



The Army's Interest in Space Control

The Army is critically dependent on space capabilities to enable and enhance land warfare. Virtually every Army operation uses space capabilities. Today, space is used largely for its ability to enhance the effectiveness of combat forces, particularly in the areas of communication, navigation, locating and targeting the enemy, and anticipating weather. As a result, space capabilities that have an impact on the Army's land warfare capability must be protected. Likewise, when critical to the military forces of the United States, such tremendous asymmetrical advantages must be denied to an adversary.

The Army views space as a vertical extension of the battlefield and an integral part of the battlespace, one that has been especially instrumental during the ongoing Global War on Terrorism. The Army's transformation integrates space into all phases of planning and operations as a core element of that process. The Army's future force, serving as part of the joint force, has even more adaptable and lethal capabilities, which further extend the advantage of the ultimate high ground. The rapidly changing nature of warfighting results in a growing Army interest in protecting and denying capabilities in space.

The Army's dependence on space will increase as space-based capabilities enable future force concepts of information superiority, enhanced situational awareness, and high-tempo, noncontiguous operations. The use of space will increase as technology provides more flexible, less expensive

space access, and supports development of a more comprehensive and integrated suite of warfighting tools. History and the rate of technological advancement clearly demonstrate that the time will come when space not only enhances land warfighting capabilities but also becomes key terrain in and from which combat engagements occur.

U.S. Superiority in Space—Not Guaranteed

The rapid growth in commercial and international space capabilities increases adversaries' ability to monitor U.S. forces and potentially negate U.S. advantages in space. Many nations now have space programs, and the commercial space industry continues to develop and deploy systems with potential military utility, such as targeting, intelligence and communications. Enemy forces probe U.S. space systems for vulnerabilities and seek ways to cause disruptions or denial of service. Adversaries may use asymmetric means to gain access to critical systems and corrupt or exploit key data for hostile purposes.

Today, virtually anyone, including a terrorist with a credit card, can purchase space support on the open market. Adversaries no longer need years of research and billions of dollars to develop their own space capabilities or programs. These global changes in the availability of space capabilities can have unacceptable consequences and associated risk for the United States and its allies. Consequently, in an effort to determine the best utilization of scarce resources, the Army, in conjunction with other Department of Defense

organizations, is considering a more comprehensive approach to protect U.S. interests in space and is analyzing the Army's need for space control.

The Army's Approach to Engaging in Space Control Activities

Space and space control is inherently a joint mission area. Space control operations ensure freedom of action in space for the United States and its allies and, when directed, space control denies adversaries' freedom of action in space. Space control includes defensive and offensive operations by friendly forces to gain and maintain space superiority and situational awareness of events that affect land warfare operations. Space control involves five interrelated objectives:

- Surveillance of space to be aware of the presence of space assets and understand real-time satellite mission operations.
- Protection of U.S. and friendly space systems from hostile actions.
- Prevention of unauthorized access to, and exploitation of, space systems.
- Negation of hostile space systems that place U.S. interests at risk.
- Direct support of battle management, command, control, communications and intelligence.

The Army's concept of operations for space control in support of the future force consists of the following essential tasks:

- Enable continuous information and decision superiority.
- Protect the force during all phases of the operation.
- Support precision maneuver, fires, sustainment and information.
- Support increased deployability and reduced theater footprint.

The Army participates in development of these operational tasks, directing its limited space

resources to initiatives addressing specific land force needs, or leveraging the Army's traditional competencies in ground-based operations to support joint needs. A two-pronged approach to space control has emerged:

- Army investment in selected multiagency or joint space control initiatives.
- Development of critical space control-capable systems to meet Army unique needs.

Through the Joint Integration and Capabilities Development System (JCIDS) process, the Army, in collaboration with the other services and combatant commanders, will analyze and develop balanced and synchronized solutions that consider doctrine, organization, training, materiel, leadership and education, personnel and facilities upfront in a collaborative acquisition environment with the consistent goal of better supporting the warfighter.

Bottom Line

Space control is the Land Component Commander's business. Space control operations have tactical military relevance to land force operations, are important on tactical timescales, and thus require the in-theater presence and responsiveness that can be gained only by employment with tactical forces. The Army has an ongoing overarching Army Equities in Space-Space Control (AEIS-SC) study to investigate the best avenue toward maintaining space superiority through space control. Just as it has in other areas critical to mission accomplishment, the Army must make difficult resource choices.

Future battles for space supremacy will leverage ground force assets intertwined with information warfare capabilities. Accordingly, the Army's interest and contributions toward space control effects are numerous and growing. Based on the nation's continued interest in space control, the Army is pushing to help quantify, secure and maintain U.S. space superiority to best support the commander and the Soldier on the battlefield.