DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE SUBCOMMITTEE ON STRATEGIC FORCES

COMMITTEE ON ARMED SERVICES

UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: FISCAL YEAR 2012 NATIONAL DEFENSE AUTHORIZATION BUDGET REQUEST FOR NATIONAL SECURITY SPACE ACTIVITIES

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Introduction

Mister Chairman, Representative Sanchez and distinguished members of the Subcommittee, it is my honor to appear before you today as the Commander of Air Force Space Command (AFSPC).

I am privileged to lead over 46,000 Active Duty, Guard and Reserve Airmen; government civilians; and contractors delivering space and cyberspace capabilities around the world for our Nation. The men and women of AFSPC accomplish our mission at 84 worldwide locations, yet we operate in domains where borders are often indiscernible. AFSPC space and cyberspace capabilities are integral to the Joint fight and our professionals continually ensure excellence and mission success.

Based on the unique responsibilities of the Command, I have established three priorities. First, AFSPC must support the Joint fight. We are focused on supporting our deployed compatriots with our best efforts, and we will not fail them. Second, we must address space system costs and deliver capabilities on time and on budget. In a very constrained budget environment, it is essential that we drive down costs to maximize our buying power. Finally, for the purposes of organizing, training and equipping, we must operationalize and normalize cyberspace to conduct Air Force operations. Cyberspace cuts across the spectrum of military operations; therefore, it is imperative that Airmen understand the special requirements and operational considerations of cyberspace. As the lead Air Force Major Command for cyberspace, we will continue to work with other Major Commands to ensure we have the same level of rigor which has served the Air Force well in air and space.

I look forward to a strong and mutually supportive working relationship with the Subcommittee as we seek to deliver critical space and cyberspace capability to our

forces. Likewise, I am committed to working with our space and cyberspace partners, including US Strategic Command (USSTRATCOM), US Cyber Command (USCYBERCOM), the National Reconnaissance Office (NRO) and the National Aeronautics and Space Administration (NASA), to advance our collective interests.

Moral Obligation to Support the Joint Fight

I strongly believe we have a moral obligation to do everything in our power to provide outstanding support to our brothers and sisters in arms who are in harm's way. Whatever we can do operationally, whatever we can procure that would make their task easier and bring them home safely, we will pursue. In that vein, AFSPC has many capabilities which are central to today's fight, and we are posturing these systems to be even more capable in the future. The President's Fiscal Year (FY) 2012 budget requests $12.1 billion for AFSPC to field and operate vital space systems and critical cyberspace capabilities.

Positioning, Navigation and Timing (PNT)

As stewards of the world's "gold standard" for PNT information, AFSPC is significantly improving the Global Positioning System (GPS) for military and civilian users alike. This past January, we completed the first of a two-phased operation called "Expandable 24," the largest satellite repositioning effort in GPS program history. This operation was planned and executed under the outstanding leadership of Lieutenant Colonel Mike Manor, Captain Dan Highlander, and Captain Blake Hajovsky of the 2nd Space Operations Squadron (SOPS) at Schriever AFB, CO. Each phase

repositions three satellites to optimize terrestrial coverage of the constellation for terrain-challenged environments, such as cities and the mountains and valleys of Afghanistan. The second and final phase of this operation is already underway and it is scheduled for completion this summer.

The FY12 budget request of $1.7 billion (Operations and Maintenance [O&M]; Research, Development, Test and Engineering [RDT&E]; Procurement; and Military Personnel [MILPERS]) also will advance PNT capability by procuring and launching upgraded satellites (GPS IIF and GPS III), funding a significant upgrade to the operational control segment (OCX) and building new Military GPS User Equipment (MGUE). GPS III, OCX and MGUE will improve user collaboration, incorporate an effects-based approach to operations and establish a net-centric ground architecture, thereby accelerating the mission application of positioning and timing information.

Last May, AFSPC launched the first of 12 GPS IIF satellites, which provides improved timing technology, a more jam-resistant military signal and a higher-powered civilian signal. Captains Vivian Elmo and Linda Gostomski, both from our GPS Reserve Associate Unit, 19 SOPS, Schriever AFB, CO, led the way as integrators of contractor, booster, satellite vehicle and ground network teams to ensure a successful launch and on-orbit checkout of this new capability.

Military Satellite Communications (MILSATCOM)

The demand for satellite communications continues to grow as warfighters increasingly depend on information relayed from space, especially for today's distributed operations in this era of information-enabled warfare. This past June, the

first block of Wideband Global SATCOM (WGS) satellites became fully operational with the acceptance of WGS-3. Launches of the next block of WGS satellites (4-6) are planned for 2011-13, with funding for WGS-6 coming from Australia. This partnership is an example of the international cooperation envisioned in the National Space Policy (NSP) and National Security Space Strategy (NSSS). The FY12 request includes $481.5 million (RDT&E and Procurement) for WGS to meet combatant commander requirements to deliver voice, data, and imagery, as well as full motion video from Remotely Piloted Aircraft (RPA).

The first satellite in the next generation of protected and survivable MILSATCOM, our Advanced Extremely High Frequency (AEHF) satellite, was launched last August. Compared to its predecessor, Milstar, AEHF will soon provide a 10-fold throughput increase in secure, jam-resistant communications for national leaders and combatant commanders, as well as support for our international partners including Canada, the Netherlands and United Kingdom.

While the launch was perfect, a spacecraft propulsion system anomaly left AEHF-1 well short of its intended geosynchronous (GEO) orbit. A team of experts from the Space and Missile Systems Center (SMC), led by Lieutenant General Tom Sheridan and Mr. Dave Madden, developed a plan to innovatively use the remaining much smaller thrusters to save this vital asset. The team worked around the clock addressing the immediate need to conserve fuel, developing the recovery plan and demonstrating the recovery could be done safely and effectively. Thanks to the outstanding engineering and hard work of these space professionals, the AEHF-1 orbit is progressing toward geosynchronous altitude and we expect to begin initial testing later

this summer. The budget includes $974.5 million (RDT&E and Procurement) in FY12 and advance appropriations in FY13-17 to fund AEHF.

Overhead Persistent Infrared (OPIR)

Data from the legacy Defense Support Program (DSP), as well as the highly elliptical orbit (HEO)-based Space Based Infrared System (SBIRS) sensors, provides real-time missile warning and missile defense information to national decision-makers and commanders. Last year, we provided the US, coalition members and our allies assured warning for over 200 missile launches and 4,500 special infrared (IR) events, a 150% increase over 2009. This is due, in part, to the vastly improved battlespace awareness capability of the latest HEO payloads. To further assist Geographic Combatant Commanders, and in cooperation with USSTRATCOM, we substantially improved our missile warning reporting criteria, thanks to the herculean efforts of Captain Christopher Castle, First Lieutenant Michael Mariner and Technical Sergeant Michael Johns of the 2d Space Warning Squadron, Buckley AFB, CO. This new criteria will provide more timely and accurate warning information to our entire force.

The 40th anniversary of the DSP program was celebrated in 2010. This constellation provides outstanding service to the Nation and Captains Barry Croker and Zach Lehmann are creatively finding ways to extend the lives of these satellites. They led a team of professionals who have developed a series of new system procedures to wring every last drop of capability from these assets. The team's actions already are credited with forestalling disposal of one of these valuable satellites.

While DSP has a long history of proven strategic, operational and tactical value, we are entering the era of SBIRS GEO, the replacement for DSP, with the first launch planned for spring of this year. Each SBIRS GEO has a staring infrared sensor to allow detection of dimmer, faster burning missiles and more accurate missile launch and impact point predictions, as well as a scanning sensor that covers an entire hemisphere in its field of view. The FY12 budget request includes $1.22 billion (O&M, RDT&E, Procurement and MILPERS) to continue the development of additional OPIR capability.

Operationally Responsive Space (ORS)

The ORS philosophy seeks to rapidly deliver warfighter-demanded capability at reduced cost through innovative acquisition approaches with shorter timelines. Last June, TacSat-3, a hyperspectral imaging satellite, transitioned from an Air Force Research Lab experiment to a warfighter-taskable, DoD-operated, system in support of Combatant Commands (COCOMs) worldwide. TacSat-3 support of the Haitian earthquake recovery efforts and the Deepwater Horizon oil spill demonstrated the value of hyperspectral imagery, and it is now being used by COCOMs to support daily operations. Leading these efforts is Lieutenant Colonel Darren Johnson, from the Headquarters AFSPC ORS Division, who is currently deployed to Afghanistan as Chief, International Security Assistance Force (ISAF) Space Operations. His experience with TacSat-3 expedited theater usage of this unique space-based imager for improved location and targeting of threats to coalition forces in harm's way.

The next ORS satellite on the horizon, currently scheduled to launch later this spring, is ORS-1 which will support USCENTCOM's multispectral imagery needs. The FY12 budget request includes $86.5 million (RDT&E) to develop these ORS systems.

Weather

As part of the National Polar-orbiting Operational Environmental Satellite System (NPOESS) restructure, AFSPC will support Joint forces by developing the Defense Weather Satellite System (DWSS), a FY12 request of $444.9 million (RDT&E). The acquisition of DWSS will maximize NPOESS-developed capabilities to best preserve program schedules and reduce costs. DWSS will replace the military's weather workhorse, the Defense Meteorological Satellite Program (DMSP), now in its sixth decade. We will continue to leverage longstanding partnerships with the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) and NASA as we develop the morning orbit satellite to accompany their Joint Polar Satellite System's afternoon orbit satellite, on which both defense and civil users rely.

Currently, DMSP is operated at the NOAA Satellite Operations Facility in Maryland with a backup control station operated by 6 SOPS, a Reserve unit at Schriever AFB, CO. This blended partnership works well for all parties. As an example, in January, an emergency situation at NOAA required activation of the backup unit. Within an hour, Major Jeremy Edwards and his crew--on hot standby--mobilized and assumed full command of all DMSP satellites, continuing delivery of critical environmental intelligence information to worldwide forces.

Space – Contested, Congested and Competitive.

Space Situational Awareness (SSA)

As the National Security Space Strategy states, “space is becoming increasingly contested, congested and competitive.” In light of these challenges to the space domain, we must maintain adequate resiliency of space capabilities to ensure space-based information delivery and access for Joint forces and allies. Foundational to our ability to “operate through” the growing threats is SSA, which is enabled by the fusion of Space Surveillance Network (SSN) sensor information at the Joint Space Operations Center (JSpOC). Behind the scenes providing this capability daily are Space Event Duty Technicians, like Staff Sergeant Adrian Cervantes, ensuring the accuracy of the SSA data by working closely with fellow space, cyber and intelligence operators. In 2010, the JSpOC routinely tracked over 22,000 space objects, an approximately 10% increase in objects from the previous year. Each week JSpOC conducts over 7,000 space object conjunction (collision potential) screenings which are critically important to the 19 commercial and agency partners in the SSA Sharing Program. Last year, there were 126 collision avoidance maneuvers, a 180% increase over 2009, the year of the very unfortunate Cosmos and Iridium satellite collision.

Our ability to maintain leadership in SSA depends on SSN modernization and adding increased SSA capability to track smaller objects, increase timeliness of revisit rates and mitigate coverage gaps. Replacing the Air Force Space Surveillance System, which employs a 1960’s era Very High Frequency (VHF) radar, is important to this overall objective. The Space Fence and its S-band radar capability will significantly aid the detection of smaller objects and provide uncued tracking of space objects.

Last September, the first operational launch of a Minotaur IV delivered the Space Based Surveillance System (SBSS) to orbit, the first dedicated on-orbit SSA satellite, which provides us the capability to track an object, day or night, without weather interference. The satellite's first image was taken in October by a team of SMC, 1 SOPS and 7 SOPS (Reserve Associate Unit) personnel as part of planned calibration and characterization activities, and the initial data is superb. Another new potential SSN contributor is DARPA's Space Surveillance Telescope (SST), based in New Mexico, which is currently undergoing extensive testing. SST has the potential to provide AFSPC with new capability to detect and track faint space objects at geosynchronous distance.

Foundational to all the space surveillance architecture improvements is ensuring that we have the processing and data fusion capabilities to conduct SSA. The JSpOC Mission System (JMS), with a FY12 budget request of $122.1 million (O&M, RDT&E and Procurement), is proceeding through the acquisition process and it will replace legacy technology with improved data processing, integration, visualization and exploitation capabilities. Without the capability to receive, process, fuse, and exploit the data we receive from SSA sources, we will not meet the challenges of an increasingly congested and contested space environment.

Space Protection Program (SPP)

SPP continues to inform the national space community by raising awareness of space threats and system vulnerabilities, as well as identifying material and non-material solutions to mitigate those threats. The Air Force's FY12 budget request is for

$9.8 million (RDT&E) to continue this work to gain architectural insights for the future. Through several analytical studies, SPP provided AFSPC and NRO leadership significant recommendations and mitigation options to protect space assets. For instance, Lieutenant Colonel Gary Samson led an analysis and software demonstration activity which illustrated how some immediate operational changes could reduce the effects of known threats and regain reconnaissance mission capability. Another study, led by Lieutenant Colonel Dan Bates, provided several recommendations to sustain PNT capabilities in a contested environment. SPP's analytical work also supports real world events, exercises and wargames. Finally, SPP supports national efforts to develop policy, strategy and architecture options across the national security space community.

Schriever Wargame 2010

The Schriever Wargame series generates leadership insights in contested space and cyberspace environments. The most recent iteration, Schriever Wargame 2010, brought together military and civilian experts from more than 30 government agencies. Under the leadership of Lieutenant Colonel Joe Wurmstein, Headquarters AFSPC wargaming branch chief, and Major Jim Pedersen, the game director, this version focused on space and cyber deterrence, escalation control, response options, policy, planning, and national command relationships and authorities. The wargame featured expanded international and industry participation, including Australia, Canada, Great Britain, a NATO observer cell and cyber industry representation. As AFSPC prepares

for the next iteration in 2012, we will use a comprehensive approach to gain additional insights, integrating instruments of national power to deter, prevent and contain conflict.

Space Innovation and Development Center (SIDC)

The SIDC, as the name implies, is our center for space and cyber innovation. Among other responsibilities, it is home to the AF Tactical Exploitation of National Capabilities (TENCAP), which works to deliver game-changing increases in capability for the Joint fight. Other SIDC projects include on-demand commercial Synthetic Aperture Radar distribution to warfighters, distribution of 5th generation aircraft data into legacy fighter aircraft and C2 platforms, and a prototype Data Integration and Fusion Center (DIFC) capable of providing a robust common operating picture to COCOM decision-makers by fusing multiple sources of non-traditional and national level information.

X-37B

Several AFSPC organizations supported DoD's first-ever operational space plane mission, the X-37B Orbital Test Vehicle (OTV). Through lessons learned from the first flight, the SIDC's 3rd Space Experimentation Squadron has identified concepts of employment, training, education and technical skill sets required for future X-37B operations. Also crucial to this success was First Lieutenant Gordon Barnhill of the 45th Launch Support Squadron at Patrick AFB, FL, who was the launch site's lead engineer and developer of ground-breaking procedures for the launch and landing of this unique space plane. Additionally, the Western Range Team at Vandenberg AFB,

CA, developed and tested new procedures for X-37B pre-recovery operations. Mr. Dennis Pakulski, the Chief Mission Engineer, applied both ingenuity and experience to replace 658 steel runway plates that posed a danger to the X-37's landing gear. Captain Dariusz Wudarzewski, the Range Operations Commander, led more than 250 landing team members and provided the complex final recommendation for "clear to land" for the safe return of the OTV after nearly 8 months of successful on-orbit operations. The second launch of the X-37B took place March 5th.

Air Force Satellite Control Network (AFSCN)

The AFSCN is our capability to receive mission data and control many of our Nation's satellites. In FY10, the AFSCN conducted over 150,000 satellite contacts, supported 21 launches and 39 vehicle emergencies. The FY12 budget requests $328 million (O&M, RDT&E and Procurement) for AFSCN. The AFSCN recently underwent a major upgrade, replacing decades-old communication and switching equipment, and upgrading communication circuits to handle Internet Protocol traffic. Considerable downtime over a four-day period was required to make these changes. First Lieutenant David Rothzeid of SMC's Satellite Control and Network Systems Division orchestrated the outages site-by-site, working with multiple organizations and contractors to ensure the network could maintain its average 450 per day satellite contact rate during the transition.

Electromagnetic Spectrum Management

In 2010, the Air Force Frequency Management Agency, Alexandria, VA, was re-designated the Air Force Spectrum Management Office (AFSMO) to better reflect the broader responsibilities of that organization. Colonel Brian Jordan, the AFSMO Commander, is the strategic thinker and visionary dealing with the difficult challenges that accompany preserving access for essential Air Force capabilities. The backbone of information flow is the electromagnetic spectrum which is the common link among networks, sensors, weapon systems, commanders and combat forces. In the Presidential Memorandum, *Unleashing the Wireless Broadband Revolution,* issued on June 28, 2010, Federal agencies were directed to cooperate in the effort to locate 500 megahertz of Federal and non-Federal spectrum suitable for wireless broadband use. As a result of the memorandum and at the direction of the Department of Commerce's National Telecommunications and Information Administration, AFSMO will lead the Air Force's evaluation of the 1755-1850 megahertz spectrum sought by wireless companies to determine if it can be made available without harming critical capabilities.

This spectrum is used by a wide array of critical Air Force systems, including precision guided munitions, airborne telemetry systems, RPAs and the C2 of numerous satellite systems, including GPS. As the Air Force designs, tests and deploys new or modified systems, spectrum management is of paramount importance to supporting the Joint fight.

SILENT SENTRY

Since 2005, Operation SILENT SENTRY, a capability initially designed for a 120-day demonstration, has provided USCENTCOM with spectrum monitoring for electromagnetic interference (EMI) of satellite communications in the AOR. Spearheaded by personnel from the 16th Space Control Squadron (16 SPCS), Peterson AFB, CO, and its collocated Reserve Associate 380 SPCS, this nine-person team is instrumental in detecting and geo-locating sources of EMI events--both intentional and unintentional--including monitoring of RPA satellite links used for C2 and mission data. The current deployment team is led by Lieutenant Colonel Blake Jeffries (16 SPCS) and Master Sergeant Scott Westfall (380 SPCS).

In-Theater Space Professionals

Many of our space professionals have deployed to critical positions in the US Central Command (USCENTCOM) Area of Responsibility (AOR) to ensure timely space support is available to the warfighter. Included in this group is the Director of Space Forces (DIRSPACEFOR). The DIRSPACEFOR, currently Colonel Dave Buck, brings senior-level space perspective and harnesses the expertise of our mid-level space professionals who are integrated in theater units, directly supporting Joint and coalition forces. Additionally, the DIRSPACEFOR reaches back to the Joint Functional Component Command for Space and the Joint Space Operations Center at Vandenberg AFB, CA, for access to all DoD space forces.

Captains Aaron Cochran and Chris Bendig are just two examples of these mid-level theater space professionals, in this case assigned to the 504th Expeditionary Air

Support Operations Group. They provide critical forward-based space expertise enabling integration of space capabilities into air and ground operations in Kandahar and Mazar-e-Sharif, Afghanistan. Their presence allows expert knowledge transfer to tactical users, including Army brigades and battalions, Joint Terminal Attack Controllers and other battlespace owners.

Space and Cyberspace Capabilities at Red Flag

Another milestone for AFSPC is tactical level integration of space and cyber capabilities with traditional air capabilities at the Air Force's premier training exercise, Red Flag, held at Nellis AFB, NV. Recently, a space officer was designated the overall mission commander during one of the exercise days--a Red Flag first. Captain Warren Riner, 76th Space Control Squadron, Peterson AFB, CO, led a multi-faceted air, space and cyberspace force, which highlighted the diverse, yet synergistic, mission capabilities of the Air Force. Captain Riner's team was also responsible for all air, space and cyberspace non-kinetic capability integration during all exercise missions. I believe this is the future of our force: seamless integration of multiple capabilities, where the result is greater than the sum of the parts.

Control Space System Costs

AFSPC is implementing significant changes as part of the Air Force's "Recapture Acquisition Excellence" priority. From requirements definition to contracting to hard-nosed program management, we must work to reduce our space system acquisition costs. In cooperation with the Office of the Secretary of Defense, the Air Force is

redefining acquisition strategies for buying military satellites. Anticipated savings will allow for research and development investment for future performance improvements and to lower cost of follow-on systems. We will closely collaborate with the Headquarters Air Force acquisition staff to implement this new strategy for the next blocks of AEHF and SBIRS satellites. We look forward to working with Congress to obtain the necessary legislative authorities to execute this strategy and achieve our vision.

The record of successful national security launches since 1999 is truly remarkable. Nevertheless, we treat each launch as if it were our first, applying sound mission assurance principles to ensure success. Unfortunately, the space launch industrial base is very fragile, resulting in significantly increased costs of the Evolved Expendable Launch Vehicle (EELV) program. To arrest this cost growth, we are implementing a new launch vehicle purchasing strategy. Our plan is to commit to an annual production rate of launch vehicles, alongside the NRO, with block buy procurement. We believe this will provide predictability, economic order quantity opportunities and a more stable industrial base, thereby lowering overall costs. A team of acquisition and launch experts, including NRO, NASA and industry partners, is developing an improved approach to maintaining EELV's outstanding mission success record while controlling costs and providing more operational flexibility. The Air Force request for EELV is $1.76 billion (RDT&E and Procurement) in FY12.

A recent Letter of Intent signed by the Air Force, NASA and the NRO commits the organizations to closer coordination in the acquisition of launch vehicles, liquid-fueled engines for boosters and upper stages, and the development of launch bases

and ranges. This is recognition of the continued need for collaboration to help assure the Nation's access to space, especially in a challenging fiscal environment for all the agencies involved.

Operationalize and Normalize Cyberspace for Air Force Operations

As the Air Force's lead Major Command for cyberspace, AFSPC is making significant strides in leveraging existing resources, applying appropriate lessons learned and new processes, and working toward increasing our effectiveness within cyberspace for 21st century military operations. Using this approach, we have rapidly developed the organizational structure, C2, career field management, education and training, and technical capabilities in cyberspace. Last October, Twenty-Fourth Air Force (24 AF) achieved Full Operational Capability status and in December was designated Air Forces Cyber (AFCYBER) to signify its role as the Air Force's operational component to USCYBERCOM.

We are applying lessons learned from the Space Professional Development Program to build a counterpart cyberspace program. The focus of the Cyberspace Professional Development Program is to build 21st century cyberspace warriors with a mindset and skill set tailored to operational roles. Last year, we produced our first graduates from Undergraduate Cyberspace Training, Cyber 200 and Cyber 300 classes, forming the beginnings of a highly trained cyber force.

Cyberspace integration into the Joint fight is beginning to take shape. A recent milestone was the integration of RPA mission assurance efforts, also called "cyber escort missions," into the operations section of the USCENTCOM Air Tasking Order.

This signifies the first major, sustained employment of cyber capability into day-to-day air operations. Lieutenant Colonel Gerald Ramsey, who is assigned to the 624th Operations Center, Lackland AFB, TX, currently leads one of the first deployments of the Cyberspace Operations Liaison Element (COLE) to the USCENTCOM AOR. The COLE ensures cyber effects are fully integrated into contingency planning efforts from initial planning through execution. The COLE also provides mission assurance, exercise planning and development, and cyber intelligence support to Joint operations.

Our 689th Combat Communications Wing (689 CCW) already is fully integrated in warfighter support. Last year, the 689 CCW deployed 700 Airmen to 54 locations, highlighted by establishing initial communications capability on four bare bases in hostile areas. Additionally, they provided support to homeland defense and disaster relief efforts, including Secret Service support and crucial involvement in humanitarian and disaster relief operations in Haiti and Chile. Staff Sergeant Alexander Yessayan, a combat communication specialist, received the Air Force Combat Action Medal and Army Combat Action Badge for his heroic actions in defending his Provincial Reconstruction Team against a Taliban ambush while in Afghanistan. Major Noland Greene, Commander of the 34th Combat Communications Squadron, led a 47-member team of cyber warriors to Shindand Air Base, Afghanistan, where they built and operated a network for the Army that provided all required communication services at this forward operating base.

While AFSPC and 24 AF have swiftly reached significant cyberspace milestones, much work remains. And our top priority is to consolidate into a single Air Force network, known as the AFNet. This single network will be a major step toward

achieving real-time situational awareness, allowing better defense of the network, and facilitating efficient enterprise solutions for the Air Force. This will standardize and simplify delivery of services to our force, thereby reducing operations and maintenance costs.

In addition to terrestrial network consolidation, the Air Force Network Integration Center leads the Single Integrated Network Environment (SINE) initiative. Under the leadership of Lieutenant Colonel Patrick Dunnells, SINE is an overarching framework for how the Air Force will provide seamless information flow across terrestrial, air and space domains. Information flow among domains is critical for efficient and effective mission accomplishment and SINE is a path forward to provide resilient, risk-mitigated infrastructure for increased operational reliability, availability, C2 and situational awareness.

AFSPC's cyberspace portfolio request is for $1.9 billion in FY12. Approximately $1.2 billion of this request is for operations and maintenance and over $700 million is allocated for developing additional capability. Operationalizing and normalizing the cyberspace mission for the Air Force is in its nascent stages, but beginning to take root as we build a strong foundation with deliberate speed and thought. These efforts will enhance the asymmetric advantages of our Joint forces and provide the vehicle for synergistic benefits through integration of air, space and cyberspace.

AFSPC Professionals

The talented men and women of AFSPC and the families who support them are essential to achieving the Command's three priorities. We have trained and ready

Airmen who deliver for the Joint fight every single day in technically demanding domains. I strongly believe the continued development of our space and cyberspace professionals is key to our future. Last year we broke ground on the new $14.4 million Space Education and Training Center, which will give a permanent, on-base residence for the National Security Space Institute (NSSI) and Advanced Space Operations School (ASOpS). Each year, ASOpS provides advanced training to more than 1,600 DoD space professionals, while NSSI, the Air Force's space professional development school, provides unique education to approximately 800 space professionals from all Services. Again in compliance with the new National Space Policy, this year the NSSI will provide its first course offerings to our Australian, British and Canadian international partners.

In addition to the training we provide for our people, a professional, non-discriminatory environment creates the opportunity for all to achieve their full potential. We steadfastly support the Air Force's Sexual Assault Prevention and Response program and its role in fostering a healthy unit environment. AFSPC is proud of our bystander intervention video, shared AF wide, which captures the experience of Airman First Class Edward Todd of the 21st Dental Squadron, Peterson AFB, CO. The video recreates how he applied his training to assist a young woman in a dangerous situation, averting a potential assault. Further, I believe a focus on the resiliency of our people is foundational to developing a wellness culture that combats not only suicides, but alcohol and substance abuse, and other self-destructive behaviors. We are working hard to provide education and training to raise the resiliency of our entire command, thereby providing better tools to our people as they deal with the stressors of daily life.

Total Force Enterprise

The contributions of our Reserve and Guard forces to the Joint fight simply cannot be overstated. In AFSPC, the Air Reserve Component (ARC) comprises approximately 40% of our Airmen. Space and cyberspace operations require high-caliber individuals with in-depth technical skills. As many AFSPC missions are 24x7 and deployed-in-place, the ARC can augment active duty units as part-time force multipliers providing needed technical expertise, especially in cyber where industry is currently leading innovation. The ARC enables a superb intersection of military and civilian experience which is mutually beneficial to both active duty and ARC Airmen in our Command.

Conclusion

Significant technological advances in space and cyberspace have transformed the way we conduct military operations--and even the way we live our daily lives. Recognizing the mandate to keep pace with this high rate of change, AFSPC will proceed with a sense of urgency as we deliver global capabilities which are so crucial in this age of information-enabled warfare. We will focus on our three priorities: support the Joint fight, get control of the costs of space programs, and operationalize and normalize cyberspace for Air Force operations. And above all, our workforce of highly trained and motivated professionals will continue to produce excellence, global and beyond.

I consider it a deep personal honor to command Air Force Space Command, and again, I appreciate the opportunity to appear before the Subcommittee to represent my Command.