LEARNING FROM THE BAT

From Task Force Band of Brothers in OIF to Combined Joint Task Force-101 in OEF

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TLEFIELD

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Over a half a decade ago Joint Publication 3-14 laid the foundation for U.S. Military space forces. No longer were the days of "carpet bombing" and limited precision bombs. This is as we know the evolution of precision ordinance, better leveraged Intelligence, Surveillance, Reconnaissance and rapid technical solutions. Tactics, techniques and procedures are valid until the day after your transfer of authority to the follow on replacement unit; this is the simple reality of asymmetric warfare. Fresh ideas and new techniques, equipment, personnel structures and missions generally arrive with the incoming unit. The previous unit's concept of operation immediately becomes subject to change in order to meet a flexible and capable enemy. The cycle continues; pre-deploying units learn current tactics while attempting to improve them. Upon execution of current and learned tactics, techniques and procedures, the unit communicates to their relief with what is working and what doesn't. Army space forces must mirror this effort by improving, not thriving on the success of past units. Functional Area 40s have been trained since the late 1990s to be the U.S. Army space experts. Prior to Army transformation, the idea of merging ground units with traditional strategic overhead assets was not viewed as a priority discussion topic to a maneuver ground unit. After a successful decade of assisting the planning and operational staffs to think "space" enhancement, the U.S. Army is more proactive toward space-based asset troubleshooting and proactive space planning than ever before. This did not happen through educational briefings alone; this occurred by daily interaction of other military professionals, both officer and enlisted Soldiers.

In 2005, the 101st Task Force Band of Brothers Space Support Element deployed a diverse team of personnel as members of the first transformational division supporting Operation Iraqi Freedom IV in 2005-2006. Key 101st Space Support Element leaders educated Task Force Band of Brothers staff to better understand the Space Support Element concept, new skill sets and capabilities as they emerged and that set the groundwork for the Combined Joint Task Force (CJTF) -101 Space and Special Technical Operations that currently operate in Afghanistan. The CJTF-101 Space Special Technical Operations is one of the few units still manned with 25S (Satellite Communications Systems Operators and Maintainers) who are critical to the daily operations of the CJTF-101's Afghanistan Space Operations Center and staff. Enlisted professionals with proper space related education and training can greatly enhance the space community if properly leveraged as they have been in the 101st Space Support Element. Other branches and functions of the Army staff utilize space-based assets, many of these other assets are operated and managed by dedicated Noncommissioned Officers; Noncommissioned Officers that have been well trained to perform these duties as functional professionals. Army space systems are no different, especially those responsible to operate SATCOM and analysis software. The 101st space Noncommissioned Officers are the most experience personnel in the section due to exposure; space focused education and total time integrated with the division's staff. The 101st Airborne Division (Air Assault) began a movement in Operation Iraqi Freedom IV and has demonstrated just how capable a space team can be when properly equipped with "space smart" Soldiers. Army space forces should identify Noncommissioned Officers with space experience and

SSG Ken Merritt instructs Soldiers in the Afghanistan Space Operations Center.

lobby to retain them for future space-based units. The mission requirements changed in Iraq from imagery production to 24/7 special programs support and space analysis in the Afghanistan Space Operations Center, this could not be accomplished if the CJTF-101 was not manned with proper space educated Soldiers who understand space integration.

The U.S. Army Space and Missile Defense Battle Lab's Space Operations Systems provides a critical analysis tool that enables tactical space support teams to function as elements that can bring capabilities beyond textbook knowledge to the fight. In Afghanistan, nearly all of the software tools installed on the space Operations Systems are used, some much more than others. One major tool that the CJTF-101 Space Special Technical Operations quickly realized to be valuable for space analysis is the Analytical Graphics, Inc. Satellite Toolkit, which merely required a zero-cost one week training comprehensive course available to all users. This software support has the capability to perform nearly all the functions supporting the Operation Enduring Freedom mission. From three-dimensional fly through modeling, line of sight analysis, and coverage definitions, Satellite Toolkit has proven its value in Operation Enduring Freedom on numerous occasions. For the FA40 community to build a reputation as professionals, a tool like the Satellite Toolkit must be a standard throughout the career field. The comprehensive course for the Satellite Toolkit must immediately integrate this course into the Space Operations Officer Qualification Course as a basic requirement to all FA40s. The Army variant of the Satellite Toolkit, Analytical Graphics, Inc.'s, Deployable Space Analysis Tool, helps to simplify the complex user interface of the Toolkit which is a major hindrance to those with access to the software. The Deployable Space Analysis Tool is a perfect example of the evolving functions and support of space professionals to the warfighter. It was developed relatively early during the Global War on Terrorism to fulfill the needs of the space warfighter through GPS coverage/analysis, imagery and fly through models. Today's fight requires integration of numerous overhead systems integrated in the modeling of mobile and fixed ground assets. As the Theater for Operation Enduring Freedom continues to establish fixed assets, basic space enabled capabilities (i.e. imagery, SATCOM links, increased bandwidth, etc …) have become "normalized" into staff operations. The efforts of the Deployable Space Analysis Tool have now become outdated and rarely utilized by current deployed space forces. CJTF-101 Space Special Technical Operations had to learn and leverage available space systems while standing up special program capabilities. Tools like Satellite Toolkit allowed the CJTF-101 Space Special Technical Operations to remain flexible and adaptable to current and future rotations. The CJTF-101 Space Special Technical Operations is additionally equipped with a Space Combat Receive Suite system while deployed to Afghanistan. This joint effort between both space-based and non-spaced based agencies produce tactical space ground system that is a fully portable system which delivers near real-time blue force tracking, personnel recovery, theater missile warning and infrared significant events. Space Operations System applications, software tools, 24/7 manning, and countless other space tasks are performed requiring the emergence of a capable space focused operations center. These resources employed by a well-trained Space Support Element provide the Regional Command-East Joint Operations Center with constant space situational awareness and support.

To adapt to the current fight, FA40s must focus on integrating emerging technologies, as previously integrated technologies are normalizing. JP 3-14 (to include the recent edition), along with many other military publications and equipment,

SSG Jason Burnett makes adjustment with help from MAJ Chris Oxendine.

LTC Pat Mullin and MAJ Chris Oxendine head out on a mission.

MAJ Michael Bancroft on a mission.

continues to be tested against the evolving combat environment. While embracing Special Technical Operations and Alternative Compensatory Control Measures, space elements are provided with critical resources that may not normally be reserved for space force enhancement and planning. Efforts such as the Tactical Space Operations Course are great initiatives to help prepare the space professionals to understand the countless new and emerging tactics, techniques and procedures. It is important to share how space support is being utilized today, not two rotations ago, to both fellow space support units but also to new FA40s in the Space Operations Officer Qualification Course who will quickly pick up the mission. Current fielded hardware must be evaluated against and integrated into other current systems such as the Space Combat Receive Suite. Currently there is no standardized space common operating picture that is supported by all services or even within the U.S. Army. Satellite Toolkit is the preferred tool of the Afghanistan Space Operations Center for CJTF-101, however this is a not a widespread concept for deployed forces. The capabilities of the Space Combat Receive Suite, the Satellite Toolkit and Environmental Sciences Research Institute ArcGIS (ArcMap) can sum up the basic requirements for tactical space units. The future of combat space forces begins with the extraction of near-real time space collects, rapid analysis and quick turnaround of products to the warfighter. Upgrades to the SATURN system to reduce the size and emplacement procedures of independent communication suites should also be part of the next generation space support equipment set to facilitate quicker emplacement and reduce mission drag from equipment failure. Having a standard space common operating picture amongst all services and reach back organizations (Joint Space Operations Center, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command Operations Center, Space and Missile Defense Battle Labs) will help streamline Contiguous United States support and enhance the sharing of capabilities between deployed space personnel. Once a standard foundation of software, hardware and technical capabilities is developed, it must be provided to all Army Space Support Teams, Space Support Elements, Commercial Imagery Teams and space supported operations centers to ensure training is accomplished on a regular base versus setting an environment of last minute personnel fills and equipment train ups. Beyond the requirement for new, updated and innovative equipment, deployable U.S. Army space forces must break from the old success stories, remain flexible and continue to evolve with the transformational army now, before the tactical space elements fall back to just a pure strategic support. Our efforts now must demonstrate to the warfighter that space-based assets and capable space professionals are enhancing our ability to win.