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STATEMENT OF
ACTING SECRETARY OF DEFENSE PATRICK M. SHANAHAN &
CHAIRMAN OF THE JOINT CHIEFS GENERAL JOSEPH F. DUNFORD,
BEFORE THE
SENATE ARMED SERVICES COMMITTEE
APRIL 11, 2019

INTRODUCTION

Chairman Inhofe, Ranking Member Reed, members of the Committee: thank you for this opportunity to testify in support of the Department's U.S. Space Force proposal. Aligned within the National Security Strategy (NSS) and our National Defense Strategy (NDS), this is our roadmap to expand our margin of dominance in space to protect the American people, our \$19 trillion economy, and the systems our military operates to keep our Nation safe. This mission is no different than that of our U.S. Navy which as early as 1801 served to protect U.S. trade and commerce, and also took action against Barbary pirates. Since our nation's earliest days, America's economy has always relied on freedom of navigation – whether on sea, land, air and now, space. In short, economic security is national security.

Through the centuries, we have successfully guarded that freedom and security from the malign intent of global adversaries, regional hegemony, and the occasional non-state actor. However, as highlighted in the NSS and NDS, we have reached a strategic inflection point in an era of renewed great power competition. We have retained much of our mercantile roots, and as such we are now fully dependent on space for our economic well-being and national security. Having carefully observed our dependencies on space, China and Russia have developed new technologies, strategies, tactics, and asymmetric capabilities specifically intended to deny our freedom of operation in space. While we would prefer space remain free from conflict, they have made space a warfighting domain. In 2007, the Chinese tested an anti-satellite missile by kinetically destroying a Fengyun series polar orbit satellite. Furthermore, since 2014, Moscow has been experimenting with the orbital maneuvering of military spacecraft. We currently maintain an advantage relative to these competitors, but our space enterprise was built for a strategic environment that no longer exists and our margin of dominance is quickly shrinking.

We are in another interwar innovation period, and we can either remain stagnant or evolve to the changing operating environment. We have unmatched human capital and resources; our challenge now is to get the systems engineering right and accelerate transformation of our posture to space as a warfighting domain. The Department's Space Force proposal is one of our proposed reorganizations to achieve greater integration, overcome paralysis of risk aversion, leverage our new technology base, and ultimately align our diverse space elements within the Department around strategic outcomes.

This is a complex and enduring undertaking; the transformation required to achieve it is a significant, multi-faceted endeavor. As unfettered access to and freedom to operate in space is a vital national interest, it demands a corresponding level of priority and focus.

Establishing the U.S. Space Force as the sixth branch of the Armed Forces will fundamentally transform our approach to space from a combat support function to a warfighting domain of competition and potential conflict. This action will institutionally elevate space relative to its role in national security; unify space missions, capabilities, and forces with clear responsibilities and authorities; and focus on the development and fielding of the personnel, culture, doctrine, and capabilities for a distinct, yet integrated, domain. The proposed U.S. Space Force within the Department of the Air Force, along with the associated elements of U.S. Space Command and the Space Development Agency, allows us to work on these challenges at speed, maximizing warfighting effectiveness while minimizing bureaucracy and additional costs.

STRATEGIC ENVIRONMENT

Space is essential to the American way of life; it also underpins the American way of war. From global communications networks to the physical movement of people and materials, space-based capabilities have allowed our economy to thrive and our military to project force with significant competitive advantage. Today, commercial entities worldwide are delivering new space technologies and capabilities at speeds never before seen. This rapid innovation also lowers the cost of accessing space and enables new services.

Strategic competitors China and Russia have observed the asymmetrical advantages afforded us by space over the last two decades. They now perceive space as a viable target to nullify our asymmetric advantages in other domains and gain a strategic foothold for future competition. Following this perception, they have adjusted their military strategies and organizations to neutralize the Joint Force's ability to project power: China and Russia have developed, tested, and fielded counterspace capabilities to deny U.S. and Allied use of space-based systems during crises and conflicts. As a result, the United States cannot afford to develop or leverage space systems today without addressing vulnerabilities from our competitors' counterspace capabilities. As a recent Defense Intelligence Agency report notes:

Chinese and Russian military doctrines indicate that they view space as important to modern warfare and view counterspace capabilities as a means to reduce U.S. and allied military effectiveness... Both states are developing jamming and cyberspace capabilities, directed energy weapons, on-orbit capabilities, and ground-based anti-satellite missiles that can achieve a range of reversible to nonreversible effects.¹

This new environment highlights the critical role of space in the changing character of warfare and presents new challenges and opportunities for our military forces.

Space systems do not simply support terrestrial forces – actions in space can also directly affect the outcome of future crises or conflicts. Space is also the connective tissue holding the other domains (land, air, sea) together in an era of multi-domain warfare. Therefore, the Department of Defense (DoD) must also be prepared to assure freedom of operation in space to deter attacks, and, when necessary, to decisively defeat space and counterspace threats.

CHALLENGES

The United States currently possesses a competitive advantage in space, but our existing Defense architecture is not designed to do so in a contested space environment. China and Russia are actively seeking to exploit our perceived vulnerabilities and are directly challenging us in areas of long-held strength. We must adapt our approach from one that views space principally as a support function to one optimized for a distinct warfighting domain.

The DoD space enterprise largely reflects strategic conditions created after 1991, when Operation Desert Storm demonstrated the asymmetrical advantages of space capabilities applied to conventional warfare and the Soviet Union's collapse halted the only credible threat to U.S. space systems. Space missions, capabilities, and units proliferated across the Joint Force as each Military Service sought to enhance its core missions through space. Absent an extant threat, advances in mission performance of space systems were prioritized over defensive capabilities or warfighting doctrine to protect them. Consequently, few DoD space forces – across all Military Services – were designed or intended to gain and maintain space superiority in a contested environment. A U.S. Space Force would prioritize development of appropriate defensive and

¹ *Challenges to Security in Space*, Defense Intelligence Agency, February 2019.

offensive capabilities and doctrine to match the current and future military threats in space, as well as enhancing resilience of our space capabilities.

Today, organizing, training, and equipping of space forces is spread across the Military Services as they enhance and enable operations for their respective domains. In short, the current organization of forces lacks sufficient unity of command, a fundamental principle of military organization and warfighting. If we do not correct this organizational fragmentation, nascent warfighting capacity, and insufficient doctrine now, America's post-Cold War complacency in space will become the catalyst for our possible defeat in a future conflict with a peer competitor.

The post-Cold War environment also gave rise to certain assumptions, which shaped the DoD space enterprise: space was a sanctuary; space superiority was assumed; gaining and maintaining space dominance was a logistical rather than a warfighting function; space capabilities and operations were strictly in support of the terrestrial fight; and space-based enablement and airpower were inextricably linked and could therefore be integrated under one doctrinal construct. These assumptions no longer reflect reality.

The erroneous assumption that space would remain uncontested resulted in processes and structures that have propagated multiple problems in the space enterprise. These problems have been documented for years.² While some corrective action has been taken, the lack of institutionalized and centralized advocacy for the space domain has resulted in fragmented responsibilities within DoD; nascent space warfighting doctrine, expertise, and culture; and undue risk aversion resulting in laborious decision cycles in system acquisitions and operations.

Rather than attempt to address each issue in isolation, DoD recognizes the need for a paradigm shift based on a new set of assumptions that more closely reflect today's realities: space is not a sanctuary – it is now a warfighting domain, similar to the air, land, and sea domains; space superiority is a condition that must be gained and maintained via a range of options, including resilient architectures, offensive and defensive operations; space doctrine, capabilities, and expertise must be designed to gain and maintain space superiority, and support operations in other domains; and spacepower and airpower doctrine and operating concepts are

² Notably - Report of the Commission to Assess United States National Security Space Management and Organization, January 2001; Report to Congress of the Independent Assessment Panel on the Organization and Management of National Security Space, July 2008; Defense Space Acquisitions: Too Early to Determine If Recent Changes Will Resolve Persistent Fragmentation in Management and Oversight (Government Accountability Office Publication GAO-16-592R), July 2016.

as distinct from one another as the air domain is from the land, and as the land domain is from the sea.

Separating spacepower from airpower and elevating this new warfighting domain allows for the independent development and advancement of strategies and doctrine for two physically and strategically distinct domains. In no uncertain terms, the U.S. Air Force (USAF) – and its current leadership in particular – have driven America’s efforts in space and delivered capabilities second to none. The USAF is the best in the world at organizing, training, and equipping for the air domain and advancing airpower for the Nation. DoD needs the USAF to retain that primacy to ensure the United States is postured to project airpower while deterring and defeating threats to the air domain posed by other great powers. The U.S. Space Force will do the same for space.

SOLUTION – A NEW APPROACH

Our challenges in space require dedicated leadership, advocacy, doctrine, equipment, and expertise. While our Military Departments and Services develop domain-centric doctrine, equipment, personnel and infrastructure necessary to attend to unique warfighting elements, no existing Military Service treats space as its number one priority.

Our reorganization will ensure the U.S. Space Force provides the dedicated leadership and advocacy that develops space forces capable of addressing our emerging security challenges. These forces will be presented to U.S. Space Command, which will bring day-to-day operational focus to competition and conflict in space, as well as to regional combatant commands. As these entities are established, the Space Development Agency will accelerate development and fielding of distinct space capabilities.

The United States Space Force

The U.S. Space Force would develop and field doctrine, equipment, and personnel with the responsibilities and authorities commensurate to the space domain’s needs, rather than conforming to another domain’s structures and processes. This will institutionally elevate space advocacy commensurate with its role in national security; unify DoD space forces to vest authority, accountability, and responsibility for organizing, training, and equipping in a single

service; and focus on the development of doctrine, expertise, capabilities and culture for space as a distinct warfighting domain. A Military Service focused on generating and developing forces for the future is the right and necessary organizational construct to organize, train, and equip space forces.

To maximize warfighting effectiveness while minimizing cost and bureaucracy, the proposal establishes U.S. Space Force as a separate armed force within the Department of the Air Force, similar to how the U.S. Marine Corps is housed within the Department of the Navy. We assess this will enable the U.S. Space Force to focus on building space warfighting capacity without having to divest resources for non-space centric support functions. The U.S. Space Force will leverage existing support functions resident in the Air Force that are not directly related to the space domain (e.g., medical corps, chaplaincy, staff judge advocates, etc.), effectively minimizing overhead and cost. This will allow the new Service to prioritize limited resources and develop a lean and focused infrastructure.

DoD envisions consolidating the preponderance of existing military space missions and authorities under the U.S. Space Force, with those space capabilities, forces, and units that do not uniquely and exclusively support a single Military Service's core domain-specific mission transitioning to the new Military Service. Current Service-specific entities that provide global space capabilities would become part of the U.S. Space Force. For example, the Air Force Space and Missile Systems Center, the Navy Mobile User Objective System, and the Army's operations of wide and narrow band global satellite communications would all become part of the Space Force. As necessary, DoD Components would retain organic space capabilities uniquely required to support the core mission of that Military Service or Defense Agency.

Senior leadership is required to ensure that space is adequately prioritized within the Department. Establishing an Under Secretary of the Air Force for Space will ensure focused civilian oversight, advocacy for space resources, and alignment and integration of space program investments. A 4-star Chief of Staff of the Space Force, with full membership on the Joint Chiefs of Staff, will elevate the mission, strengthen the requirements process and drive spacepower advocacy and coordination with the Joint Force.

The Department is postured such that, should Congress grant its approval, the 200-member Initial Space Force Staff can be stood up within 90 days of enactment. The transition as a whole will take about five years. As the U.S. Space Force is established, the Department

intends to build a lean headquarters with responsibility for developing, presenting, and advocating for space budgeting in the planning, programming, budgeting, and execution (PPBE) process. Additional organizations to deliberately build and advance space warfighting capacity and enhance professional development would also be required to focus on areas such as space education and training; operational testing and evaluation, tactics development, and threat replication; and space doctrine development; and promotions and assignments. The vast majority of initial Space Force resources – personnel and budget authority – would be transferred from the existing Military Services. We anticipate the standing up of U.S. Space Force would be phased over five years – FY 2020 to FY 2024 – and would require \$72 million in FY 2020 to establish the headquarters.

As missions are transferred, existing personnel and budget authority for the aforementioned missions and forces would transfer into the Space Force from the existing Military Services. Here it is critical to note: this transfer does not necessarily mean physical movement of personnel and capabilities to a different geographic location. Rather, it means changing reporting, identifying clear roles and responsibilities, and establishing avenues for greater accountability for space missions.

At the conclusion of the transition period, more than 95 percent of the Space Force annual budget is estimated to consist of resources that will have been transferred from existing DoD budget accounts, along with an estimated 15,000 personnel. Additional resources will be dedicated to developing the Space Force headquarters and establishing and maintaining new support elements such as education, training, doctrine, and personnel management centers.

Once fully established, additive costs for U.S. Space Force are estimated to be \$500 million annually. Approximately \$300 million would be applied toward the military space staff and civilian personnel at headquarters responsible for organizing, training, and equipping; \$200 million would be directed for developing space-specific education, training, doctrine and distinct space personnel management of the force. These costs come to approximately 0.07 percent of DoD's annual budget. Total additional cost growth over the next five years is estimated to be less than \$2 billion, or approximately 0.05 percent of DoD's budget for the same period. Lean implementation costs mean the Future Years Defense Program topline is sufficient to fully fund the U.S. Space Force.

U.S. Space Command and Space Development Agency

Establishing a unified combatant command dedicated to space will focus joint warfighting on this vital domain. U.S. Space Command will plan and conduct space operations and employ space forces to deter, and if necessary, defeat threats to secure U.S. national interests. Establishing U.S. Space Command will bring full-time operational focus to securing the space domain and streamline command and control for operationally relevant timelines. While basing decisions have not yet been made, it is anticipated that initial personnel will be drawn from existing combatant commands and services that focus on space.

To fulfill its mission, U.S. Space Command will require doctrine and forces optimized to operate in a contested environment. The role of U.S. Space Force in developing and presenting that doctrine, equipment, and trained personnel is essential to the ultimate success of U.S. Space Command.

The Department is also establishing the Space Development Agency (SDA) to outpace our potential adversaries by streamlining development and fielding of advanced space systems and architectures that meet the demands of a dynamic warfighting domain. The new agency will be complimentary to ongoing space efforts within the Department and, where applicable, leverage emerging commercial technologies to field enhanced space capabilities on an accelerated timeline. SDA will deliver the advanced systems integration essential for activities such as artificial intelligence, which will enable low-latency data movement to connect sensor-to-shooter and otherwise enhance exquisite capabilities. The SDA will ultimately transition to the U.S. Space Force in support of its “equip” function.

Given the roughly 2,500 active satellites in orbit today, the thousands more projected, and the fact that potential adversaries have nearly doubled their space presence in recent years – China’s ISR and remote sensing fleet alone contains more than 120 systems, second only to the U.S. – the imperative for an agency that can outpace the threat and leverage the astounding advances of the private sector is obvious. Absent the SDA, our departmental inertia will perpetuate development of bespoke space-based capabilities and architecture by multiple DoD organizations. That resulting complexity expands our cyber vulnerabilities along the seams of those capabilities; it also drives up costs unnecessarily. The SDA is our opportunity to recapitalize our Department’s space architecture and integrate new solutions at scale.

CONCLUSION

The threat posed by China and Russia in space demands department-level action. For years, careful observers of our processes – including Congress, independent commissions, and even our peer competitors – have pointed out the limitations of our current approach. We must not wait until we experience conflict in space to adapt our posture. As other great powers become more competent and capable in space, America burdens increased risk because we will not have sufficient time to “hammer out” what will be needed and how to do it if contingencies arise. Rather than react to their disruptive behavior, we should seize the initiative now to anticipate and influence changes in the character of warfare and deter potential adversaries’ aggression by establishing a Space Force that operates on doctrine created by fully trained space cadre members and equipped with resources and capability to defend the American way of life and U.S. national security.

Thanks to President Trump’s leadership and Vice President Pence’s consistent advocacy, this Department has identified a plan to maintain U.S. leadership in this key domain of competition and potential warfare. The Department’s partnership with Congress is and will remain absolutely critical to our success. We ask for your support in authorizing the establishment of the United States Space Force in the Fiscal Year 2020 National Defense Authorization Act so we can move out in this critical domain. As we proceed, we remain committed to the efficient and cost-effective enactment of our proposals in close partnership with this committee and Congress as a whole.

America has enduring interests in space. So does humankind. The world has benefitted from American leadership in space these past decades far more than it can expect to benefit from coercive Chinese or Russian disturbance of the domain. Just as the U.S. Navy ensures freedom of navigation of the seas, America must now ensure the freedom to navigate the stars.

To that end, we encourage this committee’s strong support for this proposal to ensure our Nation’s military remains the most advanced and lethal in the world and above it.

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