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Where is it leading ground forces?

Space — An Enabler

Implementing Space technology into Army operations has been evolutionary in nature and slow in progress, taking many twists and turns and slowly gaining acceptance as our ground forces are transformed. Now having gained momentum, Space technology has taken on the appearance of a steamroller promising to create mission effective Soldiers for the next millennium. This technology is the embodiment of a new vision, a transformation into a new world. The Army's future in Space is vital and essential. It protects our Soldiers via situational awareness, enhanced communications, speed of implementation, and operational overmatch that allows for better battle management and combat support (Force enhancement). With the potential of all but freeing our Soldiers from the "fog and friction" of war, Space has now become mission essential for combat operations.

LTG Joseph M. Cosumano Jr., commander, U.S. Army Space and Missile Defense Command (SMDC), recently emphasized: "Force enhancement embodies the warfighter's use of Space. It provides 'value-added' to the battlefield functions, enabling the land Force to accomplish its terrestrial mission. As the future Army matures, we will ensure that upgrades to Force enhancement capabilities address future requirements. Such capabilities include Beyond-Line-Of-Sight satellite communications; intelligence, surveillance and reconnaissance (ISR); position, navigation and timing; weather, terrain, and environmental monitoring; and missile warning."

BG Richard V. Geraci, former deputy commanding general for Operations, SMDC and deputy commanding general, U.S. Army Space Command, added: "We want the Army of the future to be strategically responsive, deployable, agile, versatile, lethal, survivable, and sustainable. Attaining these qualities requires a thorough examination of the required technological, doctrinal, and organizational changes, as well as their interdependencies and political impacts." He further stated: "Space-based ISR is a prerequisite to domination of the battlespace by the future Army. In many areas of the world, Space-based ISR will serve as the primary 'eyes and ears' of future combatant commanders — particularly during early entry and other 'transition' operations or periods. Satellite constellations of the Objective Force era will provide commanders with the all-weather, 24-7 view of the battlespace that commanders need to enhance situational awareness and optimize our chances for success."

The question of where Space technology is leading our ground forces requires an open acceptance to new ideas and visions. While both our American

and our military cultures are open to acceptance of new technology, it cannot be implemented so fast as to overwhelm our sense of stability and common understanding of reality and possibilities. We accept Space travel because we modified our thoughts and understandings through the technology of airplanes, electronics, jet engines, etc. It is impossible to explain Space flight or walking on the Moon to primitive men still living in some remote areas of the planet. We are all aware that many technologies once projected as science fiction are now reality.

In an earlier edition of the Army Space Journal, COL Glen C. Collins Jr., SMDC, said our inputs are "the key to developing the right Space equipment and organizations to meet those requirements." He also reiterated: "Units of Employment and Units of Action are being designed with Space-based capabilities in mind. The Army Space Command will be activated as a Table of Organization and Equipment (TOE) brigade with TOE battalions."

The Army must prepare for transformation and Space-based capabilities will be an integral part of this new Army. Space is an enabler. It will assist the military and revolutionize the way it fights wars. What was just a dream a few years ago is now a reality — Space Soldiers are here.

We can expect our future operations to continue to focus on safe, effective, efficient peacekeeping missions that protect the lives of our Soldiers, thereby minimizing casualties. To accomplish this, our forces may need to aggressively target the adversary's terrestrial Space assets while at the same time protecting our own. Superior intelligence is essential to achieving a "mean, lean operating machine"-type ground Force. The continued evolution of Space technology promises to enhance intelligence products in many areas of combat operations and help us achieve a winning battlefield environment.

Leveraging Space technologies for military utility offers a distinct advantage to our ground forces. Integrating technological advancements into our various operational options will provide unique future capabilities. Since advancements are progressing at steamroller pace, we must remain open to new ideas, capabilities, innovation, and change. As a nation, as a culture, as a military, we must be willing and able to integrate these emerging technologies to produce unchallenged superiority. To accomplish this, however, we must embrace quick and efficient acquisition processes, early testing, cooperative joint experiments, quick looks and developments of future ideas and possibilities, early prototypes and fielding, as well as proficient and expert training. Only with such a holistic approach will we be able to leverage the Space technologies that can provide the capabilities that will allow our ground forces to achieve decisive victory on future battlefields.

Fielding smaller, more mobile, agile, and self-contained ground forces and units means that they must be combat ready when embarking on peacekeeping missions (war zones, humanitarian efforts, political unrest, etc.). Space technology will help our ground forces make timely and accurate decisions to achieve victory. Communications and updated situational awareness will be in real or near-real time with precision targeting. Space will be the forward-looking observer — able to answer all the right questions (who, what, when, where, and how) and provide just the right information to the right place at the right time. Space technologies will give our Soldiers advanced warning capabilities, provide accuracy, radar imagery, detection, real-time or near-real-time digital and analog data useful to a warfighter, tracking, relay capabilities, position, navigation and time technologies, situational awareness, precise targeting, superior communications, vertical and horizontal integration capabilities, surveillance, intelligence, and much more.

As Space technologies evolve, smarter, faster, more capable sensors, energy devices (kinetic, laser, nuclear, etc.), communication enhancements, etc., will emerge and engulf military ground forces in a new world of Space capabilities and enhancements for effective battle management. But because we live in a time of constraints (limited resources, equipment, people, and budgets), we need to approach every decision as a series of trade-offs. We examine all the pros and cons. Our background in acquisition has taught us the criticality of the development and implementation phases to the future of our nation. As the Army transforms and matures, as its capabilities improve, and as its future becomes certain, there will be numerous trade-offs, hard decisions, and down-selects. The difficulty lies in selecting the very best from the many possible choices for our ground forces. Space technology is the new challenge. It is moving to center stage. We must be ready to seize every opportunity to enhance the battlefield capabilities of our ground forces. We carry the burden. We must make the right choices, choose the right developments, and field the right equipment. Our nation depends on us. Our future ground forces expect us to provide them the right leverage to win the war for peace!

1. The Army Space Journal, "Space 'Key enabler' for Army Transformation," Winter/Spring 2003, Vol. 2, No 1, pg 2.
2. The Army Space Journal, "Army Transformation War Game: Insights Concerning Space Operations," Winter/Spring 2003, Vol. 2, No 1, pg 4.
3. The Army Space Journal, "The View From (Army) Space…How Space Contributes to Transformation," Winter/Spring 2003, Vol. 2, No 1, pg 6.