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SPACE FORCES SUPPORT FOR THE JOINT FORCES COMMANDER: WHO'S IN CHARGE?

By

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A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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15. Abstract:

The 1990s were a decade where space power came of age, both economically and militarily. Commercial space revenues exceeded U.S. government spending for the first time,making space power a vital contributor to U.S. economic power. As for the military space, Desert Storm demonstrated the true value of space assets for enhancing combat capabilities of terrestrial forces.

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Abstract of

SPACE FORCES SUPPORT FOR THE JOINT FORCES COMMANDER:

WHO'S IN CHARGE?

The 1990s were a decade where space power came of age, both economically and militarily. Commercial space revenues exceeded U.S. government spending for the first time, making space power a vital contributor to U.S. economic power. As for military space, Desert Storm demonstrated the true value of space assets for enhancing the combat capabilities of terrestrial forces.

Space forces will be a part of every future U.S. military operation and the probability that our space superiority will remain unchallenged decreases every day as more and more countries around the world obtain space capabilities. Today, USSPACECOM provides support to the JFC with deployable space support teams and permanently assigned space liaison officers on the JFC's staffs. There are however, new approaches for improving command and control of space forces. One is to establish space as a separate area of responsibility (AOR.) Another is to create a Joint Forces Space Component Commander (JFSCC), similar to a JFACC, and yet another approach is to adopt the existing C^2 models used by USSOCOM or USTRANSCOM.

We've done a great job using space forces to enhance the combat capability of our land, air, and sea forces. But now is the time to move beyond simply providing information from space to providing combat power from space. In order to do this, the JFC will need more than just space advisors in theater. He will need a JFSCC.

Space has been an area for human exploration since man first broke free from the Earth's atmosphere in crude spacecraft developed in the late 1950s and early 1960s. It was not until the last decade of the 20th Century, however, that the exploitation of space as a medium for information exchange created a source of economic power for nations whose prosperity and international stature is directly linked to their space capabilities. This is especially true for the United States since it leads the world as the most space-capable nation, both militarily and economically.

The United States has become increasingly reliant on space capabilities. Economically, the 1990s were a decade where the U.S. saw a commercial explosion of space-related industries supporting areas such as telecommunications, entertainment, and international trade. In fact, today there are more than 500 U.S. companies directly involved in the space industry and their combined annual revenue is well over $100 billion.[1] In 1996, commercial space revenues exceeded U.S. government spending on space programs for the first time.[2] Today, space is so critical to the economic well-being and the national security of the United States that it's importance has been elevated to the stature of a vital national interest.[3]

United States military reliance on space assets has also increased greatly since the Persian Gulf War. Space capabilities have become so integral to the success of military operations that it is highly unlikely the United States will ever execute a contingency operation or war plan again without the benefit of space-based systems.[4] As the single-point of contact for military space, the Commander in Chief of United States Space Command (CINCSPACE) is responsible for conducting space operations with assigned space forces in support of the National Military Strategy.[5]

The thesis of this analysis is the United States Space Command (USSPACECOM) must effectively integrate space forces support with the operational needs of the joint forces commander (JFC.) Integration is the key to U.S. space superiority because of the increased reliance on space forces support since Desert Storm and the proliferation of space-capable nations which could challenge our superiority.

Desert Storm was characterized as the first "Space War" since space assets played a major role in the quick, decisive victory over Iraq.[6] It would probably be more accurate to describe Desert Storm as the first "Space-supported War" since no warfare took place in the medium of space and unlike our military forces on the ground in Southwest Asia, our space forces aloft were unchallenged in any way by the enemy. Our first "Space War" is still in the distant future when the U.S. confronts a space-capable adversary directly in the space medium and employs weapons which either fire into, through, or from space in order to defeat the enemy space capabilities. As for Desert Shield and Desert Storm, the space forces provided force enhancement for deployed forces through communications, navigation, early warning, intelligence, and weather support. Although this support appeared as if it were part of the deliberate plans for U.S. Central Command (CENTCOM), it was only through ingenious adaptation, resourcefulness, and ad hoc procedures that space forces were able to properly support the operational commanders of Desert Shield and Desert Storm.[7] Operational commanders were lucky because they had six months to prepare for combat against Iraq but this luxury of time will probably not exist against future adversaries.

There were many operational lessons learned coming out of Desert Storm dealing with space force support to the operational commanders. They ranged from increasing the number of space assets available for use by the JFC to improving the command relationships

between USSPACECOM and the JFC. Making more space assets available does not necessarily improve the operational commander's effectiveness. The key is in knowing how to effectively employ the space assets available. This is where the critical role of USSPACECOM support to the JFC comes into play. In this paper, I will examine the current method of space forces support provided by USSPACECOM to the operational commanders through the use of space support teams and space liaison officers. Then I will examine some proposed methods to improve space forces support for operational commanders in future conflicts. These proposed methods include the establishment of space as an area of responsibility (AOR), the creation of a Joint Forces Space Component Commander (JFSCC), and the adoption of the U.S. Special Operations Command (USSOCOM) or U.S. Transportation Command (USTRANSCOM) models for command and control. Based on these examinations, I will conclude with recommendations for the best approach USSPACECOM should follow to optimize space forces support to the operational commanders.

Current Method of Space Forces Support

If the United States were to go to war today, responsibility for planning and waging the war would be assigned by the National Command Authorities (NCA) to the geographic commander in chief (CINC) where the hostilities would take place. If the conflict area straddled the boundaries of two adjacent CINCs, the NCA would decide which CINC would become the supported CINC and which would be a supporting CINC. Since space power alone is insufficient to control the outcome of terrestrial conflict or ensure the attainment of terrestrial political objectives, CINCSPACE would naturally be assigned a supporting CINC role to a geographic CINC.[8] In accordance with the 1998 Unified Command Plan,

CINCSPACE is responsible for conducting space operations by exercising combatant command over assigned space control, space support, and force enhancement forces.[9] Although CINCSPACE has a fourth mission area (force application) it is not included in his supporting responsibilities since the U.S. currently does not possess the capability or political will to conduct this mission area against an adversary.[10]

Americans have a tendency to fight wars the same way we fought the last war.[11] This is also true when it comes to the use of space forces. In Desert Storm, our space forces support to the operational commanders fell almost completely in the mission area of force enhancement. We provided early warning satellites to detect SCUD missile launches. We used weather satellites to provide up to the minute forecasting to improve air operations. We began using the thirteen existing operational Global Positioning System (GPS) satellites to allow our ground forces to accurately navigate over the featureless deserts of Iraq. Finally, we reallocated and repositioned communications satellites over the Gulf region in order to provide sufficient capabilities for coordination of air, land, sea, and special operations forces.[12] Force enhancement is the most attainable function around which to structure space operations and putting all the emphasis in this area for Desert Storm and even the Kosovo conflict made sense at the time considering the lack of space opposition from any opponents.[13] In the near future, the JFC is not only going to have to work closely with CINCSPACE to benefit from space force enhancement, he will also have to consider what measures will be taken to control the space medium. When you get involved in another Desert Storm, where you do not have all the international space powers on one side of the conflict and can deny access to space-derived information to the enemy, then you are going to have to fight for space control, just like you would fight for sea control and air control.[14]

The capability to control space will permit freedom of movement on the surface and in the atmosphere.[15] But current U.S. military thinking on space forces support has to change from a strictly force enhancement environment to a space control environment which, in turn, permits force enhancement to take place. Operational commanders need to stop viewing space as a medium that provides support and start looking at it as a place to be dominated just like the land, sea, and air.[16] We cannot continue to believe that just because an adversary may not possess any space capabilities, that adversary in incapable of attacking and denying our use of space systems. Satellites have become so valuable to our overall order of battle that any future adversary would have to take them into account in their overall battle plan and try to exploit any possible weakness.[17] Attacking our space systems would give an enemy leverage and degrade our combat efficiency and effectiveness.[18] An enemy need not possess space forces in order to be a space threat. In fact, an enemy who does not depend on space can still easily target our space systems without concern for retaliation in kind.[19] These attacks on our space systems would not have to involve high-tech weapons such as lasers or kinetic-kill vehicles. They could disrupt our ability to use the space systems with simpler methods such as signal jamming, deception, or physical attacks on ground support stations. Regardless of the method of attack, future JFCs will have to be more knowledgeable of threats posed by the enemy against friendly space forces and be able to decide the appropriate response to such threats. They must become familiar with the capabilities of our satellites and be prepared to continue combat operations in a degraded space environment. Finally, the JFC will have to know ahead of time the space threats which exist in his area of responsibility to avoid any "space" surprises when hostilities start.[20] This is what the future holds for space forces support to the operational commanders however, we are not set up

today to efficiently handle space control and force enhancement for the joint forces commander.

Today's command and control structure for U.S. space forces used in support of theater military operations is disjointed and represents a "Band-Aid" approach to providing adequate space support to the war fighters. Part of the problem is the JFC lacks a single point of contact to which he can turn to in order to fulfill his space forces support requirements within his area of operations. Although CINCSPACE is the focal point for all Department of Defense space assets, he does not have combatant command (COCOM) over all U.S. space resources (e.g., he lacks COCOM of satellite communications mission payloads.)[21] A JFC must try to coordinate and orchestrate space support for his theater and must deal with several organizations other than USSPACECOM. The JFC must deal with representatives or liaisons from four different space communities: the military, national, civil, and commercial sectors. Each organization usually provides a space support team (SST) to the JFC or his component commanders. The concept of SSTs was established after Desert Storm as a transition "bridge" for the JFC until the regional CINCs could build up their own space expertise on their support staffs.[22] Space liaison officers were also added to each regional CINC's staff to act as the focal point for all space issues and assist with the development of space operational plans for the regional CINC. These teams and liaisons were supposed to gain confidence in their ability to request, task, and access space-derived information through their own battle management systems. The current USSPACECOM Long Range Plan calls for a global defense information network of sophisticated battle managers, coupled with "space-smart" staffs by 2012 to replace the existing support teams and liaisons.[23] In the mean time, the problem of streamlined space support remains on each

regional CINC's staff. Besides the Joint Space Support Team (JSST) provided to the JFC by CINCSPACE, there are also SSTs supporting the Air Force, Navy, Army, and national communities. Whereas the JSST supports the JFC and acts as a liaison back to CINCSPACE, the component SSTs only support their service component and act as liaisons back to their respective service component within USSPACECOM (i.e., Air Force SST supports the JFACC and reports back to Air Force Space Command, the Navy SST supports the sea component commander and reports back to Naval Space Command, etc.) This has led to complaints from theater commanders of confusing, overlapping space support teams coming at them from many organizations.[24]

Although the current method of space support to the operational commanders has its problems, it does meet the needs of the JFC as long as the focus of space forces support remains on force enhancement. As space capabilities improve in the future and space control becomes critical to the successful use of all space forces, better methods of command and control will have to be implemented by CINCSPACE and the JFCs in order to maintain our space superiority over all other nations on Earth. Now it is time to discuss the first of the proposed alternatives.

Space as a Separate Area of Responsibility

In the Spring of 1997, the Commander of U.S. Space Command, General Howell Estes III proposed to the Joint Staff a modification to the Unified Command Plan where space would become an AOR and CINCSPACE would transition from a functional CINC to a geographic CINC. USSPACECOM, while the lead agency for U.S. military space, did not have responsibility for the region of space and all space requirements for the war fighter. The focus of his argument in favor of a space AOR was that regional CINCs had command

authority over assigned forces and coordinate the boundaries of their AORs with other CINCs, U.S. Government agencies, and allied nations within the AOR as necessary to prevent both duplication of effort and lack of adequate control of operations.[25]

Making space an AOR is not a uniquely American concept. The Russian military considers space as a distinct *teatr voyennykh deystviy (TVD),* or theater of operations.[26] For the United States, space is the only medium which does not fall within an AOR and USSPACECOM is the only command with forces capable of moving into and operating within the medium of space.[27] According to General Estes, "In order to operate effectively in the space AOR requires a war fighting CINC and a war fighting organization with a global space perspective and space expertise."[28] Establishing a space AOR would align existing USSPACECOM authority with responsibilities which are presidentially authorized and assigned versus just implied as they are in the current functional CINC responsibilities.[29]

Establishing space as an AOR appears to be the next evolutionary step for this nation, which is relying, more and more on space power everyday. However, compelling reasons for the assignment of AOR status are lacking and are centered around improving the image and legitimacy of USSPACECOM. The arguments against a space AOR are more concrete. First of all, there are concerns that assigning a space AOR could create artificial seams between terrestrial and space forces.[30] CINCSPACE counters this by stating that a space AOR would smooth space operations among the various agencies and reduce the likelihood that operational seams would continue to grow along organizational boundaries.[31] This would only be true for DOD agencies because the Unified Command Plan only applies to military operations and its power to influence non-DOD agencies is limited.[32] Another seam that would affect the Air Force the most is at an institutional level. The Air Force has always

contended that space is merely an extension of the atmosphere in the vertical dimension. Any acknowledgement of space as an AOR would promote the "uniqueness" of space and possibly widen the gap between space and air operations.[33] Another argument against establishment of a space AOR deals with the location of the enemy and its forces. Even if space were designated an AOR, there would still have to be another geographic CINC responsible for operations directly against the enemy residing on the Earth.[34] Even if the U.S. reaches a point in time where an entire conflict is fought in space, the political entity controlling the enemy space assets would still reside in a terrestrial AOR.[35] Finally, as General Richard Myers, current CINCSPACE, points out in his recent address to the Naval War College, "Space as an AOR is a moot point. The new UCP already gives me all the missions I need without having an AOR."[36] The UCP changes he referred to were implemented in 1998 and assigned five additional responsibilities to USSPACECOM[37]

- Identified as the single point of contact for all military space operational matters;
- Directed to interface with National, commercial, and international agencies;
- Directed to conduct space campaign planning;
- Directed to plan and implement security assistance activities; and
- Directed to counter the deployment of weapons of mass destruction to space.

With these additions, USSPACECOM was given the same responsibilities as a geographic CINC, with the exception of non-combatant evacuation operations which do not apply to space.

Even though CINCSPACE has all the responsibilities of a geographic CINC without the official title, it does not mean that space will not or should not be designated as a separate area of responsibility. At some time in the future, the physical presence of humans in space will be necessary to provide greater situational awareness and allow for more flexible

prioritization in tasking space sensors and maneuvering spacecraft.[38] When we reach this point, space power will have evolved enough to support the concept of a space AOR.

Creating a Joint Forces Space Component Commander

Who commands U.S. space forces under a joint task force commander? It cannot be the space liaison officer since the title leads one to assume an advisor and not a commander. It also cannot be any member of the Joint Space Support Team for their role is also advisory and they act as the "middle men" between USSPACECOM and the JFC. The only available answer today is that CINCSPACE commands all U.S. military space forces and functions in a supporting role to terrestrial CINCs or joint force commanders.[39] So in reality, the question as to whether there should exist a Joint Forces Space Component Commander (JFSCC) is irrelevant since that person already exists in the form of CINCSPACE. Unlike ground, sea, or air forces, operational control (OPCON) of space forces does not chop to the theater CINC. Instead, CINCSPACE retains command of space forces to ensure the most effective use of global space assets.[40] CINCSPACE chooses to lead the space forces from the Cheyenne Mountain Operations Center in Colorado Springs, Colorado. After all, the very forces he commands allow him to participate in the JFC's planning and execution of military operations by using satellite communications. Looking back at Desert Storm, imagine the challenges the Joint Forces Air Component Commander (JFACC) would have faced if he had tried to lead his forces while remaining at his 9th Air Force Command Post at Shaw Air Force Base in South Carolina. Lack of face to face coordination with the other component commanders would have greatly affected the unity of effort for CENTCOM and Allied forces.

Unity of effort is the primary purpose for establishing a JFSCC under a JFC's command structure. The JFC is authorized to establish functional component commands to conduct operations where two or more military departments operate in the same dimension or medium.[41] Of the four mediums of operations, space is the only medium that is not represented as a functional component on any of the JFC staffs. This is probably because of the ever-present opinion that space is truly a support function and not a combat function. Our misguided belief that the primary purpose for space is force enhancement perpetuates the non-combat function of space forces. However, with space control (or space superiority) becoming increasingly important to the JFC, the need for a space component commander in theater, coordinating all military and commercial space assets, and employing force against enemy space forces becomes indispensable.

A JFSCC would be responsible for ensuring the JFC understands and executes the space control mission.[42] He would also be responsible for planning, coordination for allocation, and tasking forces in support of space control.[43] He would provide general directions for defenses of friendly space forces, deception efforts, and would designate targets or objectives for other components to strike.[44] The unity of effort provided by a JFSCC would ensure all the offensive and defensive space control efforts were focused on one thing: the JFC's objectives.[45] This is critical because without close coordination, one component commander may demand the elimination of a satellite or ground station while another commander may need to keep that same system operating to permit deception operations to continue.[46] Centralizing the space campaign under a JFSCC would ensure a space systems expert coordinated on the best course of action prior to taking action on situations like the one just described.

Opponents of the JFSCC (mostly Air Force) argue that the position is unnecessary and space does not fit the model of a normal component. For example, as a component command, forces assigned to the JFSCC would normally be under the operational command of the JFC. However, operational command of USSPACECOM space forces will not chop to the JFC. Therefore, the JFSCC would simply be a facilitator or coordinator between USSPACECOM and the JFC for surveillance, reconnaissance, communications, and weather support.[47] Another misguided belief is that since air and space are indivisible and over 90% of the space personnel belong to the Air Force, the JFACC should be the primary point of contact for space matters in the theater.[48] Under the Air Force's new Expeditionary Aerospace Force concept, the Air and Space Expeditionary Force commander (most likely candidate for JFACC role) would be responsible for leading space forces into the theater while using a reach-back capability to Air Force Space Command's 14th Air Force for planning, readiness, and expertise.[49] Although Air Force Doctrine states space assets should be centrally controlled by the JFACC because he best understands how to employ space power, this view is inaccurate.[50] It is once again based on the premise that space is merely and extension of the air which is not the case because the basis of space power is an understanding and use of astrophysics, not aeronautics.[51] Only space systems personnel should be granted authority and responsibility for leadership of space forces.[52] For the same argument that you would not want a ground forces commander in charge of the air component, it does not make sense to have an airman in charge of the space component. Making the JFACC the space role leader would not likely be readily accepted by the other service components. The most common reason for this is concern over an inordinate amount

of space support that would be given to air operations versus land or sea operations in a theater campaign.[53]

If a separate space component commander makes sense for the JFC, it is only because that JFSCC could contribute to the unity of effort in his combat role. Although we can get by without a JFSCC in theater today due to the lack of a serious space threat against the American forces, the need for a JFSCC will increase as space control usurps the center stage from force enhancement in the near future.

Other Unified Command Models

The last two alternative methods for improving space forces support to the JFC will be discussed together here since they both involve adopting the command and control models currently being used by two of the U.S. unified commands and are similar in their approach. The first is the U.S. Special Operations Command (USSOCOM) model and the second is the U.S. Transportation Command (USTRANSCOM) model.

As discussed earlier, the JFC has the authority to establish functional component commands within his command structure. With this authority, each of the geographic CINCs has established a subordinate unified command for USSOCOM forces within their theater of operations. Depending on the situation, the JFC will either designate a Joint Special Operations Component commander (JSOCC) or a Joint Special Operations Task Force (JSOTF) commander who will lead in-theater special operations forces.[54] The USSOCOM model provides the JFC with a single focal point for special forces and allows the JSOCC to have reach-back capability to USSOCOM for additional forces and support.[55] Adopting this model for space forces would be similar to adopting the previously discussed JFSCC model except that OPCON for space forces would not be transferred from CINCSPACE.[56]

Therefore, the commander of space forces in-theater would still have to reach-back to USSPACECOM to take advantage of CINCSPACE's ability to provide centralized control of space systems.[57] Adopting the USSOCOM model would however allow the flexibility in establishing either a Joint Space Operations Component or a Joint Space Operations Task Force, depending on the scope and needs of the JFC.

The USTRANSCOM model, on the other hand, is more flexible than the USSOCOM model because it assumes no transfer of OPCON into the theater. The USTRANSCOM model is similar to the USSOCOM model in that it provides unity of command, reach-back capability to the functional unified command, and congruence with joint doctrine.[58] Space forces could adapt to this model easily because the global nature of space systems is similar to the global nature of strategic lift.[59] Under the USTRANSCOM model, the interface between the JFC and USTRANSCOM is accomplished by a Director of Mobility Forces (DIRMOBFOR), who is normally a senior officer with both airlift and in-theater experience.[60] The DIRMOBFOR is the "go to guy" responsible for all airlift issues and works for the JFACC.[61]

To adapt the USTRANSCOM model for space forces would require the creation of a Director of Space Forces (DIRSPAFOR.) However, unlike the DIRMOBFOR who works for the JFACC, the DIRSPAFOR would provide the best space forces support if he were collocated with the Joint Space Support Team (JSST) and worked directly for the JFC.[62] This model makes more effective use of the space support teams and simplifies the reach-back to USSPACECOM.[63] However, this model is no different than the current method of support because the space support teams still exist. The DIRSPAFOR is nothing more than a

space liaison officer by another name, and centralized control of space forces remains out of theater of operations with CINCSPACE.

Conclusions and Recommendations

The old saying, "if it ain't broke, don't fix it" could be applied to the concept of space forces support to the war fighter. After all, Desert Storm proved that we could take emerging technologies and through a series of ad hoc procedures and innovative thinking, come up with a useful method of space support for the war fighter. But, let us not forget that we had six months to get ready for war, which is a luxury our future enemies probably will deny us.

We have had almost ten years after Desert Storm to learn about space systems and perfect the way in which space forces enhance the combat capability of our air, land, and sea forces. But now it is time to move beyond simply providing information from space to the terrestrial combat users.[64] It is time for U.S. space forces to concentrate on space control, which means exploiting space and denying the enemy the use of space, and force application, which entails offensive operations to influence the outcome of terrestrial conflicts. The space control and force application missions are increasingly important and need to be expanded.

Now is the time to seriously look at the command and control structure for USSPACECOM to ensure that it can meet the needs of tomorrow's joint forces commanders. How we are doing it today is not wrong and not ineffective based on the force enhancement mission that USSPACECOM supports. But change is required for tomorrow's space forces support in line with the following recommendations:

- Adopt the Joint Forces Space Component Commander model for providing optimum space forces support to the Joint Forces Commander and OPCON control of the space forces into the theater of operations when required.
- Intensify the efforts to increase the "space literacy" of all joint forces and especially those assigned to the JFC's staffs.

- Divest the "airman's" mentality from the space forces leadership to ensure the future support is truly joint with minimal service biases.

In conclusion, always keep in mind the often-quoted statement by Giulio Douhet, "Victory smiles upon those who anticipate the changes in the character of war and not those who wait to adapt themselves after the changes occur."[65]

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