

**Space as an Area of Responsibility (AOR),
Is it the Right Solution?**

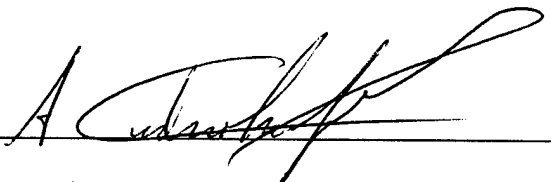
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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

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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Abstract

United States Commander in Chief Space (USCINCSpace) has advocated the need to designate space as an Area of Responsibility (AOR) in order for him to have the authority to fulfill his assigned responsibilities. However, upon examining the Unified Command Plan it becomes evident that designating space as an AOR provides USCINCSpace no additional authority or ability to accomplish his assigned missions of space control, force protection, or conduct space operations. Designating space as an AOR would likely result in undesirable consequences. If space were designated an AOR it could be perceived by other countries as the US intention of militarizing space, constituting a departure from decades-old policy of using space for peaceful purposes. This action in turn could then instigate a space-based weapons race or complicate the proliferation of weapons of mass destruction (WMD) to space.

US Space Command (USPACECOM) can best ensure space control by non-space based weapons. Use of these types of weapons would ensure space protection and access for the US and be capable of denying space access to enemies when needed, while avoiding the perception of militarizing space.

To enhance USCINCSpace's ability to meet his responsibilities, he needs the authority to better manage space personnel and space assets. US Special Operations Command (USSOCOM) provides an ideal model that USSPACECOM should implement to achieve this. If implemented, it would give USSPACECOM the unique authority to manage space orientated personnel careers. It would also give him the authority to execute his own budget, providing increased authority to shape space forces, insure interoperability and provide the best possible space support to the war fighters.

Introduction

The United States Commander in Chief Space (USCINCSpace) has been advocating that space be designated as an area of responsibility (AOR) for United States Space Command (USSPACECOM). If this were approved, it would assign space as geographic area similar to the geographic areas which United States Central Command (USCENTCOM) or United States European Command (USEUCOM) currently command. There are many implications in such a change to the Unified Command Plan (UCP), not all of which are readily apparent at first look. Space has become increasingly important to the people, economies, militaries and governments of every nation state on this earth. Some argue that it has become so vital that it is now a center of gravity for the U.S. There is no denying the increased reliance on space for the U.S. government, commercial, military, and private sectors. To best protect U.S. space interests and conduct its assigned missions USSPACECOM insists space must be designated an AOR. This paper will argue that designating space as an AOR will not enhance USCINCSpace's ability to protect U.S. space interests or conduct its mission, but rather it will result in undesirable consequences. This paper will further provide an alternative to a space AOR that will enhance USSPACECOM's ability to protect U.S. space interests and better perform its mission.

The Unified Command Plan (UCP)

The UCP designates responsibilities for all U.S. Unified Combatant Commanders (UCCs). There are nine designated UCCs, five of which have geographic areas of responsibilities. The UCP delineates responsibilities common to all UCCs, followed by additional responsibilities that are common to all UCCs with geographic AORs. Finally, the UCP delineates responsibilities unique to each UCC.

There are eleven responsibilities specified for UCCs with geographic AORs, the first of which deals with the evacuation and protection of U.S. citizens and nationals, and designated persons from threatened areas in the CINC's AOR. Another deals with the command of U.S. forces conducting peace or humanitarian relief operations within the CINC's AOR. Since both of these responsibilities deal with non-combatant persons in an AOR, they clearly are responsibilities which USSPACECOM will not have to be concerned with for some time.

Five of these additional responsibilities address the CINC's conduct of security assistance programs and organizations within the CINC's AOR. Security assistance encompasses various military and economic assistance programs for allied and friendly foreign countries conducted by the United States¹. These programs deal with state governments and their militaries, which space has none or ever will have since space is considered an international area, much like international seas or air space. National appropriation of space is forbidden in accordance with the 1967 Outer Space Treaty, which over 100 nation states are party to.² However, within USCINCSpace's individually designated responsibilities, the UCP directs USCINCSpace to coordinate with appropriate geographical CINC's security assistance activities, planning and implementing of security assistance relating to military space operations and to provide military assistance as required. This specific responsibility allows USCINCSpace to coordinate any relative security assistance as required, but ensures that the geographic CINC whose AOR includes that state (and who has overall military security assistance responsibility) is aware of the interaction.

Another responsibility for UCCs with an assigned AOR is to provide U.S. representation to international and U.S. national agencies within the CINC's AOR. Similarly

the UCP designates specific responsibility to USCINCSpace to provide military representation to U.S. national agencies, commercial, and international agencies for matters related to military space operations while coordinating with the Joint Staff and appropriate CINCs (for international agencies).

UCCs with an AOR are also designated to provide a single point of contact on military matters within their AOR. USCINCSpace has specific responsibility via the UCP to serve as the single point of contact for military space operational matters. It further directs USCINCSpace to coordinate with appropriate CINC(s) when military activities are with other nations or unilateral in that CINC(s) AOR(s). The responsibilities are similar, with the exception that CINCs with AORs are informed by USCINCSpace when the matter concerns their AOR, but USCINCSpace remains the point of contact for military space matters.

Review of force protection of all combatant and non-combatant military activities in a UCCs AOR is another responsibility assigned to CINCs with geographic AORs. The UCP states further that the CINC is to then identify up and down the chain of command any military activity not assessed as satisfactory. In comparison to the specific responsibilities that the UCP identifies for USCINCSpace, it states that USCINCSpace is to advocate space (to include enhancement, space control, space support and force application) and missile warning requirements of other CINC's. Furthermore, under responsibilities for all UCCs it is stated for UCCs to maintain the security and force protection of the command, including assigned or attached forces and assets, and protecting the U.S., its possessions and bases against attack, threat of attack or hostile incursion. Additionally, specific responsibility to USCINCSpace directs coordinating and conducting space campaign planning through the joint planning process in support of the National Military Strategy. Coordinating and

conducting space campaign planning, maintaining security and force protection of the command provide the same responsibility for USCINCSpace as CINCs with AORs. It could be argued that USCINCSpace has more since it has the additional responsibility to advocate space and missile requirements of other CINCs, thereby aiding the protection of other CINCs.

Finally, UCCs with geographic AORs are to provide the single point of contact with in their assigned AOR for countering the proliferation of weapons of mass destruction in support of non-proliferation policies, activities and tasking. USCINCSpace is assigned identical responsibility in the UCP for space.

Through these comparisons between USCINCSpace and CINCs with AORs, it is evident that the responsibilities assigned in the UCP are near identical. The only exceptions are those responsibilities that deal with states through security assistance programs and organizations. However, USCINCSpace is given the responsibility to assist geographical CINC(s) (CINCs with AORs) with security assistance matters regarding space.

The question must be asked then, if all the responsibilities are the same or with minor differences, why should space not be assigned as an AOR? What would be compromised or harmed? USCINCSpace's quest for having space declared as an AOR is based on some compelling arguments.

Space as an AOR

At first glance, arguments for space as an AOR seem compelling. However with the previous discussion of the UCP responsibilities as back ground, one can build an understanding of why an AOR for space is not what's required.

The importance of space is clearly developed and articulated in the words of former USCINCSpace ,General Estes. "World war II-era Americans understood oil's value to

military operations, and thus could accept a North Africa strategy in lieu of direct, perhaps expedient, attacks on German soil.... The oil shock of the 1970's forced Americans to also recognize their dependence on oil to commerce and their way of life. The result is an ingrained sense of oil as a military and economic center of gravity. Thus the public debate surrounding oil is very sophisticated - Americans recognize the need for a separate unified commander covering the oil region... The same level of sophistication is in its infancy for space. Just as oil drives the engine of today's industrial society, space will drive the engine of tomorrow's information society."³

With in this context, it is significant to note that in 1996 commercial space revenues exceeded government space expenditures for the first time. Today there are more than 200 U.S. satellites in orbit, worth in excess of \$100 billion.⁴ More than 1,000 satellites are expected to be launched in the next decade, representing an investment of more than one-half trillion dollars. As a large segment of information assets migrate to earth orbit, our nation's prosperity will become inextricably linked with space capabilities.⁵

USCINCSpace thus contends that an AOR is required because "War fighting has become very dependent on space capabilities. Commercial interest in space-derived products and services is growing, and so is international interest in space commerce and military space capabilities."⁶ These are valid statements, but provide no link to the requirement for an AOR. Much like joint war fighting has become dependent on air capabilities or sea capabilities, there is no rationale to establish AORs for those mediums.

USCINCSpace further contends an AOR is required because "Space operations deal with a unique...threat in the space AOR."⁷ This again is a true statement, however as

discussed previously the UCP provides USSPACECOM the authority and responsibility to assess and deal with these unique threats as a functional Unified Commander.

An AOR is required to be effective, argues USCINCSpace "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."⁸ [emphasis in original]. Title 10, United States code, section 164 designates USCINCSpace as a combatant commander with the same command authority as any regional CINC. Designation of a new AOR would not improve the command's perspective or expertise beyond the high level that already exists.⁹

USCINCSpace also cited two bulletized principles in the 1995 Report of the Commission on Roles and Missions (CORM) as evidence for a space AOR.

"- AORs should correspond to areas of recognized or likely strategic interests to the US.

- The distinction between geographic and functional CINCs should be preserved (i.e. functional CINCs **should not have AORs)."**¹⁰ [emphasis in original]. Space is recognized as an area of strategic interest to the U.S.. The first bullet, if it stood alone, appears to support a space AOR. However, the other principle cited here confirms that the CORM report did not believe that space should be a separate AOR or that USCINCSpace should be a geographic CINC, as evidenced by the reports obvious omission of such a recommendation.

Additionally, these were but two of six broad principles that are to be applied during periodic reviews of the CINCs missions. Two of the other principles are concerned with the political, economic, religious, and cultural dealings of the CINCs AOR, of which space has none.

Another principle states that sufficient land, sea, and airspace should be included in each AOR to allow the CINC to carry out their assigned mission. The intent of this principle would logically lead one to include space with the other mediums (land, sea, and air) to allow

the CINCs to carry out their mission, and not add portions of the other mediums to space to form a new AOR. The final principle simply states the need for periodic review of AORs.¹¹

Finally, USSPACECOM contends it's "... the only US military organization with operational forces in that area/region, or capable of deploying forces to that region."¹² This again is a true statement. However, force capability or deployability does not create the need to create a new AOR. USCINCSOC also has unique forces, which is the precise reason they are designated as a supporting CINC. Their relationship as supporting CINCs allows their unique forces, capabilities and expertise to be best employed by all CINCs in all AORs.

Even if the U.S. fights an entire conflict in space, the political entity controlling the enemy space assets resides in a terrestrial AOR. Thus, the conflict can never be isolated exclusively to space. War is not fought against weapons in a particular medium, rather war is fought against political entities who use tools to achieve their aims. Theater commanders must concern themselves with all the adversaries fielded forces in all media when attempting to compel that adversary to comply with our will. He must also concern himself with the political and military leadership controlling those forces.¹³

Although a space AOR initially appears enticing, it readily becomes apparent that the arguments do not stand up under scrutiny.

Undesirable Consequences

In addition to direct responses to USCINCSPACE's rationale against space as an AOR, there are other problems that arise if space becomes an AOR. The most significant being the political impact of declaring space to be an area in which military operations may be conducted and the military planning that CINCSPACE would then undertake could pose

difficulties. Russia remains deeply suspicious of U.S. national and theater ballistic missile defense programs and are still balking at ratifying the START II nuclear arms control treaty.¹⁴

USCINCSpace is given the responsibility of maintaining the security and protection of assets assigned. As discussed earlier, designating space as an AOR does not provide additional capability for him to do so. Assigning space as an AOR could well be perceived by other countries as the U.S. intention of militarizing space, even if for the protection of those assets, and constitute a departure from decades-old policy of using space for peaceful purposes.

There are two treaties relevant to military in space. The first is the 1967 Outer Space Treaty which prohibits weapons of mass destruction (WMD) to be stationed in outer space. It also declared space to be used only for peaceful purposes.¹⁵ The other significant treaty is the 1972 Anti-Ballistic Missile (ABM) treaty with the Soviet Union which prohibits the development, testing or deployment of space-based ABM systems or components.¹⁶ Despite the fact that the Soviet Union no longer exists, the current administration stated that the United States and Russia are clearly parties to the ABM Treaty and that a strong case can be made that Belarus, Kazakhstan and Ukraine are also parties to the treaty.¹⁷

The U.S. space program is at least an order of magnitude beyond others in terms of size, diversity, technical sophistication, and funding. Its only significant competition was the Soviet Union, whose successors program in Russia today is much reduced. The U.S. faces less military competition in space than it does on the Great Lakes.¹⁸ Many states believe there is no current or projected threat from weapons in space, nor is there the threat of war fighting in space.

The balance of power theory must be seriously considered as we contemplate declaring space as an AOR and employing space based weapons. Strategic planners in the Department of Defense and recent advocates argue that others already believe, or can be led to believe, that the U.S. is a benign hegemon and other states will not balance against the U.S.¹⁹ Otto von Bismarck well understood the Balance of Power principle and meticulously managed Prussia's perceived power during the three wars of German Unification in the late nineteenth century. He was thus able to prevent a coalition of states from developing to balance against Prussia's rise in power. The U.S. employment of space-based weapons at a time when there is no perceived space threat from other states would destroy the "benign hegemon" perception and threaten a rise of states to balance the U.S. power.

The National Security Strategy (NSS) vision for space states "... uninhibited access to and use of space is essential for preserving peace and protecting U.S. national security..." It further states current administration space policy objectives as deterring threats to space assets and defeating hostile efforts if deterrence fails, and "... preventing the spread of weapons of mass destruction to space and enhancing global partnerships with other space fairing nations across economic, political and security issues."²⁰ The National Military Strategy (NMS), which is derived from the NSS, provides a similar vision. It identifies of "special concern" the use of WMD. It also identifies other current and future challenges as "enemies exploiting commercial and foreign space capabilities, and threatening U.S. space based systems."²¹

While employment of space based weapons may provide protection of U.S. space assets initially, it would most certainly complicate preventing the much higher security concern of the spread of WMD to space as well as opening the way to a whole new era of

space-based arms race. The last arms race was won at an enormous cost to both the U.S. and the Soviet Union. Despite these facts, it is critical for the U.S. to protect its space assets and interests, which remains the responsibility of USCINCSpace.

Space Protection/Control Alternatives to Space-Based Weapons

If declaring space as an AOR and placing weapons in space is not advantageous to policy, how then can USCINCSpace protect U.S. space assets? In addition to protection of our space assets, USCINCSpace has declared it imperative that the U.S. have a robust capability to deny other nations the ability to use their space systems against the U.S. and our allies.²²

Satellites can be damaged or rendered useless by physical attack (possibly nuclear), jamming transponders, blinding sensors and spoofing or the receipt of false commands.²³

In 1996, an Indonesian company jammed the satellite signal of a rival company from Hong Kong when the Hong Kong satellite was moved into the Indonesian satellites orbit. It was unclear whether the incident was intentional or not.²⁴ There have also been incidents of inadvertent jamming of Global Positioning Satellite (GPS) signals by EA-6B aircraft and unmanned aerial vehicles designed for jamming.²⁵ Despite these few isolated cases, there have been few actual incidents of interference with commercial or military satellites.

However, these cases do point to the vulnerability of our satellites to existing technology.

In order to protect our space assets we must first know when they are being threatened or are under attack. Current U.S. satellites do not have the ability that allows their operators to detect if the satellites are attacked. If problems arise with satellites, it is difficult to determine if the malfunction resulted from a hostile attack or if it resulted from some other reason. It may have been a victim of natural radiation, space debris or a target of intentional

attack.²⁶ Satellites must be designed and built with sensors that detect and warn operators when they are under attack. They must also be able to distinguish between a hostile attack and other natural incidents.

Once the U.S. has the ability to determine when their space assets are under attack, it can employ a variety of responses to protect them. These same capabilities can be used to deny an enemy the use of his own space systems if required. Direct attack with Tactical Land Attack Missile (TLAM) or tactical aircraft can be employed against terrestrial based jammers or ASAT weapons (currently no operational ASAT weapons are known to exist). Destruction of ground stations, space support facilities, and links between satellites via direct attack is also the most effective way to deny enemies the use of their systems. Severing these critical nodes will deny the enemy control of their satellites or prevent transfer of data to and from the satellite, effectively denying an enemy the use of their satellites.

Although current treaties and administration policy prevent weapons in space, they do not prevent the research and development of such weapons. Additionally, these treaties would not apply if acting in self-defense of the nation. The development and construction of a weapon system which would provide the capability of an on-demand type of space-based weapon would ensure U.S. dominance in space while securing U.S. interests on the planet without creating the instability associated with permanently space-based orbiting weapons.²⁷ An on-demand type of system would launch the weapon into orbit when needed and then recover the weapon on earth when the conflict is over.

Use of earth based direct-ascent anti-satellite (ASAT) weapons is another appealing capability for denying satellites to an enemy and protection of U.S. space based assets from enemy space-based weapons (which none are currently known to exist). The technology

exists today for such a weapon and would not violate treaties against space based weapons, since it would be earth based and intended for use only in national self-defense.

Another capability effective in encouraging other states not to provide space information or support to enemies is diplomatic intervention. Desert Storm was a successful example of where diplomacy was employed to deny an enemy access to satellites. Due to diplomatic appeals, France did not sell SPOT multispectral imagery data to Iraq.²⁸ As space becomes more commercialized and commercial applications become more similar to military applications (high resolution imagery, infrared imagery, etc.), diplomacy will become increasingly important for satellite control.

For the reasons stated, non-space based weapons and diplomacy provide the best method for space protection and control. However, USCINCSpace's authority remains inadequate to accomplish these and his other support missions.

Alternative to a space AOR

USCINCSpace is given the responsibility of maintaining the security and protection of assets assigned, as well recently being acknowledged by the U.S. President as being the most appropriate organization to assume responsibility for space defense operations, all military-related space operations, requirements and architectures.²⁹ As demonstrated previously, designating space as an AOR does not improve his ability to accomplish these missions. What is needed is a modification to USSPACECOM authority that enables him to meet his mission requirements.

The USSOCOM provides a model which USSPACECOM could incorporate to correct the short comings which have been evident in USSPACECOM. Much like the special operations mission, the space mission is very specialized, requiring specialized training and

equipment. Legislation in 1986 and 1987 granted USCINCSOC the authority to acquire and develop special operation-peculiar equipment and acquire special operations-peculiar material, supplies, and services. It further stated that USCINCSOC be responsible for validating requirements, establishing priorities for requirements and insuring the interoperability of the equipment and forces.³⁰ For the special operation forces, this legislation came about to rectify problems which resulted in the Grenada and Iranian rescue mission debacles.³¹

Some of the problems identified were that inter-service rivalries and military bureaucracy did not support Special Operation Forces (SOF) thought and careers. Most singularly, however was the lack of unity within DOD toward achieving an institutionalized SOF capability. This was fueled by an inconsistent SOF equipment acquisition program which delayed or prevented critical equipment procurement.³² The legislation sought to unify the service's fragmented SOF efforts in order to achieve a functional, efficient and inter-operable SOF capability.

Similar shortcomings have recently been identified in the U.S. military space program. Many institutions of space power have been established in the Department of Defense (DOD), yet there is no dedicated space warfare cadre of younger officers. Additionally, most of the Air Force's space institutions and commands are led by officers who are not space specialists. Science and technology investments in spacepower are insufficient, and the financial investments being made by the Air Force in these critical space areas are paltry. Since the Air Force has a larger portion of the space programs, they have faced unfair pressure to make most of the funding tradeoffs within their budget while spacepower programs suffer from being raided by more popular and well-established programs.³³

These difficulties would be overcome by vesting USCINCSOC type power in USCINCSpace. USCINCSpace would then have the power to control the development, acquisition, promotions and assignments of the personnel in this unique mission area, and thus promote space thought and careers. More importantly, this vested power would give USCINCSpace the means and authority to meet his responsibility by giving him budgetary control of his own POM, much the same as USSOCOM provides SOF assets.

Currently each service allocates a self determined portion of its POM to service related space projects or systems as it feels meets that services need, much the same as each of the services did for their SOF forces prior to the Goldwater-Nichols DOD Reorganization Act (GNA) of 1986 and the National Defense Authorization Act (NDA) for Fiscal Year 1987. Thus the SOF assets funding suffered due to low, service determined, priorities. Although the GNA and NDA also incorporated CINC derived Integrated Priority Lists (IPL) into the PPBS process, it was insufficient to correct the SOF problems since funding remained largely at the discretion of the services.

At present, the National Security Space Architect (NSSA) is responsible for developing space architecture and transition planning, integrating DOD and Intelligence Community Space System Architecture, and improving efficiencies in acquisition. NSSA works with the CINCs and provides space architect input to the Joint Requirements Oversight Counsel (JROC) process with guidance from the National Security Space-Senior Steering Group (SSG). The SSG is tri-chaired by the ASD(CSI) (Assistant Secretary of Defense for Command, Control, Communication, and Intelligence), Deputy Director of Classified Intelligence/Community Management (DDCI/CM), and the Joint Staff/J-8.³⁴ This current DOD space management system is relatively new and evolved from several previous systems.

These systems suffered from a lack of direct lines to command authority and competing with USCINCSpace, resulting in a lack of authority, especially in terms of budgeting clout.³⁵ Time will tell if the recent changes will bring about the desired effect, however the NSSA remains in an advisory role with little direct budgetary authority.

If USCINCSpace was given authority similar to USSOCOM, it would provide USCINCSpace with his own POM while providing him the authority and legitimacy to develop and acquire systems with compatible architecture. NSSA could be placed under USCINCSpace thereby providing him their expertise and manpower while solving the power dichotomy between the two. A reorganization as stated would provide USCINCSpace the authority needed to execute the responsibility expected of him by the UCP. As a true single point for military space, he could then insure inter-service space asset compatibility, prevent duplication of effort, and provide increased space service to the war fighters. He would better be able to insure compatibility of space architectures and systems between the U.S. and Allied space assets as well, a consideration which is of great importance since the likelihood of future large scale U.S. unilateral action has become highly unlikely due to reduced U.S. force structure and the political reality of legitimacy provided by coalition action.

Developing USSPACECOM on the USSOCOM model would let the services retain their individual space capability and ensure that their overall space requirements were met. USSOCOM allows the services to retain their SOF assets (Navy still has SEALs, Army still has Rangers, etc.), while service representatives on the USSOCOM staff insure their service SOF requirements are met. Similarly, USSPACECOM would be responsible for all the services space personnel but the services would still retain their personnel expertise and

capabilities. Additionally, service representatives on the USSPACECOM staff would ensure their respective service space requirements would continue to be met.

These changes, if incorporated, would ensure USSPACECOM's authority was appropriate to fulfill his responsibility, and the U.S. was poised to ensure space control now and the future.

Conclusion

The UCP provides USCINCSpace with essentially the same responsibilities as CINCs with AORs, yet it does not designate space as an AOR. Such a designation would not provide any additional authority to USCINCSpace to fulfill his stated mission. The same conclusion is reached when addressing USCINCSpace's submitted reasoning (to the UCP biannual review) for an AOR. A consequence of a space AOR would be the perception of U.S. militarizing space that could trigger a space arms race. Space control can be effectively executed from a combination of terrestrial-based weapons, diplomacy, and on-demand type weapons that would not violate current treaties and avoid the perception of militarizing space.

In order to provide USCINCSpace with the authority needed to execute his responsibilities, he must be vested with power similar to that of USCINCSOC. This would give him the authority to manage the careers of space minded personnel which would ensure a professional corps to advocate and manage future military space development. It would also give him budgetary authority to manage the development and acquisition of space systems so as to best shape military space forces to meet his responsibilities, ultimately providing the CINCs with fully integrated and inter-operable space support for the war fighters.

Notes

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- ³ Howell M. Estes III, "Top Military Space Officer Urges Congress to help Fulfill Promise of Space" 11 March 1998. <<http://www.spacecom.af.mil/usspace/speech9.htm>> (29 December 1998).
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- ⁷ Ibid.
- ⁸ Ibid.
- ⁹ Ibid. pg. 2.
- ¹⁰ Rudy Veit, "The Responsibilities of Regional and Functional CINCs," (Unpublished point paper, USSPACECOM, Colorado Springs, CO: July 1997), pg. 1.
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- ¹² Riggins, pg. 2.
- ¹³ Ibid. pg. 2-3.
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