STATEMENT OF

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Chairman Turner, Ranking Member Sanchez, and members of the subcommittee, thank you for the opportunity to testify regarding key strategic issues for the Department of Defense. It is a pleasure to join the new Commander of U.S. Strategic Command, General Bob Kehler.

My testimony today will focus on America's nuclear, missile defense, and space capabilities. As you know, just over a year ago, DoD submitted to Congress the Quadrennial Defense Review (QDR) and the Ballistic Missile Defense Review (BMDR), and soon thereafter the Nuclear Posture Review (NPR) and an interim Space Posture Review. We have recently submitted the first-ever National Security Space Strategy to close out the Space Posture Review, and are finalizing the first-ever Department of Defense Strategy for Operating in Cyberspace. Before summarizing progress in implementing these reviews and addressing current challenges, I'd like to say a few words about the broader strategic context in which we find ourselves today.

Strategic Context

Although my testimony today focuses on the Department's efforts relating to the high end of the conflict spectrum, it is critical to ground ourselves in the reality that we are a nation at war. We are on track to withdraw responsibly from Iraq by the end of 2011, and are making progress in Afghanistan and against al Qaida globally. We must win today's wars in order to shape the future in ways commensurate with U.S. vital interests. Indeed, a key objective of our campaign against terrorism is to prevent the proliferation of WMD to terrorists and other non-state actors.

The United States continues to focus on Iran and North Korea as engines of destabilizing proliferation. From their pursuit of nuclear capabilities and other WMD material, to the proliferation of ballistic missiles and other means of delivery, Iran and North Korea continue to flout UN Security Council resolutions and the views of the international community. We remain concerned that these states also pose substantial risks of transferring dangerous technology to other state or non-state actors.

Iran shows continued interest in pursuing its nuclear-related programs. Although we do not know if Iran will eventually decide to build nuclear weapons, the prospect of a nuclear-armed Iran is deeply concerning to the United States and the global community, and there is a risk that Iran's continued efforts will prompt neighboring states to pursue nuclear options. Iran already possesses the largest inventory of ballistic missiles in the Middle East, and it is continuing their development. Iran has also jammed commercial satellites to censor news to its public. In recent weeks, the regime in Tehran has curtailed internet access to its own people, and has claimed responsibility for defacing the website of the Voice of America.

For its part, North Korea continues its nuclear ambitions and missile development. In November 2010 it claimed to U.S. visitors that it was operating a uranium enrichment facility at

Yongbyon – evidence that further supports the United States' longstanding assessment that the DPRK has pursued a uranium enrichment capability. It has also continued development of the Taepo Dong 2 missile, which could reach the United States if developed into an intercontinental ballistic missile (ICBM). Its export of ballistic missiles and associated materials to Iran and Syria is evidence not only of North Korea's continued intransigence, but also the threat such proliferation poses to international stability more generally.

Even as the United States and its partners are working to prevent states like Iran and North Korea from acquiring and transferring nuclear weapons technology, we must recognize that the proliferation of advanced conventional weapons technology is more difficult to control. Many states are acquiring Anti-Access/Area Denial (A2/AD) capabilities intended to deny our forces access to key regions and allies, and to blunt the operations of forces that do deploy forward.

The United States welcomes a strong, prosperous, and successful China that plays a greater global role in supporting international rules, norms of responsible behavior, and institutions. At the same time, the United States and China's Asian neighbors remain concerned about the pace and scope of China's current military modernization efforts, which encompass a wide range of advanced air, air defense, naval, missile, space and cyberspace capabilities. The connection between China's significant military investments and the strategies to which they would be put to use is cause for concern. In this respect, greater transparency from China concerning its military could reduce the chance for misunderstanding and miscalculation. We continue to seek sustained U.S.-China military-to-military relations as a means to help reduce mistrust, enhance mutual understanding, and broaden cooperation.

U.S.-Russian relations improved significantly in 2010, as demonstrated by such developments as conclusion, ratification, and entry into force of the New START Treaty; the joint pressure applied to Iran's nuclear program; and the continued cooperation on transit and counternarcotics efforts in Afghanistan. While disagreements exist and will remain, we will continue fruitful dialogue on areas of mutual interest, including seeking cooperation on missile defense, and stability in space and cyberspace. We seek to responsibly sustain a stable relationship as the pace of military-technical innovation increases and the global security environment evolves.

A critical component of U.S. national security strategy is maintaining and enhancing our global network of alliances and partnerships. From our long-standing alliances forged in the middle of the 20th century to strong partnerships emerging today, America's approach to global leadership requires relationships that can adapt to 21st century security challenges. The Administration looks forward to working with this Congress to ensure that this global leadership is sustained and strengthened to meet the challenges of our time.

In all of our efforts regarding strategic issues, it is critical to maintain a whole of government approach. Examples in the strategic arena include DoD's collaboration with the National Nuclear Security Administration (NNSA) on nuclear non-proliferation as well as nuclear modernization; with the Department of Homeland Security (DHS) on cyber security; and with the State Department on establishing the rules of the road for operating in space to encourage responsible actions in, and the peaceful use of, space.

DoD's partnership with U.S. industry is also critical. From the emerging technical challenges in space and cyberspace that require industry expertise and leadership, to the reform of export controls by building higher walls around the most sensitive items while ensuring that America's industrial base is globally competitive, the need to remain engaged with the business community has never been greater.

Nuclear Policy and Posture

Nearly a year ago, Secretary Gates delivered the 2010 NPR Report to Congress. The NPR provides a roadmap for advancing the President's Prague agenda; it articulates the Administration's comprehensive approach to reducing the role and number of nuclear weapons toward the ultimate goal of a world free of nuclear weapons, while sustaining, as long as nuclear weapons exist, a safe, secure, and effective nuclear arsenal. The NPR outlined five key objectives.

Preventing nuclear proliferation and nuclear terrorism

The 2010 NPR was the first to focus significantly on nuclear proliferation and terrorism, and gave first priority to their prevention.

Securing all vulnerable nuclear materials worldwide

About 2,000 tons of weapons-usable highly enriched uranium (HEU) and separated plutonium exist in hundreds of civilian and military locations around the world under varying levels of security. In the hands of terrorists, such materials could be used to create improvised nuclear devices with the capability to decimate cities and create economic and political damage on a global scale.

To implement the President's call for a focused and intensified international effort to lock down or remove such nuclear materials, the Administration is executing an integrated strategy that aligns authorities, capabilities and resources to reduce global nuclear threats. DoD is supporting these efforts through its Nunn-Lugar Cooperative Threat Reduction Program, and is requesting $121.1 million for this purpose in FY2012.

Bolstering the nuclear non-proliferation regime

The Administration continues to give top priority to reversing the nuclear ambitions of North Korea and Iran. The past year has met with some success, including increasingly strong sanctions of Iran, but much work remains. For the first time in ten years, the May 2010 Nuclear Nonproliferation Treaty (NPT) Review Conference reached consensus agreement to advance disarmament and nonproliferation efforts based on the three pillars of the regime: nuclear nonproliferation, peaceful uses of nuclear energy, and nuclear disarmament. Further steps are needed to strengthen International Atomic Energy Agency (IAEA) safeguards, as well as address the critical issue of consequences for withdrawal from the NPT. We are working with the State Department to advance these critical activities.

Pursuing arms control efforts in support of NPT Article VI obligations

Entry into force of New START on February 5, which I will discuss in greater depth momentarily, was a key milestone in meeting U.S. obligations under Article VI of the NPT to pursue nuclear disarmament. Two additional areas where we hope to make progress include pursuing ratification and entry into force of a Comprehensive Nuclear Test Ban Treaty (CTBT), and beginning multilateral negotiations on a verifiable Fissile Material Cutoff Treaty (FMCT) in the Conference on Disarmament in Geneva.

Reducing the role of nuclear weapons in U.S. national security strategy

The sustained growth of unrivaled U.S. conventional military capabilities, improvements in missile defenses, and the easing of Cold War rivalries enable the United States to meet 21st century threats at significantly lower nuclear force levels and with reduced reliance on nuclear weapons. Further development of conventional prompt global strike (CPGS) and other long-range strike capabilities offers the possibility of further reducing the role of nuclear weapons while strengthening U.S. security. However, as long as nuclear weapons exist, the United States will maintain a safe, secure, and reliable nuclear arsenal.

Conventional prompt global strike

The 2010 NPR noted the potential value of CPGS capabilities to defeat time-urgent regional threats. DoD is exploring in particular the potential of conventionally-armed, long-range missile systems that fly a non-ballistic trajectory such as boost-glide systems. Such systems could "steer around" other countries to avoid over-flight and have flight trajectories distinguishable from an ICBM or submarine launched ballistic missile (SLBM). As we made clear during the New START Treaty negotiations, we would not consider such non-nuclear systems, which do not otherwise meet the definitions of the New START Treaty, to be "new kinds of strategic offense arms" for the purposes of the Treaty.

DoD continues to explore a broad range of possibilities for CPGS. Although still in an early stage of development, such capabilities would increase the options available to the President in time of crisis and conflict, including the ability to hold at risk key high-value

regional targets such as WMD facilities and ballistic missiles with rapidly executed, high precision attacks. DoD proposes investing approximately $2 billion between now and 2016 for research and development of CPGS capabilities.

Other long-range strike

Beginning in the Quadrennial Defense Review and Nuclear Posture Review and extending through the last year, DoD conducted exhaustive analysis of the nation's requirements for a future long-range strike (LRS) family of systems, including the potential role for a follow-on bomber. Our analysis led the Department to undertake future improvements across these systems. In addition to funding for CPGS, the FY2012-FY2016 Future Years Defense Program (FYDP) includes the following enhancements:

- Expanding procurement of proven cruise missile systems, including the Joint Air-to-Surface Standoff Missile – Extended Range (JASSM-ER) and Tactical Tomahawk missiles.

- Developing a new dual-capable Long-Range Standoff (LRSO) missile to replace the current air-launched cruise missile in the latter half of the 2020s.

- Continuing to invest in upgrades to our fleet of B-2 bombers to ensure survivability.

- Initiating development of a new long-range, nuclear capable penetrating bomber capable of manned or unmanned operations, with $3.7 billion programmed through the FYDP.

Counter-WMD capabilities

The Administration continues to actively engage partners in robust exercises as part of the Proliferation Security Initiative (PSI) and has taken steps towards the President's goal of ensuring PSI is an enduring effort. We have conducted an extensive review of our planning processes as they relate to WMD threats, and are working to align our plans, organizations, and capabilities to ensure that DoD can respond effectively to WMD threats wherever they emerge. In addition, we have focused on enhancing national and international efforts to attribute the source of potential WMD attacks. These efforts support our ability to both respond to and deter the use of WMD.

<u>Maintaining strategic deterrence and stability at reduced nuclear force levels</u>

The New START Treaty allows the United States to continue to field a credible and flexible nuclear deterrent force for the duration of the treaty. In particular:

- The Treaty's limit of 1,550 accountable strategic warheads allows the United States to sustain effective nuclear deterrence, including sufficient survivable nuclear forces for an assured devastating second-strike capability.

- The Treaty's limit of 700 deployed ICBMs, deployed SLBMs, and deployed heavy bombers supports strategic stability by allowing the United States to retain a robust Triad of strategic delivery systems—while downloading all Minuteman III ICBMs to a single warhead each.

- The Treaty's limit of 800 deployed and non-deployed launchers of ICBMs, launchers of SLBMs, and nuclear-capable heavy bombers allows the retention of up to 100 ICBM and SLBM launchers, and nuclear-capable bombers, in a non-deployed status. When combined with the New START counting rule that a launcher is deployed only when mated with a missile, and the treaty's provisions on disabling individual launchers on strategic submarines and converting of heavy bombers to a conventional-only configuration, this allows the United States to minimize irreversible changes to nuclear force structure.

A key contribution of New START is its strong verification regime, which provides a firm basis for monitoring Russia's compliance with its treaty obligations while also providing important insights into the size and composition of Russian strategic forces.

- The United States and Russia will exchange initial New START databases no later than March 22, 2011. Required notifications for changes in that data, which were initiated on February 5 when the Treaty entered into force, will allow us to track changes in the status of Russian strategic offensive arms covered by the Treaty.

- The Treaty allows each party to conduct up to 18 on-site inspections each year. These inspections will begin after April 5.

The United States intends to pursue further reductions in strategic and non-strategic nuclear weapons with Russia, including both deployed and non-deployed nuclear weapons. Maintaining strategic stability with both Russia and China will remain a critical challenge in the years ahead. We continue to pursue high-level, bilateral dialogues with Russia and China aimed at promoting more stable, resilient, and transparent strategic relationships. Such discussions are moving forward with Russia, and we are seeking similar discussions with China. The lack of transparency surrounding China's nuclear programs – their pace and scope, as well as the strategy and doctrine that guide them – raises questions about China's future strategic intentions. We will continue to seek to engage China in a strategic dialogue, as I am convinced that we share mutual interests in maintaining strategic stability and avoiding an arms race.

Nuclear force structure

Maintaining each leg of the nuclear Triad – ICBMs, SLBMs, and dual-capable heavy bombers – under New START is key both to preserving strategic stability and hedging against any unexpected technical problems or operational vulnerabilities that may arise in one leg. The Administration plans a robust nuclear Triad of 700 deployed ICBMs, SLBMs, and nuclear-capable heavy bombers under New START:

- We plan to retain all 14 Ohio-class SSBNs and deploy no more than 240 Trident II D5 SLBMs at any time.

- We also plan to retain up to 420 of the current 450 deployed Minuteman III ICBMs, each with a single warhead.

- And we plan to retain up to 60 nuclear-capable B-2A and B-52H heavy bombers, while completing the conversion of all nuclear-capable B-1B and some B-52H heavy bombers to conventional-only capability.

Strategic delivery system modernization

As articulated in the NPR and consistent with the New START Treaty, the Administration is committed to modernizing the nuclear Triad:

- Funding began for the OHIO-class replacement SSBN in FY2010 to support the FY2019 lead ship procurement. Continued research, development, technology, and engineering investments are included in the FY2012 President's Budget Request.

- The Navy plans to sustain the Trident II D5 missile, carried on the OHIO-class SSBN, through at least 2042 with a robust life extension program.

- The preparatory analysis for a follow-on ICBM capability to be fielded by the 2030 timeframe has begun.

- As I noted earlier, we will continue to maintain heavy bombers to provide a long-range air-delivered conventional and nuclear attack capability for the indefinite future, including upgrades to the B-2 and the development and fielding of a new long-range, nuclear-capable penetrating bomber starting in FY2012.

- As noted earlier, DoD is developing a new dual-capable Long-Range Standoff (LRSO) missile to replace the current air-launched cruise missile in the latter half of the 2020s.

<u>Strengthening regional deterrence and reassuring U.S. allies and partners</u>

At the NATO summit in Lisbon last year, President Obama joined other Heads of State in approving a new Strategic Concept that outlines a roadmap for ensuring NATO's common defense and security. The Strategic Concept committed NATO to the goal of creating the conditions for a world without nuclear weapons while at the same time reconfirming that as long as there are nuclear weapons in the world, NATO will remain a nuclear alliance.

In order to ensure that it maintains an appropriate mix of conventional, missile defense, and nuclear forces to deter and defend against the full range of threats to the Alliance, NATO has begun a year-long comprehensive review of NATO deterrent and defense forces, taking into account changes in the evolving security environment. We are now fully engaged in this effort with our NATO partners and we intend to complete this review before the 2012 NATO summit.

As part of the U.S. commitment to assure our Asian allies, the United States has engaged on a series of strategic dialogues on extended deterrence with the Republic of Korea (ROK) and Japan. The United States and South Korea have developed the Extended Deterrence Policy Committee (EDPC) as one of the enabling measures for an effective combined defense posture agreed to by the Secretary of Defense and the Minister of National Defense at their Security Consultative Meeting held on October 8, 2010. The EDPC is intended to provide transparency and reassurance that extended deterrence for South Korea is credible and enduring; the inaugural session is scheduled for later this month in Hawaii. DoD has also been working with Japan to develop a series of extended deterrence dialogues, and will host regular U.S.-Japan Extended Deterrence discussions every year for the foreseeable future. The inaugural session is scheduled for this week at the Pentagon.

Sustaining a safe, secure, and effective nuclear arsenal

The 2010 NPR highlighted the importance of sustaining a safe, secure, and effective nuclear deterrent. The Administration's FY2012 budget reflects our commitment to the modernization of our nuclear arsenal for the long term, including some $125 billion over the next ten years to sustain our strategic delivery systems, and about $88 billion over the same period to sustain our nuclear arsenal and modernize infrastructure. These are large investments, but essential to U.S. national security.

The NPR identified a number of NNSA nuclear weapons facilities that are decades old and must be replaced or modernized to ensure the reliability of a smaller nuclear arsenal. Two particularly critical facilities are the Chemistry and Metallurgy Research Replacement (CMRR) Facility and the Uranium Processing Facility (UPF), which are to be completed in the middle of the next decade. The CMRR and UPF are in their early design phases today; as their designs proceed, we will have more accurate estimates of their costs.

As the Committee is aware, NNSA is seeking an "anomaly" to allow the Weapons Activities account, part of NNSA's Defense Programs, to operate at the FY2011 President's Request during the Continuing Resolution (CR). If another CR is passed, the anomaly should be

extended to continue implementation of several NPR-directed activities, including the life extension program study for the W78 nuclear warhead and design of the CMRR and UPF. The current House CR would cut in half the additional funding for Weapons Activities in the current CR, from $624 million to $312.4 million. If not corrected, this reduced funding level will delay needed investments and drive up program costs.

Missile Defense Policy and Posture

The February 2010 Ballistic Missile Defense Review report represented a major milestone in aligning U.S. missile defense posture with near-term regional ballistic missile threats, while offering a roadmap toward sustaining and enhancing our ability to defend the homeland against a limited long-range attack.

Defending the Homeland

The United States is currently protected against limited ICBM attacks. This is a result of investments made over the past decade in the ground-based midcourse defense (GMD) system. Because of continuing improvements in the GMD system and the number of interceptors now deployed compared to potential North Korean and Iranian long-range ballistic missile capabilities, the United States possesses a capability to counter the projected threat from North Korea and Iran. We will continue to reassess requirements based on updated threat projections and other factors.

We have deployed 30 Ground-Based Interceptors (GBIs) to defend the homeland. We are continuing our procurement of a total of 52 GBIs, including five in FY2012. Additional GBIs will be used for testing, stockpile reliability, and operational spares. We will conduct stockpile surveillance of GBIs by testing all limited life components as GBIs are refurbished and maintained until at least 2032.

We continue to upgrade and test the system to increase reliability and survivability and expand the ability to leverage new Ballistic Missile Defense System sensors. The President's FY2012 budget request will begin funding an In Flight Interceptor Communications System (IFICS) Data Terminal (IDT) on the East Coast and upgrades to the Early Warning Radars at Clear, Alaska, and Cape Cod, Massachusetts.

The Missile Defense Agency (MDA) is conducting a review of the most recent GBI test failure, and we will use the results of that review and future tests to ensure that our homeland defenses are as robust and reliable as possible. Data collected from future GMD flight tests, results from the aging surveillance program, and future intelligence estimates regarding the pace of North Korean and Iranian ICBM efforts will inform decisions regarding any need to procure additional GBIs.

The President's FY2012 budget request provides a substantial investment in the GMD element intended to ensure it remains viable over the long term, while implementing the efficiencies mandated by the Secretary of Defense. The requested funds will continue the procurement of 52 total GBIs, underwrite the GBI refurbishment and reliability sustainment programs to sustain the fleet to 2032, support a service life extension decision, upgrade GMD Fire Control ground system software, and support a test program to ensure the GMD system provides an effective and reliable capability to protect the nation. The FY2012 budget request also supports developing and deploying new sensors, including a forward-based sensor in Europe, UAV-mounted infrared sensors, and a new space-based sensor, as well as continuing work on early-intercept kill systems to help defeat countermeasures, and enhancing the Command, Control, Battle Management and Communications system to handle larger raid sizes.

Because future missile threats cannot be fully predicted, the United States must be well hedged against the possibility of rapid threat developments or unexpected obstacles to U.S technological advances. The Department is in the process of developing and refining its hedging strategy, and will brief Congress on its results soon. We are developing various courses of action to respond to a range of scenarios, while evaluating what mix of capabilities or deployment timelines would be appropriate for each. Several hedging measures reflected in the current program are:

- Completing construction of Missile Field 2 at Ft. Greely in a 14-silo configuration to accommodate a contingency deployment of eight additional GBIs if needed;

- Mothballing the six GBI silos at Missile Field 1 at Ft. Greely instead of decommissioning them, allowing their return to service in the future if necessary; and

- Continuing with development and assessment of a two-stage Ground-Based Interceptor to preserve future deployment options.

To be clear, the United States currently has fielded a significant BMD capability to protect the United States against a limited, long-range ballistic missile attack and we are making improvements to that system to ensure its effectiveness. Our hedging strategy further improves our ability to guard against uncertainty in the years to come.

Defending against regional threats

Although the missile threat is developing at different rates in different regions, overall it is developing rapidly – both in quality and quantity. Today there are thousands of ballistic missiles and hundreds of launchers, with roughly 90 percent of those missiles having ranges less than 1,000 kilometers. Regional actors such as North Korea and Iran field short, medium, and/or intermediate range ballistic missiles that can threaten U.S. forces, allies, and partners in regions where the United States deploys forces and maintains security relationships. Our objective is to

create an environment in which the development, acquisition, deployment, and use of ballistic missiles by regional adversaries can be deterred, and if necessary, defeated.

Implementing the Phased Adaptive Approach in Europe

Since the President's announcement of the European Phased Adaptive Approach (EPAA) in September 2009, the Administration has made substantial progress in implementation.

- We expect the deployment of an Aegis BMD-capable cruiser to the Mediterranean as part of the EPAA Phase 1 to occur this month.

- We are currently in discussions with potential host nations for the deployment of an AN/TPY-2 radar to southeastern Europe. While no decision has been made, we expect to meet our 2011 deployment timeline.

- Romania and Poland have agreed to host the deployment of land-based SM-3 interceptor sites planned for Phase 2 of EPAA in 2015 and Phase 3 in 2018, respectively.

- The Request for Proposals (RFP) for the concept development for the SM-3 Block IIB interceptor was issued in October 2010, and MDA will conduct SM-3 Block IIB concept and component technology development during the next three fiscal years.

As President Obama stated in his letter to the Senate in December 2010, the Administration plans to deploy all four phases of the EPAA. While advances of technology or future changes in the threat could modify the details or timing of the later phases of the EPAA – one reason this approach is called "adaptive" – we will take every action available to support the deployment of all four phases of the EPAA.

Considerable progress has also been achieved with NATO on ballistic missile defense, which has been a longstanding U.S. goal. This past November at the Lisbon Summit, NATO's leaders took the unprecedented step of deciding to pursue a missile defense capability to provide full coverage and protection for the Alliance's populations, territories, and forces in Europe against ballistic missile attacks. NATO also decided at Lisbon to expand its existing missile defense command and control backbone — the Active Layered Theater Ballistic Missile Defense — to encompass territorial missile defense, which will make current and future Alliance missile defense assets interoperable. These decisions send a strong signal that NATO will not allow itself to be defenseless against ballistic missile coercion or attack.

Implementing Phased Adaptive Approaches in East Asia and the Middle East

We are also working to implement the Phased Adaptive Approach to missile defense in East Asia and the Middle East. These approaches must be tailored to the specific threat and geographical characteristics of each region.

In Asia, the United States is making progress with a number of key allies, including Japan, Australia, and South Korea. Japan has acquired a layered missile defense system that includes Aegis BMD ships with SM-3 interceptors, PAC-3 fire units, early warning radars, and a command and control system. Japan hosts an AN/TPY-2, as well as U.S. Aegis BMD-capable ships. Both sides regularly train together and have successfully executed simulated cooperative BMD operations. We are also engaged in cooperative development of the next generation SM-3 Block IIA interceptor, which will enter service in 2018.

Australia participates in our Trilateral Missile Defense Forum with Japan, and takes part in the recurring Nimble Titan missile defense exercise series hosted by U.S. Strategic Command (USSTRATCOM), which focuses on developing coalition missile defense policy options with U.S. allies and partners to create global deterrent and defensive effects. Australia is also acquiring ships which will be compatible with U.S. Aegis BMD capabilities, should they choose to pursue that capability. With South Korea we have engaged in bilateral missile defense cooperation discussions, and we will also discuss BMD cooperation as a topic in the recently established Extended Deterrence Policy Committee. We have also signed a Terms of Reference and Agreement with South Korea that will enable a BMD program analysis.

In the Middle East, we have a long-standing relationship with Israel on BMD. In addition to conducting major missile defense exercises over the last several years, the United States and Israel meet regularly and coordinate extensively on a range of missile defense issues. Our extensive support for Israeli missile defense programs includes the existing Arrow Weapon System and a new program for defeating short range ballistic missiles known as David's Sling, as well as cooperating on plans and operations.

The United States also maintains a robust mix of missile defense assets forward deployed to provide defense of our troops and facilities in the Persian Gulf region, as well as a series of bilateral missile defense agreements between the United States and nations belonging to the Gulf Cooperation Council (GCC). USCENTCOM continues to work on establishing regional integrated air and missile defense architectures for the GCC nations. In addition, the United States has recently approved the sale of Patriot systems to the UAE. We have also been working with Saudi Arabia to refurbish its Patriot systems and recertify the missiles.

Missile defense cooperation with Russia

Since I last testified before you in December, we have continued to pursue missile defense cooperation with Russia. Following strategic direction from President Obama, and operating under the auspices of the bilateral Defense Relations Working Group created by Secretary Gates and Defense Minister Serduykov, we held inaugural sub-working group sessions on missile defense cooperation in January 2011; the next meeting is planned for later this month.

As a starting point, U.S. and Russian technical experts will undertake a joint analysis to identify what aspects of missile defense cooperation will provide the most utility given our

respective current and projected future capabilities. We believe that some Russian radars may be able to provide data that could improve the capabilities of U.S. and NATO missile defense systems.

As outlined in the NATO-Russia joint statement issued following the NATO-Russia summit last November, NATO and Russia agreed to resume theater missile defense cooperation and study ways in which we might cooperate on territorial missile defense in Europe. These are practical steps toward cooperation that could strengthen NATO's and Russia's ability to address the common threats posed by ballistic missile proliferation.

As President Obama stated, this cooperation can happen "even as we have made clear that the system we intend to pursue with Russia will not be a joint system, and it will not in any way limit United States' or NATO's missile defense capabilities." Our concept for missile defense cooperation stems from our conviction that NATO must be responsible for defense of NATO territory and Russia should be responsible for defense of Russian territory. We would operate our respective systems independently but cooperatively, including sharing of sensor data that may improve the ability of both systems to defeat missile attacks by regional actors such as Iran.

It is important to note that this process will take time. With the sustained attention and mutual intent to cooperate currently evident on both sides, I believe that meaningful cooperation is possible – cooperation that can strengthen the security of the United States and our NATO partners as well as Russia.

Managing the missile defense program

Ensuring realistic and rigorous missile defense testing prior to deployment is a priority for this Administration. The Missile Defense Agency maintains an Integrated Master Test Plan which sets out test activities over the full course of each system's development. Once fielded, MDA conducts additional assessments in conjunction with the operational test community. The Integrated Master Test Plan includes a comprehensive set of flight and ground tests to demonstrate system performance as well as validate models used to validate system effectiveness.

Last December, MDA's flight test of the Ground-based Midcourse Defense system failed to intercept its target in the longest range test ever attempted. We gained valuable knowledge in the performance of the system; a Failure Review Board is conducting a review of data collected during the test and will present its findings to the Director of Missile Defense Agency when completed.

The Missile Defense Executive Board (MDEB), chaired by the Under Secretary of Defense for Acquisition, Technology, and Logistics, Dr. Ash Carter, continues to provide oversight and guidance for the missile defense program. As the BMDR noted, adopting a cost-

effective approach to BMD development involves taking decisive action on programs that do not meet cost, schedule, or performance goals. This Administration has demonstrated its commitment to developing cost-effective missile defenses with the decision to pursue Phased Adaptive Approaches to regional missile defense, the termination of the Multiple Kill Vehicle program and the Kinetic Energy Interceptor program, the restructuring of the Airborne Laser program, and most recently, the decision to end the Medium Extended Air Defense System (MEADS) program following the design and development phase.

Space Policy and Posture

U.S. space capabilities allow our military to see with clarity, communicate with certainty, navigate with accuracy, and operate with assurance. Maintaining the benefits afforded to the United States by space is central to our national security, but the evolving strategic environment increasingly challenges U.S. space advantages. In particular, space is increasingly congested, contested, and competitive.

DoD currently tracks approximately 22,000 man-made objects in orbit. There are likely hundreds of thousands more objects less than 10 centimeters in diameter and too small to track, but these objects still pose a threat to satellites. We only expect the number of satellites on orbit to continue growing, resulting in greater congestion in the radio frequency spectrum and an increased risk of unintentional interference or collision.

A number of countries are developing counterspace capabilities, from widely available jamming technology to kinetic anti-satellite weapons. The threat to our space capabilities will continue to increase as these capabilities proliferate.

The United States space industrial base faces increasing competition from companies worldwide. More than 60 nations and government consortia currently operate satellites, and the United States share of worldwide satellite manufacturing has dropped from approximately 65 percent in 1997 to approximately 30 percent in 2008.

In response to this shifting environment, and to reinvigorate U.S. leadership in space, President Obama released a new National Space Policy on June 28, 2010. This policy declares that the United States considers the sustainability, stability, free access to, and use of space vital to its national interests. It also directs agencies to pursue policies and programs that strengthen the stability of activities in space, enhance international cooperation, increase assurance and resilience of mission-essential functions, and energize competitive domestic industries supporting activities in space.

Building on this direction, on February 3, 2011, DoD and the Intelligence Community delivered a National Security Space Strategy to Congress. This strategy is derived from the National Space Policy and charts a path to respond to the space strategic environment over the next decade. The strategy sets out objectives to strengthen safety, stability, and security in space;

maintain and enhance the strategic national security advantages afforded to the United States by space; and energize the space industrial base that supports U.S. national security.

The National Security Space Strategy outlines five interrelated strategic approaches to chart a future course for national security in space.

Promoting responsible, peaceful and safe use of space

With increasing congestion in the space domain, efforts to develop and share situational awareness and best practices for space operations can help bring order to the congestion. For example, based on years of experience and analysis, the United States undertook a concerted effort to promote standard practices to mitigate space debris, a common threat to all space operators. That leadership resulted in guidelines endorsed by the United Nations.

The United States is currently evaluating the European Union's proposed international Code of Conduct for Outer Space Activities as a potentially useful set of guidelines for safe activity in space. The Department of Defense is also pursuing opportunities to expand sharing of space situational awareness data to increase transparency and cooperation in the domain. USSTRATCOM has entered into agreements with 19 companies, including both launch providers and satellite owners and operators, to improve spaceflight safety. Sharing data to enhance transparency and to improve situational awareness can reduce the risk of catastrophic mishaps which could pollute the domain for generations.

Finally, pursuing transparency and confidence building measures and promoting the responsible use of outer space will enhance the security of the United States by singling out those rogue actors who seek to interfere with U.S. and allied space activities and disrupt peaceful uses of outer space. As a concrete step towards transparency, the Department recently revised our pre-launch notification policy to include space launch vehicles in addition to ballistic missile launches, a step that will decrease the risk of misunderstanding and miscalculation by other nations.

Providing improved U.S. space capabilities

Maintaining U.S. leadership requires improving our own acquisition processes and energizing the space industrial base to stay at the forefront of professional development and technological innovation. In recognition of this fact, the Department of Defense has revalidated the role of the Secretary of the Air Force as the Executive Agent for Space, who is responsible for integrating and assessing the numerous DoD space programs, as well as facilitating cooperation between the Department and the Intelligence Community.

The Department also recognizes that reforming U.S. space export controls is essential to energizing the space industrial base. As you know, Secretary Gates has been at the forefront of calls for an overhaul of our export control system. In order to make our firms more competitive

while protecting our most sensitive capabilities, we need to build "higher fences" around the most sensitive technologies while de-listing capabilities already widely available to the world-at-large. A comprehensive review of space-related items on the United States Munitions List is now underway.

Providing improved capabilities will also require innovative acquisition efforts. Examples include considering hosting national security payloads on commercial spacecraft, as well as pursuing non-traditional procurement strategies. The President's DoD FY2012 budget request allocates $1,760 million to Evolved Expendable Launch Vehicles (EELV), which will be used in part for a block buy, to help assure access to space while supporting our industrial base.

The Department will also continue to develop current and future national security space professionals, recognizing that people are our greatest asset.

Partnering with responsible nations, international organizations, and the commercial sector

With over sixty nations and government consortia currently operating satellites, opportunities for partnerships are on the rise. These partnerships can augment and add resilience to our space systems, allowing the United States military to continue operations during crises and attacks. Wideband Global SATCOM is a good example. Australia has joined the constellation and other potential partners are looking at doing the same.

The Department is also exploring operating with partners by transforming the Joint Space Operations Center at Vandenberg Air Force Base, California into a Combined Space Operations Center operated with international partners. A Combined Space Operations Center will allow our allies to work side-by-side with U.S. commanders, integrating a multilateral approach to space into our day-to-day operations.

Consistent with guidance in the President's National Space Policy, DoD is working with the Department of State to establish space security dialogues with key allies, partners, and independent but emerging space-faring nations. The United States is also seeking to include space in future strategic dialogues with China. These forums provide an opportunity for a constructive and pragmatic dialogue and cooperation on space-related issues of common concern.

DoD will also seek to improve our partnerships with the commercial space sector. Such partnerships enhance national security capabilities by providing opportunities to host national security payloads on commercial spacecraft or by offering innovative opportunities to buy or lease capabilities on-orbit. In an era of limited resources, the DoD will develop space systems only when there are no suitable, cost-effective commercial alternatives or when national security needs dictate. We will also actively promote the sale of capabilities developed by U.S.

companies to partner nations. Such capabilities could then be integrated into existing U.S. architectures and networks through arrangements that enhance and diversify U.S. capabilities.

Preventing and deterring aggression against space infrastructure

The United States is pursuing a multi-layered approach to prevent and deter aggression against U.S. and allied space systems that support our national security. We will encourage restraint by potential adversaries by advancing international norms of responsible behavior that strengthen stability in space. We will also develop resilient and distributed architectures that can operate through interference, while preserving the capabilities needed, if deterrence fails, to defeat attacks on U.S. and allied space systems.

Improving space situational awareness is central to our ability to deter aggression by decreasing the risk that an adversary's action could occur without warning or attribution. We are working with the Director of National Intelligence to improve our intelligence posture – predictive awareness, characterization, warning, and attribution – to improve our understanding of activities in the space domain. When combined with efforts to adopt approaches for responsible behavior, such transparency will facilitate the quick identification of actions that are inimical to U.S. and allied interests.

Preparing to defeat attacks and to operate in a degraded environment

To counter threats to U.S. space assets, the United States is preparing to defeat attacks and to operate if necessary in a degraded space environment. Developing resilient architectures and cross-domain alternatives for providing critical capabilities to our warfighters will be critical to this effort. The Department is also developing exercises and training to ensure our ability to access the requisite capabilities and information, from space or through cross-domain solutions, in the event of interference with space capabilities.

Finally, the United States is developing a range of capabilities, plans, and options to deter, defend against, and, if necessary, defeat efforts to interfere with or attack U.S. or allied space systems; such options could include necessary and proportional responses outside of the space domain.

Cyberspace Policy and Posture

Operating effectively in cyberspace is a DoD imperative. The Department recognizes that developing and enabling the full spectrum of capabilities in cyberspace, including improved cybersecurity, is required to assure the ability to conduct DoD missions, including projecting power abroad. Following the Administration's initial strategy review of cyberspace, the Department has taken a number of steps to improve our posture. I look forward to discussing

these critical issues when I provide testimony on this subject alongside General Keith Alexander, Commander, U.S. Cyber Command, to the House Armed Services Committee on March 16th.

Conclusion

Reducing strategic risks to the United States and sustaining key U.S. strategic capabilities are long-term challenges that will require support from a succession of U.S. Administrations and Congresses. Success will require developing and sustaining bipartisan consensus on key issues. I am pleased to have the opportunity to continue that engagement today, and look forward to your questions.