

Statement Before the

House Armed Services Subcommittee on Strategic Forces

***“National Security Space: 21st Century Challenges,
20th Century Organization”***

A Testimony by:

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We set sail on this new sea because there is new knowledge to be gained, and new rights to be won, and they must be won and used for the progress of all people. For space science, like nuclear science and all technology, has no conscience of its own. Whether it will become a force for good or ill depends on man, and only if the United States occupies a position of pre-eminence can we help decide whether this new ocean will be a sea of peace or a new terrifying theater of war.

President John F. Kennedy
speech at Rice University
September 12, 1962

Chairman Rogers, Ranking Member Cooper, distinguished members of the Committee, thank you for your invitation to appear today to discuss the challenges confronting National Security Space assets, operations, and organizations. As the Committee is aware, I have been privileged over the past 18 months to co-chair a Congressionally-directed classified study by the National Academy of Science on National Security Space Protection and Defense. Both a classified and unclassified version of that study have been delivered to the Committee. While comprehensively addressing technological, policy, and strategy issues, the study results did not extend to organizational findings and recommendations and I appear at the invitation of the Subcommittee to present my own views on these critical issues, not those of the other study participants or the National Academy of Science.

As this Committee is well aware and as has now been widely acknowledged, the national security of the United States is inextricably linked to space and our unimpeded access to the capabilities resident in or traveling through that domain. Since the dawn of the Space Age, all those who have been a part of what was once a race between two superpowers and is now a \$315 billion global enterprise, have implicitly understood this linkage. Over more than six decades, that reliance on space systems has deepened and broadened. What was once only a realm of exploration and national security has grown to include a commercial element that has become so ubiquitous that it has led us to fundamentally redefine the term national security space. President Kennedy was not the first to draw the analogy between space and the oceans of the world. The literature is sprinkled with references to space "ships," interplanetary "voyages," and star "fleets." Even the term "astronaut" is a combination of two Greek words, for "star" and "sailor." In many ways, the analogy is apt in that space exploration, initially, and exploitation, ultimately, have parallels in mankind's first tentative maritime endeavors. Sea-borne voyages of discovery led to the establishment of trade routes, colonial expansion, and, finally, contests for influence and security in the new domain.

The significant difference, of course, between the creation of global maritime policy and practice and that of the space domain is time. The technologies, customary behaviors, conventions and, eventually, treaties governing military and commercial naval activity evolved over centuries along with the enabling operational concepts, naval strategies, nation-states and attendant diplomacy. The system was thus able to gradually incorporate advances, slowly accommodate stresses, and, to some degree, resolve conflicts in a deliberate manner over time.

A key aspect of the space domain is that the speed of advances in access and space-borne capabilities has significantly outpaced the creation of guiding national -- let alone

international -- strategies and policies. The technological advances in space systems and an increased reliance on them have created a space-enabled "critical infrastructure" that has not been matched by coherent supporting protection and loss-mitigation strategies, clearly articulated and accepted policies, and robust defensive capabilities. These gaps have created newfound concern domestically, confusion on the part of allies, and opportunities for misalignment and misperceptions on the part of potential adversaries. The need to rapidly, precisely, and effectively address all of these factors has created an environment of urgency to find mitigation strategies, fill policy gaps, and fund new capabilities. Done poorly, rapid efforts and expansive rhetoric can exacerbate existing tensions, pursue capabilities that add only marginally to system security, and increase the probability of misunderstanding or miscalculation on the part of potential adversaries. Well-coordinated and properly executed, these efforts can meet real needs, add essential system security, and promote stability. These efforts must succeed. National security and global stability in space and on Earth demand it.

The Subcommittee, in its letter of invitation, asked that the witnesses address several specific issues related to the challenges we face in the national security space domain. Those included the organization, management, leadership structure, acquisition process, operational authorities and other associated elements of the space posture of the Department of Defense (DoD) and the National Reconnaissance Office (NRO). In preparing my response, I drew on my own experience and explored previous studies of the issue, some decades old, as well as a recent summary GAO report to Congress on the subject.

Before I continue, with your indulgence, I would make two points. First, my remarks in no way impugn the efforts of most of those who labor every day in support of our nation's national security space capabilities. Whether in or out of uniform, in government or the private sector, from the halls of the Pentagon and the tactical command centers to the industry factory floors and the launch complexes, they are among the most dedicated and skilled who serve our nation and have created a national security space capability that is the envy of the world. In many ways, they are as frustrated as we are and want the tools to be able to do even better. They know better than anyone that, in national security space, despite their efforts, we are not yet where we need to be. When we speak to them of change, rather than shy away from it, they ask the not-so-rhetorical question: "What are we waiting for?"

Second, we must remind ourselves that organizational change alone, in and of itself, though often an important factor, is rarely an effective stand-alone solution to a major problem. The reality is that every organization is sub-optimized for something, reflective of the tensions between speed, quality and cost as well as the difficult-to-discern differences between what you do the most and what is most important. An alternative approach is to simply make someone responsible, at a senior and impactful level, give them all the authority they need, and make them accountable for outcomes, not aspirations. If they successfully drive real change in outcomes, then, if organizational changes are necessary down the road, the form should follow function. If we get the "What, When and Why" right, the "How" will follow. Organizationally, I often note how the sidewalks should be placed on a college campus: where the paths are worn in the grass. That is the clearest indicator of how interaction really works, in practice, not in theory. In my view, we need not and should not try to precisely define a complex new architecture first. There is important work to be done now.

“Any intelligent fool can make things bigger and more complex. It takes a touch of genius – and a lot of courage – to move in the opposite direction” —Albert Einstein

As this committee is aware, in a recent report to Congress, the General Accountability Office interviewed 17 long-serving space experts and surveyed over 20 years of critical assessments of national security space planning, acquisition and management. They distilled that down to four selected proposals for change that cover the full spectrum from, in naval parlance, “steady as she goes” to “hard right rudder.” In the interest of time and to facilitate a consistent discussion, my remaining comments will focus on those choices.

No Further Changes: Allow time for the recent dual-hatting of the Secretary of the Air Force as Principal DoD Space Advisor (PDSA) to work.

While I appreciate the preeminent role of the US Air Force in space acquisition and operations and have great admiration and respect for Secretary James, I do not believe that this option goes far, or high, enough, no pun intended. We are nearly a year into the process so an assessment of progress should be possible. There are a many stakeholders in the DoD space arena, including all of the other services and the NRO, none of which are subordinate to the Air Force and all of which might question the true independence of a “first among equals” structure which gives a single service oversight of a DoD-wide program. Span-of-control is also an issue; I know how hard SECAF works Air Force issues; what is she delegating in order to take on this new and equally challenging responsibility? The “A” in PDSA is also a concern; an advisory role can be useful but the real leadership challenges come when consensus is not achieved and a decision and immediate action is still required. In the national security space environment, the need is urgent and the challenges are real.

Create a Space Acquisition Agency: Combine SMC and NRO.

I believe this solution would be far too narrow, neglect process, structural and cultural realities and risk “homogenizing” two very different organizations and, in so doing decrease the effectiveness of both. It is not clear which or whose procurement rules would apply and, if a new set needed to be established, risks beginning a process of space acquisition regulation creation that would be characterized by “3 L’s”: Loud, Legal and Long. I also value the healthy tension between two independent development and procurement entities. It mirrors, in a sense, the historic rivalry between the nation’s nuclear laboratories where each took different and competitive approaches to solving shared problems. Creativity and innovation were encouraged and national security benefited as a result. Finally, space acquisition is a critical subset of a larger DoD acquisition process. Wholesale procurement reform should be pursued in the Department while making full use in the near-term of appropriate waivers, programmatic exceptions, innovative contract vehicles, delegated authorities, and other tools and demanding, as I noted earlier, full accountability for outcomes, not aspirations.

Create a Space Force: New military department for the space domain.

In my personal view, this is easily at once the most far-reaching and most disruptive of the postulated options. A new department and a new military service would be a decade in the making and drain and concentrate critical space expertise just reaching maturity in the DoD

and, especially, that resident in the other services. It would risk centralizing and isolating space knowledge and skills, reversing two decades' worth of effort to get space understanding and employment down to the warfighter, no matter what service or agency they serve. The bureaucratic effort to create a new entity would be staggering: literally everything would need to be created anew, from policy, roles and missions to budgets, operational and training facilities and personnel support. The debate, distractions and decisions could be drawn-out over two administrations and five Congresses, with the potential for iterative alterations to the path and objectives. In this case, effectively simplifying and reforming the "devil we know" is a far better option.

"Perhaps because Americans as a nation have a gift for organizing, we tend to meet any new situation by reorganization, and a wonderful method it is for creating the illusion of progress at a mere cost of confusion, inefficiency and demoralization."

Charlton Ogburn Jr., The Marauders, Quote p. 60
Harper & Brothers, New York, 1959,

Creation of a Defense Space Agency: Combine military space functions into one agency but leave the NRO unchanged.

In my opinion, this concept addresses the essential requirements for driving real, timely and effective change in the oversight of US national security space. Properly constituted, it will clearly define the responsibilities, authorities and accountability, in other words, leadership, in a single entity for oversight of military space. After full stake-holder consultation, USD (Space) should also have full decision making authority, subject, of course, to Secretary of Defense review. Combining space acquisition functions of all military agencies into one organization, the NRO would remain a separate organization, which, as noted earlier, I fully support. As a DoD entity, however, the NRO would report to USD (Space) to ensure consistency of policy, cohesiveness of strategy and complementarity of capability. The concept, as the GAO noted, will provide a single leadership organization for all military space activities, provide greater unity and integration of military space acquisitions, and bring focused OSD-level oversight of military space policies and execution. Over a decade ago the Allard Commission on the Organization and Management of National Security Space forcefully noted as a central conclusion that "A strong executive is needed to integrate customer capability needs, set resource priorities, evaluate alternatives, develop and advocate investment plans and programs, and formulate and execute budgets for National Security Space. This executive must be responsive to DoD, the Intelligence Community, and other customers for Space capabilities, and must serve as a focal point for coordinating efforts across the federal government." As those space warfighters I referenced earlier asked: "What are we waiting for?"

Final Thoughts

Before concluding, there are several other points I would like to make:

- (1) The technological advances in space systems and the world's increased reliance on them have created a space-enabled "critical infrastructure" that is an integral part of the national and global information infrastructure. This network includes both civilian

resources that are used in support of national security efforts and those that support more broadly economic and societal well-being around the world. National security space has been redefined and, as a result, must be addressed in a global context. An effective US response to growing space threats cannot be implemented solely by the national security space sector but requires a “whole of nation” response to include civil, commercial and international partnerships.

- (2) A key aspect of national security space, as we now define it, is that the speed of advances in access to space and space-borne capabilities have significantly outpaced the creation of guiding national – let alone international – capabilities, strategies and policies. We have consistently underestimated both the rate of increase in our own space-related capabilities, our reliance on them, and the rate at which potential threats have progressed with the ability to counter them.

- (3) When addressing a challenge, there is an understandable tendency to focus on the system details and operating procedures and neglect the essential broader context. I call it “working the technical and the tactical.” We will always need a full and complete understanding of both what we are trying to do and what are the appropriate limits on what we are allowed to do. The truth is that clear and unambiguous civilian and senior military policy and strategy guidance are essential to ensuring we match resources with requirements to achieve unity of purpose and effectiveness of outcome. They are also critical to reassuring our allies and deterring potential adversaries. If we are to ensure space remains accessible and secure, we must continue to lead global efforts and be very clear about what we stand for and what we will not stand for in that domain. We must not confuse effort with outcome or technology with strategy. Tactical energy in a strategic vacuum is a recipe for disaster.

Conclusion

Members of the Subcommittee. Let me conclude by thanking you all for the opportunity to offer a few thoughts as you continue your important deliberations. As we are all aware, and as the GAO has noted, the Department of Defense has made real and significant progress in making national security space a national priority, a critical first step. Some limited progress has been made in four other areas highlighted as important in oversight and assessment reports dating back two decades. Where progress has not been verifiably made is in the last finding common to those reports: the need for unified leadership and authority in national security space. In my opinion, this is the single most important action to be taken. Given the appropriate resources and authorities, the right leader can dramatically improve the national security space environment we have and shape the environment we need.

I congratulate the Subcommittee for its interest in this critically important topic. I thank you for allowing me to contribute in a small way to your deliberations, and look forward to your questions.

“I do not say the we should or will go unprotected against the hostile misuse of space any more than we go unprotected against the hostile use of land or sea, but I do say that space can be explored and mastered without feeding the fires of war, without repeating the mistakes that man has made in extending his writ around this globe of ours”

President John F. Kennedy,
speech at Rice University,
September 12, 1962

