Space as a War-fighting Domain

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For the past 70 years, the US Air Force has consistently delivered a war-fighting advantage in support of vital national interests. Our service grew from the vision of early Airmen who recognized the potential of a new war-fighting domain and exploited emerging technology to make it a reality. We developed the capabilities to gain and maintain air superiority, securing the high ground to protect US forces and defeat adversaries. These advantages were not a given; they were bought with the blood, sacrifice, and ingenuity of American Airmen. In 1982, the Air Force established the Air Force Space Command (AFSPC) to operationalize and normalize space operations, recognizing the intersection of a growing reliance and increased vulnerability of the space domain. More recently, the USAF has led a decades-long effort to exploit space by integrating it into joint war fighting.

For example, in 1991, when coalition forces resoundingly defeated the Iraqi forces in Operation Desert Storm, the nation saw firsthand the power of integrating operations in air and space. Even though the Global Positioning System was not fully operational, it delivered navigational precision to great effect. When Iraqi SCUD missiles posed a significant threat to coalition forces, innovative Airmen found a way to enhance the data from our strategic missile-warning satellites to locate missiles and warn of incoming attacks. Finally, strategic intelligence, surveillance, and reconnaissance satellites provided valuable situational awareness to battlefield commanders engaged across vast operational distances.

After Desert Storm, the Air Force accelerated the integration work. We envisioned and formed joint space support teams that traveled forward to educate theater commanders on space. We activated a space division at the Air Force Weapons School to grow a cadre of space weapons officers finely trained in the art of employing weapons effects from and through space. Finally, we created a joint space operations center to provide command and control (C2) of the department's space forces.

As a result of Air Force leadership in this critical domain, space capabilities became a virtually seamless part of all military operations, providing a great strategic and operational advantage for the nation and our allies. Our national security space program is the envy of the world; today, there is nothing we do as a joint force that is not enabled by space capabilities. Space systems allow us to mass and concentrate fires while reducing collateral damage. Network and C2 synchronize widely dispersed and disaggregated forces and extend our operational reach, all while compressing the time it takes to deliver decisive combat effects on a global scale. Space capabilities clearly fuel both our American way of life and the American way of war. They significantly sharpen the Air Force's global vigilance, global reach, and global power!

The Imperative—Winning a War that Extends to Space

As an Air Force, we take great pride in our ability to always be there. However, that assured ability to exploit the advantages of the space domain is no longer a given. Today, we cannot take space for granted. Our potential adversaries have had a front-row seat to observe and learn from the many successes we have achieved by integrating space effects into joint war fighting. Unfortunately, they are rapidly developing the capabilities and doctrine, tactics, techniques, and procedures to deny us that advantage.

In the future, our potential adversaries will have the capability to hold every one of our critically important national security satellites at risk. In his 2016 posture statement, the chairman of the Joint Chiefs of Staff reported that Russia is modernizing its counterspace capabilities to defeat a wide range of US space-based capabilities, while seeking to secure freedom of action in, through, and from the space domain. Similarly, as the Office of the Secretary of Defense reported to Congress in 2016, China continues to pursue a diverse and capable range of counterspace capabilities designed to diminish, degrade, and disrupt an adversary's space capabilities. These targeted capabilities are the same capabilities the US relies on to underpin our global reach and unmatched global power.

The US does not want to see a war that extends to space, because nobody wins that war. We will continue to seek ways to prevent that from happening; at the same time, we cannot ignore the capabilities and stated intent of potential adversaries. The best way to prevent war from extending to space is to prepare for that possibility, deter aggressive action in space, and, if deterrence fails, be ready to fight and win. US national security depends on our ability to do so, and the Air Force is leading the way toward that end.

Ensuring the Future by Understanding Space Is a War-fighting Domain

Until recently, the consensus among senior policy makers assumed a future of unimpeded action in space. To change this legacy perspective, the Department of Defense and the intelligence community actively educated key stakeholders and collectively built an agreement around a new, threat-informed narrative. In a close partnership with the National Reconnaissance Office (NRO), the Air Force developed a space architecture and concept of operations to successfully operate in today's contested environment. This new space war-fighting construct is based on the reality that the control of space provides a military advantage and, therefore, it is a contested war-fighting domain. Like other bottom-up, innovative, joint war-fighting constructs, this concept must align operational activities to higher-level policy and strategy to be most effective in achieving its desired ends.

In the December 2017 *National Security Strategy,* the US articulated that the unfettered access to—and freedom to operate in—space are vital interests. We must backstop this pronouncement with capabilities designed to protect and defend the domain. Hence, it is equally critical that current space system requirements and acquisition processes enable expedited, effective development, and fielding of capabilities that outpace our rapidly advancing adversaries. As recommended by the Commission to Access United States National Security Space Management and Organization (the Rumsfeld Commission), the Air Force aligned space acquisition and operations together under AFSPC in 2001. This

alignment has proved vital to our success. However, we must further streamline acquisition to meet the speed of need. This streamlining will require action to eliminate the inertia of outdated bureaucratic processes and perspectives.

Integrating space capabilities through our unified command plan structure from US Strategic Command (USSTRATCOM) into geographic combatant commands (GCC) has served our nation's war fighters well. On 1 December 2017, USSTRATCOM strengthened this structure with the establishment of the joint force space component commander. This new four-star level component command elevates the C2 of joint space forces to create parity with other component commanders found in GCCs for air, land, and sea. This elevation best postures the joint force to sustain the tremendous integration of space effects into joint war fighting, while also fortifying and balancing command relationships to fight and win should a war extend to space. One component to orchestrating joint and whole-of-government operations and activities for space superiority is the relatively new National Space Defense Center (NSDC). In partnership with USSTRATCOM, the intelligence community, and the NRO, the Air Force maintains the NSDC. This center is designed to ensure space superiority for the joint force and the nation. Additionally, the NSDC staff innovates, experiments, and tests new space C2 tools, methods, and procedures necessary to fly, fight, and win a war in space. This operations center is rapidly helping us better understand how to link all space stakeholders to better defend space capabilities.

As we train and equip Airmen to deter and win a war that may extend to space, we must also acknowledge that successful war-fighting concepts incorporate proven, multidomain principles of war such as maneuver, security, and offense. Similar to successful war-fighting conceptual frameworks of the past such as AirLand Battle, a construct to fight a war that extends to space must blunt aggression, seize the initiative, and terminate a conflict on terms favorable to US national interests. Communicating and resourcing this strategy only strengthens our deterrent position. The nation and our war fighters deserve nothing less. Our sacred promise must be to ensure our sons and daughters remain the best-equipped Soldiers, Sailors, Marines, and Airmen on the battlefield.

Gen Douglas MacArthur famously said, "The history of the failure of war can almost be summed up in two words: too late. Too late in comprehending the deadly purpose of a potential enemy. Too late in realizing the mortal danger. Too late in preparedness." We must heed these words today. Protecting and defending our space capabilities is a national imperative. Just as the Air Force has done in the past 70 years, now is the time to unlock the ferocious and disruptive ingenuity of our Airmen. We must continue to rapidly evolve war-fighting operational concepts and simultaneously organize, train, and equip Airmen to ensure our ability to deter adversaries from extending a war to space, and if necessary, to win decisively. Ceding the high ground is not an American way of war—not then, not now, not ever. ❑

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