARC) support to AFSPC missions. AFSPC's first-ever Total Force Integration (TFI) Strategy was developed to fully leverage the unique strengths of the ARC in both existing and emerging missions. New TFI partnerships are underway across the launch, SSA, space control, and cyberspace operational mission sets. In April 2008, we activated the 310th Space Wing at Schriever Air Force Base, CO, as the Air Force's

first-ever reserve space wing. In addition, we activated the 380th Space Control Squadron at Peterson Air Force Base, CO, as the Reserve Associate Unit for the RAIDRS mission.

AFSPC Goal: Reengineer Acquisition to Deliver Capability at the Speed of Need

To support the Air Force's priority of "Acquisition Excellence," AFSPC will reengineer acquisition to deliver capability at the "speed of need." During 2009-2010, we will continue working a "back to basics" philosophy and block-build approach, fund to the most probable cost, increase our acquisition work force, improve relations with industry, and control requirements. Our Space and Missile Systems Center will deliver five major new systems and mission capabilities in the next six to twenty-four months for SBIRS, AEHF, WGS, GPS IIF, and the Space-Based Space Surveillance (SBSS) system. The GPS III and OCX programs are on the right vectors for success, and we are improving our space development expertise, processes and culture.

In today's world of rapid technological advancement and proliferation, we cannot afford to do business as usual when it comes to delivering space capabilities. The nature of warfare, as influenced by the information age, has changed dramatically in terms of symmetry, ambiguity, time, distance, and boundaries. This environment requires a paradigm shift necessary to deploy space capabilities at the "speed of need" while still executing efficient acquisition practices.

Conclusion

Defending the United States of America and its allies and friends is a continuous mission that requires the utmost planning and execution. As technology advances, so do the means that can be employed by those who threaten our way of life. AFSPC

seeks to perfect the most formidable, capable and remarkable military space, missile and cyberspace force the world has ever known. This will allow warfighting commands to meet the challenge of protecting the American people, their livelihoods and interests with precision at the moment of need. With the continued support of the Congress, AFSPC is postured to maintain a crucial leadership role as we realize our vision to be the leading source of emerging and integrated space and cyberspace capabilities.