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“Emerging Missions and Requirements for Tactical Army Space Forces”

By Bill Coffey and Robert Zaza

Space operations, by its nature, is a global endeavor. Planning and integrating Space in a combat zone requires a global perspective matched with an equal understanding of the inherently global architectures which support each satellite and their respective constellations. Nonetheless, it is the role of each deployed Army Space Soldier to first possess an understanding of his unit’s respective Area of Responsibility and his commander’s intent in order to integrate the global Space architectures when and where it is needed. This global perspective, with unit responsibilities is the genesis of the art and science behind the tactical and operational integration of all available Space capabilities and effects.

Since Sept. 11, the U.S. Armed Forces, especially the U.S. Army, have greatly evolved and expanded their understanding of how best and most innovatively to apply the existing global satellite architectures to the current and ever-changing wartime requirements of offensive operations, defensive operations, and stability operations in a joint, interagency, intergovernmental and multinational environment.

The following discussion points are not intended to reiterate the basic, and still valuable, traditional Space force enhancement capabilities, but rather to address the new, emerging and innovative applications of Space operations to the current war, with an eye on near-future Space capabilities and effects.

Prior to any combat deployment it remains imperative for all Army Space Soldiers to appreciate that expertise remains a personal decision to better oneself in one’s chosen profession of Space. The authors have found, through examining both the Space community and the intelligence community, that expertise is self-taught. Personally initiated professional development within the Space community relies heavily on a variety of Distance Learning sites and curricula as well as resourcing one’s own time and securing Army funding to attend the multitude of Space and Space-related courses available throughout the military and academia. It is likewise imperative to read and study all the existing Space journals, publications, articles, After Action Reports, newsletters, and the like, which collectively offer current insights and recommendations into

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new and emerging issues that will impact your ability to integrate Space throughout our active combat zones.

As you prepare yourself and your team, or prepare others for their deployment, the authors recommend that you consider the following as you decide how best to allocate your extremely limited time, funds, and energy to your Space-related combat preparations:

- The Army’s efforts to develop a wide variety of Geospatial Intelligence products has accelerated in importance and value-added to land combat operations. There are currently at least 25 Continental United States-based Geospatial Intelligence production facilities that directly support U.S. Central Command operations. Geospatial Intelligence products combine multiple layers of fused information to graphically depict activities, patterns, trends and analysis. Space products can at times contribute greatly to the overall development of such analysis and products. Army Space Soldiers should ensure that Space-based imagery, radar, environmental monitoring, infrared, blue force tracking, Moving Target Indicator (MTI) and other Space-based products are fully considered in the planning for the development of Geospatial Intelligence products.
- Army Space Soldiers should be fully aware of how to apply all available Space capabilities and effects to the ongoing and ever-dynamic Counter Improvised Explosive Device fight. It has been noted by several Army Space Soldiers that “Space support to C-IED

is the only Space work you can do that helps kill the enemy and save American Soldiers’ lives.”

- Find the closest Air Force Space Officers (13S or W13S coded career management tracks), buy them lunch and start working closely with them. They provide a level of Space-related technical expertise that is rarely found among Army Space Soldiers since they begin as Space professionals as Second Lieutenants. Conversely, the Air Force Space Officers are usually very reliant on Army Space Soldiers for their understanding of how the Army operates, how it conducts the Military Decision Making Process and how the Army “moves, shoots and communicates.”
- Coordinate and integrate with all the augmentation teams attached to your headquarters and collaborate with them on how best to integrate Space capabilities and effects into your unit’s operations. It is fair to assume that many of these non-organic augmentation teams do not understand the roles and missions of Army Space Support Teams or Space Support Elements. Educate them on your roles and missions and also get smart on their unique skill sets. Some of these augmentation teams in Division, Corps and Marine Expeditionary Force headquarters include Counter Improvised Explosive Device teams; Geospatial Intelligence Support Teams from the National Geospatial-Intelligence Agency, Geospatial Analysts from Continental U.S. Military Intelligence units; Air Force Intelligence, Surveillance, and Reconnaissance Liaison Officers from the Air Force’s Distributed Common Ground Station units; Cryptologic Support teams, liaison personnel from the National Reconnaissance Office (both TDY personnel and Field Service Representatives) as well as a plethora of personnel from a variety of interagency organizations, Special Forces and Coalition partners. How best can each of

these augmentation teams and personnel benefit from your expertise in the tactical and operational applications of Space?

– Prior to your deployment, as well as throughout your entire deployment, make a dedicated effort to document Space-related issues, requirements, challenges, insights, and recommendations on how to better evolve materiel capabilities as well as documenting emerging or evolving Space Tactics, Techniques, and Procedures. A few questions you may ask yourself: what have I learned that can benefit those who will follow in my boots? What recommendations have I developed that can assist Program Managers to improve the systems they have already fielded? What are those new Tactics, Techniques and Procedures on how best to task, receive, and integrate Space capabilities and effects? The old Army adage of “if it’s not documented, it never happened” applies here.

– In more cases than we like, some of our Army Space Soldiers (especially the organic FA40s) are appointed additional duties which do not directly exploit their Space expertise. Anticipate these and attempt to secure those additional duties that will keep you on the staff (as opposed to being a Liaison Officer with another headquarters) and ideally those which keep you aligned with cutting edge technologies. Recent examples of additional duties supported by, or led by, our Space Soldiers within staffs include being integrated into compartmented programs, supporting Fires and Information Operations, performing Knowledge Management Officer duties, supporting Blue Force Tracking operations, serving as a Battle Major or shift officer as Chief of Operations. Division and Corps headquarters continue to be resourced with negligible to no “extra” officers to perform the numerous additional duties and taskings that the leadership still has to satisfy. Some of the first officers they look to appoint with additional duties are the functional area officers, to include FA40s.

– Just after you think you’ve properly integrated and “normalized” all available Space capabilities and effects throughout all your staff sections, you need to visit your subordinate Brigade Combat Teams or Regimental Combat Teams and battalions. In some cases you will be pleasantly surprised at how well they are accessing and integrating select Space products and services, but in many more cases you will find that these brigade and battalion level staffs are not knowledgeable on what Space capabilities, products, services and effects are fully available to them, just for the asking. Each FA40 possesses a higher level of Space training and expertise than can be found on the vast majority of brigade, regimental and battalion headquarters staffs. Many Space Soldiers who have returned from combat supported their subordinate customers by practicing “Space support by walking around”, and have made a real difference at the most tactical of the tactical echelon.

– Stay engaged in the day to day war; watch the Current Operations, monitor the Common Operational Picture, sit through the daily Commander’s Update Briefs, read the Significant Activities reports, talk with the shift Battle Majors or Chief of Operations and sit through as many boards, working groups and planning meetings as you need to until you are convinced you can in no way provide Space support. You cannot integrate Space capabilities and effects into combat operations you do not understand. Remember, for FA40s, it has often been stated that, “you are a combined arms staff planner first, with an expertise in Space.” Be that well rounded combined arms staff planner for your headquarters, then plan, coordinate and integrate Space when and where it is most appropriate in support of your commander’s intent.

– Know Global Positioning System (GPS) better than anyone else on your staff. Time and again our FA40s note that the one of the few areas of Space expertise that cannot be found (doctrinally or otherwise) anywhere on the staff is with GPS, its applications and its vulnerabilities.



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FA40s with expertise in this area are quickly recognized as the “go to guy” for any and all GPS related issues. The authors recommend that FA40s understand GPS signals, receivers, orbits, inherent system errors, satellite command and control architecture, current and future initiatives, and how best to recognize and mitigate Electromagnetic Interference. FA40s have played a key role in developing GPS Electromagnetic Interference Battle Drills, collaborating with Air Force Space Officers. Also, FA40s should have a good understanding of how their respective units rely on GPS for their Unmanned Aerial Systems, Precision Guided Munitions, and the unit’s reliance on GPS timing for Counter Remote-controlled Electronic Warfare devices and frequency-hopping radios.

– The other area of expertise that cannot usually be found anywhere on staff is an appreciation of the various aspects of Space Control. Army Space Soldiers should have a good working knowledge of all available Space control assets, measures, and processes prior to your deployment.

– Without exception, any data that moves to, through, or from Space is moved digitally through the electromagnetic spectrum. The electromagnetic spectrum, especially within the Central Command Area of Responsibility, continues to get more crowded with each passing day. This crowding causes interference on our two GPS signals, satellite communications, and other aspects of Space operations. All Army Space Soldiers need to increase their understanding not only of the electromagnetic spectrum, but also of Electronic Warfare principles and operations.

– Seven years into this war, the U.S. Department of Defense continues to greatly expand the type and quantity of “reachback” organizations to include many Space and Space-related reachback analysis and production centers. These reach back centers are not all created equal. Army Space forces need to fully appreciate the strengths and limitations of those key reach back assets that may provide support to their respective units. “Expectation management” is key to this entire process, in that no one can afford to oversell a reachback capability only to find out later that the “PowerPoint slide lied.” Developing close working relationships with select reach back organizations is the one of the linchpins. Knowing each collection process for each reach back organization is also critical and finally, appreciating the associated and realistic time lines to receive support from any given reach back asset will allow you to better plan for such support.

Army Space operations remain a very dynamic, challenging and expanding field. Only by staying current on cutting edge technologies, Space Tactics, Techniques and Procedures, and deciding to train yourself to become an expert, will you be able to remain a valuable and recognized member of your staff. There’s an old saying that “winning horses don’t know they’re in the race, they just love to run,” and by extension, Army Space professional should push themselves to their intellectual limits by being the best in the race to fully integrate Space. 