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SPACE OPERATIONS IN THE JOINT WARFIGHTING ARENA: THE VIABILITY OF A JOINT FORCE SPACE COMPONENT COMMANDER

by

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14. ABSTRACT

This paper is written for the non-?space-minded? person who is willing to hear ideas of how to integrate space power throughout the U.S. military?s joint warfighting ways. The U.S. military is becoming increasingly more dependent upon space assets to help win wars. In fact, some have said, ?Operation DESERT STORM was the first space war.?1 As the world?s dependence on space assets grows, so grows the costs of building space assets and launching them into orbit. As such, the business of building and launching space assets fits the classic ?low supply/high demand? relationship. But as the costs to gain space power increases, the U.S. Department of Defense?s budget continues to decrease. Therefore, the U.S. military must rely on commercial and civil--as well as its own--space assets, to maximize the effects space power brings to the theater Commander in Chief. Additionally, it?s not difficult to imagine that the U.S. military may also rely on the space assets of allied countries in future coalition wars. So, given the U.S. military?s limited budget, coupled with its increasing reliance on space assets, it is imperative to maximize all available space power in future wars. It follows, then, to question whether the U.S. military currently integrates space into the joint warfighting arena as effectively and efficiently as possible. Today, the U.S. military relies on the ?air component,? within the joint warfighting structure, to work space issues for the Joint Force Commander (JFC). However, information distilled from United States Space Command?s estimate of world space assets reveals that the U.S. military owns or controls less than 1/5th (with the U.S. Air Force owning the majority of those) of the space assets potentially available for U.S. military use in the next war. One might wonder how the other 4/5ths are integrated into the fight? Does the U.S. military have room for improvement when it comes to integrating space resources? Moreover, before there?s a shooting war from, to, and/or within space, will the U.S. military?s joint warfighting doctrine include the relationships and processes needed to most effectively integrate and employ all space assets available? Another question that follows is?how could the U.S. government (not just the military) take a truly joint approach to employing space power in the planning and execution of military operations? And, who?s the right person to focus the other 4/5ths of available space power to help meet the JFC?s objectives? The idea of a Joint Force Space Component Commander (JFSCC) is a viable solution--is it the right one? Part I of this paper provides an introduction and focus for subsequent discussion of the viability of a JFSCC. Part II provides background information, including discussion of space terminology, definitions, and current joint space doctrine. Research of Joint and Service Doctrine was also pursued to determine the changes necessary to legitimize a JFSCC within the current joint warfighting organizational structure. Recommended doctrine changes are included in Part V. Part III provides a general overview of the space assets that could be employed in war and provides analysis of the current processes used to integrate space assets for maximum efficiency and effectiveness in war--based on answers to a questionnaire sent to the space liaison officers of each warfighting CINC. Part IV summarizes the research in Parts I through III and concludes that a JFSCC is a viable solution to integrating space for the JFC, but suggests now is not the time to make this change. Part V recommends the roles and responsibilities of a JFSCC and recommends some essential changes to current joint doctrine.

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Preface

During my quest for a research topic I had only two mandatory prerequisites--to research a space operations issue with potential future application. I did not want to write a "book report," or produce something with only historical significance. With that in mind, my research advisor suggested I read some past Air War College and Air Command and Staff College research papers written on current space operations issues. Many of the papers offered recommendations for the future. I then found myself questioning the viability of those recommendations.

Therefore, this paper builds upon a 1999 Air War College paper, written by Lt Col D. J. Miller, which recommends the Joint Force Commander assign a Joint Force *Space* Component Commander--to complement the Joint Force *Land* Component Commander, Joint Force *Maritime* Component Commander, Joint Force *Air* Component Commander, and Joint Force *Special Operations* Component Commander within our joint warfighting structure. Today, the Joint Force Commander would most likely look to the Joint Force *Air* Component Commander to bring all available *space* assets to bear, to help meet the joint campaign objective(s). This means the Joint Force *Air* Component Commander, in addition to working the joint/coalition *Air* War, also works all the needed support from space assets, of which only about $1/5^{th}$ belongs to the U.S. military.

I found this idea of executing future wars with the "space" piece split from the "air" piece both pertinent and timely. During my last assignment I witnessed, on several occasions, how the U.S. Air Force is struggling to provide appropriate funding and stewardship for both the air and

space pieces embedded within its core competencies. The U.S. Air Force has a huge challenge in integrating space capabilities throughout the entire U.S. military. Additionally, while drafting this paper, the Air Command and Staff College space elective class was fortunate to receive a briefing from the current Commander in Chief, North American Aerospace Defense Command; Commander in Chief, United States Space Command; and Commander, Air Force Space Command. As he said, and has been proven during numerous military operations, "space clearly benefits all military services and must become fully integrated"[1] throughout the services.

After hearing this from the U.S. military's senior "space boss," it's clear that viable recommendations on how to fully integrate space capabilities are welcomed and encouraged. Likewise, it's clear that such recommendations have potential future application—meeting my prerequisites for doing research. Laying the foundation for the future should include the establishment of a Joint Force Space Component Commander.

I am truly indebted to several people who enhanced my learning about this debated issue and about the numerous administrative details involved in such a paper. I want to thank Lt Col Mikael Beno for pointing me in the direction of this relevant topic. I also thank the Space Liaison Officers and Joint Space Support Team members who responded to my questionnaire. Also, the figures in this paper are present largely because of the generous and enthusiastic help of Ms. Pam Hollabaugh, of the ACSC/DER staff. Without these folks' assistance, this paper would not have been a complete product, fit for others to debate. With that said, I take full credit for all shortcomings herein.

Notes

[1] General Richard B. Myers, briefing, Jones Auditorium, Air War College, Maxwell AFB AL, 26 January 2000.

Abstract

This paper is written for the non-"space-minded" person who is willing to hear ideas of how to integrate space power throughout the U.S. military's joint warfighting ways.

The U.S. military is becoming increasingly more dependent upon space assets to help win wars. In fact, some have said, "Operation DESERT STORM was the first space war."[1] As the world's dependence on space assets grows, so grows the costs of building space assets and launching them into orbit. As such, the business of building and launching space assets fits the classic "low supply/high demand" relationship. But as the costs to gain space power increases, the U.S. Department of Defense's budget continues to decrease. Therefore, the U.S. military must rely on commercial and civil--as well as its own--space assets, to maximize the effects space power brings to the theater Commander in Chief. Additionally, it's not difficult to imagine that the U.S. military may also rely on the space assets of allied countries in future coalition wars. So, given the U.S. military's limited budget, coupled with its increasing reliance on space assets, it is imperative to maximize all available space power in future wars. It follows, then, to question whether the U.S. military currently integrates space into the joint warfighting arena as effectively and efficiently as possible.

Today, the U.S. military relies on the "air component," within the joint warfighting structure, to work space issues for the Joint Force Commander (JFC). However, information distilled from United States Space Command's estimate of world space assets reveals that the U.S. military owns or controls less than $1/5^{th}$ (with the U.S. Air Force owning the majority of

those) of the space assets potentially available for U.S. military use in the next war. One might wonder how the other 4/5^{ths} are integrated into the fight? Does the U.S. military have room for improvement when it comes to integrating space resources? Moreover, before there's a shooting war from, to, and/or within space, will the U.S. military's joint warfighting doctrine include the relationships and processes needed to most effectively integrate and employ all space assets available?

Another question that follows is…how could the U.S. government (not just the military) take a truly joint approach to employing space power in the planning and execution of military operations? And, who's the right person to focus the other 4/5^{ths} of available space power to help meet the JFC's objectives? The idea of a Joint Force Space Component Commander (JFSCC) is a viable solution--is it the right one?

Part I of this paper provides an introduction and focus for subsequent discussion of the viability of a JFSCC. Part II provides background information, including discussion of space terminology, definitions, and current joint space doctrine. Research of Joint and Service Doctrine was also pursued to determine the changes necessary to legitimize a JFSCC within the current joint warfighting organizational structure. Recommended doctrine changes are included in Part V. Part III provides a general overview of the space assets that could be employed in war and provides analysis of the current processes used to integrate space assets for maximum efficiency and effectiveness in war--based on answers to a questionnaire sent to the space liaison officers of each warfighting CINC. Part IV summarizes the research in Parts I through III and concludes that a JFSCC is a viable solution to integrating space for the JFC, but suggests now is not the time to make this change. Part V recommends the roles and responsibilities of a JFSCC and recommends some essential changes to current joint doctrine.

Notes

[1] General Merrill McPeak, Air Force Chief of Staff, address to the National War College on DESERT SHIELD/DESERT STORM, 6 March 1991. Quoted in "The Synergy of Air and Space," *Airpower Journal* (Air University Press, Maxwell AFB, Summer 1998), 7.

Part 1

Introduction and Focus

Operation DESERT STORM was the first space war.[1]

— Gen Merrill McPeak, USAF, 1991

As we look to the future, it's easy to see an increasing reliance on space assets by an increasing number of people in the world. Today, navigation using the Global Positioning System (GPS) is commonplace. We're also used to seeing our local, regional, and national weather "picture" on the 6:00 news--provided from a satellite in space. And, in general, the global population today is probably most reliant on space assets to help meet their communications needs. Many people have a satellite television dish and/or use communications satellites (possibly unknowingly) to retrieve information through the Internet. While the civilian application of space assets continues to grow, some believe the military application will too. As the current Commander in Chief, United States Space Command (USSPACECOM) said in his testimony before the U.S. Senate Strategic Forces Subcommittee of the Senate Armed Services Committee, "…it's clear that the exploitation of orbital space is driving a new American way of making wealth. It's also driving a new American way of employing military forces."[2]

Given these facts, and given the reality of shrinking defense budgets, the U.S. military will need to efficiently maximize the effects of "space power" in future wars. Furthermore, if the exploitation of orbital space is driving a new American way of employing military forces, this exploitation must be integrated in the traditional American way--in a truly "joint" manner.

Why? As the U.S. military's senior space boss recently emphasized, "Space clearly benefits all military services and must become fully integrated."[3] So then, what is the best way to integrate the exploitation of orbital space throughout the American way of employing military forces? Or, said another way, what is the best solution to integrating space power in the U.S. military's joint warfighting arena?

To answer this question, Lt Col D. J. Miller, while a student at the U.S. Air Force's Air War College in 1999, wrote a paper titled, *Space Superiority The Joint Way*. His paper documented four possible ways to organize space to meet the theater objectives of Joint Force Commanders (JFCs). To maximize space power for future JFCs, Lt Col Miller first looked at the option of the Joint Force *Air* Component Commander (JFACC) retaining the responsibility to work all space support and also fight the air war--as was done during Operation DESERT STORM. The second option discussed is that of the JFC retaining the responsibility for space power. Third, is the option of a Director of Space Forces (DIRSPACEFOR) working for the JFACC, which is similar to the Director of Mobility Forces (DIRMOBFOR) model. Finally, Lt Col Miller recommends the option of adding a Joint Force Space Component Commander (JFSCC) to complement the Joint Force Special Ops Component Commander (JFSOCC), Joint Force Land Component Commander (JFLCC), Joint Force Air Component Commander (JFACC), and Joint Force Maritime Component Commander (JFMCC), in Figure 1, below. Resulting from this recommendation is the question--is it a viable solution?

Therefore, the purpose of this paper is to investigate the question: Is a JFSCC a viable option in the U.S. military's joint warfighting arena?

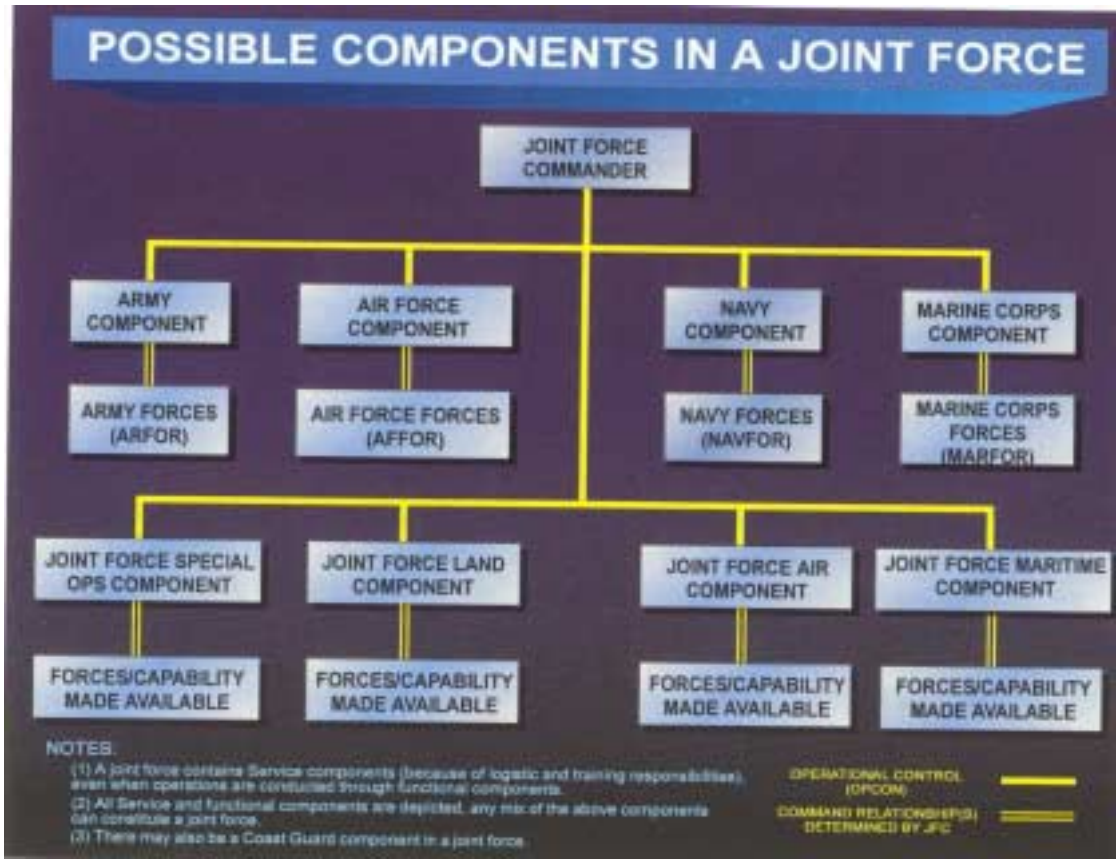

Figure 1 Today's Possible Components in a Joint Force[4]

To help determine the viability of a JFSCC, current doctrine will be reviewed to see if it precludes a JFSCC from complementing the JFSOCC, JFLCC, JFACC, and JFMCC. Asking this and other questions of the Space Liaison Officers--assigned to our Unified CINCs--also helps assess the viability of this option. The doctrinal review is covered in Part II of this paper, and insight from Space Liaison Officers is covered in Part III. Part IV provides conclusions and Part V closes with recommendations. But first, before delving into the details of assessing the viability of a JFSCC, one might question the need for a JFSCC.

The need clearly lays in the fact that the U.S. military continues to increase its reliance on the effects from space assets to help meet JFC objectives, but only owns/controls about 1/5th the space assets potentially available to help win wars. Moreover, within the "military" category in

Figure 2, below, the U.S. Army and U.S. Navy own/control space assets, but the U.S. Air Force is generally regarded as the steward for space capabilities. And although it owns/controls less

Figure 2 Possible Joint Space Power Contributors

than 1/5th the assets, the U.S. Air Force embraces "space superiority"[5] as one of its core competencies. Lt Col Miller argues that space superiority will never be accomplished until it is afforded the same opportunity and focus as land, sea, and air superiority, and a JFSCC could help provide that focus. It's also logical to believe that as the world's population (military and civilian) increasingly relies on space assets, the need to achieve and maintain space superiority will also increase and may become crucial for maintaining national security and prosperity. Furthermore, the need for space superiority--"an important first step in military operations"[6]--is clear if one believes there could be future wars waged with weapons in space. Finally, acquiring, employing, and operating space assets is very expensive. In today's environment of ever-shrinking defense budgets, this may be the most compelling reason to look for more focused ways to bring all space assets to bear for the JFC.

Researching the viability of the JFSCC option, rather than any of the other three options mentioned above, was pursued because the other three seem unrealistic. Although General Schwarzkopf, the JFC during Operation DESERT STORM, chose to also assume the role of the JFLCC, can we really expect the JFC to be responsible for pulling all the space assets together while keeping the broad focus of managing an entire war? As stated in Air Force Doctrine Document 2, "The JFC normally should *not* serve as a functional or Service component commander. For example, an Air Force JFC should not also be a COMAFFOR or the JFACC."[7] Likewise, is it wise to burden the JFACC with the responsibilities of the *space* war, while he's trying to win the *air* war? As the JFACC during Operation DESERT STORM said, "If the space assets were assigned under him as the JFACC he would get a good space person (deputy) and give that person full responsibility for executing it. The air portion is a full time job during a war, both could not be done well by one commander."[8] The DIRSPACEFOR option doesn't work as well for space assets as it does for air assets because the U.S. Air Force doesn't own many space assets "in theater," whereas the U.S. Air Force does own most of the airlift assets controlled by the DIRMOBFOR. Therefore, the JFSCC option appears to be the only realistic option of the four.

Notes

[1] General Merrill McPeak, Air Force Chief of Staff, address to the National War College on DESERT SHIELD/DESERT STORM, 6 March 1991. Quoted in "The Synergy of Air and Space," *Airpower Journal* (Air University Press, Maxwell AFB, Summer 1998), 7.

[2] General Richard B. Myers, testimony before the U.S. Senate Strategic Forces Subcommittee of the Senate Armed Services Committee, 22 March 1999.

[3] General Richard B. Myers, briefing, Jones Auditorium, Air War College, Maxwell AFB AL, 26 January 2000.

[4] JP0-2, *Unified Action Armed Forces*, 24 February 1995, IV-3 and JP3-0, *Doctrine for Joint Operations*, 1 February 1995, II-16.

[5] AFDD-1, September 1997, 29-30.

[6] Ibid, 29.

[7] AFDD-2, 28 September 1998, 42.

Notes

[8] General Charles Horner, USAF (Retired), former Commander, United States Space Command and JFACC during Operation DESERT STORM; interview with Lt Col D. J. Miller, October 1998.

Part 2

Background (Definitions and Doctrine)

> *When you think about protecting the nation's global interests, you have to remember it starts with space…it is the fourth medium of warfare.*
>
> — Gen Ronald R. Fogleman, USAF
> *AFDD 2-2*

If one believes there's a need to maximize focus on achieving space superiority, and the JFSCC can help do so--as Miller proposes--the next step is to gain an understanding of "space" terminology and issues that may affect a JFSCC. Review and discussion of current DoD Space Policy (Figure 3) and Joint Space Doctrine (Figure 4) is used to help gain that understanding.

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