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Strategic Force Multiplier

The importance of Space in the Army's future

By Adam Aberle

The Army has been involved in Space since an Army team launched the first U.S. Explorer satellite in the 1950s. Since then, the Army's use of Space has evolved to become fundamental to the successful conduct of military operations. Today, the Army relies on very sophisticated Space-based systems to provide unprecedented reconnaissance, imagery, sensor, communication, and intelligence capabilities to reduce the "fog and friction" of war. But is Space critical for the future success of the Army? Will the current trend of reliance of Space products by the Army continue to increase? The success of Army Transformation and how the transformational force will conduct future military operations depends on it!

In 1997, the U.S. Army's Training and Doctrine Command (TRADOC) sponsored an Army After Next War Game with the intent of determining how the Army would fight future battles. At the start of the war game, the first significant loss was the ability of U.S. forces to use Space-based systems and capabilities. This caused a large degradation of the communication and reconnaissance information available to the warfighter, resulting in reduced situational awareness on the battlefield. The commander was not able to accomplish the mission. In one bold sweep, Army After Next War Game removed all doubt among senior Army leadership concerning the central role that Space would play in future Army operations.

Today the Army has a tremendous reliance on Space-based information capabilities as we continue to increase our reliance on Space-based assets to collect intelligence and provide strategic, operational, and tactical information across the depth of the battlefield. Because information is absolutely critical to the success of military operations, information warfare may be the most complex and most unpredictable type of warfare facing the military in the future.

From a military perspective, control of Space and information operations are very closely linked. Both are critical to our ability to achieve and maintain information superiority. The U.S. military's ability to establish information dominance on the battlefield is a force multiplier that allows us to operate effectively on a dispersed battlefield. The linkage between Space and information is so important that the former U.S. Space Command established a Space and Information Operations Element to support the war against terrorism.

DoD Space policy focuses on operational capabilities that enable the military services to fulfill national security objectives. The policy breaks out three Space-related efforts that guide the military services: (1) deter or, if necessary, defend against enemy attack; (2) enhance the operations of U.S. and allied forces by employing Space systems; and (3) ensure that forces of hostile nations cannot prevent our use of Space. From this policy, the Army determines its responsibilities for Space operations: (1) to organize, train, equip, and provide Army forces to support Space operations; (2) to develop, in coordination with the other military services, tactics, techniques, and equipment employed by Army forces for use in Space operations; (3) to conduct individual and unit training of Army Space operations; and (4) to participate in joint Space operations, training, and exercises as mutually agreed to by the services concerned or as directed by competent authority. Within this policy construct and as a result of fundamental changes in our operational environment at home and abroad, the Army has adopted a new, regionally oriented military strategy. This strategy calls on the Army's ability to design specific force packages to satisfy diverse worldwide missions.

Implementing this new strategy requires the Army to fully exploit the capabilities of existing Space assets and incorporate the use of future, programmed Space systems and capabilities. The Army's use of Space capabilities to support its missions will evolve from the use of ground receivers in the near term to direct satellite-to-user linkage in the far term. The implementation strategy falls into three timeframes that occur concurrently, not sequentially:

- In the near term, we will acquire receivers to take advantage of currently deployed Space system capabilities.
- In the midterm, we will acquire or develop processors for more complete integration and direct interface with Space systems.
- In the far term, we will influence the development of future Space systems that have been totally or partly designed to meet specific Army requirements.

The Army's future doctrine is also tied to Space. As stated in TRADOC Pamphlet 525-3-14, Concept for Space Operations in Support of the Objective Force, we plan to exploit all forms of information operations against any potential adversary to minimize risk and exposure of

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Soldiers to the effects of direct combat. It is not surprising then that all future Army operations will include planning for and influencing Space operations.

Seamlessness and ease of use will be the signature characteristics of a well-integrated Space and land force operation. Support from Space-based assets must be reliable and timely. Operational friction must be minimized. During operations at the tactical or operational level, undue delays or discontinuities will quickly make Space support irrelevant. For this reason, the central thrust of Army Space operations will be to reduce technical and procedural challenges by developing a seamless integration of Space capabilities into the Army.

The Army of the future will be faster, lighter, and deployed around the globe. Space is the critical link in the chain, the glue holding the regionally oriented, specifically designed, deployed worldwide force packages together in an "Army of One." In an operational environment where infantry and special operation units require real-time detailed information and communication, Space assets will be indispensable to accomplish their mission. Understanding how to use Space is as important as developing the capability. To accomplish this, the Army is aggressively educating its Soldiers on the capabilities that Space assets bring to the battlefield. Special courses are now offered to both officers and enlisted Soldiers to ensure warfighters at every level can

take advantage of Space as a strategic force multiplier.

The Army's use and reliance on Space assets has evolved exponentially since that first satellite in the 1950s. From a primitive communication capability to today's global positioning system to tomorrow's single integrated Space picture, the use of Space has become fundamental to how the Army trains and fights. The Army's reliance on Space products will continue to grow and will become even more vital in the dispersed, nonlinear battlefield of the transformed Army.

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1. Streland, Major Arnold H., Developing Military Space Theory Through a Comparative Analysis. Maxwell AFB, AL, April 1999.
2. TRADOC Pamphlet 525-3-14, 11 April 2003