CSBA
Center for Strategic and Budgetary Assessments

TESTIMONY

STATEMENT BEFORE THE SENATE ARMED SERVICES COMMITTEE ON REVISITING THE ROLES AND MISSIONS OF THE ARMED FORCES

November 5, 2015

Statement by Robert Martinage
Senior Fellow, Center for Strategic and Budgetary Assessments

Chairman McCain, Ranking Member Reed, and members of this distinguished committee, thank you for the opportunity to share my views on how we may need to realign the roles and missions of the Armed Forces to better address emerging operational and strategic challenges, as well as to exploit new opportunities for sustaining U.S. military superiority.

After private meetings with the Joint Chiefs a month earlier in Key West, Florida, Secretary of Defense Forrestal signed out a memorandum codifying the "Functions of the Armed Forces and the Joint Staff" on April 21, 1948. The Department of Defense (DoD) was wrestling with three major internal issues at the time: the creation of the Air Force as a full-fledged military Service, the division of responsibilities for deterrence and warfighting in the atomic age, and the role of the U.S. Marine Corps relative to the U.S. Army with respect to conventional power projection. Externally, the Soviet Union was in the process of consolidating control over Eastern Europe and had not de-mobilized following World War II to nearly the same degree as the Allies. The Soviet blockade of Berlin was intensifying, which would lead just two months later to the commencement of the Berlin Airlift. A little more than a year later, the United States would lose its atomic monopoly with the Soviet's successful test of an implosion device in August 1949. Unbeknownst to the participants at the Key West meeting, two years later, the Nation would be engaged in a large-scale war on the Korean Peninsula.

Today, DoD arguably faces an even wider array of threats, opportunities, and planning uncertainties. After more than a decade of sustained military operations in Afghanistan and Iraq, the U.S. military continues to confront a range of global security challenges. In Europe, Russia is resurgent and increasingly assertive in its near abroad. In the Middle East, the Syrian civil war is heating up with the involvement of a growing number of external powers, Iraq is unstable, the Islamic State of Iraq and the Levant (ISIL) has risen to power, and Iran continues to expand its ballistic missile arsenal as it drives toward a nuclear weapons capability. In Central Asia, the security situation in Afghanistan remains tenuous

and will likely deteriorate as U.S. forces withdraw over the coming year. In East Asia, an unstable, nuclear-armed North Korea remains as belligerent as ever, while China pursues hegemonic ambitions, becoming increasingly confrontational in the South China Sea. The metastasizing radical Islamic threat has spread from the Middle East and Central Asia into Africa. At the same time, traditional sources of U.S. military advantage are being undermined by the maturation and proliferation of disruptive technologies—most notably, anti-access/area-denial (A2/AD) capabilities.[1] DoD must also come to grips with the emergence of war in two new domains: space and cyberspace.

The roles and missions of the Armed Forces need to be realigned to better address these manifold challenges and preserve U.S. military superiority in the decades ahead. In addition, while beyond the scope of this hearing, closely related adjustments are also needed to the Joint Staff model established with the Goldwater-Nichols Department of Defense Reorganization Act of 1986 and the current Unified Command Plan (UCP). The remainder of my remarks will focus on three broad areas for change: the possible creation of new Services for space, cyber, and special operations; the need for increased Service specialization; and the concept of "competitive jointness," meaning encouraging healthy intra- and inter-Service rivalry to foster innovation.

Creating New Services

While few argued that air power merited an independent Service in the immediate wake of World War I, the momentum behind the establishment of the Department of the Air Force was strong by the end of World War II. Today, in comparison to air power, cyber and space forces are arguably somewhere in the late inter-war period. Cyber and space warfare capabilities have yet to be tested in high intensity combat. The dominant view in the national security community, however, appears to be shifting from not whether there should be separate cyber and space Services, but when to take those steps. While U.S. Special Operations Command (SOCOM) is now well established, has proven itself repeatedly in operations over the past decade, and has the lead for DoD on counter-terrorism operations around the world, it may now be time to reinforce success and elevate it to a full Service.

Toward a New Cyber Service

Cyberspace has become a vital operational domain for U.S. military forces that is similar—and yet unique—from the air, sea, land, and space.[2] Unlike the other warfare domains, it encompasses physical elements (e.g., communications infrastructure and computer networks), electromagnetic radiation traveling through air and space, and the virtual world of computer code and data processing. It is distinct culturally as well, requiring different types of warriors

[1] "Anti-access" refers to the ability to slow or prevent the deployment of U.S. forces into a given theater of operation or cause them to base operations farther away than would be preferred. "Area denial" captures actions to restrict freedom

[2] For an excellent argument in favor of an independent cyber Service, see Admiral James Stavridis and David Weinstein, "Time for a U.S. Cyber Force," *Proceedings*, January 2014.

than the other Services. Given these myriad differences and its growing importance, cyber warfare may warrant an independent branch of the Armed Services to recruit, organize, train, equip, and retain skilled personnel; prioritize and manage financial resources; and develop domain-relevant operational concepts and doctrine.

While most cyber attacks against American entities have been motivated by espionage or greed, there have also been attempts to sabotage critical infrastructure. China, Russia, and other prospective adversaries have established dedicated cyber units and write frequently about the employment of cyber weapons. The People's Liberation Army (PLA), for example, has cultivated a comprehensive computer network attack capability over the past decade concentrated within the Fourth Department of the General Staff Department.[3] While most of China's cyber activity to date has focused on intelligence collection, it has demonstrated a sophisticated penetration and exploitation capability.[4] There is also a strong possibility that Chinese actors have left behind malware in DoD systems. In light of PLA doctrine, in the event of hostilities, it is likely that cyber attacks would be focused on U.S. and allied C4ISR and logistic support networks.

In 2010, DoD stood up U.S. Cyber Command, and in 2013 it activated the Cyber Mission Force comprising National Mission Teams, Combat Mission Teams, and Cyber Protection Teams—all of which are staffed by the Services.[5] In addition, each of the Services maintains its own cyber component that is technically subordinate to Cyber Command, but also controlled by their respective Service's chain of command. This approach has a number of drawbacks, including duplication of effort and lack of continuity as personnel rotate in and out of cyber positions every 2–3 years. An independent Service focused on cyber operations would offer a number of potential benefits:

- Unity of command;
- Promulgation and enforcement of common cyber and information technology standards;
- Tailored recruitment standards (e.g., relaxed physical fitness and dress/grooming requirements), training programs, and retention strategies;
- Dedicated career paths to enable the development of deep technical and operational expertise over time;

[3] Bryan Krekel, Patton Adams, and George Bakos, "Occupying the Information High Ground: Chinese Capabilities for Computer Network Operations and Cyber Espionage," report prepared for the U.S.-China Economic and Security Review Commission, March 7, 2012.

[4] Kevin Pollpeter, "Controlling the Information Domain: Space, Cyber, and Electronic Warfare," in Tellis and Tanner, eds., *China's Military Challenge—Strategic Asia 2012–2013*, pp. 172–177.

[5] Stavridis and Weinstein, "Time for a U.S. Cyber Force," *Proceedings*, January 2014.

- Formulation of cyber operational concepts and doctrine independent of the parent Service's culture; and
- Centralized prioritization and management of cyber manpower and financial resources.

There are, however, some potential downsides to standing up a cyber Service at this time.

First, it might be preferable to have the current Services compete for the mission to spur innovation in what is a nascent warfare domain. Second, by deferring the decision, Cyber Command would have additional time to establish a strong institutional foundation upon which a future Service could be built to include cultivating a critical mass of skilled personnel and a cyber warfare culture. Third, the current approach identifies and pulls promising cyber warfare candidates from a very large personnel pool. Whether or not a new cyber Service could recruit sufficient talent from the existing Services, government agencies, and from the commercial sector is an open question.

It is sometimes argued that instead of a separate Service, it would make more sense to stand up a unified functional combatant command similar to SOCOM. However, unlike SOCOM, whose functions span multiple warfare domains, Cyber Command focuses on only one: cyberspace. Therefore, while SOCOM requires the core competencies of all the Services to conduct operations on land, at sea, in the air, and in space, Cyber Command does "not require any of the core competencies of the five Services; in fact, the cyber domain requires precisely the core competencies that none of the other branches possesses."[6]

Toward a New Space Service

While each Service has its own space professionals, most of the expertise currently resides within the Air Force. Space operations, however, are fundamentally different from air operations. The laws of astrodynamics govern the former whereas the laws of aerodynamics govern the latter. Space operations require specialized skill sets, training, equipment, operational concepts, and doctrine. Accordingly, it may be worth considering the establishment of an independent Service to organize, train, and equip space warfare operators.

In 2001, the Commission to Assess United States National Security Space Management and Organization concluded that the disadvantages of creating a separate space Service outweighed the advantages. As they explained, "There is not yet a critical mass of qualified personnel, budget, requirements, or missions sufficient to establish a new department."[7] They did, however, call for a number of organizational reforms and left open the possibility that "U.S. interests may

[6] Ibid.

[7] *Report of the Commission to Assess United States National Security Space Management and Organization* (Washington, DC: DoD, 2001), p. 80.

require the creation of a military department of space at some future date."[8] The Commission also identified matters of key importance that demanded urgent, senior-leader attention, including the matter that "the U.S. must develop the means both to deter and to defend against hostile acts in and from space."[9] It is instructive to reflect on what has—or perhaps more importantly, what has not—happened over the past 14 years. Most of the urgent items identified by the Commission, for instance, remain partially or completely unaddressed.

Mounting Threats

Threats to U.S. space systems have increased significantly—most notably from China and to a lesser degree from Russia. The PLA first targeted American satellites with a High Energy Laser (HEL) in 2006.[10] Building upon the successful SC-19 direct-ascent ASAT test against a defunct weather satellite in low earth orbit (LEO) in January 2007, which created thousands of pieces of space debris, China demonstrated an ability to attack satellites in higher earth orbits in May 2013.[11] China also conducted a non-debris-creating test of an ASAT missile for use against LEO targets in July of 2014.[12] According to one source of emerging PLA space doctrine, China seeks to have fielded space weapons systems, including both land-based and co-orbital ASATs, by 2025 that are "capable of destroying or temporarily incapacitating all enemy space vehicles that fly in space above our sovereign territory."[13]

The United States has taken some steps to improve its space situational awareness, as well as to develop space control capabilities. The National Defense Authorization Act for 2015, for example, authorized funds for the recently created Space Security and Defense Program, whose mission is "the development of offensive space control and active defense strategies and capabilities." It appears, however, that the United States is lagging behind the threat in terms of fielding *operational* offensive and defensive space control capabilities.

Acquisition Difficulties and Weak Industrial Base

Until recently, most of DoD's larger space system acquisitions experienced billions of dollars in cost increases and delayed schedules. The past decade is littered with failed or canceled programs (e.g., TSAT, space-based radar, and Future Imagery Architecture) or ones with staggering cost overruns. According to

---

[8] Ibid.

[9] Ibid., pp. 9–10.

[10] David Axe, "Chinese Laser vs. U.S. Sats?" *Defensetech,* September 25, 2006, available at http://defensetech.org/2006/09/25/chinese-laser-vs-u-s-sats/.

[11] Mike Gruss, "Pentagon Says 2013 Chinese Launch May Have Tested Antisatellite Technology," *Space News*, May 14, 2015, available at http://spacenews.com/pentagon-says-2013-chinese-launch-may-have-tested-antisatellite-technology; and William Broad and David Sanger, "Flexing Muscle, China Destroys Satellite in Test," *New York Times*, January 19, 2007, p. 1.

[12] Office of the Secretary of Defense (OSD), *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2015* (Washington, DC: OSD, 2015), p. 35.

[13] Li Daguang, *Space Warfare* (Beijing: Military Science Press, 2001), pp. 413–414; and Anthony Mastalir, "The PRC Challenge to U.S. Space Assets," in Erickson and Goldstein, eds., *Chinese Aerospace Power*, pp. 74–75.

GAO, estimated space acquisition costs for fiscal years 2012–2017 grew by a staggering $22.6B or nearly 230 percent over the initial baseline.[14] The Advanced Extremely High Frequency (AEHF) program, for example, more than doubled from an original total program cost of $6.3B to over $14B, and its first launch in 2010 was six years later than planned. And the Space-Based Infrared System (SBIRS), which was initially estimated to cost $4.7B, is now expected to crest $19B, and its first launch in 2011 was roughly nine years late.[15]

While financial and program turbulence has exacted a toll on the space industrial base across the board, the U.S. space launch sector is arguably the weakest. For over 15 years, the United States has been in the very unfortunate position of having to purchase RD-180 rocket motors designed and built in Russia for use on the Atlas III/V space launch vehicles owing to the lack of a domestic supplier. In May 2014, in the wake of declining U.S.-Russian relations over events in Ukraine, senior Russian officials threatened to ban the United States from using RD-180 for military launches. Congress is also opposed to continued reliance upon Russian engines. The U.S. government is now scrambling to find domestic alternatives. Re-building the rocket motor industrial base, however, takes time and it will probably not be possible to field a new engine for several years.

With the focused attention of a dedicated space Service, acquisitions may have been better managed and the industrial base would have had a more powerful bureaucratic advocate.

Looking Ahead

The organizational reforms flowing from the recommendations of the Commission to Assess United States National Security Space Management and Organization have proven insufficient. The critical capability shortfalls that were identified 14 years ago have not been adequately addressed. The Commission questioned in 2001 "whether, as in the past, a disabling attack against the country and its people—a 'space Pearl Harbor'—will be the only event able to galvanize the nation and the cause the U.S. government to act."[16] It certainly appears that the Nation has become more–not less–vulnerable in space since 2001. While threats have intensified and proliferated, space-related acquisitions have been slow and disordered, and the U.S. industrial base has grown weaker. Until recently, the development and fielding of space control capabilities was not afforded priority attention. Similarly, the recruitment, training, and retention of space warfare professionals remain mostly unchanged.

The potential benefits of standing up a new space Service would be:

---

[14] Cristina Chaplain, "Space Acquisitions—DoD is Overcoming Long-Standing Problems, but Faces Challenges to Ensuring its Investments are Optimized," GAO Testimony Before SASC Subcommittee on Strategic Forces, April 24, 2013, pp. 2–3.

[15] Ibid., p. 8.

[16] *Report of the Commission to Assess United States National Security Space Management and Organization* (Washington, DC: DoD, 2001), p. 15.

- Better control over recruitment, training, promotions, and retention of skilled personnel;
- Creation of dedicated space career paths, fostering development of deep technical and operational expertise;
- Formulation of space operational concepts and doctrine unencumbered by legacy "air power" approaches;
- A separate funding stream that does not compete with other Air Force priorities; and
- Centralized prioritization and focused management of space systems acquisition.

As an interim step in this direction, U.S. Space Command could be broken out from under Strategic Command and transformed into a unified combatant command with major force program (MFP) funding similar to SOCOM.

It might also make sense to incorporate the Air Force's strategic missile forces into the new space Service. Over time, much like the PLA's Second Artillery Corps, the space Service's missile branch could expand into conventional long-range, precision-strike operations with ballistic missiles, boost-glide weapons, and sub-orbital weapons.

Elevating SOCOM to a Service

Almost seven years to the day after the tragic failure of Operation Eagle Claw/Operation Evening Light at a temporary airstrip in Iran, dubbed Desert One, SOCOM was created by an act of Congress, over the strenuous opposition of the Armed Services and the Joint Staff, to improve the capabilities, readiness, and command and control of special operations forces. The key impetus for the creation of SOCOM was the Holloway Commission report on the failed Desert One hostage-rescue mission, which among other things highlighted poor command and control, interoperability, and readiness within and among the Services' respective special operations units.

SOCOM is responsible for organizing, training, equipping and deploying SOF to geographic combatant commanders. Furthermore, SOCOM is the lead combatant command for planning, synchronizing, and, as directed, executing global operations against terrorist networks in coordination with other combatant commanders. In essence, SOCOM is a hybrid organization: like the Services, it is a force provider to the geographic combatant commands; like other combatant commands, it is heavily involved in operational planning, force allocation, and, in some cases, execution of military operations. Reflecting SOCOM's unique hybrid status, it is the only combatant command with the authority to submit its own program objective memorandum to the Secretary of Defense and to have its own acquisition executive and funding line, referred to as Major Force Program-11 (MFP-11), for conducting R&D and procuring materials, equipment, supplies, and services unique to special operations requirements.

The primary reason to elevate SOCOM to a full-fledged Service would be to increase the command's control over its personnel. Currently, the individual Services are ultimately responsible for managing the career paths of special operators, which is a source of considerable institutional tension. As a Service, SOCOM would have more flexibility in managing the career paths of its highly skilled operators. Second, while SOCOM takes full advantage of MFP-11's flexibility, it is nevertheless constrained in some respects by ossified Service acquisition processes. As a Service, with increased funding and a more robust acquisition workforce, SOCOM could potentially develop and field a wider range of SOF-unique and SOF-tailored equipment and weapons systems more quickly.

Increased Service Specialization

One of the many unintended consequences of Goldwater-Nichols has been an acceptance of what is often referred to as "Little League rules," meaning that every Service is entitled to a role in planning and conducting nearly all military operations across the spectrum of conflict regardless of whether or not it makes the most sense operationally or is the best use of available resources. Every Service "gets to play" to justify its respective program of record and defend its budget allocation. As a result, Service budget allocations have remained remarkably fixed over the past three decades, which has stifled innovation. A corollary is that the Services have over-invested in capabilities for conducting operations in medium-threat environments with the implicit reasoning that such capabilities can swing to the low-end or high-end. The problem, however, is that such middle-of-the-road capabilities are often inefficient in terms of cost with respect to lower-end contingencies and inadequate operationally for higher-end ones.

What might a more "specialized" joint force look like? The Marine Corps, for example, could focus on being the Nation's crisis response force in readiness for contingencies in low-to-medium threat environments around the globe. In exchange, it would give up on high-risk, high-cost notions of forcible entry operations in high-end A2/AD environments. It would also eschew protracted counter-insurgency and stability operations. The Army could focus on developing the cultural, language, and specialized skill sets to be the Nation's lead for counter-insurgency, stability operations, and building partner capacity. It could also develop and field mobile, cross-domain missile forces (e.g., surface-to-air missiles, anti-ship missiles, long-range ASW weapons, and surface-to-surface missiles) to both enable and conduct power projection operations in A2/AD environments. The Air Force and the Navy might shift more strongly toward a "high-low" force mix with the high focused on conventional power projection in A2/AD environments and the low focused on persistent ISR-strike presence in more benign environments. For the Air Force, this might entail curtailing investment in medium-threat environment capabilities such as short-range, manned fighters in favor of extended-range MQ-9 *Reaper* UAVs, RQ-4 *Global Hawk* High Altitude Long Endurance (HALE) ISR UAVs, and commercial derivative aircraft for the low end of the mix and LRS-B, penetrating HALE ISR UAVs, and a land-based unmanned combat air systems (UCAS) for the high end.

For the Navy, this might mean increased investment in Joint High Speed Vessels/Expeditionary Fast Transports, Afloat Forward Staging Bases/Expeditionary Mobile Bases, Littoral Combat Ships, and frigates for the low end and stealthy carrier-based UCAS, additional attack submarines, undersea payloads, and unmanned undersea vehicles (UUVs) for the high.

Competitive Jointness

Intra- and inter-Service competition should be strongly encouraged, with the Secretary of Defense and his key advisors as referees. Inter-Service crowding into each other's battlespace in particular, if managed properly, could keep the Services on their toes, foster innovation, and lead to a more robust future force. A competitive approach to joint operations would allow alternative concepts to vie for incorporation into regional contingency plans and secure DoD investment resources.

Encouraging competition within and among the Services does not mean that the Services should adopt a go-it-alone approach to warfighting. The intent of what might be called competitive jointness is to exploit the expertise inherent in divergent approaches and expand the range of warfighting options presented to joint force commanders. Each branch or Service or would be encouraged to integrate the capabilities of other branches or Services, respectively, to enhance its own capabilities and achieve theater objectives.

To enable competitive jointness, some of the Service monopolies on specific missions protected as "primary functions" in Secretary Forrestal's "Functions of the Armed Forces and the Joint Staff" memorandum from 1948 will need to be opened to competition, and many of the "collateral functions" for each Service will need to be elevated in importance.

The Army's primary function of defeating land forces, for example, should be open to the Navy and the Air Force, and its collateral function "to interdict enemy sea and air power and communications through operations on or from land" should become a new area of conceptual and capability development.

Similarly, the Navy's primary functions "to seek out and destroy enemy naval forces and to suppress enemy sea commerce, to gain and maintain general sea control, and to control vital sea areas to protect sea line of communications" should be open to competition by the Air Force and Army. Meanwhile, the Navy's collateral function to "interdict enemy land and air power and communications through operations at sea" should be a focus of operational concept development along with the fielding of critical enabling capabilities.

Finally, the primary functions of the Air Force for "defense of the United States against air attack," as well as to "gain and maintain air supremacy" and "defeat enemy air forces," should be open to competition by the Navy and the Army. All three of the Air Force's assigned collateral functions—interdicting enemy sea power, conducting anti-submarine warfare and shipping protection, and conducting aerial minelaying operations—should be growth areas for the future.

Conclusion

The emergence of new capabilities and the evolving threat landscape demand a fundamental re-look at the Key West Agreement as promulgated by Secretary of Defense Forrestal in April 1948. It may well be time to establish new independent Services for space and cyber operations, as well as to elevate SOCOM to a full-fledged Service. Given flat or declining resources for defense and threat trends shaping the future security environment, being a "jack of all trades, but master of none" appears to be an increasingly problematic proposition. Accordingly, increased Service specialization in selected areas should be given serious consideration. Finally, intra- and inter-Service competition should be strongly encouraged as a means of fostering innovation. To do so, many of the Service mission monopolies that have hardened since 1948 will need to be broken and many of the collateral missions that have been ignored or under-invested in to date will need to be elevated in importance.

About the Center for Strategic and Budgetary Assessments

The Center for Strategic and Budgetary Assessments (CSBA) is an independent, nonpartisan policy research institute established to promote innovative thinking and debate about national security strategy and investment options. CSBA's analysis focuses on key questions related to existing and emerging threats to U.S. national security, and its goal is to enable policymakers to make informed decisions on matters of strategy, security policy, and resource.