With the advent of the global positioning system (GPS), Army Tactical Exploitation of National Capabilities (TENCAP), and other Space-related functions, today's tactical warfighter has the demonstrated need for the integration of Space capabilities.

Space and the Interim Division

By Lt. Col. Thomas A. Gray

For years, Space has been within the realm of the strategic level of warfare. With the advent of the global positioning system (GPS), Army Tactical Exploitation of National Capabilities (TENCAP), and other Space-related functions, today's tactical warfighter has the demonstrated need for the integration of Space capabilities. The Army, in its pursuit of information dominance as a combat multiplier, recognizes the added value that Space provides to the tactical fight.

Space expertise currently resides within the different battlefield functional areas; however, that expertise is limited to the scope of the individual Battlefield Operating System. The need for a single resident expert to integrate Space into all operations the commander is responsible for resides with the Space Operations Officer. The tactical commander should be able to rely on one source for advice and information regarding the contributions of Space-based systems.

The Interim Division (IDIV) provides the Space community the first opportunity to build into the organization the systems and capabilities to enhance the commander's operations right from the beginning. The need to integrate Space capabilities and their related contributions to support the warfighter is inherently obvious; however, the articulated requirements are nebulous at best.

The compressed time for effective development of the IDIV design did not allow requirements documentation along conventional lines. With some historical reference to the abandoned Strike Force concept, the Space Support Element (SSE) was designed to provide Space Operations Officers to the main command post for planning and the tactical advanced command (TAC) command posts to effectively integrate Space capabilities into current operations. Primary support follows the Strike Force model to the G2, G3, G5, and the G6. Other staff interaction includes, but isn't limited to the targeting cell, G7, and support to the subordinate brigades for Space-based products.

Though a large part of the IDIV G2 resides at the Sustainment Cell, it is comprised of the analysts rather than the planners and executers of intelligence operations. The Space Operations Officers will provide necessary support to the G2 analysis via electronic connectivity as necessary.

Each element of the SSE at the TAC and Main command posts will maintain a vehicle and the equipment to achieve the connectivity necessary to provide the products and information the IDIV commander and staff require. Two majors and a specialist man the TAC command posts to effectively integrate Space products into the current operation. A lieutenant colonel, a major, and a sergeant operate in the main command post SSE to effectively integrate Space into the future plans of the IDIV. Satellite communications and classified Internet connectivity allows the Space Operation Officer to reach-back to the U.S. Space Command and Army Space Operations Centers for timely and critical information and coordination. Organic communications systems are the means to provide support within the IDIV command posts and to the subordinate units as necessary.

The IDIV draft organizational and operational concept includes the parameters for SSE conduct of operations. Staff work is underway for the completion of the IDIV operational architecture that defines the IDIV SSE functions, tasks, and information exchange requirements.

(See Interim Division, page 35)

INTERIM DIVISION ... from Page 10

Each of these documents will contribute to the future understanding of how the SSE will "operationalize" Space in the tactical Army. The IDIV SSE is the foundation for the integration of Space operations at the tactical level.

There remain several questions that we as a community will need to answer with one voice. What does the tactical warfighter really need from the Space Operations Officer that he does not get from other members of his staff? What additional value does that officer provide? What can we use as a historical reference to articulate such officers' future contributions at the tactical level?

In the next issue we will look at how the tasks of the SSE will provide support to division operations.

Lt. Col. Thomas A. Gray is currently the Space and Missile Defense Command Liaison Officer to the U.S. Army Combined Arms Center at Fort Leavenworth, Kan. He served in the Army Space Command in the Army Theater Missile Defense Element Force Projection TOC and as the Executive Officer in the Space Directorate of the Space and Missile Defense Battle Lab.

Editorial Note. This is the second in a series of four columns that will outline Space in the Interim force. Following the first column that discussed the basics of the Interim Division, this column addresses Space within the tactical Army for Interim Division operations and design considerations.

DoD ... from Page 25

First, we need to help individual customer organizations throughout DoD understand the benefits that will accrue to all DoD customers if we collect all of DoD's commercial SATCOM requirements together and intelligently lease the capacity to meet the Department's aggregate demand. Second, we must change the paradigm in place today within DoD that causes customers to lease commercial SATCOM capacity on what is effectively a "circuit-by-circuit" basis; we must persuade the Department that, as an essential part of DoD's communications infrastructure, commercial SATCOM should be funded and acquired centrally and adequately to meet most of the Department's peacetime and a portion of its projected contingency SATCOM requirements. Third, we must also further change DoD's paradigm for leasing commercial SATCOM so that we can enter into the long-term leases of 10 years or more that prove we are a serious customer to industry and that yield the benefits of cost savings to the military — and the American taxpayers. We need to get the most bandwidth for the bucks spent! Fourth, we must help the Department realize that the commercial SATCOM portion of its global information infrastructure should be consumed ahead of the MILSATCOM portion.

Commercial systems are optimized to provide coverage where paying customers are located. Military systems are optimized to be able to rapidly and agilely provide support at any location on the Earth where crisis of some sort arises. By employing commercial systems to meet a substantial portion of its routine requirements — the kind of requirements ideally suited to relatively unprotected commercial systems — our military will have sufficient capacity available on its MILSATCOM systems to meet surge requirements in the event of a contingency. This "surge" capability will then exist on the systems that are designed to have the capability to support forces at any location on the planet-whether there is normally a paying customer community or not.

An additional benefit in proceeding in this manner is that if DoD organizes its requirements for commercial SATCOM into an aggregated whole, leases capacity from industry on this basis, and enters into long-term (10 or more years) leases, then the commercial SATCOM industry will begin to perceive DoD as a serious, major customer. Both will benefit: DoD will have positioned itself to meet more of its SATCOM infrastructure requirements easily, responsively and affordably; industry will be able to count on DoD as a customer and size its constellations and on-orbit capacity accordingly. This last point is important because there is a real possibility that over the next 10 years the demand for long-haul, wideband SATCOM may dramatically diminish.[3] If DoD is not a regular, reliable, significant customer of the SATCOM industry — one whose needs the industry routinely plans on meeting — DoD may find as the next decade begins that there is no suitable commercial SATCOM capacity to lease.

Lt. Col. Patrick Rayerman, U.S. Army Signal Corp, is currently the Chief of Space Operations at the Defense Information Services Agency.

Endnotes

1 Lt. Gen. Woodward in his MILSATCOM 2001 presentation

2 Lt. Gen. Raduege in his Spring 2001 DISA Customer Conference presentation

3 Col Anhalt in his presentations to the USAF Science Advisory Board "Summer 2001" Study and the Via Satellite's SATCOM 2001 Industry Conference

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Anhalt, Colonel David, Briefings to USAF SAB and Via Satellite's SATCOM 2001 Industry Conference

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