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STATEMENT OF

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FOR SPACE POLICY

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Chairman Turner, Ranking Member Sanchez, and members of the subcommittee, thank you for the opportunity to testify on Department of Defense space policy. I am honored to join my distinguished colleagues from the Air Force and the National Reconnaissance Office. When my colleague, Mr. Bob Butler, testified a year ago, the Department had just issued an interim Space Posture Review. Today, I am pleased to discuss the recently released National Security Space Strategy.

Maintaining the benefits afforded to the United States by space is central to our national security. Space systems allow our warfighters to see with clarity, communicate with certainty, navigate with accuracy, and operate with assurance. However, an evolving strategic environment increasingly challenges U.S. space advantages. The current and future strategic environment is driven by three trends – space is increasingly congested, contested, and competitive.

Space is increasingly *congested*. Growing global space activity and testing of China's destructive anti-satellite system have increased congestion in important areas in space. The Department of Defense tracks approximately 22,000 man-made objects in orbit, of which 1,100 are active satellites. Another area of increasing congestion is the radiofrequency spectrum. As many as 9,000 satellite communications transponders are expected to be in orbit by 2015. As more transponders are placed in service, the greater the probability of radiofrequency interference. This congestion is complicating space operations for all those that seek to benefit from space.

Space is increasingly *contested* in all orbits. Potential adversaries are seeking to exploit perceived space vulnerabilities through a range of counterspace threats that may deny, degrade, deceive, disrupt, or destroy space assets and supporting infrastructure from widely available

jamming technology to highly-sophisticated, kinetic anti-satellite weapons. As more nations and non-state actors develop counterspace capabilities over the next decade, threats to U.S. space systems and challenges to the stability and security of the space environment will increase. Irresponsible acts against space systems could have implications beyond the space domain, disrupting worldwide services upon which the civil and commercial sectors depend.

Space is increasingly *competitive*. More than 60 nations and government consortia currently operate satellites. Although the United States maintains an overall edge in space capabilities, the U.S. competitive advantage has decreased as market-entry barriers have lowered. Some U.S. suppliers are at risk due to inconsistent acquisition and production rates, long development cycles, and a more competitive foreign market. A decrease in specialized suppliers further challenges U.S. abilities to maintain assured access to critical technologies, avoid critical dependencies, inspire innovation, and maintain leadership advantages. All of these issues are compounded by challenges in recruiting, developing, and retaining a technical workforce.

However, the challenges of a congested, contested, competitive environment also present the United States with opportunities for leadership and partnership. The recently released joint Department of Defense and Intelligence Community National Security Space Strategy charts a path for the next decade to respond to the current and projected space strategic environment.

The National Security Space Strategy seeks to maintain and enhance the national security benefits the United States derives from its activities and capabilities in space while addressing and shaping the strategic environment and strengthening the foundations of our space enterprise. The strategy identifies three U.S. national security space objectives: 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. Achieving these objectives will ensure our military continued access to space-based assets national security purposes.

The United States will retain leadership in space by strengthening our space capabilities and improving our collaboration with others worldwide. Leadership cannot be predicated on declaratory policy alone. It must build upon a willingness to maintain strategic advantages while working with the international community to develop collective norms, share information, and collaborate on capabilities. Thus the United States will pursue a set of five interrelated strategic approaches to meet our national security space objectives and enhance U.S. leadership in space, as outlined in the National Security Space Strategy.

Promote responsible, peaceful and safe use of space

The United States will promote the responsible, peaceful, and safe use of space as the foundational step to addressing the congested and contested space domain. A more cooperative, predictable environment enhances U.S. national security and discourages destabilizing crisis behavior. The United States will encourage responsible behavior in space and will support development of data standards, best practices, transparency and confidence-building measures, and norms of behavior for responsible space operations. The United States will consider proposals and concepts for arms control measures if they are equitable, effectively verifiable, and enhance the national security of the United States.

With increasing congestion in the space domain, efforts to develop and share situational awareness can help bring order to the congestion and prevent mishaps, misperceptions, and mistrust. The Department of Defense will continue to improve the quantity and quality of the

space situational awareness (SSA) information it obtains and, in coordination with other government agencies, will seek to establish agreements with other nations and commercial firms to enhance spaceflight safety for all parties.

The United States is pursuing a number of initiatives to promote the responsible use of space. We are consulting with the European Union on a proposed international Code of Conduct for Outer Space Activities as a pragmatic first set of guidelines for safe activity in space and are discussing the Code with other space-faring countries, including our key allies, as well as Russia, China, and India. The Department of Defense is also pursuing opportunities to expand sharing of space situational awareness data to increase transparency and cooperation in the domain. U.S. Strategic Command has entered into agreements with 19 companies, including both launch providers and satellite owners and operators, to improve spaceflight safety.

Furthermore, promoting transparency for responsible space operations will enhance the security of the United States by singling out those actors who seek to disrupt peaceful uses of outer space. As a concrete step towards transparency, the Department recently revised its pre-launch notification policy to include space launch vehicles in addition to ballistic missile launches. The Department will continue to work with State and other Departments to promote responsible behavior worldwide that will help ensure the long-term sustainability of the space environment.

Provide improved U.S. space capabilities

Ensuring U.S. capabilities are developed and fielded in a timely, reliable, and responsive manner is critical for military forces to plan and execute effective operations. Improving our acquisition processes, energizing the U.S. space industrial base, enhancing technological

innovation, and deliberately developing space professionals are critical enablers to maintaining U.S. space leadership.

The United States seeks to foster a space industrial base that is robust, competitive, flexible, healthy, and delivers reliable space capabilities on time and on budget. International advances in space technology have put increased importance on reforming U.S. export controls to ensure the competitiveness of the U.S. space industrial base while addressing technology security. Secretary Gates has actively called for an overhaul of our export control system. Reforming export controls will facilitate U.S. firms' ability to compete in the international marketplace for capabilities that are, or will soon become, widely available globally, while strengthening our ability to protect the most significant U.S. technology advantages. The National Security Space Strategy reaffirms the necessity of these reforms and echoes the National Space Policy's call for giving favorable consideration for export of those items and technologies that are generally available on the global market, consistent with U.S. national security interests.

We are exploring innovative acquisition strategies for buying spacecraft, with a focus on block buys. As part of the Secretary of Defense's broader efficiency initiatives, our goals are to (1) reduce unit cost for "production ready" satellites; (2) enable the Department to acquire these systems more efficiently and affordably; and (3) stabilize production including the industrial base. Our innovative acquisition strategy will include full-funding of two satellite classes – AEHF (in FY 2012) and SIBRS (in FY 2013) – through the use of advance appropriations. We ask for your support of this approach.

Partner with responsible nations, international organizations, and commercial firms

The United States will pursue additional opportunities to partner with responsible nations, international organizations, and commercial firms to augment the U.S. national security space posture. Decisions on partnering will be consistent with U.S. policy and international commitments and will consider cost, protection of sources and methods, and effects on the U.S. industrial base. U.S. military personnel will ensure the appropriate review and release of classified information to enhance partner access to space information.

With our allies, we will explore the development of combined space doctrine that endorse and enable the collaborative sharing of space capabilities in crisis and conflict. The Department is already exploring operating with partners by transforming the Joint Space Operations Center into a Combined Space Operations Center operated with international partners. A Combined Space Operations Center will allow our closest allies to work side-by-side with U.S. commanders, integrating a multilateral approach to space into our day-to-day operations. The Department of Defense, in conjunction with the State Department and other appropriate U.S. government agencies, will work to expand mutually beneficial agreements with key partners to utilize existing and planned capabilities that can augment U.S. national security space capabilities. Wideband Global SATCOM is a good example – Australia has joined the constellation and other allies are looking at doing the same. A larger, more international constellation adds resilience and augments our space-based capabilities and forces a potential aggressor to contemplate attacking space systems used by a coalition of countries instead of one country.

We will explore sharing space-derived information as "global utilities" with partnered nations. We will continue to share SSA information to promote responsible and safe space

operations and will pursue enhanced sharing of other space services such as missile warning and maritime domain awareness. We will explore the establishment of a collaborative missile warning network to detect attacks against our interests and those of our allies and partners.

Strategic partnerships with commercial firms will be pursued in areas that stabilize costs and improve the resilience of space architectures upon which we rely. 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 is 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.

Prevent and deter aggression against space infrastructure that supports U.S. national security

The United States is pursuing a multilayered approach to prevent and deter aggression against U.S. and allied space systems that support our national security. The Department seeks to enhance its capability to dissuade and deter the development, testing, and employment of counterspace systems and prevent and deter aggression against space systems and supporting infrastructure that support U.S. national security.

Many elements of this strategy contribute to this approach. The Department of Defense will: support diplomatic efforts to promote norms of responsible behavior in space which may dissuade and impose international costs on irresponsible behavior; pursue international partnerships that encourage potential adversary restraint; improve our ability to attribute attacks;

strengthen the resilience of our architectures to deny the benefits of an attack; and retain the right to respond, should deterrence fail.

SSA will continue to be a top priority, as it decreases 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 promote responsible behavior, such transparency will facilitate the quick identification of actions that threaten U.S. interests.

Furthermore, the United States will deny adversaries meaningful benefits of attack by improving protection and strengthening the resilience of our architectures. Partnerships as well as alternative U.S. Government approaches such as cross-domain solutions, hosted payloads, responsive options, and other innovative solutions, can deliver capability, should our space systems be attacked. This also will enable our ability to operate in a degraded space environment.

Finally, the United States is developing a range of options to deter, and if necessary, defeat efforts to interfere with U.S. or allied space systems consistent with the inherent right of self-defense and other longstanding principles on international law. Such options could include necessary and proportional responses outside of the space domain.

Prepare to defeat attacks and to operate in a degraded environment

Notwithstanding our efforts to deter, some actors may still pursue counterspace actions as a means of achieving military or political advantage. Our military capabilities must be prepared to operate through a degraded environment and attacks targeted at our space systems and

supporting infrastructure. We must deny and defeat an adversary's ability to achieve its objectives.

As the Department invests in space capabilities, it will include resilience as a key criterion in evaluating alternative architectures. Resilience can be achieved in a variety of ways, to include cost-effective space system protection, cross-domain solutions, hosting payloads on a mix of platforms in various orbits, drawing on distributed international and commercial partner capabilities, and developing and maturing responsive space capabilities.

To enhance resilience, the Department will continue to develop mission-effective alternatives, including land, sea, air, and space-based alternatives for critical capabilities currently delivered primarily through space-based platforms. In addition, the Department will seek to establish relationships and agreements whereby we can access partner capabilities if U.S. systems are degraded or unavailable. We will be prepared to use these capabilities to ensure the timely continuity of services in a degraded space environment.

Preparing for attacks must extend to the people and processes relying on space information, operating our space systems, and analyzing space-derived information. Ensuring that our servicemen can operate effectively during an attack on our space assets reduces the benefit of attack. The Department of Defense 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.

Conclusion

Our strategy requires active U.S. leadership enabled by an approach that updates, balances, and integrates all of the tools of U.S. power. The Department of Defense, in

coordination with other departments and agencies, will implement this strategy by updating guidance, plans, doctrine, programs, and operations to reflect the new strategic approach.

The Department of Defense included initial steps towards implementing the strategy in its fiscal 2012 budget and will use the coming year to lay the foundation for changes in fiscal 2013 and beyond. The Department looks forward to working closely with Congress, industry, and allies to implement this new strategy for space.