Is a Space Force Enough?

By Maj. Mike Krayer

When I first transitioned to the space operations career path within the U.S. Army in July 2017, the question being debated in Congress, the greater space community and the media was "do we need a Space Force?" (defined as a fifth military service within the Department of Defense (DoD)). After following the discussion for a year, I think the better question is, "Is a Space Force enough?"

More broadly, is a Space Force enough to provide unity of command and effort in space matters, solve the lack of focus and emphasis on space throughout the DoD, and address the related major acquisition issues? The short answer is no.

The U.S. government recognizes the growing importance of space as well as the fact the DoD is not yet getting the job done. Provisions in the 2018 National Defense Authorization Act (NDAA), the National Security Strategy and changes in the National Defense Strategy indicate that governmental leaders want the DoD to improve the way it does space.

To ensure the United States is poised for success in the future of space and guarantee that it does not fall behind, the DoD should consider three changes:

1. Immediately direct the creation of a formalized space cadre within each of the four military services.

2. Re-establish space as a unified combatant command within two years (which at the time of publishing, DoD is on track to do).

3. Create a Space Force as a separate entity within the DoD within 10 years.

Before going into detail in each of these three areas, one must better understand the problem.

Who's the Boss?

Who is in charge of space within the DoD? Just as importantly, of what are they in charge? A common phrase spoken amongst some space professionals is that "space is hard." It is usually said in jest as an oversimplification due to the extreme complexity of getting to and doing anything in space. Just because space is hard, however, there is no reason that the command and control structure of the DoD space community needs to be equally as complex to operate and understand.

Until the 2018 National Defense Authorization Act, the DoD's "executive agent" for space existed in the U.S. Air Force Space Command. The Deputy Secretary of Defense has been directed to appoint a new "executive agent" for space. Despite this change, there are still 11 unique entities within the DoD charged with oversight for space, none of whom are "in control or able to set the direction, map the course, or build the overarching strategy for U.S. space capabilities."[1] Neither the old nor new construct defines with clarity who is in charge of space and how the varying entities work together.

The other avenue to provide unified command resides within the authority associated with a combatant command (CCMD). The DoD defines a CCMD as "a unified or specified command with a broad continuing mission under a single commander."[2] From 1983 until 2002

space had its own CCMD, with components from the Army, Air Force and Navy. With changes to the Unified Command Plan in response to the attacks on 9/11, U.S. Space Command merged with U.S. Strategic Command (USSTRATCOM).

Space!

In 2001 Air Force Lt. Col. Robert Gibson wrote, "In the near future space will become more important . . . than the air, land and maritime" domains, and he argued that the weaponization of space is inevitable.[3] Furthermore, with advances in technology and increased commercial space activity, it is also inevitable that more and more people will physically be present in and occupy space. This should instill a high sense of purpose across the DoD, USSTRATCOM and space entities within each military service. There is a perceived lack of emphasis throughout the DoD, however, and it begins at the top.

Space is a sub-component of USSTRATCOM.[4] USSTRATCOM has two other focal areas in addition to space: an Air component that "manages global force air activities to assure allies and to deter and dissuade actions detrimental to the United States and its global interests;" and an Integrated Missile Defense component that constantly monitors "for any missile activity or threat against the United States and its allies." With all of these competing interests in the space arena that are extremely important, how much emphasis is space truly getting from its own CCMD level?

The Army, Navy and Marine Corps do not have dedicated space branches for their officers or enlisted soldiers. Their respective space cadres are small in number.

In lieu of a designated branch each military service has the equivalent of an "additional duty." For Army officers, this is the specialty known as Functional Area 40, Space Operations. Army enlisted soldiers in the space arena spend years learning the space trade and ultimately rotate back to the force, where they are usually not utilized as space experts despite years of training and experience.

One of the Army's foundational doctrine publications, Field Manual 3-0, *Operations* was re-published in October 2017. It is the first time space is mentioned as a consideration despite being significant to the warfighter since the first Gulf War in 1991; however, space is mentioned in four paragraphs only.[5]

Contrast this state of affairs with the recent growth of cyber within the DoD. Cyber as a domain is much newer than space, only being formed in 2009 initially as a fifth sub-component under USSTRATCOM[6] and more recently as its own sub-unified command to USSTRATCOM. Cyber will elevate to its own CCMD this year at the direct guidance of the President. Additionally, the Army has established a cyber Military Occupational Specialty for its enlisted soldiers.

Even the Air Force routinely is criticized for not placing the right emphasis on space, despite Air Force Space Command (AFSPC) having more than 30,000 space professionals. This criticism came very publicly from U.S. Rep. Mike Rogers (R-Ala.) who wrote an opinion piece saying the "Air Force always prioritizes air dominance systems over space systems" while he proposed significant Space Force-related language in the most recent NDAA.[7]

Lt. Col. Gibson discussed the inevitability of war in space. Based on the force-laydown described, who would take the lead on this fight, if such a battle occurred today? Although it is

not likely to happen soon, without a clearly defined leader with proper authority the United States initially could fail.

Show Me the Money

It makes sense that the Air Force prioritizes systems that provide dominance to the air over other domains. Who is leading the charge in the space acquisitions process if the Air Force is not? A 2016 U.S. Government Accountability Office (GAO) study found that DoD space leadership responsibilities are fragmented among many organizations. GAO identified approximately 60 stakeholder organizations across DoD, the Executive Office of the President, the Intelligence Community and civilian agencies. Of these, eight organizations, including the Air Force Space and Missile Systems Center and National Reconnaissance Office, have space acquisition management responsibilities; 11 have oversight responsibilities; and six are involved in setting requirements for defense space programs.[8]

Who sets the priorities? Who provides organizational synchronization to prevent redundancies or wasted money, effort and time? The GAO completed a different study in 2015 looking at specific space acquisitions programs and what issues occurred. Of 12 space acquisition programs, six were over budget by about $70 billion combined.[9]

These programs were focused on strategic capabilities such as satellite communications, space-based missile warning systems and updating the Global Positioning System constellation that the United States relies on for national self-preservation and to maintain advantage across the warfighting domains.

U.S. Rep. Jim Cooper (D-Tenn.) was more aggressive in his assessment, stating the "military has not done a good enough job looking after space" and further criticizing the Air Force, claiming it is consistently six to eight years behind in schedule in deploying new space-based capabilities.[10]

Next Steps

First, all four military services must formalize their current space cadres with their equivalent of a branch and Military Occupational Specialty immediately. This updated and formalized space cadre will build expertise with a breadth of experience across domains (land, air and maritime) to assist in the later creation of a Space Force. This is vital to build space knowledge across each joint warfighting function and to better enable the foundation of a future Space Force.

Second, a functional space combatant command should be established within two years with the purpose of asserting the DoD's focus on space across all military services and providing unity of command and unity of effort. Space must move out from the shadow of USSTRATCOM as a sub-component. It needs to be established as its own CCMD with appropriate authorities to allow for a single point of command and control across operations and acquisitions.

Third, a Space Force should be established within 10 years. The extended timeframe would allow time to set conditions within the DoD to include increasing the size of the current space cadres, define what a Space Force looks like and set feasible benchmarks for implementation.

Congress confirmed the importance of considering options in the 2018 NDAA, specifically, the requirement that the DoD "conduct a review and identify a recommended

organizational and management structure for the national security space components" of the DoD.[11] The Department of Defense also is conducting an independent study on the development of a plan to "establish a separate military department responsible for the national security space activities" of the DoD."[12]

After this article was initially developed, the President of the United States ordered the creation of a U.S. Space Force, but what does that mean and what would it look like? Below is an attempt to define the force in short and simple terms to generate discussion and ultimately identify a recommended solution. I think a Space Force would require eight areas:

1. Headquarters Space Force. Similar to each military service's headquarters; heavy on intelligence and cyber.
2. Space Launch. The group responsible for getting DoD stuff into space.
3. Space Command and Control Center. Run things in space. Day-to-day operations, maintain and monitor health and welfare of space systems, including all satellite communications and space-based weather observation.
4. Space Operations. Focus on offensive and defensive space operations.
5. Terrestrial Space Forces (TSF). This arm of the Space Force would bring space to the warfighter. The TSF would be comprised of three specialties, integrating space with land, sea and air. If each military service had a better developed and formalized space organization, a formalized separate service with officer, warrant and enlisted forces may become unnecessary.
6. Training and Doctrine. The arm responsible for all training of space personnel, from basic, advanced and professional developmental training (think the equivalent of basic/recruit training, advanced initial training, officer leadership courses, noncommissioned officer education, etc.).
7. Acquisitions and Research and Development. I originally saw R&D under Training and Doctrine; however, Acquisitions and R&D should not have an additional level of bureaucracy between them and Space Force headquarters. Also, Acquisitions and R&D should be streamlined with each other to increase discussion between the two when developing new requirements.
8. Recruiting. Responsible for recruiting civilians into the Space Force.

Questions to Consider

Where do nuclear weapons and missile defense fit into this? Should they? With strategic assets using space as a medium, does it make sense for nuclear weapons and missile defense to reside in the Space Force or leave them where they are?

How could the Space Force better synchronize Title 50 assets?

Should the Space Force become the DoD frequency manager?

Each of the three steps outlined in the description of the Space Force, individually taken, is not enough to ensure the United States maintains primacy in space. Together, they provide a framework to move the DoD forward on the right path. Two keys to success not discussed above include speed of implementation which includes motivation, approval and funding from the

government and understanding and patience to implement changes which will likely span over multiple election cycles.

I love the idea of a Space Force. Building a Space Force within the DoD, however, would not be enough to solve the nation's space problem. Each military service needs space integrated within its organization by formalized space professionals.

The DoD must have clear unity of command and unity of effort in regards to space matters and set conditions to be prepared for the inevitability of growth into space and for the worst case of a war in space. Right now, the DoD space community has an amazing opportunity to use the directed guidance from the 2018 NDAA to ensure it examines all options to regain supremacy in space and continue to lead the way as pioneers in this developing domain.

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[1] John Venable, "Creating a 'Space Corps' Is Not the Solution to U.S. Space Problems," Heritage Foundation *Backgrounder*, no. 3254, Oct. 10, 2017, 2, https://www.heritage.org/sites/default/files/2017-10/BG3254_0.pdf.

[2] Chairman of the Joint Chiefs of Staff, *DOD Dictionary of Military and Associated Terms* (Washington: April 2018), pg. 40.

[3] Robert D. Gibson, *Space Power, The Revolution in Military Affairs* (Carlisle Barracks, Pa.: U.S. Army War College, 2001), pp. 4-5.

[4] U.S. Strategic Command, "Functional Components," n.d. http://www.stratcom.mil/Components.

[5] FM 3-0, *Operations* (Washington: Headquarters, Department of the Army, October 2017).

[6] Ali Crawford, "Assessment of U.S. Cyber Command's Elevation to Unified Combatant Command," *Real Clear Defense*, Nov. 13, 2017, https://www.realcleardefense.com/articles/2017/11/13/assessment_of_us_cyber_commands_elevation_to_unified_combatant_command_112626.html.

[7] Mike Rogers and Jim Cooper, "America Needs a Space Corps," *Space News*, July 14, 2017, http://spacenews.com/america-needs-a-space-corps.

[8] U.S. Government Accountability Office, *Defense Space Acquisitions: Too Early to Determine If Recent Changes Will Resolve Persistent Fragmentation in Management and Oversight* (Washington: GAO-16-592R, July 27, 2016), https://www.gao.gov/assets/680/678697.pdf.

[9] Christina T. Chaplain, *Space Acquisitions: Some Programs Have Overcome Past Problems, but Challenges and Uncertainty Remain for the Future*, testimony before the Subcommittee on Strategic Forces, Committee on Armed Services, U.S. Senate (Washington: U.S. Government Accountability Office, GAO-15-492T, April 29, 2015), https://www.gao.gov/assets/670/669930.pdf.

[10] Russell Berman, "Does the US Military Need a Space Corps?" *Defense One*, Aug. 8, 2017, http://www.defenseone.com/politics/2017/08/does-us-military-need-space-corps/140097.

[11] National Defense Authorization Act for Fiscal Year 2018, Public Law 115-91, 115th Cong., 1st sess. (Dec. 12, 2017), §1601(c)(1).

[12] Ibid., §1601(d)(1).