

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>2002</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2002 to 00-00-2002</b>	
4. TITLE AND SUBTITLE <b>Space Control Necessary for Information Operations Enabling Army Transformation</b>			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Army Space &amp; Missile Defense Command, Army Forces Strategic Command, Redstone Arsenal, AL, 35809</b>			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>2</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

# Space Control Necessary for Information Operations Enabling Army Transformation



**BG Richard V. Geraci,**  
Deputy Commanding  
General for Operations,  
United States Army  
Space & Missile Defense  
Command/Deputy  
Commanding General,  
United States Army  
Space Command.

By BG Richard V. Geraci

**U**nder Officer Personnel Management System XXI, the Army leadership had the foresight to place Information Operations Officers FA 30 and Space Operations Officers FA 40 in the Information Operation (IO) Career Field. Six years later, these officers are now working together to address Space control and IO issues. Their expertise has gained in importance as the military utility of Space-based capabilities and IO is better understood by commanders and their staffs.

Achieving information dominance, and thus, decision superiority, is the driver for IO. The Army is transforming into an information-centric force — depending on information for real-time collaborative planning, communications and reach-back capability on the move, making decisions quicker than the adversary, and precision lethal engagements. The effectiveness of the Army's Transformation — and the transformation efforts of our sister services — will depend on how successful we are at achieving decision dominance through IO and Space control. Space Operations Officers need to understand Space control and IO to effectively support their commanders.

The emerging definition of Information Operations — *Actions taken to affect, influence, or defend information systems and decision-making* (draft DoD Directive 3600.1) — recognizes the importance of information systems and information, and focuses our efforts on influencing an adversary's decision-making to our advantage. When you read the new draft or current DoD Directive, you will not find Space operations, Space control, or Space force enhancement anywhere in the document. Rather, you will find the implied tasks of controlling space and maximizing Space-based capabilities that must be executed for successful IO.

The Army is, and will remain, the largest user among the services of Space-based capabilities. We must maintain

control of Space to ensure access to critical information, much of which is provided by Space-based capabilities. Space control is the ability to ensure freedom of action in space through and within the Space medium and, if necessary, the ability to deny others the use of Space. The Objective Force will need to employ sophisticated Space control capabilities to deny or disrupt an adversary benefit from valuable Space-derived and Space-reliant information. If we lose control of Space, our decision-making capability may be jeopardized. Continuous wargaming sponsored by TRADOC, Joint Forces Command and the Air Force over the past several years, and the most recent Army Transformation Wargame demonstrated that the Army must improve IO, acquire organic Space control capabilities, and effectively utilize Space-based force enhancement capabilities from DOD, civil, commercial and foreign sources. Two of the six critical transformation goals include Space control and IO (highlighted on the next page). The other four depend upon Space and information if the transformation is to succeed. We must get into the habit of addressing these two disciplines together when discussing support to the warfighter. Both Space and IO remain areas where many leaders have yet to fully understand their significance and relationship or their impacts on the warfighter.

Our Army's objective forces will be highly information-centric. They will rely heavily on reach-back capabilities for command and control and to gain critical intelligence, surveillance and reconnaissance information. This space-enabled reach-back will be critical for setting the conditions for success, prior to and during early entry and other "transition" periods in support of mission operations.

The Army needs to relook its Space and IO doctrine.

---

# *As a Space Operations Officer, you are part of the 'IO cell.' You must effectively plan for Space control to support the commander's IO mission.*

---

Currently FM 3-13 (IO) is out for coordination, but the Combined Arms Center drafted the manual before DoD began reworking its view of IO. The Center did include in the manual a small section identifying some of the IO responsibilities of the Space operations officer.

This summer, the Army staff conducted a full-spectrum IO study to best answer questions concerning command and control, force structure, joint force support, and many other challenging issues. One issue the study did not address is the relationship of IO and Space control. This is an area where we, the Army's Space experts, must take the lead in demonstrating the mutual advantages these two functional areas provide one another.

As a Space Operations Officer, you are part of the "IO cell." You must effectively plan for Space control to support the commander's IO mission. However, before you can do that, you need a good understanding of IO and its associated elements. In fact, this summer we began an instructor exchange program between the FA 30 and FA 40 officer qualification courses to promote that understanding.

Space Operations Officers must understand Electronic Warfare, Psychological Operations, Military Deception, Operations Security, and Computer Network Operations capabilities, all recognized by Joint Doctrine as important component capabilities of IO. As you protect our Space assets, the links and infrastructure, you enable IO. As you advise commanders on the timing of protective measures (effective camouflage, concealment and deception) to deny enemy space operations, you enable IO. In planning to deny an adversary use of Space assets, you must understand the

## **Critical Operational Goals for Transformation**

- Protecting critical bases of operations and defeating chemical biological radiological nuclear explosive weapons and means of delivery.
- Projecting and sustaining U.S. Forces in distant anti-access or area-denial environments and defeating anti-access and area-denial threats.
- Denying enemies sanctuary by providing persistent surveillance, tracking and rapid engagement with high-volume precision strike, through a combination of complementary air and ground capabilities, against critical mobile and fixed targets at various ranges and in all weather and terrain.
- Assuring information systems in the face of attack and conducting effective Information Operations.
- Enhancing the capability and survivability of Space systems and supporting infrastructure.
- Leveraging information technology and innovative concepts to develop an interoperable, joint command, control, communications, computers, intelligence, surveillance and reconnaissance architecture and capability that includes a tailorable joint operational picture.

*Source: Army Transformation Roadmap*

employment of all tools available. You should understand the role, mission and functions of the Space Electronic Warfare Detachment; and work with the IO cell to integrate it into the commander's deliberate and crisis-action planning processes. You must understand the mechanisms and tactics that the enemy could implement in their efforts to asymmetrically use space (and our dependence upon space) against us. The Army Space Command G3 IO Branch and the Space and IO Element can assist you — take advantage of their expertise.

Because IO includes information generated from Space-based capabilities or transported across Space-based infrastructure, he who controls those Space segments (Space platforms, links and ground stations) will have the superior position in controlling information and thus maintain decision superiority. It will take a proactive and IO-savvy Space Operations Officer to plan and execute Space control in support of Information Operations.