Products Plus ...

Space Support to Post Hostilities and Stability and Support Operations

LTC Elizabeth Kuh was assigned to U.S. Army Space Command in July 1996 where she worked in the G2 section until 1999. She has been at U.S. Army Space and Missile Defense Command in the Current Operations Section since September 2002. She is currently deployed as part of Operation Iraqi Freedom and is attached to the Coalition Provisional Authority.

By LTC Elizabeth Kuh

The entire staff chuckled as the new "kid on the block" was introduced at the staff meeting as the Space Operations Officer. The bewildered look in everyone's eyes made it clear that no one in the room could imagine what role Space would possibly play in supporting the Office of Reconstruction and Humanitarian Assistance (ORHA) mission. After all, the organization was rebuilding the country of Iraq — not destroying it. The "war" would be over and ORHA was the initial post-hostilities support structure, not a warfighting organization.

As so often happens, there was a significant lack of knowledge and understanding of Space force enhancement roles and missions. As Space operations officers, our greatest challenge is to educate and demonstrate to the organizations we support, exactly what we bring to the table throughout the full spectrum of warfare — from predeployment, to post-hostilities, and through redeployment. That morning at my first ORHA staff meeting, the gauntlet had been thrown down; education was on!

Initially, I was an FA40 in the role of Space liaison officer to ORHA and (eventually) Army Space Support Team (ARSST) 13, deployed to Baghdad, Iraq, in support of Operation Iraqi Freedom, Phase IV (post-hostilities) and the Interim Civil Authority. As the first FA40 and Army Space Support Team to deploy with a Joint, coalition, combined, interagency organization, significant challenges were identified immediately during our very condensed predeployment crisis action-planning phase. Outside of anticipating support requirements, the most significant challenge was that of releasability and classification of Space products. The team knew the demand — for image products in particular — would be significant. We also knew that those image products would be shared in a combined, coalition environment. It was obvious there was little if any use for classified image products in support of this mission. In actuality, the request for image products far exceeded expectations. Had the team not been able to provide unclassified imagery products, our impact on this mission would have been minimal rather than exceptional.

Limited distribution issues were a concern as well, but to a much lesser extent, as the majority of our requests came from governmental agencies. On that same note, if the organization that a team is supporting has a Foreign Disclosure Officer, they must get to know that individual. If the organization does not have a Foreign Disclosure Officer, the team chief or the FA40 should find a way to reach back to one. Foreign Disclosure Officers are a tremendous source of advice and can be a great ally.

A brief discussion of the types of products provided in support of this mission is in order. Through this discussion, I will highlight a few key points on resourcing and partnering for this mission. Once in Baghdad, the ORHA team conducted a quick assessment of requirements and redundant capabilities that met those requirements. Our intent was to create efficiencies by building a partnership with other agencies that were in the business of providing infrastructure information to the various ministries and reconstruction teams associated with ORHA. The team established one such partnership with the Army Corps of Engineers that in concert with the Defense Intelligence Agency, developed an extensive infrastructure database, which was transportable into the mapping program ArcView. A simple conversion from Excel spreadsheets to shape files created overlays that were then imported onto maps. These mapping products were absolutely invaluable to the ministries because rather than having to send multiple teams out to scour the city/countryside for facilities (i.e. banks, jails, radio towers, etc.), we developed infrastructure products that provided locations and status of those facilities. The products saved ORHA hundreds of man-hours and thousands of dollars, and allowed the ministries to begin reconstruction and refurbishment projects much earlier than anticipated. Image map reconnaissance also kept teams off the roads, enhancing the employment of force

protection.

It became apparent very quickly that the need for raster graphic (mapping) products was going to be just as extensive as the demand for image products. Understanding that this capability is inherent to Topographic (Topo) Engineering teams, we initiated a request through Combined Forces Land Component Command for a Topographic team. The request asked that this team be under the operational control of ORHA and augmented to our Space support cell. The 30th Engineer Battalion agreed to this arrangement and a team from the 175th Topographic Company was deployed from Camp Arifjan, Kuwait, to Baghdad. This partnership proved extremely beneficial. Our Space cell became the one stop shop for all mapping requirements. The ARSST 13 officers conducted requirements management, passing the Geospatial Information System (GIS) (mapping) requirements to the Topo Team Platoon Leader/ NCOIC and delegating production of image requirements to the ARSST. This construct greatly facilitated timely production of mapping/image requirements and should be explored as a possible permanent relationship between ARSSTs and Topo teams.

There were also a number of requests for more complex spectral image and change detection projects. The addition of SPEC-TR to our cell provided the necessary production capability for these special Spectral Imagery projects. The SPEC-TR team deployed to Baghdad as a follow-on mission. Its original support requirement was to Combined Forces Special Operations Component Command in Doha, Qatar. While deployed to Qatar, SPEC-TR passed imagery requirements to, and received imagery products directly from Eagle Vision I (EV I). This arrangement provided the team with up to 15 new scenes per day of unclassified commercial imagery. This partnership proved, beyond a shadow of a doubt, the value of the Eagle Vision vans and their impact on production of timely, relevant, unclassified image products. When the SPEC-TR team arrived in Baghdad and the tie to EV I was severed, the team often waited for weeks for new imagery scenes and change detection projects using reachback. To some degree, because the personnel in the Spectral Operations Resource Center (SORC) are not immersed in the same environment as deployed teams (24/7 operations), it appeared that the sense of urgency needed to provide timely products was lacking at times.

The last but certainly not least of the partnerships that the team developed was with the National Imagery and Mapping Agency (NIMA) representative from the National Intelligence Support Team (NIST). We shared information and softcopy products, discussed different requirements, and established a division of labor. The team passed all requests for new collects through the NIMA representative and, in general, established an excellent working relationship. Again, all image products that came through the Space support cell were requested at the unclassified level, significantly decreasing the redundancy of products created by the NIMA representative and products created by the ARSST.

Other Space force enhancement missions played a minor yet important role in this deployment. After researching Blue Force Tracking systems, the team recommended ORHA purchase the Vistar system, an unclassified tracking box, provided by a company whose Web site was accessible on a standard unclassified laptop/desktop computer. Again, we did not have to worry about coalition issues with the Blue Force Tracking boxes and all of our satellite offices and force protection agencies could access the Web site and tracking program through the NIPRNET. Accounts were established for any office that needed access to the tracking program. The accounts were password protected for security.

The ease and reliability of this system facilitated maxi-

(See Products Plus , page 71)

Brigade Operations ... from Page19

tise in areas such as Space Based Blue Force Tracking, Space Based Battle Space Characterization, Multi and Hyper Spectral Imagery, etc. The support provided could be tailorable based upon needs of the supported element, if expertise and planning support is the requirement, a single LNO may be appropriate. If products as well as expertise are required the LNO cell could increase, to include the requisite skill set.

A potential side benefit of having the Brigade Commander and his ASFCOC in theater is the ability to coordinate administration and logistics support to Space forces in theater. This support could include a Maintenance Contact Team(s) and a limited Prescribed Load List for ARSST, JTAGS, etc. This would facilitate maintenance and repair of Army Space unique equipment. Further, this administration and logistics cell could act as the focal point for movement of supplies and equipment to forward elements. Operation Iraqi Freedom provided 1st Space Brigade (Prov) numerous lessons ranging from how to integrate and deploy new tools, to the necessity to train logistics as well as Space. These lessons must be used to develop the future roles and doctrine for Brigade and Battalion forward and homestation elements.

Products Plus ... from Page 47

mum accountability of ORHA personnel traveling in a somewhat unstable environment. The other Space force enhancement area that was of value to this mission was monitoring of Space environment and passing information on scintillation and possible communications disruptions to the C6. Navigational accuracy charts were of little or no value.

Because of the unique nature of this mission, task organizing the follow-on ARSST should be considered. This mission is obviously imagery intensive and requires an experienced spectral analyst as well. In this case, because the team is in a hardened facility with a well-established communications network, we should consider organizing a follow-on team that is imagery/spectrally heavy and lighter on the communications side. In fact, the command should consider task organizing all ARSSTs rather than establishing a hard and fast structure. The old phrase, Mission, Enemy, Terrain, Troops and Time available (METT-T) has merit when planning for the deployment of teams.

Shifting from the personnel/production side of things to equipment issues, there were a couple of significant problems identified during this deployment. First and foremost, EVERY piece of equipment developed or purchased by the Battle Lab (BL) must be worldwide deployable. It is imperative that all equipment is 110/220 V capable as well as 50/60 Hz capable. We encountered significant problems getting our equipment up and running because so much of it was designed for use in a 110 V, 60 Hz environment. We had to purchase additional uninterrupted power supplies, transformers, and power sources to get everything operational. Not only did this cost money, but valuable time as well.

The other equipment issue identified was the inability to access the SIPRNET on the SSET-Light. The SSET-Light is an excellent communications package if a team only requires NIPRNET connectivity. However, in order to access the imagery data (unclassified or classified), both through NIMA and the SORC, teams must have SIPRNET access. Having to depend on another agency to provide that connectivity cost us very valuable time and significantly delayed our initial production timeline. Download times for image scenes were also lengthy because the bandwidth of the established SIPRNET network was not designed to accommodate large image files. Expanding each team's bandwidth (not sharing a single transponder) and pushing for independent SIPRNET access via the SSET-Light are necessary changes to the team's communications capability.

In retrospect, we did educate ORHA, its components, and the maneuver units conducting military operations in the area on the support Space can provide to post-hostilities and stability and support operations. In fact, we educated them so well that to date we have produced and distributed more than 2,500 products, both image and geographic information systems. We developed image maps and photos for reconstruction projects, force protection plans, and military raids and operations. Where there was no map support, we created it, and we created it very quickly. We also revalidated the need for Blue Force Tracking, and provided assistance to the C2 and the C6. However, along the way, as almost always happens, we were educated as well. We learned the value and importance of partnering. We clearly validated the need for the Eagle Vision capability. We conducted a non-doctrinal mission in a new environment and learned to make Space capabilities provide significant value added. We examined personnel structure and equipment issues. We took up the "gauntlet" and accepted the challenge, became better Space operators, and proved the value of Space to full spectrum military operations.