Army Space Journal

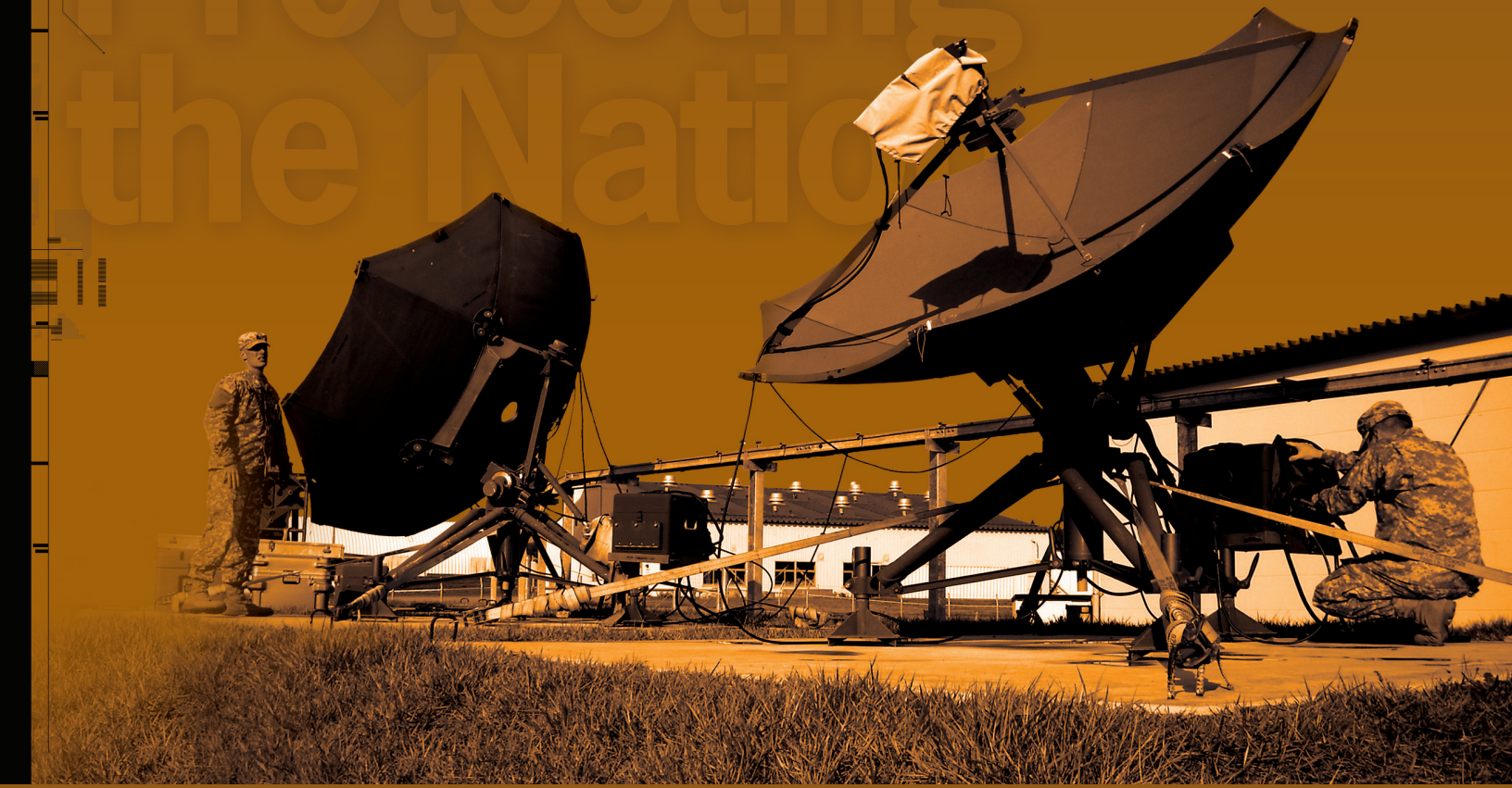
A Professional Journal on U.S. Army Space Operations

2008 Fall Edition Vol. 7, No. 4

Published by U.S. Army Space and Missile Defense Command

JTAGS on watch around the world

Protecting the Nation



Army Space Journal

The U.S. Army Space and Missile Defense Command publishes **the Army Space Journal** quarterly, with special editions as required. The publication consists of four sections, FROM THE TOP — Leadership Updates; JOURNAL FORUM — Space Topics; TIP OF THE SPHERE — Space Cadre News/Features; and FLIPSIDE — USASMDC Features.

The Journal provides a forum through which Space operations professionals can disseminate professional knowledge and furnish information within the U.S. Army. The purpose is to increase the effectiveness of Space operations through a professional discussion of events and lessons learned. It is also intended to inform the Army Warfighter on Army Space issues.

Comments, inquiries and manuscripts should be sent to the Director, Future Warfare Center, Directorate of Combat Development, ATTN: Richard Burks
1330 Inverness Dr., Suite 440
Colorado Springs CO 80910
Telephone: 719-622-2902
Fax: 719-622-2951
E-mail: Space.journal@us.army.mil
Worldwide Web site: www.SMDC-armyforces.army.mil/ASJ

Distribution is made to the general public, Functional Area 40 officers and associated military officers, civilians and contractors. Changes to addresses and requests for this publication should be made to the Future Warfare Center, Directorate of Combat Development address listed above.

The Army Space Journal is an authorized publication of the U.S. Army Space and Missile Defense Command in accordance with AR 25-30 and AR 360-1. The Commanding General, U.S. Army Space and Missile Defense Command, has directed that the publication of this periodical is necessary in the transaction of the public business as required by law. Use of funds for printing this publication were approved by the Commanding General in January 2001.

The views and opinions expressed in the Army Space Journal are not necessarily those of the Department of the Army or U.S. Army Space and Missile Defense Command.

From The Top

Leadership Updates

Cover Photos: Daniel Vigil, 1st Space Company (JTAGS)
Back Cover Photo: Courtesy NASA
Front and Back Cover Design and Layout : Michael Kahl

Communicating Space to the Warfighter

2008 Fall Edition

Contents

Journal Forum

Space Topics

Tip of the Sphere

Space Cadre News/Features

The Flipside

USASMDC Features

Editor's BLOG

The real PFC Brent Wilson story started to sink into my head a little bit after I finished with the Thanksgiving dinner dishes. My wife had gotten a letter from him in Iraq during the summer months saying thanks for the pounds of coffee and other good things sent to the Boys to help keep them feeling loved while they played around in the sand. It's a long story, but the Boys belong to the S6 of the 10th Special Forces Group out of Fort Carson, Colo. We learned of them through our daughter, Air Force 1st Lt. Patricia Rodriguez who deployed over to Iraq to serve with them in the J6 of the Combined Joint Special Operations Task Force for the Arabian Peninsula.

So Patty came home for Thanksgiving a few weeks after her tour in Iraq and, after the dishes, showed us a little video montage the Boys put together before she left. It had the normal stuff proud moms and dads like to see of their children. One of the pictures, though, showed Wilson hiding behind sunglasses with an Army buddy and their guns. She said he was a hero. The story went along the lines of a young communications Soldier on watch one day when he saw through the SatCom video feed that bad guys were up to no good with a small number of American troops. Wilson called in help and led the Soldiers to capture four enemy combatants — and saved lives. Patty went on to explain how Wilson regularly went outside the wire to show the Special Forces teams how to make all the latest SatCom and Blue Force Tracking gadgets work right.

It was a holiday, but the Wilson story logged into my brain as a good introduction for my blog on how great American Soldiers make space work. A few days later, a spot report arrived via email from one of our own FA40 Space Operations Officers - LTC Victoria Miralda - hit my in box. She had just hit the sand in the CENTCOM area of responsibility.

"Mike, from day one this Commercial Exploitation Team, under the superb leadership of MAJ Rod Fischer and MSG Marc Acito, has made its' mark of excellence bringing production and emerging technology to new levels of operational support. They have set a new standard of tenacity and responsiveness in their contributions to the CENTCOM theater and Coalition forces. An example was when the CET members traveled to the International Zone to train Iraqi soldiers and government officals in the acquisition and use of unclassified commercial imagery.

"MSG Acito had previously trained other Iraqi officials on the same skills and one of his students from the earlier class co-taught this class with him. At the completion of the class, MSG Acito presented graduation cer-

tificate to the students. He also presented the Iraqi instructor with a Trainer Certification certificate. All of the students were very proud of their accomplishments and were anxious to make use of their skills to improve the security of Iraqi. This training gives the Iraqi forces the ability to view and manipulate commercial imagery for operations without having to rely on US forces."

The constant idea between Wilson and CET is sharing information that can help with the fight. There is a similar article about the team mentoring the Afghanistan National Army starting on page 28 of this edition.

This planted an idea.

So I had lunch with the editors of the Air Force High Frontier Journal. We came up with this joint announcement as we close out 2008: "The Air Force High Frontier Journal and Army Space Journal are entering into a collaborative effort for 2009. Because audiences of both publications share a common interest in how space issues impact the national security environment, the editors of both publications have agreed to create an article exchange program in order to share ideas across their respective communities. With the intent to broaden perspectives through information and idea sharing, we will encourage our readers and authors to submit articles related to our themes."

The plan is just now evolving, so look for details and results in our 2009 editions.

Mike Howard
Editor-in-chief

LTG Kevin T. Campbell
Commanding General,
U.S. Army Space and Missile Defense Command/
Army Forces Strategic Command

Army Space Support to Civil Authorities

"Our National Strategy for Homeland Security recognizes that the lives and livelihoods of the American people also are at risk from natural catastrophes. Our vast Nation, with its varied population, geography, and landscape, will continue to endure a range of natural hazards and disasters."[1]

This decade has witnessed arguably one of the worst natural disasters in our nation's history. Hurricane Katrina caused the death of more than 1,330 lives, forced more than 770,000 people out of their homes and cost in excess of $96 billion in damage.[2]

While America's Army responded to help our fellow citizens in the days following the devastation, the relief efforts also exposed some gaps in providing better reconnaissance assets to natural disasters.

For 233 years, the Army has defended the cause of freedom by going into harm's way and putting boots on the ground whenever and wherever needed. Today it continues that sacred trust not only by continuing to fight a determined enemy in an era of persistent conflict, but also by helping communities during times of need. Our Soldiers – Active, Reserve and National Guard – are in communities following a natural disaster. The camouflage uniforms have come to represent hope to the thousands along the Gulf Coast after hurricanes or to those fighting the wildfires in the west or to those stemming the floods in the northern plains.

In this issue of, the Army Space Journal, there are several good articles that discuss the varied missions, capabilities, and issues surrounding Army Space support. From Blue Force Tracking, to "Best Crew Competition," to lessons learned from the Space Cadre Symposium, to the Commercial Exploitation Team White Paper – each article provides a unique perspective about the complexities of our profession.

One aspect not normally discussed is that of Army Space support to civil authorities. I would like to briefly touch on the importance of Army support to civil authorities and invite others in upcoming issues of the Army Space Journal to provide their perspectives as well.

Policies that guide Army support

Providing military support following natural disasters is not new. The U.S. Army was both heralded for its support to civil authorities during the great Chicago fire, October 1871, and at the same time questioned about the legitimacy. In a proclamation dated Oct. 10, 1871, Mayor Roswell B. Mason places LTG Philip Sheridan in charge of restoring peace in Chicago.[3] However, the Governor of Illinois questioned whether that support was constitutional. It is important to note that the framers of the Constitution envisioned very limited use of American Armed Forces in support of civil authorities given the history of British rule.

Today, the laws that govern the use of military support to civil authorities allow more and better cooperation between state and federal agencies. The Stafford Act of 1988 provides the statutory authority for military support to civil authorities during disaster relief. In addition, there are military plans that delineate responsibilities among the

services to defend the Continental United States from attack or to provide support to civil authorities during natural disasters or civil unrest.[4]

Unique capabilities of USASMDC/ARSTRAT

U.S. Army Space and Missile Defense Command (USASMDC/ARSTRAT) is uniquely organized to provide Warfighters with dominant Space-based capabilities and integrated missile defense. The command is dispersed around the globe to operate early warning radars to detect incoming ballistic missiles, to provide Blue Force Tracking information to Warfighters, as well as to provide Army Space Support Teams and Commercial Exploitation Teams in support of combatant commanders and Warfighters. I was fortunate to visit some of our Army Space professionals in the Central Command Area of Responsibility recently and I am glad to report that they are providing tremendous support to the Warfighters and to the combatant commanders. They not only provide assets to our Warfighters, but also are very proactive in training their peers and our coalition partners about available capabilities.

A comparison between Hurricanes Andrew and Katrina

There have been many reports written about the severity of Hurricanes Andrew and Katrina as well as the Department of Defense response to the relief efforts following the landfall of each storm. It is not my intent to unearth new lessons from those experiences, but to put Hurricanes Andrew and Katrina in context with the Army Space support provided to the relief effort of Hurricane Ike in September 2008. According to the 1993 United States Government Accountability Office report about Hurricane Andrew, an aerial survey would have helped leaders determine the magnitude of the damage done by the Category 5 hurricane.[5] Unfortunately, the 2006 Government Accountability Office report about Hurricane Katrina had similar comments.

Problems that were identified about relief efforts for Hurricane Andrew would surface again during Hurricane Katrina: inadequate ability to assess damage, problems with communication, no aerial reconnaissance utilized.

In reports to Congress after Hurricanes Andrew and Katrina respectively, the Government Accountability Office determined that accurate assessments of damage following landfall was crucial to providing much needed services to those most affected by the storms.

Deployment of Army Space Support Team (ARSST)

USASMDC/ARSTRAT deployed Army Space Support Team 3, with attached civilians from the command's G-2 Advanced Geospatial Intelligence Node, to Fort Sam Houston, Texas, from Sept. 6-19, in order to provide Space support to Army North for Hurricane Ike relief operations. Army Space Support Team 3 remained in San Antonio with the Army North Main Command Post due to the Team's lack of mobility. The combined Army Space Support/Advanced Geospatial Intelligence Team 3 was able to push products forward to the Operational Command Post in Houston, albeit with limited bandwidth at the post. The deployment successfully demonstrated a need for continued Space Support to civil authorities, but emphasized the need for more planning and coordination for such support within the Space community.

In a disaster relief scenario, the availability of resources such as life support, communications, food, water, sanitation and transportation is very limited. While Soldiers are relied upon to adapt and overcome in these situations, it is still incumbent upon leaders to ensure that Soldiers are prepared to enter this type of environment.

During their deployment, the Army Space Support Team 3 and Advanced Geospatial Intelligence Node provided direct support to the Army North staff and the Operational Command Post which was forward deployed to Houston, Texas. The support provided included: imagery collection planning; Geographic Information System products; reach back support to the Advanced Geospatial Intelligence Node and other Space agencies; additional satellite communication bandwidth capability; Global Positioning System Navigational Accuracy reports; and, with the assistance of the attached Advanced Geospatial Intelligence Node civilians, Global Broadcast Service downloads and additional imagery products. Army Space Support Team 3 was not the only team providing Space support during Hurricane Ike: National Geospatial Intelligence Agency supported Federal Emergency Management Agency and Eagle Vision IV supported Air Force North.

A major lesson learned was that the support must be synchronized to preclude duplication of effort and competition for scarce Space resources. The bottom line is that training for disaster relief must be incorporated into the annual training regimen and must be done under realistic conditions, with all players participating. The right Space support requirements and capabilities applied effectively can be the difference between life and death during a natural disaster.

Support >> page 12

CSM Ralph Borja
U.S. Army Space and Missile Defense/
Army Forces Strategic Command

Well Done Soldiers

In this edition of the Army Space Journal, you will read about the "Best Crew" competition carried out by the 1st Space Company (Joint Tactical Ground Station). The article focuses on the unique contributions provided by our Joint Tactical Ground Station crew members to the safety and security of our Warfighters and our Nation and provides a jump-off point for a topic that I'd like to address in my column.

Army Enlisted personnel assigned to USASMDC/ARSTRAT are performing critical operational tasks around the globe, twenty-four hours a day, seven days a week. Our Soldiers are manning operational crew positions in Joint Tactical Ground Station shelters, Wideband Satellite Operations Centers, Missile Defense Fire Direction Centers, and as members of deployed Army Space Support Teams.

They provide tactical missile warning, satellite communications, ballistic missile defense, and hands on Space force enhancement support to the Warfighter and for our Nation. Each of them contributes significantly to USASMDC/ARSTRAT's vision and mission, and every one is uniquely qualified and certified to fill the position he or she is assigned.

A good example of our Soldiers' professionalism is the successful interception of a threat-representative target missile launched from Kodiak Alaska by a Ground-Based Interceptor missile launched from Vandenberg Air Force Base, Calif. The Ground-Based Interceptor was launch-controlled by an operational crew located in the alternate fire control center at Fort Greely, Alaska. Another excellent example is the performance of our crew members in the Wideband Satellite Operations Centers as we worked to certify and declare operational the first Wideband Global Satellite this past year.

As highlighted in the "Best Crew Competition" article, our Soldiers work hard to obtain and maintain crew certification and proficiency within their specialized area of expertise. They maintain a hair-trigger level of readiness; always ready to carry out their assigned mission in a moment's notice, under any conditions. They reach this level through constant training and execution during real-world events or exercises.

However, they are Soldiers first. This means that in addition to working expanded hours as members of operational crews or teams – maintaining crew certification/proficiency or currency on up to date Space force enhancements – our Soldiers are also maintaining currency and proficiency as Warriors; first and foremost.

This fact was clearly reflected in the overall success our candidates for Soldier and Noncommissioned Officer of the year enjoyed during head-to-head competition with other Soldiers and Noncommissioned Officers from across the Army. While SSG Christopher Barber and SPC Michael Moore unfortunately did not win this year's Army "Best Warrior Competition," they performed extremely well and were ready for action throughout the competition.

Their performance is a great source of pride for the command. It illustrates the fact that each of our highly qualified and specialized Soldiers is not only an expert within the mission area currently assigned within USASMDC/ARSTRAT, but is also a highly qualified and proficient Warfighter.

To each and every one of you I say "well done Soldier." I also encourage you to remain focused. Focus on being the best Soldier you can possibly be, while at the same time remaining a highly qualified and valued member of the USASMDC/ARSTRAT team.

"SECURE THE HIGH GROUND"

COL Dawn Capozzella, (back to the camera) commander of the 89th Troop Command, Colorado Army National Guard, congratulates SPC Bennie Dennis from Army Space Support Team 27, 117th Space Battalion, COARNG during a deployment ceremony on Dec. 16, 2008. The ceremony took place in U.S. Army Space and Missile Defense Command/Army Forces Strategic Command's Operations Building 3, on Peterson Air Force Base, Colo. Dennis is one of a six-member team which is being sent in theater to help provide Space-based capabilities to the Warfighter on the ground. *Photo by DJ Montoya*

BG Kurt S. Story

Deputy Commander for Operations
U.S. Army Space and Missile Defense Command/
Army Forces Strategic Command

An Evolution of Space Support

We are in an era of persistent conflict operating in a contested domain – Space. Comments from the 2008 Allard Commission (see box on page __) highlight the importance of that domain to the Nation and our military. As Space professionals we have long recognized the validity of Space, and have endeavored to provide the leadership and stewardship of our particular lanes in the Space business and will continue to do so.

One of those lanes is how the Army Space community, in concert with the other services and the industrial base, is going to support and provide the Space systems, doctrine and techniques, tactics, and procedures to the Army's Future Combat System. This System is a Space-enabled capability that is highly reliant on assured access to those supporting Space capabilities for mission success. As the Army continues to develop and field the Future Combat System, the amount and specifics of the Space support for that system of systems will continue to evolve. So as Space professionals, we need to stay engaged.

Looking at our past, evaluating our present, and looking toward our future, sets an azimuth on our way-ahead for providing world-class Space-based capabilities to the warfighter.

Past to present (2001 to now)

When planes flew into the World Trade Center, then-Army Space Command (ARSPACE) had five Army Space Support Teams aligned in habitual relationships with operational organizations. In 2002 as U.S. Army Space and Missile Defense Command and ARSPACE developed supporting plans, along with the rest of the Army, to invade Iraq, requests for Army Space Support Teams soon claimed all the available Active Army, Army National Guard and U.S. Army Reserve teams. To provide additional teams to meet the demand, the command battle-rostered all of its Space Operations Officers (FA40), intelligence officers and supporting noncommissioned officers (some which came from the Army at large). ARSPACE met the challenge.

In 2001 the Commercial Exploitation Team was a deployable capability of the then-Spectral Operations Resource Center. Because of its deployable status, it was assigned to the 1st Space Brigade and forward-deployed. Early in the conflict, the Commercial Exploitation Team tried to "e-mail" imagery and send compact discs to Army Space Support Teams. One image was typically 500MB. Through the 2003 - 2004 NIPR/SIPR connections, transmission of just one scene could well exceed a 1-hour transmission time. Multiple scenes were routinely requested, which turned into gigabytes of information and resulted in hours of transmission time and usually ended up in a system "time out" error long before the transmission was successful. The U.S. Army Space and Missile Defense Command/Army Space Command, Command Information Office was routinely contacted regarding transmission limitations and came up with the "Band-Aid" fix of dedicated FTP (file transfer protocol) servers. The Commercial Exploitation Team was later upgraded with a link to Digital Globe for Quickbird imagery. Since 2004, the Commercial Exploitation Team and its Eagle Vision II shelter have been in Bahrain partnering with National Geospatial-Intelligence Agency's Middle East Team to provide needed support to warfighters.[1] See summer 2008 edition for the evolution of the Commercial Exploitation Team.

At that time, the Department of Defense blue force tracking capabilities were still in the study/experimental stages. Immediately following Sept. 11, Commander, U.S. Space Command, ordered its Army Service Component

The following comments from the 2008 Allard Commission highlight the importance of Space to the Nation and our military:

– "Space capabilities underpin U.S. economic, scientific and military leadership. The Space enterprise is embedded in the fabric of our Nation's economy, providing technological leadership and sustainment of the industrial base."

– "The military use of Space-based capabilities is becoming increasingly sophisticated ... [and pervasive]."

– "Military capabilities at all levels – strategic, operational and tactical – increasingly rely on the availability of Space-based capabilities."

– "...continued leadership in Space is a vital national interest that merits strong national leadership and careful stewardship."

Command to stand up a capability to provide blue force tracking data services to U.S. Central Command within 30 days. The Army Service Component Command, then-ARSPACE, operationalized its experimental Blue Force Tracking Mission Management Center and manned it with internal staff, U.S. Space Command J33 staff, and mobilized National Guard noncommissioned officers. It was operational on October 23, 2001. During that initial phase of the Global War on Terrorism, it provided blue force tracking data services to only one type of device. It now supports multiple devices, classified and unclassified. The Command has continued to grow its ability to support ever expanding requirements for blue force tracking and situational awareness levied on U.S. Strategic Command to support the joint, inter-agency and multinational communities.

In 2001, Space Support Elements didn't exist. The Army began training, fielding, and assigning these Elements to the Army corps, divisions, and fires brigades starting in Fiscal Year 2004. The Element is "first and foremost a planning agent providing recommendations, coordinating space-based products and services, and preparing space input to plans and orders." The 3rd Infantry Division received the first team of Space-savvy planners in late 2004.

Since 2001 providing Space-based capabilities and support to ground-based commanders has evolved and grown. Field Manual 3-14 (Space Support to Army Operations, May 2005) lists five Space force enhancement functions: satellite communications; positioning, navigation and timing; environmental monitoring; intelligence, surveillance and reconnaissance; and missile warning as Space operations core competencies. Joint Publication 3-14 "Space Operations" dated Jan. 6, 2009, examines those functions.

This evolution includes Space control, which ensures freedom of action in Space for friendly forces, and when directed, denies an adversary the same. In accordance with the recently released Joint Publication 3-4, Space control now consists of Offensive Space Control, Defensive Space Control and Space Situational Awareness. Prevention, Negation, Protection and Surveillance remain pillars of Space control.

Coming – Support to Future Combat System

Today, we are providing Space support to the warfighter. Space now enables what will become the legacy systems. At the same time the Army is evolving and transforming to the Future Combat System which is enabled by Space-based systems.

The Future Combat System is a system of systems program with equipment, like sensors and unmanned aerial vehicles, and lighter rolling stock designed to make the Army more mobile and expeditionary. Fielding for the first full Future Combat System brigade is slated for fiscal year 2015. It consists of 14 systems, a network and the Soldier. And all of these systems are networked by the Army's portion of the Global Information Grid, called LandWarNet. Under the LandWarNet umbrella, all Future Combat System vehicles beyond-line-of-sight will be connected by Warfighter Information Network-Tactical (WIN-T).

Commanders can mix and match the systems to meet their need and maintain command and control through WIN-T. "FCS gets its lethality from the ability to move information around rapidly to understand where the enemy is and then engage the enemy at a distance" — to see first, understand first, act first and finish decisively.

The WIN-T network has been developed to support a more mobile, expeditionary Army by providing more network robustness and through-put capacity than the legacy Mobile Subscriber Equipment could. This new communications architecture was designed to move with the Future Combat System formations by allowing the user to switch between satellite communications, aerial relays and line-of-sight communications to best extend the communications range and to stay in communication with the rest of the formation.

Evolution >> page 12

COL Bruce Smith
Director
Directorate of Combat Development
Future Warfare Center

REFOCUSING TECHNOLOGY

In recent months operations within Afghanistan have been increasingly making the nightly news. The resurgence of the Taliban and resistance to the Afghan government has generated many stories, as has the recent attacks in Pakistan by Taliban forces against U.S. interests. Simultaneously the president–elect, during the recent campaign, promised to begin moving forces out of Iraq and into Afghanistan in a major shift in policy and strategy. Although details are yet to be announced, at the time this article is being written, it appears the Army will shift emphasis and forces from Iraq to Afghanistan in the future.

Thinking about such a shift prompts many questions. How many Soldiers will be posted in Afghanistan? When will they start deploying, and how long will they be there? Answers to these questions and others, will be formulated at the highest levels of our government and are far beyond the scope of this article. However U.S. Army Space and Missile Defense Command/Army Forces Strategic Command must think about the forthcoming shifts in policy and the associated deployments and reevaluate how to best provide Space capabilities to the Warfighter. For years Army Space forces have been primarily oriented on providing support for Iraq-based operations. Over the past several years the Iraqi theater has matured and infrastructure has grown in its ability to support military operations. Power grids, communications systems, and robust transportation networks enable Army operations and affect how USASMDC/ARSTRAT provides Space capabilities. Conversely the Afghan theater remains much less developed and austere. Rugged terrain, limited communications and transportation networks constrain land component operations as well as affect the Army's Space operational requirements.

Within the Directorate of Combat Development and the Future Warfare Center, we are wrestling with the implications caused by the differences between the two theaters. Working though the paradigm Doctrine, Organization, Training, Materiel, Leadership, Personnel and Facilities, we are continuing to assess and prepare today's Army Space forces to meet tomorrow's operational requirements.

Doctrine: In short doctrine is evolving to meet our emerging requirements. Within the past year USASMDC/ARSTRAT, in coordination with other Army and Joint Space stakeholders, has been working under the direction of U.S. Strategic Command to write the new Joint Pub 3-14, Space Operations. The new publication incorporates lessons learned from operations in Iraq as well as recognizes the newly created Joint Functional Component Commands and the capabilities they provide. In addition, the Army is rewriting FM 3-14 and expects to publish it by the end of Fiscal Year 2009. Furthermore we have just updated our Theater Missile Warning doctrine, with the publishing of FM 3-14.5, Joint Tactical Ground Station Operations on Nov. 28, 2008.

Organization: Army Space organizational structure is also evolving to meet the Army's changing needs. The Directorate of Combat Development has been conducting a review of the 1st Space Brigade's force structure in the Space Major Restructuring Initiative. The Brigade's and

> ... operations in Iraq may be slowly winding down but the Global War on Terror is not over. Rather, the fight is evolving; our strategy and tactics are changing to meet an adaptive enemy.

subordinate battalions' structural designs were developed almost seven years ago. Since that time many changes have taken place, such as the fielding of new equipment, the Army's conversion to modular brigades, etc., which has made the current organizational structures inadequate to meeting future challenges. During the Major Restructuring Initiative we have analyzed the Brigade's mission, examined its operational effectiveness, reviewed lessons learned and applied the latest doctrine in our comprehensive analysis. The results of the Initiative will change the Brigade's and subordinate battalions' Tables of Organization and Equipment giving each of them increased operational capability and enhanced ability to support the modular Army.

Training: Institutional Space training is changing to meet emerging needs as well. Directorate of Combat Development is constantly working to improve training of our Space officers and forces. During the last year we revised the Tactical Space Operations Course and better integrated it with Space Operations Systems equipment training to better prepare deploying FA40s, Army Space Support Team and Space Support Element members. These courses are continually updated with feedback from theater so that no two courses are the same. Directorate of Combat Development's continuous dialogue with deployed Space operations officers as well as debriefs from each redeploying Army Space Support Team and Space Support Element will keep future training relevant and ensure Space officers and forces are prepared to support deployed forces in any theater.

Materiel: Space equipment is maturing to meet our future operational needs. The Future Warfare Center is actively pursuing the development of future systems that will have enhanced capabilities over today's systems. Currently we are working with the Joint Tactical Ground Station Program Office to upgrade JTAGS and keep it viable when the Space-Based Infrared System constellation is launched and operational. In addition, we are working to develop a net-centric theater missile warning system that will be able to use a variety of sensors, processors and a robust communications network rather than a stovepiped platform. The Space Operations System capabilities will migrate into the new Distributed Common Ground System-Army that will provide improved connectivity as well as an enhanced sustainment capability.

Personnel: The Army's personnel system is also evolving to meet future Space requirements. Late last year the Army Senior Space Council approved the establishment of the Army Space Cadre with over 1700 enablers identified from across the Army. These enabler personnel were identified after an extensive process that involved U.S. Training and Doctrine Command, Headquarters Department of Army and Major Commands. At the same time, the Directorate for Combat Development has been conducting a training analysis for these newly identified Cadre members and has begun conducting several training courses for Space Enablers at various installations around the country. The identification and training of the Army Space Cadre will further improve the Army's future integration and utilization of Space capabilities.

In conclusion, operations in Iraq may be slowly winding down but the Global War on Terror is not over. Rather, the fight is evolving; our strategy and tactics are changing to meet an adaptive enemy. Army force structure, equipment, training and doctrine are all changing as well. Army Space capabilities cannot remain static but must grow and mature in order to continue meeting future operational challenges. The Future Warfare Center and the Directorate of Combat Development remain focused on developing and providing Space doctrine, organizational structure, training, and equipment to meet the needs of our Space operations officers, and forces, no matter where they are deployed.

Support >> from page 5

Where do we go from here?

According to the National Weather Service, since 1851 there is an average of two major hurricanes that hit the Gulf or the Atlantic Coast every three years.[6] If history is a guide, we can anticipate two things: there will be a Category 3 hurricane again within the next 12-18 months and the Army will be there to provide support to relief operations. We cannot influence the first possibility, but we can certainly begin planning for the second. We can assume there will be damage and we can assume there will be a need to provide accurate damage assessments.

The old adage of "train like we fight" needs to apply to disaster relief as well. In order to improve operations and to establish a habitual relationship with Army North, Army Space Support Team 3 trained with the Army North Operational Command Post during exercise Vigilant Shield 09, which took place at Fort Sam Houston, Texas, in November 2008. Historically, Army Space support to Defense Support to Civil Authorities has been low. Habitual support relationships and tactics, techniques, and procedures will need to be established.

We must continue to be proactive in preparing for the next disaster and incorporate the lessons learned in order to include Army Space Support Teams' unique capabilities into disaster relief operations planning and training.

As I mentioned at the start, I would like to see those Space professionals who supported disaster relief operations to provide articles that discuss tactics, techniques and procedures. Tell us what worked and what didn't work during your deployment. Only by sharing information can we improve.

1 Homeland Security Council, National Strategy for Homeland Security, October 2007, 10

2 Lynda E. Davis, Jill Rough, etal, Rand Corp, Hurricane Katrina Lessons for Army Planning and Operations, 2

3 The Great Chicago Fire, Rescue and Relief Essay, (http://www.chicagohs.org/fire/rescue/)

4 GAO Report to Congressional Committees, Hurricane Katrina: Better Plans and Exercises Needed to Guide the Military's Response to Catastrophic Natural Disasters, May 2006, 11. A copy of the Stafford Act is available at http://www.fema.gov/about/stafact.shtm

5 GAO Report to the Chairman, Subcommittee on Readiness, Committee on Armed Services, House of Representatives, Disaster Assistance: DOD's Support for Hurricane Andrew and Iniki and Typhoon Omar, June 1993, 6

6 Eric S. Blake, etal, National Weather Service, The Deadliest, Costliest, and Most Intense United States Tropical Cyclones from 1851 to 2006, April 2007, 13 (a major hurricane is one that is Category 3 or greater).

Evolution >> from page 9

Even though fielding for the first full Future Combat System brigade is slated for fiscal year 2015, a few of the systems or spin-off technologies have already been fielded: small UGV (unmanned guided vehicle), several unattended ground sensors and an Unmanned Aircraft System. In fact, 2nd Brigade, 25 Infantry Division took 30 of the Class I Unmanned Aerial Vehicles (gasoline-powered Micro Air Vehicle) with them to Iraq last summer in response to an joint operational needs statement asking for more intelligence, surveillance and reconnaissance assets. And the Pennsylvania National Guard's 56th Stryker Brigade Combat Team will deploy to Iraq in January 2009 with 15 of the Unmanned Aerial Vehicles. (This is the first Guard unit to use one of these unmanned vehicles.) This particular system is man-portable and has the capability to hover and stare which other Army and Air Force Unmanned Aerial Vehicles don't.

Overall, Space-based capabilities are critical enablers of the Future Combat System's fundamental operational maneuver principles: to see first, understand first, act first and finish decisively. For example, all that the mobile equipment will use the Global Positioning System for is position and navigation. The Battle Command network will need satellite communication to provide secure, reliable access to distribute information over extended distances throughout the Global Information Grid over open or complex terrain. Information from the unattended ground sensors/data, which the Future Combat System depends on, will be exfiltrated using Space-based communications. Commanders and staffs of the Future Combat System will team collaboratively and virtually with other elements through a global Battle Command network linking the Future Combat System Brigade Combat Team to higher headquarters and joint, inter-agency and multi-national community assets and organizations. Information must be current, near real time. In all, to be successful, this family of systems will be required to acquire, access, and disseminate relevant and accurate information at requisite levels of detail over the area of operation, regardless of how large the area.

A lot of electrons will need to move around the battlespace. The network that handles all this information will require robust bandwidth and redundant systems. The network disseminating the electrons will likely consist of multiple tiers or layers, including terrestrial, airborne, high altitude and Space. Ground force commanders will depend on assured access to the network, and will expect appropriate doctrine to be written to support the land component commanders.

Today's Army priorities for Space (enhanced satellite communications; early missile warning; assured access and asset protection; persistent surveillance; position, navigation, timing; and weather, terrain, and environmental monitoring) support the Future Combat System needs.

This is where Space operations and USASMDC/ARSTRAT come in as both the Army's proponent for Space and as a combat developer of "Space" equipment.

As the proponent for Space, USASMDC/ARSTRAT fully supported the action to create a billet and assign a Space Operations Officer to the Future Force Integration Directorate which is Program Manager for the Future Combat System. The officer will be fully engaged as the first System Brigade Combat Team goes through its initial operational test and evaluation beginning during the 3rd quarter, fiscal year 2011. He will be in a position to ensure that current Space-based and high altitude capabilities – so essential for the Future Combat System Brigade Combat Team mission success – are accessible.

As the proponent for Space, USASMDC/ARSTRAT acts as the Army's advocate for Space capabilities. Since many Army organizations have significant stakes in what Space-based capabilities deliver, the proponent coordinates with the other stakeholders (Headquarters Department of Army, Command Information Operations/G6, G3/5/7, G2, USA Network Command, U.S. Army Intelligence and Security Command, Assistant Secretary of the Army (Acquisitions, Logistics and Technology), and U.S. Training and Doctrine Command, to ensure that the Army's requirements are met and that the Army leadership speaks with one voice:

For example, WIN-T (Increment 4) will be required if the Future Combat System is to communicate with the legacy systems. According to the WIN-T (Increment 4) Acquisition Decision Memorandum, that increment is dependent on the capabilities the Transformational Satellite will deliver. It is the only satellite being specifically designed for high data rate, protected (anti-jam and anti-scintillation), networked, communications to mobile, on-the-move, ground forces. Clearly, the Army requires the Transformational Satellite to meet the needs of the Future Combat System, but the Transformational Satellite launch continues to slip. The Army Vice Chief of Staff, Department of the Army Command Information Office/G6, and USASMDC/ARSTRAT have been fully engaged with Air Force Space Command, the developer, to ensure that the capabilities on the satellite that support Future Combat Systems will continue to be a major consideration in any redesign or further launch slippage. Point is: the Army community needs to maintain one-voice in all forums for capabilities supporting Future Combat Systems.

In an environment of constrained resources, like the one affecting Transformational Satellite, where it is unlikely that all the original requirements can be met, Space professionals will look for "trade Space" or alternative solutions. That is, if a system cannot now provide one of the capabilities it was designed for within the appropriate time frame, can some other requirement be slipped to a subsequent spiral out or build of the system? Can another system provide the capability in the interim? What is in the realm of possibility so that the needs of the ground commanders are met?

Maybe those needs can be met by an apparatus in the high altitude domain. In accordance with The Army Space Master Plan, the combat developer of Army Space systems (USASMDC/ARSTRAT) is working to develop capabilities in that domain. High Altitude systems allow persistent sensor coverage, permit changing sensor loads and payloads, and allow developmental spirals to increase capability. Although High Altitude systems cannot replace Space systems, they can augment them. The multi-altitude or multi-domain solutions can maximize effectiveness of the Future Combat System by providing an option of increased capability along with redundancy. Space-only solutions become unaffordable for some critical capabilities.

Another effort that USASMDC/ARSTRAT is concentrating on is the Responsive Space Initiative. This initiative is focused on providing Space and high altitude capabilities that can, as the name implies, rapidly respond to the joint and ground-based warfighters' emergent needs. The objectives of the initiative are threefold: to demonstrate that it is possible to develop new capabilities to meet Warfighter needs within 9-12 months; to demonstrate that small-satellite class Space vehicles can provide meaningful effects to the Warfighter; and to demonstrate that a level of persistence over a specific region for a specific purpose is feasible using small-satellite formations. USASMDC/ARSTRAT and its industry partners are in the process of developing and building small satellite Space vehicles and believe low-cost small satellites will satisfy warfighter needs for beyond-line-of-sight communications as well as other requirements.

Conclusion

As I said in the opening paragraph, we are in an era of persistent conflict operating in a contested domain. Even as we expect to be combating terrorism for the foreseeable future, we need to continue to think about and work toward capabilities the Army will need for the next conflict. The Army is banking on the Future Combat System to be that capability, and it will continue to evolve. It is one of those systems that the Allard Commission must have had in mind when it wrote "The military use of Space-based capabilities is becoming increasingly sophisticated" and reliant on them.

As Space professionals, we need to understand the Army's Space priorities and speak with one voice as we engage the Space professionals and combat developers in the other Services to advocate Army requirements and look for the "trade Space"/alternatives in a constrained environment. We then will provide, as we have in the past, strong leadership and stewardship within our particular lanes in the Space business.

Future Combat Systems will continue to evolve and spin out. One day the Space systems, Space operations doctrine; and tactics, techniques and procedures provided to enable it will take their places alongside the list of evolutionary developments in Space operations since Sept. 11.

1 Army Space Journal, 2008 Summer Edition, pg 45

REST ASSURED JTAGS

LOOKING OUT FOR THE WARFIGHTER

BY MAJ ERIC LITTLE
COMMANDER, 1ST SPACE COMPANY (JTAGS)

SMDC/CRSTRCT

Envision a missile launch from an unnamed, unfriendly country in the Middle East that is inbound toward U.S. forces deployed in a combat zone. As the launch occurs, a Defense Support Program satellite in a geosynchronous orbit detects the launch, and a signal is transmitted to a Joint Tactical Ground Station (JTAGS) TACSTAR antenna located within the theater. The data is processed through a series of high-tech components and eventually ends up as an array of information on three computer screens inside a JTAGS shelter. Manning the system is a three-person crew that has the responsibility to detect, understand, and process the missile data all within a matter of seconds, and then immediately report the event to forces in theater for early warning. This is truly an awesome responsibility for a three-person crew with ranks ranging from private first class to staff sergeant. The mission is real-world and JTAGS crews perform it 24 hours a day, 365 days a year.

There is no room for error in this Space mission, so to ensure each JTAGS crew at every site is trained and proficient in their duties, a contest is conducted to assess their performance. The Best Crew Competition is an annual event and is an integral part of the JTAGS mission. The mission conducted by the Soldiers of 1st Space Company (JTAGS) is unique and one of a kind. No other unit in the military has the capability that 1st Space Company executes on a daily basis. Specifically, JTAGS maintains a direct down-link capability that allows real-time warning to the deployed U.S. forces, friends and allies within the theater of the reporting JTAGS detachment.

Because the detachments are forward located in various theaters of operation, they have the capability to detect and report directly within the theater. The four detachments that comprise 1st Space Company train and conduct their mission the same way, but from different geographic locations around the world. Because of the geographic dispersion, the Soldiers and crews do not see or know operators conducting the same mission within their company. The Best Crew competition instills a sense of competitiveness and friendly rivalry within the company to be the best, and strengthens the bond between detachments around the world. It also reinforces the standardization of how crews provide theater missile warning.

1st Space Company (JTAGS) formed an evaluation team consisting of representatives from the company, 1st Space Battalion and 1st Space Brigade to find out who is currently the "best of the best" regarding theater missile warn-

Left: SPC Vyncent Beasley, SGT Brandon Smith and SSG Jonas Moody of Charlie Company, JTAGS–Central Command, were named the 2008 Best Crew for all JTAGS crews worldwide. *Photo by Daniel Vigil*

ing. It took the evaluation team approximately four weeks to cover all four JTAGS sites around the globe and identify the best crew at each site, as well as the best overall crew within 1st Space Company. When the dust finally settled, SSG Jonas Moody, SGT Brandon Smith and SPC Vyncent Beasley with Charlie Crew, JTAGS-Central Command claimed the title as JTAGS Best Crew.

Contrary to what many would think, JTAGS crews do not perform the theater missile warning mission from a modernized operations center or from a high-tech room with a bridge, multiple flat screen monitors, computers and radios, and a 14 person crew. Rather, they operate as a three person crew, inside an 8 foot by 8 foot by 20 foot shelter. These confines make it essential for JTAGS crews to work closely together.

The Best Crew Competition program offers the Soldiers of 1st Space Company the opportunity to prepare, train and show their skills in a profession that they alone represent. Because 1st Space Company is the only theater missile warning unit in the Army, the competition not only identifies the best theater missile warning crew in the company, but also the best crew in the Army. These crews are without question the best in the world at what they do.

Nine events were evaluated over a four day period as part of the competition. The competition commenced at each site with a record Army Physical Fitness Test that measured the physical fitness endurance of all crews as well as the detachment as a whole. The JTAGS detachment in U.S. European Command received the highest overall APFT average of 274 points and will receive a physical fitness streamer for excellence to recognize the achievement. The APFT was followed by a 100 question, closed book, classified, written examination covering regulations, policies and procedures surrounding missile warning. The crews also endured a rigorous and extremely challenging event processing exercise that stressed the crews with a myriad of missile events and other infrared special events. The competition also included a written situational paper exercise, a fault detection/fault isolation (maintenance troubleshooting) event, antenna assembly and emplacement, Army Warrior Task evaluation, and crew presentation.

The Army Warrior Task evaluation began with a no-notice detachment recall, weapons draw and inspections. This allowed for an assessment of not only the readiness and preparedness of the JTAGS crews, but also the readiness of the entire detachment.

The most non-standard event of the competition with regard to JTAGS operations was the crew presentation. The crews were given the task, conditions, and standard for the presentation during the opening brief on day one of the competition. Over the following two days of competition, the crews prepared an informative briefing on the dismount of the JTAGS system, to include suggested system improvements, optimal geographic location for the system, and the benefit to the supported theater. The results brought forward by the crews were beyond impressive. Many of the suggested improvements to the system were so innovative, practical, and relevant that they are currently being packaged for presentation to the JTAGS Product Office for consideration in future upgrades.

There is tremendous value to the best crew competition because it focuses on the proficiency of a three person crew over the individual. When processing infrared data that is direct from a satellite to a three person work station, JTAGS crews have to recognize an event, process the data, determine if what they are looking at is a threat, and then determine whether or not to report it; all within a very constrained time line. There is a significant reliance on every Soldier in the three person crew to carry their share of the workload. A typical shift will consist of hours of monotonous work with seconds to minutes of high adventure and extremely stressful data processing. In order to succeed as a crew, it is imperative that every crew member be proficient. The best crew competition places a significant amount of stress on every crew member and very quickly identifies if there is a weak link. Crews recognize this and in turn, train and prepare so that every crew member is proficient. All of this training and preparation ultimately results in a Company of mission ready crews; the Best Crew Competition is just one tool to get to that end state.

The competition proved extremely rewarding for both the command and the Soldiers of 1st Space Company. It provided the command an opportunity to watch every crew in JTAGS perform what they are trained to do, and assess not only who is the best, but to assess the overall operations at each JTAGS site. The return was far greater than anticipated and the lessons learned from this year's competition are already integrated into a plan for an even better competition next year. Most importantly, the competition afforded the individual Soldiers and crews a goal and a target to strive for, that went beyond the day-to-day routine of providing early warning for those deployed in a combat zone. A high level of camaraderie and esprit de corps was displayed among the Soldiers and crews that truly represent the spirit of the American Soldier.

The 1st Space Company motto of "Rest Assured" emphasizes the importance to the JTAGS crews that as long as they are on watch, the homeland of the U.S., deployed U.S. forces, friends and allies can indeed "rest assured" with JTAGS Operators on mission.

additional photos on following pages >>

Overall JTAGS Best Crew 2008

TOP: SPC Vyncent Beasley, SGT Brandon Smith and SSG Jonas Moody of Charlie Company, JTAGS–Central Command prepare for Army Warrior Training. The three-man crew was named the 2008 Best Crew for all JTAGS crews worldwide. MIDDLE: PFC Toby Unzicker emplaces a TACSTAR antenna during the best crew competition. BOTTOM: Members of JTAGS-CENTCOM conduct a unit run led by company 1SG Steven Adams. *Photos by Daniel Vigil*

Best Crew

SSG Jonas Moody

SGT Brandon Smith

SPC Vyncent Beasley

BELOW: (left to right), SSG Kenneth Hansen, SPC Amanda Henderson and SPC Shawn Johnston of JTAGS-Europe set up a TACSTAR antenna. Right, a Soldier from JTAGS-Europe prepares for Warrior Training as part of the competition. *Photos by Daniel Vigil*

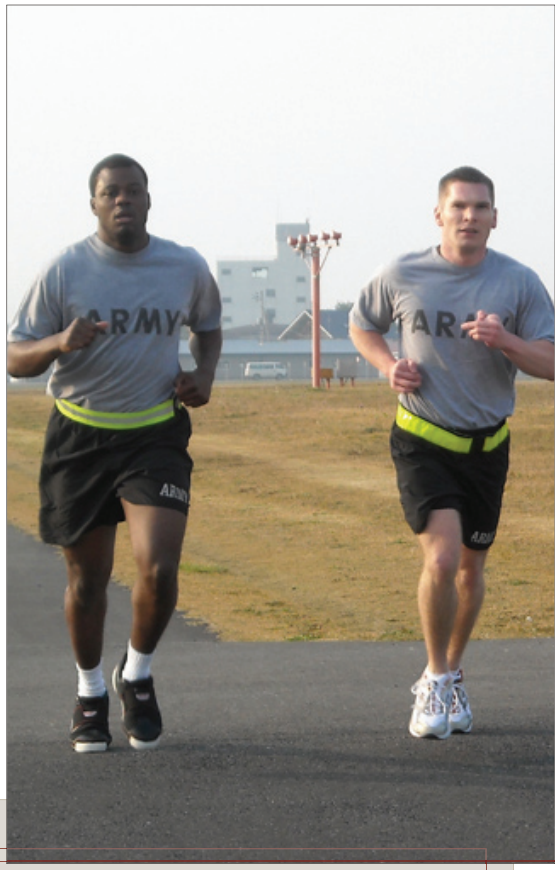
Best Crew

SSG Andrew Brown

SPC Samuel Heath

PFC Michael Maughan

EUROPE



ABOVE LEFT: SSG George Stratakos, SFC Benjamin Hartwig and SGT Wallace Connell perform maintenance on a TACSTAR antenna. Above right: SGT Christopher Crook and SPC J.C. Thomas conduct the two-mile run portion of the Army Physical Fitness Test. Left: 1SG Steven Adams and Company Commander, MAJ Eric Little, take part in a reflagging ceremony for JTAGS-Japan. *Photos by Daniel Vigil*

Best Crew

SSG Christopher Douglas

SSG Christopher Crook

SPC Emmanuel Dickerson

JAPAN

Best Crew

SGT John Hardegree

SPC Ernest Dominguez

SPC Robert Swain

TOP: SGT John Hardegree, SPC Robert Swain and SPC Ernest Dominguez set up a TACSTAR antenna during the JTAGS Best Crew Competition. The three-person crew was named the JTAGS-Korea Best Crew. Bottom: JTAGS Korea Soldiers receive a Best Crew in-brief from the evaluation team. *Photos by Daniel Vigil*

NATIONAL GUARD PLAYS VITAL ROLE

BY MATTHEW B. TULLEY ESQ.
MAJ, U.S. ARMY NATIONAL GUARD

National Guard Space Support Elements face unique challenges which are often misunderstood by our Active Duty peers. Nearly half of the Space Support Element Functional Area 40 (FA40) positions in the Army are in the National Guard yet less than 20 percent of the National Guard Space Support Element billets are manned by qualified FA40s. By comparison, nearly 100 percent of the Active Duty Element billets are manned by qualified FA40s. This shortage of National Guard FA40s appears to be the result of a focus on the imminent needs of the relatively new Army Space Community and the lack of a long term integrated strategy of the National Guard Elements into the Army Space community. The problems with the National Guard Space Support Elements community are unlikely to be resolved without the personal attention of the leaders within the Army Space Community, the National Guard, and Congress as well as the development and implementation of a clear strategy by the military of integrating Space into Homeland Security missions.

BACKGROUND

The Army National Guard is one component of the Total Army. The other components are the Active Army and the Army Reserve. The Army National Guard is composed primarily of traditional Guardsmen and Guardswomen civilians who serve their country, state, and community on a part time basis (usually one weekend each month and two weeks during the summer). Each state, American territory (Guam, the Virgin Islands and Puerto Rico), and the District of Columbia has its own National Guard (consisting of both the Army National Guard and the Air National Guard). The National Guard is specifically provided for by the Constitution of the United States. Currently, there are 54 National Guard entities which are coordinated by a four-star National Guard general who runs the National Guard Bureau. The Army National Guard predates the founding of the nation and a standing national military by almost 150 years. America's first permanent militia regiments, among the oldest still-serving units in the world, were organized by the Massachusetts Bay Colony in 1636. Since that time, the Guard has participated in every major conflict from the Pequot War of 1637 to Operation Iraqi Freedom today.

Unlike the other components of the American Military, the National Guard has a unique dual mission that consists of both a Federal and a State role. Many Active Duty personnel are unaware about the dual role of the National Guard. Simply, National Guard personnel can be activated in three different ways depending on the mission they are assigned.

The first is a "federal" activation under Title 10 of the United States Code. In Title 10 status, National Guard personnel are the exact same as our Active Duty

Currently, there are 54 National Guard entities which are coordinated by a four-star National Guard general who runs the National Guard Bureau. The Army National Guard predates the founding of the nation and a standing national military by almost 150 years.

brethren in every respect. The second is a "state" activation under Title 32 of the United States Code. In Title 32 status (which is more than 90 percent of the time for typical national guard personnel), National Guard personnel answer to their governor who is the commander in chief of the state's National Guard and not the president of the United States. While in Title 32 status, National Guard personnel are paid by the federal government, can use federal equipment, but generally (the 100th Missile Defense Brigade is one exception) can't exercise command and control over Title 10 Soldiers (Active Duty personnel) and Title 32 personnel are not generally subject to the Uniform Code of Military Justice but are subject to State Military Laws (many dating back to the early 1800s) pertaining to military discipline. The third way to be activated in the National Guard is "state Active Duty" under applicable state laws. While on state Active Duty, National Guard personnel are paid by the state and the federal government has no liability for the actions of the personnel on State Active Duty. State Active Duty personnel are often used to quell prison riots, end civil disobedience, and to this day serve as armed augmentees to law enforcement agencies that are either understaffed or that want the calming presence of uniformed members of the military to be seen by the public.

Just like the active Army, the National Guards priority is the fight against terrorism and traditional combat operations. But the National Guard also has several unique missions that Space or Special Technical Operations could be involved in:

1. Counterdrug mission: The National Guard Counterdrug Program conducts a full spectrum campaign that bridges the gap between and among Department of Defense and Non-Department of Defense institutions in the fight against illicit drugs and transnational threats to the Homeland. The National Guard supports military, law enforcement, and community based counterdrug operations at all levels of government to anticipate, deter, and defeat these threats in order to enhance national security and protect our society. The use of military assets to support a Continental United States counterdrug effort is supported by statute (32 USC 112) and military instructions (CJCSI 3710.01A, dated 30 March 2004 authorizes the use of National Assets for Continental United States Counterdrug missions if conducted pursuant to a U.S. Northern Command proper use memorandum).

2. Defense Support for Civil Authorities mission: The Guard provides support to civil authorities both as a Federal entity and more often as a state entity (a unique mission of the National Guard). These missions routinely involve responding to floods, hurricanes and blizzards in our communities. The National Guard is also involved in Military Support to Civilian Law Enforcement Agencies and Military Assistance for Civil Disturbance. The National Guard maintains several unique missions such as providing a National Guard Reaction Force, Critical Infrastructure Protection — Mission Assurance Assessments, and Joint Continental United States Communications Support Environment.

3. Weapons of Mass Destruction Operations mission: The National Guard has a unique statutory mission to field full time Weapons of Mass Destruction Civil Support Teams whose mission is to assist local first responders in determining the nature of a terrorist attack, provide medical and technical advice, and pave the way for identification and arrival of follow on assets. In addition to the Civil Support Teams, the National Guard fields a Chemical, Biological, Radiological/Nuclear, and Explosive Enhanced Response Force Package.

The National Guard is vital to the total force package in the Global War on Terrorism. Over 250,000 National Guard personnel have deployed to either Iraq or Afghanistan, and many more have served in Cuba, Africa, and elsewhere in support of the war against terror.

The National Guard tactical Space elements consists of eight Division Space Support Elements with two FA40s assigned to each and seven Fires Brigade Space Support Elements with one FA40 assigned to each for a total of 23 FA40s. At the time this article was written, only four of those 23 positions have qualified National Guard FA40s in them. This less than 20 percent fill rate will decrease slightly with the graduation of three new National Guard FA40s from the Space Operations Officer Qualification Course 08-02, and who are slated for National Guard Space Support Element assignments.

This article focuses on the National Guard Space Support Element FA40s not facing an imminent combat mission and not on the National Guard FA40s involved in the ground based missile defense mission or other non Space Support Element Space

missions (i.e. National Guard Army Space Support Teams). (Note: The 34th Infantry Division from the Minnesota National Guard has a full Space Support Element and is being deployed shortly to Iraq. It goes without saying that National Guard Space Support Elements about to go into combat are not faced with many of the issues discussed below.)

PERSONNEL PROPONENCY

A dramatic difference between the National Guard and the Active Army is how personnel are managed. National Guard personnel are not managed by a proponency office but by each of the 54 National Guard commands. Generally, the eight Division and seven Fires Brigade Commanders select who they want to be their FA40 with little review as long as the person selected meets the minimum qualifications to attend the Army Space Operations Officer Qualification Course.

Another dramatic difference between the National Guard and the Active Army is how personnel are promoted. National Guard personnel may be promoted to a higher rank if they are billeted in such a position and if they meet the minimum requirements for promotion to that rank (military education, branch/functional area qualified, time in grade, etc). What that means is a major in a lieutenant colonel billeted position can be promoted to lieutenant colonel if they meet the minimum requirements for promotion. This is called a "unit vacancy" promotion.

Unit vacancy promotions allow top performing officers to move quickly through the ranks. Unfortunately, it also causes a great deal of competition for branch immaterial positions. If a position is branch immaterial it removes one of the minimum requirements for promotion. For example, if you have a high speed Infantry major who you want to make a lieutenant colonel, you can either place him in an FA40 position where he will need to enroll in and graduate from the Space Operations Officer Qualification Course to be promoted to lieutenant colonel because being branch or functional area qualified is a requirement for promotion. (Remember this course is only held twice a year and is typically full, so getting qualified may take a year to three years, and the National Guard personnel must balance his/her civilian work schedule with an extended Active Duty for training period needed to attend the course.) They can also place them in a branch immaterial position, promote them to lieutenant colonel, and then lateral them into the FA40 position to free up the branch immaterial position for another promotion. Nothing is improper about doing this as long as that now lieutenant colonel is willing to attend the Space Operations Officer Qualification Course at a convenient time.

As commanders at all levels are aware, priority fill positions are those that will give the command the biggest bang for the buck. The Division and Fires Brigade commanders need to determine what value does an FA40 provide to the unit in a non combat situation (obviously when you are going to war you want to ensure you have every asset at your disposal to kill the enemy and/or protect your personnel). As I will discuss later on, it is clear that FA40s for a multitude of reasons currently provide minimum value to National Guard units in a non combat mission scenario, and unless they start providing value to homeland security/defense missions not much is likely to change with time.

The lack of qualified and technically proficient National Guard FA40s also creates an unnecessary burden on the Active Army. In almost every other career field, large percentages of National Guard personnel are on Active Duty. These mobilizations of National Guard personnel serve a multitude of purposes, for the Guard it allows us the opportunity to become proficient in our given duties, and for the Active Duty, it allows the filling of vacant assignments with qualified personnel.

It is critical for the future success and technical competency of National Guard FA40s to be afforded the opportunity to serve on Active Duty as an FA40 not just in a tactical Space Support Element setting but in one of the many other vacant FA40 billets that will help make a National Guardsmen FA40 well rounded — similar to how Active Duty FA40 careers are managed by rotating personnel between joint assignments, tactical assignments and the Space Brigade. Continued failure to afford National Guard FA40s non-tactical Active Duty assignments will further erode the career potential and retention of qualified National Guard FA40s. Given the already small number of National Guard FA40s, the loss of just one qualified Guardsman to another career path will have a significant impact on the National Guard Space community.

TRAINING READINESS ISSUES

The fundamental tenets of a quality reserve force is that they are technically and tactically proficient so that on relatively short notice they can perform their duties at a level equal to or better than their Active Duty brethren. Currently, the training of FA40s in National Guard Space Support Elements is extremely limited to say it in the most favorable terms. This is due in large part to a failure to properly resource National Guard Space Support Elements with the basic equipment needed to perform their duties (i.e. the Space Operations System). This failure to properly resource the National Guard Space Support Elements is further evidence of a systemic failure to properly utilize the National Guard within the Space Community.

Even assuming that the National Guard Space Support Element was properly resourced with qualified personnel — personnel who had the opportunity for short term Active Duty assignments to become more proficient in their duties or to get greater exposure to the Space community — and had the proper equipment, the use of the National Guard Space Support Element in homeland security/defense is unnecessarily restricted by inadequate training exercises and real world application.

Some place the training readiness problem on the National Guard Space Support Element chief (all three of them). This is a naive approach to a complex problem; it is the equivalent of a battalion commander claiming that a squad is untrained because the squad leader failed to conduct proper hip pocket training during down time. Proper utilization of a National Guard

Space Support Element in a training exercise requires the involvement of U.S. Northern Command on down. One of the most glaring problems with training National Guard Space Support Elements is that U.S. Northern Command has not exercised their subordinate National Guard Space Support Elements in a significant manner. Complex, realistic, and frequent joint training exercises are not being conducted on a regular basis involving U.S. Northern Command, National Guard Space Support Elements, Department of Homeland Security, and Army Space Support Teams due to manpower and financial limitations. This failure to train as you will fight (or defend the homeland as the case maybe) has resulted in repeated After Action Report comments asking for better joint training by the Space community after actual U.S. Northern Command missions yet little has been done to implement a comprehensive Space training exercise based on likely future U.S. Northern Command Space missions. Sole responsibility for joint National Guard exercises can't be placed with U.S. Northern Command. Joint Forces Command is charged with Joint Exercises (J7) and Joint experimentation (J9) yet they don't have a single FA40 working on joint Space training or experimentation for the Active, Reserve or National Guard Space community.

It cannot be overstated that training National Guard personnel has very unique challenges. Unlike Active Duty personnel, National Guard personnel generally do not place their military commitment over everything else. National Guard personnel are part time members of the military and as such they generally have priorities higher than the military such as family, civilian employment and religion. If they did not place these other priorities higher then military service they likely would be on Active Duty. Often in non combat or Sept. 11, 2001-type situations, weddings, family reunions, and civilian employment commitments take priority over National Guard training. Even when a member of the National Guard is able to balance all of the requirements placed on them, training in a specialty like Space Operations is limited. Like our Active Duty brethren, National Guard personnel must take an Army Physical Fitness Test, perform warrior tasks, qualify on their weapon, write evaluation reports, counsel subordinates, plan training events, attend division staff meetings, participate in mandatory training briefings on safety, sexual harassment, equal opportunity, etc. These mandatory events, especially at the major and lieutenant colonel level, dramatically reduce the amount of available time to train on Space Operations. Assuming the most ideal conditions, it is likely that only two drill weekends and eight days at annual training would be available to perform Space Support Element duties. To put that into perspective, ask yourself how proficient would you be if you only trained on Space missions for the first two weeks in January without the equipment you would need to perform your duty (i.e. the lack of the Space operating system within the National Guard Space Support Element units), without a realistic training exercise that would allow you to exercise real world Space Support Element functions both in collection management and adequate staff decision making, and then decide how much value you bring to your unit.

To adequately utilize/exercise National Guard Space Support Elements, it is vital to exercise them as often as possible and preferably in real world situations. It is critical that U.S. Northern Command and Joint Forces Command do a much better job at utilizing the small number of highly skilled personnel who make up the National Guard Space Support Elements. No better training opportunities exist in the short term then domestic emergencies (hurricanes, blizzards, forest fires, etc) that arise several times a year. In the longer term, it is critical that U.S. Northern Command and Joint Forces Command conduct a joint training exercise involving collection of imagery over the Continental United States with National Guard, Homeland Security and state/local first responders.

Finally, National Guard Space Support Elements must figure out a way to train on Special Technical Operations. Training on this poses numerous complex logistical and practical problems that will not be resolved in the near term and may never be resolved without General Officer level planning beginning in the near term. If, as expected, Special Technical Operations becomes an official function of the Active Duty Space Support Element, then it is vital that the Space community determine how they will train National Guard Space Support Elements on this critical mission.

THE ROAD AHEAD

The first step to solving any problem is identifying the problem. This article clearly identifies numerous problems facing the National Guard Space Support Element FA40s and the Space community. These problems (staffing, resourcing and training) will not resolve themselves. These problems will only be resolved with the personal attention of senior military and civilian leaders. The road ahead will be bumpy and long but it is vital to treat National Guard personnel as valued members of the Space Community with real missions. When the wars in Iraq and Afghanistan come to an end, I can think of a no more vital mission for the Space community than to defend/protect our homeland in accordance with our constitution and laws. The National Guard is the tip of the sphere for future applications for Space in that respect. Neglecting the National Guard Space Support Element (and its homeland defense/protection mission) is short sighted and will result in five, 10 or 15 years from now a significantly harder effort to fix. It is vital that the leaders of the Space community realize today that neglecting the National Guard Space community is hurting not only the National Guard but the entire Army. With proper command emphasis and the right selection of people on a small "tiger team" it should not be hard for U.S. Army Space and Missile Defense Command/Army Forces Strategic Command, Joint Forces Command, and U.S. Northern Command to develop policies, procedures, and mechanisms to fix the current neglect of the National Guard FA40 Space Support Element community.

CET WHITE PAPER

BY: MAJ WILLIAM S. MONCRIEF, FA40
8TH ARMY DEPUTY SPACE SUPPORT OFFICER

The need for Commercial Remote Sensing on the modern battlefield is unquestionable. The big question is: Who is going to provide it? As it stands now, the intelligence community is responsible for imagery support for intelligence purposes. The problem is that they can barely meet all of the National Technical Means requests they are getting now. Along with National Geospatial-intelligence Agency (NGA) being in theater, the Army has developed and employed the Commercial Exploitation Teams which provide Commercial Remote Sensing to theater. However, this is only one part of providing Commercial Remote Sensing support to the coalition warfighters.

Examples of Unclassified Imagery over Bagdad, Iraq. *Images obtained from Google Earth*

Providing this support to the coalition warfighters consists of more than simply supplying imagery. A major part of this support is providing training to our coalition partners on how to acquire, use and exploit it. This is undeniably an area that we have yet to fully exploit. An important step in improving our support in this area is assigning Commercial Remote Sensing support personnel to the Military Transition Team (MiTT) teams heading for Iraq and Afghanistan as well as embedding them with our coalition partners. The sooner we teach our coalition partners to be fully self-sufficient the sooner we can focus our efforts elsewhere.

Another point weighing on this issue is that the requirements for Commercial Remote Sensing support are growing by leaps and bounds. Unfortunately the primary supporter is on the chopping block for U.S. Army Space and Missile Defense Command. One reason is we do not have a Commercial Exploitation Team Program of Record to assign Solders against. The system the Teams are currently using, the Commercial Exploitation Team Tactical Set, does not have direct downlink capability. This system acquires its imagery through Operational Bent Pipe, but it does have archiving and production capability.[1] The old system the Eagle Vision II "… I is a self-contained imagery downlink and processing station that provides direct access to commercial imaging satellites. EVII receives imagery directly from the SPOT 2 and SPOT 4 satellites and the

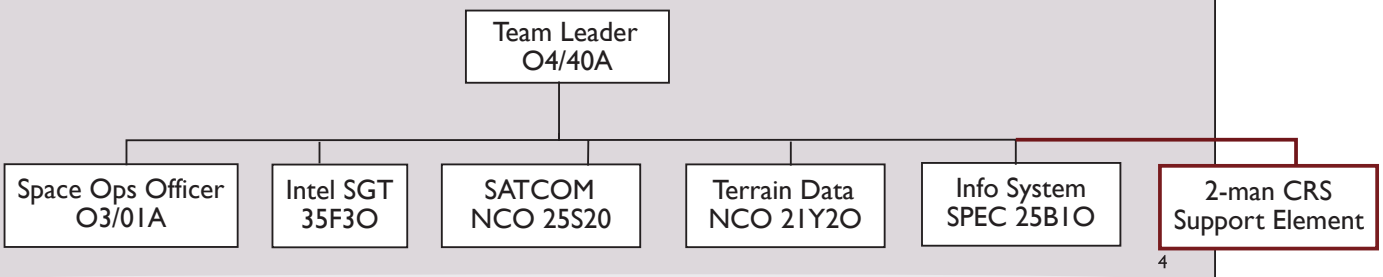


Figure: 2-7. Army Space Support Team composition.

RADARSAT-1 synthetic aperture radar satellite. EVII is roll-on/roll-off transportable on the C-130H or C-17 aircraft."[2]

Although the current and older systems are highly effective, they were built and paid for by U.S. Army Space and Missile Defense Command and are not a part of an official Program of Record. This creates major issues with the sustainment of the systems life-cycle. This is a problem we should have solved a long time ago.

The ever increasing requirements for Commercial Remote Sensing support combined with the endangered Commercial Exploitation Teams leaves us with two options. One, the intelligence community increases its footprint in the areas of Commercial Remote Sensing products and starts embedding personnel with coalition units. Two, U.S. Army Space and Missile Defense Command and the FA40 community take over as the proponent, not sole provider, for Commercial Remote Sensing, which would include training our coalition partners in how to acquire, use and exploit it. If the FA40 community takes over this mission it does not necessarily mean all teams need special equipment or a Commercial Exploitation Team Tactical Set. Educating our coalition partners only requires a laptop, Google Earth and an unclassified Space Operations System (SOS) Workstation. We could equip the Commercial Remote Sensing support elements with the Tactical Set but it is not necessary in all locations.

With this being the case, should the Space Support Elements and Army Space Support Teams — as they are currently configured — conduct this mission?

The one major problem with the Space Support Elements and Army Space Support Teams conducting this mission is FA40s are becoming increasingly tied to work at the top secret and even Special Technical Operations (STO) levels. In some locations, we are upgrading our SOS workstations to the top secret level. This allows us to bring in other tools like Battlefield Visualization Initiative and Joint Worldwide Intelligence Communications System (JWICS) Google Earth online to give us a complete Space picture. If a two-person Space Support Element is then asked to break away from its work stations to bring in unclassified imagery products for the Iraqi, Afghan, and Republic of Korea armies, it may desynchronize their operations and disrupt their battle rhythm. In U.S. Central Command, they can hand this off to the Commercial Exploitation Team but it is not as responsive as having a man on site. With U.S. Northern Command or Korea, this is not even an option. It would be nice to have a one or two man component on the Space Support Element or Army Space Support Team whose sole mission is Commercial Remote Sensing support. This would free up the rest of the team to focus on "U.S. Only" mission requirements and would prevent the operations centers from getting a myopic view similar to the one presented in the side bar piece on page 17.

The Commercial Exploitation Teams should not go away, but they should be transformed. (See addition to figure 2-7 above) We need to ensure that we do not just look at Commercial Remote Sensing support in the scope of Commercial Exploitation Teams, but also

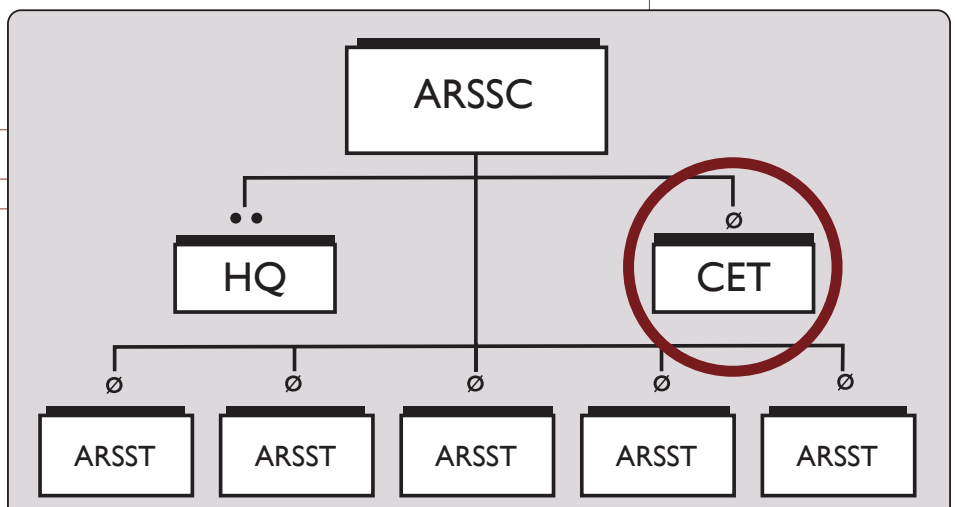


Figure: 2-6. Space company (support) organization

as support elements that encompass all forms of Commercial Remote Sensing support. This should include getting unclassified imagery, training our coalition partners and embedding with our partners at all levels. What should this new Commercial Remote Sensing support element look like? To answer this we need to answer a few other questions.

Does this new Commercial Exploitation Team need its own system?

Answer : Not all Commercial Exploitation Teams need a direct downlink capability. If they have an unclassified SOS Workstation, Google Earth, and U-warp they can support our coalition partners.

Should the Commercial Exploitation Teams have the capability to request a commercial tasking?

Answer : Yes. They can do this on a web-based system or by e-mail and phone.

Where should the Commercial Exploitation Teams be located?

Answer : Multiple locations. We need one main Commercial Exploitation Team with direct downlink, tasking, and production capability in each combatant command. Smaller elements would also be needed. An example of this could be, one to two FA40s who serve as Commercial Remote Sensing exploitation support on each MITT team and one to two FA40s who serve as Commercial Remote Sensing exploitation support in each Space Support Element and Army Space Support Team.

What would each team look like?

Answer : The main Commercial Exploitation Teams might be a little larger than the one in Bahrain; and with the same equipment due to the increased work load. The MITT team, Space Support Element, and Army Space Support Team may use the main Commercial Exploitation Team for tasking and use systems like Google Earth, and (U-warp) for day to day operations.

Why put FA40s on MITT teams?

Answer : If we put FA40s on the MITT teams we can teach the Iraqi and Afghan armies how to use and exploit the commercial Space assets that are out there. The sooner we get them to be fully self-sufficient the sooner we can focus or efforts elsewhere.

Why do we need to add an extra position to the Space Support Elements?

Answer 6: As a member of a two man Space Support Element and being the main Army Space support for the Korean peninsula, I can tell you it is needed. We work in a Republic of Korea/U.S. Combined Operations and Intelligence Center. In order to fully support the Republic we need to be able to support them with good imagery. As it stands now we cannot do that. We are also busy doing the STO planning for 8th Army and Classified Space support for 2nd Infantry Division. The additional bodies could serve as our commercial support.

Is it not the job of the Intel community to handle imagery?

Answer 7: Yes. However, Commercial Remote Sensing is an area we are already controlling in the U.S. Central Command Theater. I have found in most units the G-2 is glad to give the FA40 the Commercial Remote Sensing mission. In some cases the Space Support Elements have

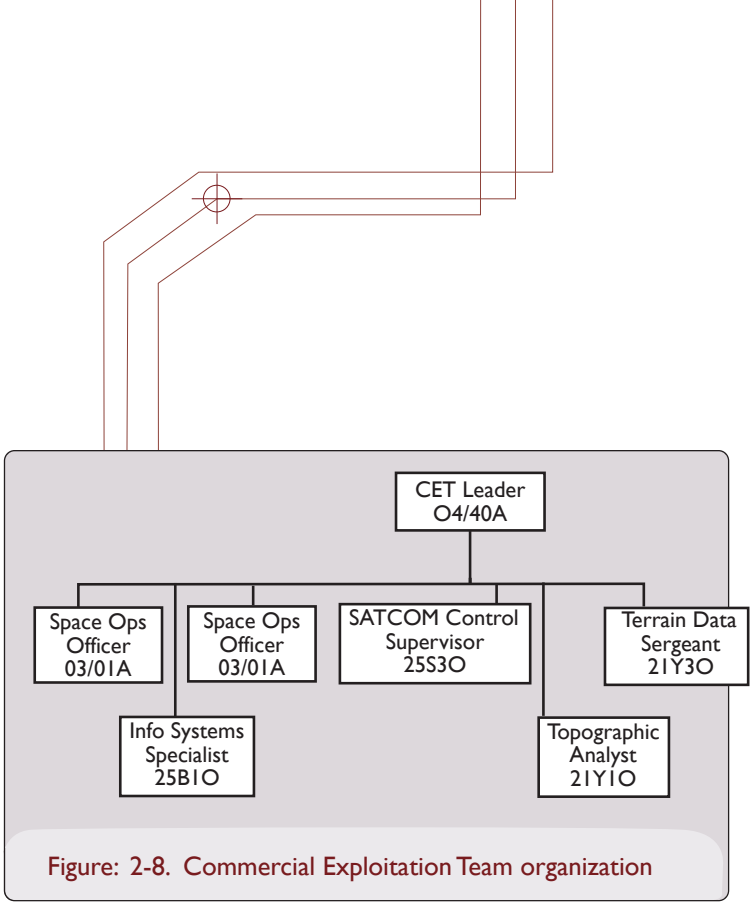


Figure: 2-8. Commercial Exploitation Team organization

been the collection manager for it. This frees up the G-2 to focus on national systems. If the Intel community wants to hold on to the complete Commercial Remote Sensing support mission, then they should give up the personnel and put a Commercial Remote Sensing Soldier on each of the MITT teams. My guess is they won't. If U.S. Army Space and Missile Defense Command can become the proponent for Commercial Remote Sensing we then do not have to run our requirements statements for a system of record through the G-2 and we write our own ticket.

Recommendations: U.S. Army Space and Missile Defense Command needs to petition Department of the Army to take over as the proponent for Commercial Remote Sensing. Then we should submit a critical needs statement from U.S. Central Command, U.S. Northern Command, and U.S. Pacific Command (Korea) for the need to maintain Commercial Remote Sensing support. Along with a packet to get the Commercial Exploitation Team system accredited as a system of record. We then request personnel to assign against the critical needs statements. The Space Support Elements and the Army Space Support Teams should be restructured to have one to two people designated as Commercial Remote Sensing support and give them an unclassified SOS Workstation. If there is not a fully capable Commercial Exploitation Team with direct downlink, tasking, and production capability in their theater, then we should give the Space Support Elements or Army Space Support Teams the Commercial Exploitation Team system to ensure they can fully support our coalition partners.

1 Coffey, Bill. "RE: CET White Paper" E-mail to William S. Moncrief. 23 OCT 2008.
2 Headquarters Department of the Army. "FM 3-14.10" Space Brigade Operations, p. 2-4 & 2-5

KEEPING BALANCE IN A JOINT ENVIRONMENT

BY: MAJ WILLIAM S. MONCRIEF,
FA40 8TH ARMY DEPUTY
SPACE SUPPORT OFFICER

Commercial Remote Sensing and its exploitation is a cornerstone for FA40s in the coalition environment. In Iraq, Afghanistan, and Republic of Korea, FA40s need the support of our coalition partners — Commercial Remote Sensing support is a must. Unfortunately, this is not an easy task to accomplish. With the U.S. military performing operations in multinational environments, it is becoming increasingly difficult for FA40s to share information openly because of security classification levels. The unforeseen consequences are that operations centers tend to develop a myopic view. They will either ignore our coalition partners by focusing on National Technical Means products or shy away from the use of national systems under the pretence of "security." This forces U.S. units to use only open source products thereby not fully exploiting U.S. capabilities.

Both scenarios are equally dangerous. Anyone who has served in one of these operations centers would concur. What they wouldn't say is that this is a sign of laziness or fear — although that is a correct statement. I have actually been on the operations floor and wanted to pass "U.S. Only" information to the Battle Major when he made it known he did not want to hear it if he could not share it with the Republic Of Korea military. This could be seen as him being afraid that he might accidently disclose something to them. This is not only short-sighted but it is dangerous. As a result, he made a military operational decision based upon incomplete information. We are all professionals and should know how to handle classified information in mixed environments. If not, we should be doing another job.

MOVING TO SELF SUFFI

Members of the Afghanistan National Army receive training on management of intelligence information from SSG Jeffery Burke, a member of the USASMDC/ARSTRAT Commercial Exploitation Team. *Photo courtesy MAJ Rodney Fischer*

WARD CIENCY

MENTORING THE AFGHANISTAN NATIONAL ARMY

BY 1LT STEVEN COWAN AND MAJ RODNEY FISCHER
1ST SPACE BATTALION, COMMERCIAL EXPLOITATION TEAM

The management of intelligence information has been critical to successful command and control in warfare since the dawn of civilization. During the Soviet-Afghan War, the Soviet Union military's inability to properly manage their intelligence information sabotaged its command and control of forces in the mountainous Afghanistan countryside. FM 3-0 emphasizes that successful command and control demands timely and effective management of intelligence information to make time-sensitive decisions.[1] After ten years of grueling conflict, the Soviet Union, unable to get timely intelligence information and unable to exploit the information that they did receive to counterinsurgent tactics, left Afghanistan in defeat.

Today, insurgents fighting coalition forces use the same tactics, but the coalition is more able to counter the insurgent's tactics because it has the skills and resources to better manage its intelligence information. In Afghanistan, the mountainous terrain makes intelligence gathering, exploitation, and dissemination all the more important to effective command and control. The Afghanistan National Army currently uses paper maps with overlays and sticky notes to coordinate and apply forces. This system, while effective at a small unit tactical level, does not allow for the timely command and control that is needed to conduct war at the operational level. Giving the Afghanistan National Army the skills and the resources to manage intelligence information is critical to enabling them to move toward self sufficiency. The National Geospatial Intelligence Agency, acting as mentors to the Afghanistan National Army, identified FalconLite Compact, a powerful geospatial computer program, as a resource that the Afghanistan National Army could use to enhance its command and control by providing an effective way to manage their intelligence information. To train the Afghanistan National Army's key intelligence and operations personnel on FalconLite Compact, the National Geospatial Agency called upon the Commercial Exploitation Team based at the Naval Support Activity Bahrain.

The Commercial Exploitation Team identified two of its members, 1LT Steven Cowan, Operations and Intelligence Officer, and SSG Jeffery Burke, Satellite Communications and Data Acquisition Noncommissioned Officer to conduct two separate week-long classes at the Ministry of Defense in Kabul.

From the beginning of the class, it was evident the students wanted to help their country become self sufficient. The translator for the class was especially skilled and had seen much despite his young age. Like other members of the class, he had been a refugee in Pakistan where they were persecuted and called "Americans." All of the students had a very positive attitude despite being from a country that has seen almost nothing but war for the past thirty years. The class consisted of Afghan officers from the Plans, Operations, Intelligence, AirCorps, Special Operations and Engineers sections. In addition, there were representatives from the National Police, Ministry of Internal Security and Liaison Officers from each of the country's five Corps. By teaching multiple echelons, any incident, unit, or plan can be reported with coordinates and entered into FalconLite Compact at the National Command Center and then disseminated to forward-deployed Corps, Divisions, Brigades and Battalions engaged in operations.

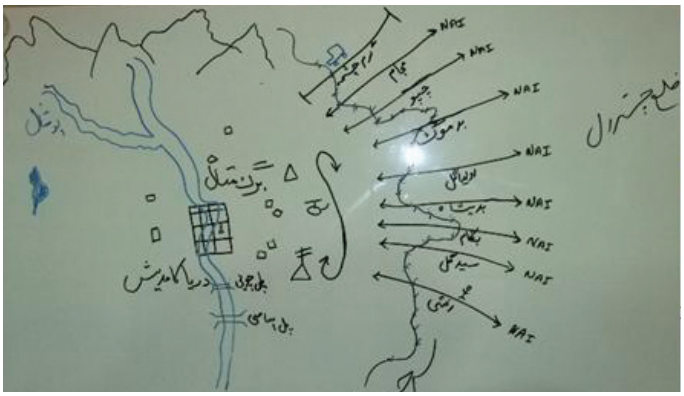
The students immediately saw the value in FalconLite Compact. The FalconLite Compact program, which is releasable to the Afghanistan National Army, can be loaded with maps and commercial imagery from the local area. It can then be used to mark up these maps and images with drawings (depicting routes, minefields), icons (showing guard locations, road blocks), and units (displaying whether they are friendly, hostile, infantry or medical).

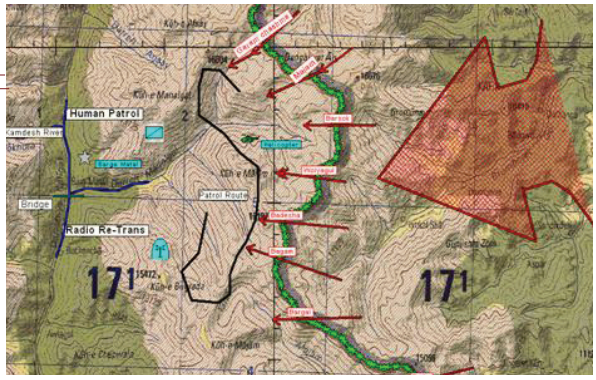
All of this mark-up data can be saved and shared via e-mail or computer networks. Therefore, one can plan an operation at the command center and send the detailed plans to someone with FalconLite Compact at a distant location. The receiver can then makes changes to the plan reflecting the real situation on the ground and send that information back to the command.

We started the class with a basic introduction of FalconLite Compact. The students were amazed at the amount of maps and commercial imagery we had loaded onto a single 300GB hard drive. They used the mouse to quickly view different scales of maps for Kabul and Kandahar. Some of the students showed us their home-towns, various buildings near where we were teaching and the slopes of the Hindu Kush. We also taught the students how to open, save and close drawing and icon files, which excited them greatly, as they realized that they could save their work and share it with other subordinate commands, increasing their command and control of forces.

Next, we showed the students some of the FalconLite Compact tools. The students were particularly interested in the bullseye tool of the drawing editor. With the bullseye tool, students could determine the distance one could travel from a known location with a given rate of movement. The Afghanistan Police and Ministry of Internal Security students used the polyline tool to identify city blocks to be patrolled and security zones to be checked. Students were also interested in the point editor as it allowed them to highlight any object or location of interest. Using this tool, the students highlighted guard locations, accidents, road signs and checkpoints. With the threat editor, the students laid out their forces and displayed the enemy units' detection and engagement ranges.

To solidify the training, we conducted a final practical exercise. In this exercise, "insurgents" occupied a town and the students liberated it with the help of allied forces. First, the students placed an icon representing insurgents in the occupied town. Next, the students placed icons of the friendly forces, consisting of an infantry and an artillery unit, at the closest major cities to the occupied town. The students then drew lines to show the routes of the friendly units to the occupied town. After the route was created, we told the students that the infantry unit that was traversing the route had been ambushed by insurgents. The ambush had resulted in injured personnel requiring a medical evacuation by helicopter. To plan for the medical evacuation, students calculated the location of the closest hospital using the range bearing tool. While the evacuation was taking place, the friendly artillery unit was hit by enemy artillery fire. To defend/counter this attack, the students moved the friendly artillery unit so it could hit the enemy without being in danger of being hit itself. Finally, the friendly units liberated the town. The students then learned that insurgent reinforcements were coming. They decided to counter the invasion by conducting a movement to contact. To do this, the students used the bullseye tool to estimate how far the insurgent reinforcements and the friendly units





ABOVE LEFT: the USASMDC/ARSTRAT Commercial Exploitation Team (from left to right) 1LT Steven Cowan, SPC Scott Summers, SSG Jeffery Burke, MSG Marc Acito, MAJ Rod Fischer, SPC Nicole Zamora, SPC Megan Valentin, and SSG Erik Gaines.

ABOVE RIGHT AND LOWER LEFT: Before and after maps for the Afghanistan National Army after receiving training in intelligence information management from the USASMDC/ARSTRAT Commercial Exploitation Team *Images courtesy MAJ Rodney Fischer.*

could move in a day. They looked at where the two bullseyes overlapped and planned interception points where they would set up their own ambushes. Finally, the students used the polygon tool to set up patrol sectors so the insurgents wouldn't slip through in unexpected locations. When the exercise concluded, the students clearly had demonstrated that they had grasped the skills needed to effectively use FalconLite Compact.

Each student was excited to receive certificates upon graduation and said that they would make the Islamic Republic of Afghanistan proud. Six weeks later, the students were able to utilize their new FalconLite Compact skills in an Afghanistan National Army exercise involving multiple levels of command and control. SSG Burke and SPC Nicole Zamora, a Commercial Exploitation Team topographic analyst, returned to Afghanistan to help the Afghanistan National Army with the transition from a training environment to an operational environment. The Army's Topographic unit, which consisted of many of the students from the class, made a huge impact on the exercise. Their ability to integrate into the exercise and to provide pertinent products was recognized by BGen Alan Howard, the Canadian general in charge of the exercise. The Afghanistan National Army plans to continue to expand the role of its topographic units and its use of FalconLite Compact. In fact to improve its command and control over its subordinate units, it is looking at creating topographic units at the each of its five corps and at utilizing FalconLite Compact as a common operation picture. The U.S. Secretary of Defense Robert Gates recently said, "This is the Afghans' war for their own country, and we need to make sure they know we are not there to run it, we are there to help."[2] The Commercial Exploitation Team's introduction of FalconLite Compact to the Afghanistan National Army and its integration will help the Afghan Army to become self sufficient and may prove to revolutionize the way they engage in modern warfare.

1. Department of the Army, FM 3-0 Operations, 14 June 2001, p 3-11
2. Gates, Robert; Afghan Conflict Must Not Be Seen As 'America's War', Agence France-Presse, 1 November 2008.

SPC Nicole Zamora, a member of the USASMDC/ARSTRAT Commercial Exploitation Team trains members of the Afghanistan National Army on intelligence information management. *Photo courtesy MAJ Rodney Fischer*

ARMY PROVIDES JOINT SUPPORT IN DISASTER RELIEF DEMO

BY: BRIAN PLAISTED
G-2 ADVANCED GEOSPATIAL INTELLIGENCE NODE

The U.S. Army Space and Missile Defense Command/Army Forces Strategic Command's G-2 Advanced Geospatial Intelligence Node conducted a joint demonstration with the Air Force Eagle Vision III (EV III) system at Peterson Air Force Base in Colorado Springs, Colo., Nov. 12-14. The G-2 Advanced Geospatial Intelligence Node set up their Mobile Processing, Exploitation and Dissemination (MoPED) system next to the EV III system to highlight each system's capabilities and the interoperability between the systems.

OPPOSITE PAGE: Michael Nifong, chief G-2 Advanced Geospatial Intelligence Node, escorts Air Force GEN C. Robert Kehler, Commander, Air Force Space Command, to a demonstration area. The G-2 AGI Node conducted a joint demonstration with the Air Force Eagle Vision III system at Peterson Air Force Base in Colorado Springs, Colo., Nov. 12-14, to highlight each system's capabilities and the interoperability between the systems. Below: An Air Force Senior Airman, right, presents information to several VIPs to include Peter B. Teets, center, former Air Force undersecretary and director of the National Reconnaissance Office. *Photos by DJ Montoya, USASMDC/ARSTRAT*

The U.S. Army Space Command's Remote Sensing Branch originally built the Mobile Processing, Exploitation and Dissemination system in 1999, for hyperspectral exploitation of data from the Warfighter-1 satellite. The Ford Econoline Van was provided by the Air Force Research Laboratory and U.S. Army Space and Missile Defense Command personnel installed state-of-the-art computer equipment. The system participated in several successful exercises using hyperspectral airborne data as a surrogate for the satellite data. A follow-on High Mobility Multipurpose Wheeled Vehicle (HMMWV)-based system deployed at the start of Operation Iraqi Freedom in support of U.S. Central Command. In 2007, U.S. Northern Command requested that the G-2 Advanced Geospatial Intelligence Node upgrade the computer equipment in the Mobile Processing, Exploitation and Dissemination system to support Defense Support to Civil Authority missions. This was accomplished in 2008 with increased computer capacity as well as a portable Global Broadcasting System receive suite. The Advanced Geospatial Intelligence Node deployed the upgraded system in September 2008 to support U.S. Army North during Hurricane Ike planning and relief operations. The system has a server with 30 TeraBytes of data storage, four laptop workstations, and exploitation software to provide both Basic and Advanced Geospatial Intelligence production.

The Air Force EV III system is one of five Air Force systems. One is stationed in Europe, one is in Hawaii, and three others are in the continental United States. The Army EV III system is stationed in San Diego, Calif., and is part of the 147th Combat Communications Squadron in the California Air National Guard. The system has the capability to directly downlink data from four commercial satellites, SPOT 2, 4, and 5, and RADARSAT-1. The EV III system has a 2,500 km field of view and from Colorado Springs has the ability to downlink imagery over approximately 75 percent of the continental United States. Future upgrades are expected to add the RADARSAT-2 and the CARTOSAT imaging satellites. The direct downlink capability of EV III allows production centers such as the Mobile Processing, Exploitation and Dissemination system to rapidly acquire commercial satellite imagery in support of Defense Support for Civil Authority missions. Since commercial imagery is unclassified it can be shared with first responders and state and local authorities.

During the demonstration many personnel toured the systems including the commanders of Air Force Space Command and U.S. Northern Command. The result of the demonstration was a greater appreciation for what directly down linked commercial imagery can provide in support of Defense Support to Civil Authority operations when exploited by deployed G-2 Advanced Geospatial Intelligence Node analysts.

SMDC/ARSTRAT

JOINT BLUE FORCE MISSION MANAGEMEN

WHO WE ARE AND WHAT WE DO

The USASMDC/ARSTRAT Joint Blue Force Tracking Mission Management Center (JBFT MMC) provides 24/7/365 support to the Warfighter by collecting, validating and disseminating timely, actionable, and accurate position location information data downrange to the Combatant Commands (COCOMs) to enable Joint Blue Force Situational Awareness. In other words, a commander has the capability to look at a single Common Operational Picture and see where his forces are located, their direction and speed, and where other friendly forces may be located on his left, right, front and rear.

The JBFT MMC receives data from between thirteen and eighteen unique device types. Currently the JBFT MMC collects data from over 70,000 devices in support of over 200 customers, globally, from all branches of service.

The JBFT MMC performs its support role to the Warfighter by employing 15 government employees and 10 contractors. The government employees perform shift-work (swings, mids and days), and are required to go through a stringent train-up period, with an initial certification test at the 90 day mark. Further certification testing takes place at six-months and one year. This insures that each and every operator is capable of responding to any issues relating to device operation, architectural troubleshooting (ground and Space), and various computer systems, to include the GCCS (Global Command and Control System), and the C2PC (Command and Control Personal Computer).

Many of the Government employees are either retired Military, or have some prior military experience. While

TRACKING
NT CENTER

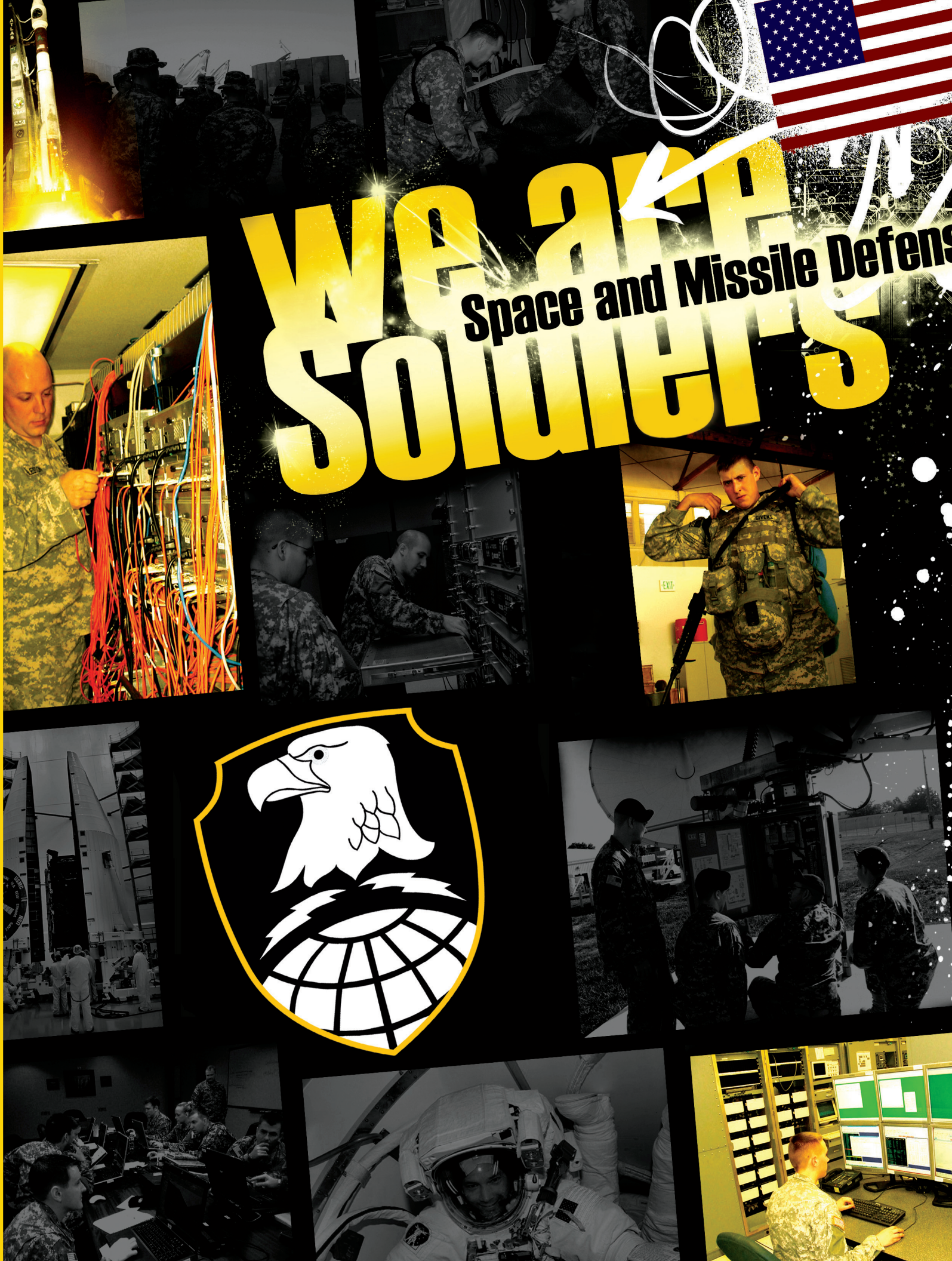
BY JON E. BUSICK
BLUE FORCE TRACKING
MISSION MANAGEMENT CENTER

Tracking SFC Kenneth Dawson of Fort Lewis, Wash., checks the map of his Force XXI Battle Command Brigade and Below (FBCB2) system, a widely used but limited blue force tracking system that is being improved. *U.S. Army photo by CPT Timothy Beninato.*

military service is definitely not a requirement to be a Watch Operations Specialist, the fact that many of us have "been there and done that" brings a certain amount of understanding, appreciation, and unwavering support to the Warfighters in harms way. The Watch Operations Specialist visually observes over 20 monitors, maintains operational awareness of over 50 servers, cues in on a multitude of architectural alert tools and performs over 178 tasks daily.

In addition to supporting the Warfighter and the COCOMs by insuring timely, actionable and accurate data downrange, the JBFT MMC also serves, in many cases, as the first line of action for various devices capable of transmitting a 911 distress signal. Upon receipt of a 911, the Watch Operations Specialist must identify the device owner, down to the lowest level, and track the device transmission rate, location, and any other pertinent information. The watch operations specialist must then contact various elements within the system by phone, e-mail and chat room to ensure immediate response, if the event is in fact a real-world distress call. To this end, the JBFT MMC has been personally responsible for saving warriors lives.

The JBFT MMC mission and responsibility is ever-growing and will continue to support the Warfighter in support of the Global War on Terror. From its inception some seven years ago, with only three device types and approximately 150 devices, to the present number, it's easy to understand that the JBFT MMC will be around for the long haul. We believe in the people we serve and understand our mission and role and WILL continue to be a part of the USASMDC/ARSTRAT mission to help "Secure the High Ground."


We are
Soldiers
Space and Missile Defens

7 Army Valu

Personal Courage

Our ability to face fear, danger, or adversity, both physical and moral courage.

Selfless Service

Put the welfare of the nation, the Army, and your subordinates before your own. Selfless service leads to organizational teamwork and encompasses discipline, self-control and faith in the system.

Integrity

Do what is right, legally and morally. Be willing to do what is right even when no one is looking. It is our "moral compass" an inner voice.

Honor

Live up to all the Army values

Respect

Rely upon the golden rule. How we consider others reflects upon each of us, both personally and as a professional organization.

Loyalty

Bear true faith and allegiance to the U.S. constitution, the Army, and other Soldiers. Be loyal to the nation and its heritage.

Duty

Fulfill your obligations. Accept responsibility for your own actions and those entrusted to your care. Find opportunities to improve oneself for the good of the group.

FA40

SPACE PROFESSIONAL 0-5 AND BELOW FORUM

BY LTC VICTORIA MIRALDA

During the 2008 FA40 Space Operations Symposium there was a session conducted to discuss current issues and concerns for leadership awareness or intervention. BG (Ret) Steve Ferrell led the forum discussion as an independent observer to encourage openness and candor from the attendees. The purpose of this article is to share with the larger community some of the top concerns and discussion points and to lay a foundation for further discussions and functional area growth as appropriate.

Then - COL Kurt S. Story, Deputy Commanding General for Operations, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command, gives remarks during the 2008 FA40 Space Operations Symposium. *Photo by DJ Montoya*

A summary of the top issues identified as a result of the two-and-a-half hour forum follows:

1. There is a compelling need for a "knowledge manager" for Space information and resources to enable community-wide collaboration.

2. In conjunction with a "knowledge manager," the community requires Web-enabled portals at For Official Use Only and classified levels with capability for Space Professionals to share lessons learned, Contingency Operations, Tactics, Techniques and Procedures, and to communicate current issues.

3. A message for senior Army leaders is that we need more opportunities to train and manage operational expectations of Space-enabled effects and capabilities.

4. Functional Area 40 (FA40) placements at key organizations to impact policy, decisions, and capabilities from strategic to tactical levels remains a challenge worthy of renewed assessment.

5. Noncommissioned Officer and Warrant Officer career progression and training opportunities need additional development and formalization.

6. Reserve Soldier career paths need greater definition and formalization to retain quality Soldiers and provide progression opportunities.

7. Proposal to assess recoding U.S. Strategic Command 01A positions as FA40s.

Attendees of the 2008 Space Operations Symposium listen intently to issues presented during the conference. *Photo by DJ Montoya*

Knowledge Manager

The requirement for a knowledge manager is centered on the fact that networking and information sharing across the Army Space community is not standardized and leads to a loss of collaboration benefits to support Space missions. This position and associated duties is vital to the growth of the community's professional expertise and dissemination of mission related information. There is a clear need for a professional focal point for resources. It is reasonable for U.S. Army Space and Missile Defense Command/Army Forces Strategic Command, as the Army's designated proponent for Space, to lead this effort and resource it appropriately.

Collaboration Portal

The lack of a Space collaboration and resource portal impedes the ability of FA40s (particularly Space Support Elements and Army Space Support Teams), as well as other operational Space elements, from sharing and building upon best practices. Continuity of information during personnel transitions and the ability to post or pull current Space-related policies and doctrine also suffers from the lack of a common information sharing resource that is Web-enabled and accessible with differing levels of security. There was consensus that Army Knowledge Online-Secret (AKO-S) is a viable option to start this effort based upon its ease of access and manageability. In addition, an ability to alert members via a distribution list to provide key updates or news was considered an important feature. MAJ Joe Guzman has already initiated an informal Space Operations Officer Collaboration site on AKO-S and the Future Warfare Center's Directorate of Combat Development has training references available at their portal on SIPRNET. Command sponsorship of a common portal with a dedicated manager to maintain this focal point is a desired end state to formalize this capability and further empower the community.

Senior Leader Space Training

Despite advances in our cadre training, it was the consensus of the group that senior operational leaders would benefit from operationally focused Space capabilities training and education. The purpose includes developing the expectations of Space professionals and ensures they advocate integrating them into battle staff processes. For example, as a commander or S-3 becomes more understanding to request Space assessments or Space-enabled products, the ability of the FA40 to integrate and provide relevant and responsive support is greatly enhanced. The commander's personal interest can often be the impetus needed to ensure Space professionals are leveraged to work Space issues and requirements versus non-Space related tasks. Senior FA40s offered to the group that while leader training will help, it remains the FA40s' individual responsibility to properly engage and contribute at key planning and execution times to establish credibility and demonstrate value-added. Discussion also included the perspective that without senior leader education the Space community remains routinely challenged to offer a full range of expertise.

FA40 Placement

The consensus of attendees included the issue of improving FA40 officer placement at key nodes of influence in the Army and Joint community. The concept of Key Developmental positions was explored; however, to establish them at this stage lacked clear value given the uniqueness of various positions and their associated scope of impact to Space operations. While most FA40s felt Joint assignments at combatant commands were of tremendous benefit to learn the operational level of warfighting, they also agreed

1st Space Battalion CSM James Ross speaks with other attendees at the 2008 FA40 Space Operations Symposium. *Photo by DJ Montoya*

FA40 placements are a delicate balancing act between strategic and operational areas (e.g. policy and capabilities development) and the importance of supporting tactical operations. A blend of experiences from tactical to strategic levels seems to provide the best foundation for an FA40 Officer, although that goal is limited by a perceived shortfall in the number of Space professionals available. Given this environment, some felt strongly that allocation of Space professionals should not be treated with a handwave "coordinate and integrate" but be based upon hard task analysis prior to utilization in a particular position. When LTG Kevin T. Campbell, commanding general, USASMDC/ARSTRAT was asked about FA40 placement and career management, his advice was that our progression would continue to be shaped and influenced by developmental experiences because no one school can completely prepare an FA40 Officer.

NCO and Warrant Officer Career Progression

A key shortfall identified is that we need a path and plan to keep our total community of professionals in the Army contributing to the mission. Currently, there is a perception that Soldiers with Space expertise cannot go back to their basic branches and serve without disadvantage. However, staying in Space related positions is not always feasible despite critical skills that are in high demand and time consuming to train. The forum collectively felt we owe the Noncommissioned Officer and Warrant Officer Corps a Space Professional path and sufficient opportunities for education and advancement. If we do not nourish this backbone of our community we jeopardize our ability to recruit and retain the best. One comment was that the Noncommissioned Officers are "getting scraps" when it comes to educational opportunities. All agreed this must change with Space Cadre coded positions and Key Developmental positions for our Soldiers. All Noncommissioned Officers would attend formal classes as part of skills certification. During the forum wrap-up, the Deputy Commanding General for Operations, then-COL Kurt S. Story advised the group that as we achieve Phase III of the Cadre Implementation Plan, we can truly shape the training requirements. The commanding general advised that while the gap needed to be fixed we also had an obligation to return these Soldiers to their basic branches.

Reserve Soldier Career Paths

One FA40 officer asked for the command to assess developing a career path and progression opportunities for Reserve Soldiers and a potential future Reserve element in Huntsville, Ala. The idea was accepted as important to further assess. Finally, there was a suggestion to assess 01A slots, particularly at U.S. Strategic Command, and determine if they could be coded for FA40s.

The forum was well attended and the issues were explored openly in a non-attribution environment. To ensure the issues are truly addressed, the command leadership is tracking most of these issues and suggestions as staff taskings for follow-up assessment and reporting. The FA40 community anticipates an equally productive session for the next conference and feedback on these long term actions to improve our ability to collectively contribute to our supported organizations missions. Be sure to be there!

Got S_pace?

www.smdc-armyforces.army.mil/ASJ

e-mail: space.journal@us.army.mil

Tip of the Sphere

FA40 Proponent/ Army Space Cadre News

BY LTC CHRISTOPHER A. LIVINGSTONE

LTC Christopher Livingstone is an FA40 Space Operations Officer dual-hatted as the Chief, FA40 Personnel Proponent Office and Chief, Army Space Cadre Office. Livingstone previously served with the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command in the 1st Space Battalion. He also served as an Ordnance Officer in the 1st Infantry Division, 1st Armor Division, 1st Cavalry Division, and First U.S. Army prior to entering the Space Operations Career Field in 2003.

Phone: (719) 554-8753;
Fax 8764; DSN 692

FROM LEFT TO RIGHT: WO1 Don Dickerson, MAJ Paul Fritz, CPT William Hamilton, MAJ Dillard Young, CPT Brian Barnes, LTC Patrick Lozier, LTC Jeffery Cushing, MAJ Mathew Tully, MAJ Jeffrey Kacala, CPT Kenneth Nickerson, CPT Elizabeth Helland, CPT Everetta Davis, MAJ Cooper Bowden, CPT Dirk Crawford, CPT Mark Cobos, CPT Wesley White, COL Kurt Story, MAJ Jeffrey Lakey, LTCOL Scott Touney, MAJ Larry Kimbrell, CPT Donald Brooks, CPT Scott Mudge, MAJ Troy Wincapaw, CPT Walter Frazier, CPT Robert Flores, CPT Steven Paulk. Missing: CPT Steven Elisha, LTC Mark Patterson, MAJ David Settje

Space Operations Officer Qualification Course 08-02

Army Space Cadre Update

Our year long effort on a second data call is finally coming to an end. The Army 1-2 Star Space Council is recommending approval of the 507 identified Space Cadre billets to the Army G3/5/7. The second data call culminates with two key outcomes: all billets with a 3Y (Space Activities) Skill Identifier and all 25S billets with a 1C (Satellite Systems/Network Coordinator) Additional Skill Identifier will be coded as Space Enabler billets. Our goal to establish templates for standardization of the Space Cadre across the Army's force structure was partially obtained at the Division, Corps and Army Service Component Command level. In the future, as the Space Cadre matures and force structure changes slow down, we will relook the templates.

Our next step is to gain U.S. Army Human Resources Command approval of a Skill Identifier for award to qualifying military Space Enablers and initiate a subsequent data call to identify additional civilian Space Enablers. We currently envision a self-nomination process for civilians.

In conjunction with the identification of additional Space Cadre billets, we completed and staffed an Army Space Cadre Implementation Plan which lays out the way ahead. The desired end state of the Implementation Plan is to have an identified cadre of Space expertise within the Army in sufficient quantities, and with the appropriate skills and experience to meet the Army's needs and fill Space requirements, acquisition and operations positions. At this time, there is no directed quantity of Space Cadre members within the Army. In the end state, as authorization documents change, Space Enabler billets are identified and coded in the documentation process based on approved templates and subsequent document reviews.

Once an individual is assigned to a Space Enabler billet, that individual may seek additional training based on the specific requirements of that billet. When that individual has met an established level of proficiency (training, education, experience), they may request award of a Space Skill Identifier through the Army Space Cadre Office. Additionally, as their level of proficiency increases, they may apply for award of the Air Force Space Badge in accordance with current established procedures. The Skill Identifier and level of badge certification could serve to identify Soldiers for potential repetitive assignments within Space related fields as determined by Human Resources Command and Proponents. Assignments will continue to be based on needs of the Army and on established career tracks as defined by Human Resources Command and Proponents. The Space Enabler training recommended by U.S. Army Space and Missile Defense Command/Army Forces Strategic Command in coordination with Functional Proponents, may consist of or be achieved through a combination of online training, mobile training teams, school attendance, military occupational specialty training, or on-the-job experience. The Army Space Cadre Office will manage the award of a Space Skill Identifier and award of the Air Force Space Badge. Once coded in the Human Resources Command personnel system, the Skill Identifier will be used by the Army Space Cadre Office to track statistical information for metrics reporting. The Army Space Cadre Office will not manage Space Enablers in any regard nor have involvement in the assignment process.

ASCO

USASMDC/ARSTRAT
Army Space Cadre Office
ATTN: SMDC-OPZ-FB
350 Vandenberg Street
Peterson Air Force
Base, CO 80914
POCs: Greg Piper and
Jim Schlichting

(719) 554-0455/0456;
Fax 0451; DSN 692

FA40 PPO

USASMDC/ARSTRAT
FA40 Personnel Proponent Office
ATTN: SMDC-OPZ-FA
350 Vandenberg Street
Peterson Air Force
Base, CO 80914
POCs: Mike Connolly
and Jerry Pepin

(719) 554-0452 / 0458;
Fax 0451; DSN 692

Promotions

Congratulations to BG Kurt S. Story on his recent promotion.

Congratulations to LTC Gary Arnold, LTC Stephen Benavides and LTC James Meisinger on their selection for promotion to Colonel.

Congratulations to the following Functional Area 40 officers on their recent promotion:

LTC Clifford Hodges – Dec. 1
LTC Kevin Laughlin – Nov. 1
LTC Jacqueline Patten – Aug. 1
LTC John Price – Nov. 1
LTC Jerome Shay – Oct. 1

MAJ Tammy Aguilar – Dec. 1
MAJ Michael Bancroft – Nov. 1
MAJ Thomas Bloomfield – Dec. 1
MAJ Todd Book – Nov. 1
MAJ Charles Hayes – Dec. 1
MAJ Eric Marion – Nov. 1
MAJ John Marley – Dec. 1
MAJ Dennis Slaton – Dec. 1

SPACE 300 COURSE

We manage all Army allocations for Space 300. The Proponent Point of Contact is Jerry Pepin at 719-554-0457, Gerald.pepin@smdc-cs.army.mil. Space 300 is a 15-day capstone course for Space professional development at the National Security Space Institute in Colorado Springs, Colo. This course is for Space professionals approaching senior positions (13-15 year point in their military career). It is a thinker's course, primarily using guided discussion techniques to teach tomorrow's Space leaders to solve problems of Space bearing on national security.

Graduates will be able to:

- Provide expertise on and advocate for national-level agency, Department of Defense and Service Space-related policy, strategy, doctrine, operations, acquisition and international and domestic law.
- Critically analyze key operational and acquisition events in a Space system's lifetime and their respective interactions with the operator, user and acquirer.
- Provide Space operations and acquisition expertise at the strategic and operational levels of terrestrial operations, enabling the best-integrated Space support to the Warfighter.

Are you eligible to attend? The minimum requirements to attend this course are:

- Must be a Field Grade Officer, E-7 or higher, or Warrant Officer
- Must have a Top Secret clearance
- Completed Space Operations Officer Qualification Course (SOOQC) or Space 200
- Must have at least one Army Space coded assignment (FA40, 3Y, 1C, etc.)
- Must be an ILE Graduate (Officers).

We normally will not send you if you have approved or submitted retirement orders or are in a student status.

Every year in the July/August time frame, we rack and stack all qualified Functional Area 40 officers into an order of merit listing using that year's priorities. The listing is what we will use to fill classes during the next year. We handle non-FA40s on a case-by-case basis. If you are not an FA40, submit your request to us. Requests should include documentation that the above requirements have been met.

There is always confusion over funding. The FA40 Proponency Office does not fund Space 300 attendance. All temporary duty stations (TDY) are paid through assigned units or through Military Training Specific Allotment in conjunction with a Permanent Change of Station (TDY enroute). Therefore, if selected ensure your unit can support.

Once you graduate from Space 300, you may qualify for the Master Air Force Space Badge … if you meet the experience requirements. You may also get college credit for attending. The American Council on Education recommends credit for three semester hours in the graduate degree category for Space Acquisition and Integration. Contact your school to see if they will honor this recommendation.

++++++++++++

Air Force Space Badge (AFSB) — Processing Procedures

Bob Kyniston recently moved to the Functional Area 40 Personnel Proponent Office and Army Space Cadre Office where he assumed responsibility for managing the process for award of the Air Force Space Badge to Army personnel – among many other tasks. Mr. Kyniston is no stranger to U.S. Army Space and Missile Defense Command/Army Forces Strategic Command or the FA40 community. He came to the Personnel Proponent Office from the USASMDC/ARSTRAT G1 where he was the Plans and Operations Officer. Prior to that assignment, he was the Enlisted Strength Manager for the command and before that, the Battalion S1 for the 1st Space Battalion. Mr. Kyniston has over 30 years in the Army personnel management business and over 10 years with USASMDC/ARSTRAT. He brings a wealth of knowledge, experience, and a strong work ethic to our team. For information, assistance, or discussion regarding the Air Force Space Badge, please contact Mr. Kyniston at (719) 554-0459 or DSN 692-0459. Submit all requests for award of the Air Force Space Badge to Mr. Kyniston on a DA Form 4187, routed through the first lieutenant colonel in the chain of command, with supporting documentation attached (i.e., Enlisted or Officer Record Brief, evaluation reports, Personnel Qualification Record, etc.). Scan and e-mail requests to space.cadre@smdc-cs.army.mil or robert.kyniston@smdc-cs.army.mil. Requests can also be faxed to (719) 554-0451 or DSN 692-0451. The majority of Air Force Space Badge requests received over the last month were complete and accurate; however, of those received that were incomplete, some were missing supporting documentation and some were missing signatures from either the requesting Soldier or first lieutenant colonel in the chain of command. Please ensure all Air Force Space Badge requests are signed and submitted with accurate information and supporting documentation to ensure timely processing of the request.

Tip of the Sphere

Training Insights

BY LARRY MIZE

Larry Mize graduated from Xavier University with a Bachelor of Science in Mathematics in 1973. He entered active service in the United States Navy serving a career specializing in Naval Intelligence, Aircraft Carrier Operations, Naval Special Warfare (SEALs), and Space Operations. He attended French language training at the Defense Language Institute and Subsequently served as the U.S. Navy Liaison Officer to the Commander French Forces Indian Ocean/French Foreign Legion/Commandos Marine in Djibouti. He attended Naval Postgraduate School and was awarded a Master of Science in Space Systems in 1986, subsequently serving at U.S. Space Command and U.S. Strategic Command. Mize is currently Chief of Space and Ground-based Midcourse Defense Education Training.

larry.mize@smdc-cs.army.mil
(719) 554-4545

JTAGS Individual Qualification Course Commandant, CW3 Jeffrey Sprague presents a photo to the new JTAGS - Europe, Alpha Detachment Commander, CPT Keith Woodburn. *Photo by DJ Montoya*

FA40

In 2001 when U.S. Army Space and Missile Defense Command's Future Warfare Center DCD institutional training commenced it did so with one course, the Functional Area 40 Space Operations Officer Qualification Course (SOOQC 01-01) with a total of fourteen students. I often refer to the early years as DCD's "One Room School House" period. Since then, fifteen classes have graduated 322 students to include core FA40 students, and U.S. Air Force, U.S. Marine Corps, Reserve Component, National Guard, officer, warrant officer and noncommissioned officer students from E-5 to O-6.

The Space Operations Officer Qualification Course training went from seven weeks initially to now 10 weeks. Within this 10 weeks of instruction, students benefit from attending the National Security Space Institute (NSSI) Space 200 course, receive special programs training associated with special technical operations, endure the rigors of being exposed to and tested in those tactics, techniques and procedures developed through nearly eight years of Space operations support to combat operations, and lastly enjoy a more relaxed learning experience with field experience trips to the west coast (Joint Space Operations Command, Joint Functional Component Command-Space, 14th Air Force, SMC, Boeing and Northrop Grumman) and Washington, D.C. area Space organizations.

Infrastructure investments were made in 2003 with the construction of the DCD Sensitive Compartmented Information Facility classroom, 2005-8 with staff additions, and major information technology improvements in 2008. The "One Room School House" now looks mighty state-of-the-art. Student class sizes are now up to 28 versus the 14 in 2001 with the original 01-01 class.

JTAGS

Through a 1st Space Brigade commander and Director, Directorate of Combat Development signed memorandum of agreement effective May 1, 2008, DCD assumed the institutional training responsibility for the Joint Tactical Ground Station (JTAGS) Operator Individual Qualification Training Course – a perfect fit for the command's institutional trainers vice an operational brigade. Capitalizing on an already quality training program established by the 1st Space Brigade, DCD in its partnership with the brigade is furthering this legacy. A Brigade warrant officer and a DCD Department of Army civilian training developer serve as course managers, brigade noncommissioned officers serve as instructors and provide logistics support, and U.S. Navy and DCD contractors augment Individual Qualification Training operations. Most noteworthy is the recent addition of two DCD temporary duty assigned noncommissioned officers to the JTAGS Individual Qualification Training Team (proof positive that the manpower survey accomplished in 2005 paid dividends). In December, after graduating the sixth 2008 course (38 JTAGS Operators graduated in 2008), a major information technology capital improvement project was undertaken to move JTAGS training course operations from a paper environment to a paperless/online network. No longer will lessons, tech manuals, tests, etc., be printed. All training development and instruction will reside on a close internal network with students having their own docking port, all supported by an internal local area network. For the JTAGS shelter, three permanently emplaced new commercial 12-meter dishes will be installed this month as well as software P3I updates.

Tactical Space Operations and Space Operating System SOS

Given the normal permanent change of station cycle of our tactical Space forces, the Directorate of Combat Development (DCD) supported a variety of training and leadership education efforts for ten new Space Support Element Teams this past year (three "first generation" teams and seven "second" or "third" generation teams – 82nd Airborne, 1st Infantry Division, 1st Cavalry Division, 1st Armored Division, 2nd Infantry Division, 3rd Infantry Division, 10th Mountain, 25th Infantry Division, 40th Infantry Division, 42nd Infantry Division). Throughout 2008, DCD continued supporting these new Space Support Element teams through the Battle Command Training Program by providing onsite Observer-Trainer support to four Division level Mission Rehearsal Exercises [1st Cavalry Division, 25th Infantry Division, 2nd Infantry Division, 10th Mountain Division] and one Corps level Mission Rehearsal Exercise (1st Corps). In preparing our Space Soldiers for these Mission Rehearsal Exercises, the DCD training conducted seven Tactical Space Operations Courses, six in Colorado Springs, Colo., and one mobile Tactical Space Operations Course at Fort Drum, N.Y. This 40-hour course provides training to deploying Army Space Support Teams and Space Support Elements on Space operations Tactics, Techniques and Procedures in the Central Command Theater. In the second half of 2008, DCD training also provided Space operations Observer/Trainer support for two Army Central Command (3rd Army) Exercises in Kuwait as they prepared their newly forming command posts for combat deployments.

Leadership development/education efforts in 2008 included one Training Assistance Visit to the 34th Infantry Division (Minnesota Army National Guard) when DCD trainers met with each staff section and the command group of the 34th to brief them on Space Support Element support and Space operations in the Central Command Theater. Over the NIPRNET, DCD compiled and released 32 High Ground Newsletters, each containing multiple Space-related items, articles, documents and issues for the benefit of tactical Space operations and those who provide this support. Much of the information on the latest Space tactics, techniques and procedures issues, and emerging Space capabilities which is incorporated into our Tactical Space Operations Courses, Mission Rehearsal Exercises Master Scenario Events Lists, leadership education briefs and High Ground Newsletters, is derived from the multiple "debriefings" of Army Space Soldiers once they have redeployed. These debriefings conducted by DCD, investigate, capture and document the latest Space-related issues, lessons, gaps and recommendations on how to better develop our Space Soldiers and deliver relevant Space support to the ongoing and ever-changing wartime requirements.

Complementing these successes was the formal transition of SOS Space analytical tool/software applications training from the Future Warfare Center Battle Lab to DCD. Effective Sept. 1, 2008, DCD now pulls under its institutional training umbrella another course — the SOS training that supports Space Support Element, Army Space Support Team and Commercial Exploitation Team Space warriors. As with other courses, improvements were made to facilities and the Battle Lab continues to support with technology upgrades to hardware and software.

Army Space Cadre

The 2008 Summer Edition Vol. 7, No. 3 provides the most recent update to available online resources for professional development of the Army Space Cadre. In 2008, the National Security Space Institute was able to develop and pilot the first iteration of an online distance learning Space Fundamentals Course. DCD will continue to update this initiative and publish information on how to register for this course as soon as the National Security Space Institute goes to full implementation. For those organizations that prefer residence Space training, the two-week National Security Space Institute residence Space Fundamentals Course is available. However, to mitigate temporary duty station costs, the Future Warfare Center DCD does have a mobile 40-hour Army Space Cadre Basic Course that can be taken by requesting customers. Over 200 hundred Army Space Cadre members have taken advantage of this home station Space training twice at Redstone Arsenal, Ala., and at Colorado Springs, Colo., and Fort Monroe, Va. Feel free to contact DCD if this training option is of interest.

Space and GMD: Collective

In addition to the institutionalized courses described above, is the critical training done with the development, writing and fielding of collective training products that directly support 1st Space Brigade, 100th Missile Defense Brigade and assigned Battalions. The Directorate of Combat Development training developers and subject matter experts author Mission Training Plans and Crew Drills that facilitate Brigade and Battalion training. They also perform courseware training development associated with fielding Training Development Plans, Target Audience Descriptions, mission/job analysis Total Task Inventory Lists, and Student Evaluation Plans. One of the last processes prior to course design is development of course critical tasks and conducting the formal process of a Critical Task Selection Board which sets the program of instruction, tasks, conditions, standards and learning objectives. Every course discussed above benefits from this formal Army Systems Approach to Training methodology.

Army Proponent Schools and Joint

Recurring Space education and leader development continues in support of the greater Army. Quarterly, Directorate of Combat Development trainers support the:

- U.S. Army Intelligence Center and School with instruction in the Captains Career Course, Pre-Command Course, Imagery Intelligence, Signal Intelligence and Strategic Intelligence Courses.

- U.S. Army Fires Center of Excellence and Fort Sill, Okla., in the Joint Operations Fires and Effects Course and the Army Operational Electronic Warfare Course. For the future, DCD looks to integrate into the new Functional Area 29 Electronic Operations Officer Qualification Course and the Fires Center of Excellence Pre-Command Course.

- Joint Special Operations University.

- Army War College.

Through a resident DCD Space professional Department of Army civilian educator assigned to the Command and General Staff College, onsite daily Space education is provided to Fort Leavenworth, Ky., the Combined Arms Center, and Command and General Staff College schools. Core to this is the direct support of the third most sought after elective of the Command and General Staff Officers Course – "A537 Space Orientation" and "A543, Space Operations." Completion of A537 and A543 meet the requirement for the 3Y Additional Skill Identifier "Space Activities." Further educational support is provided to Command and General Staff College Masters of Military Arts and Sciences program, Advanced Operational Arts Studies Fellowship program, as well as the School of Advanced Military Studies.

Continuing into its seventh year is the strong partnership DCD has established with the U.S. Air Force National Security Space Institute. Two Future Warfare Center DCD Functional Area 40 lieutenant colonels are assigned full time in-residence to the National Security Space Institute and in the fall of 2008, U.S. Army Space and Missile Defense Command assigned Army COL Michelle Putko to the National Security Space Institute where she serves as Dean. National Security Space Institute Space 200 and Space 300 courses are the cornerstones of this partnership and directly contribute to life long learning and professional development of Functional Area 40s. The Institute's other course offering as discussed above supports Army Space Cadre education and training. In-depth professional development and education in select mission areas are also accorded to Army Space professionals through attendance at the:

- Missile Warning and Defense Advanced Course

- Advanced Orbital Mechanics Course

- Satellite Communications Advanced Course

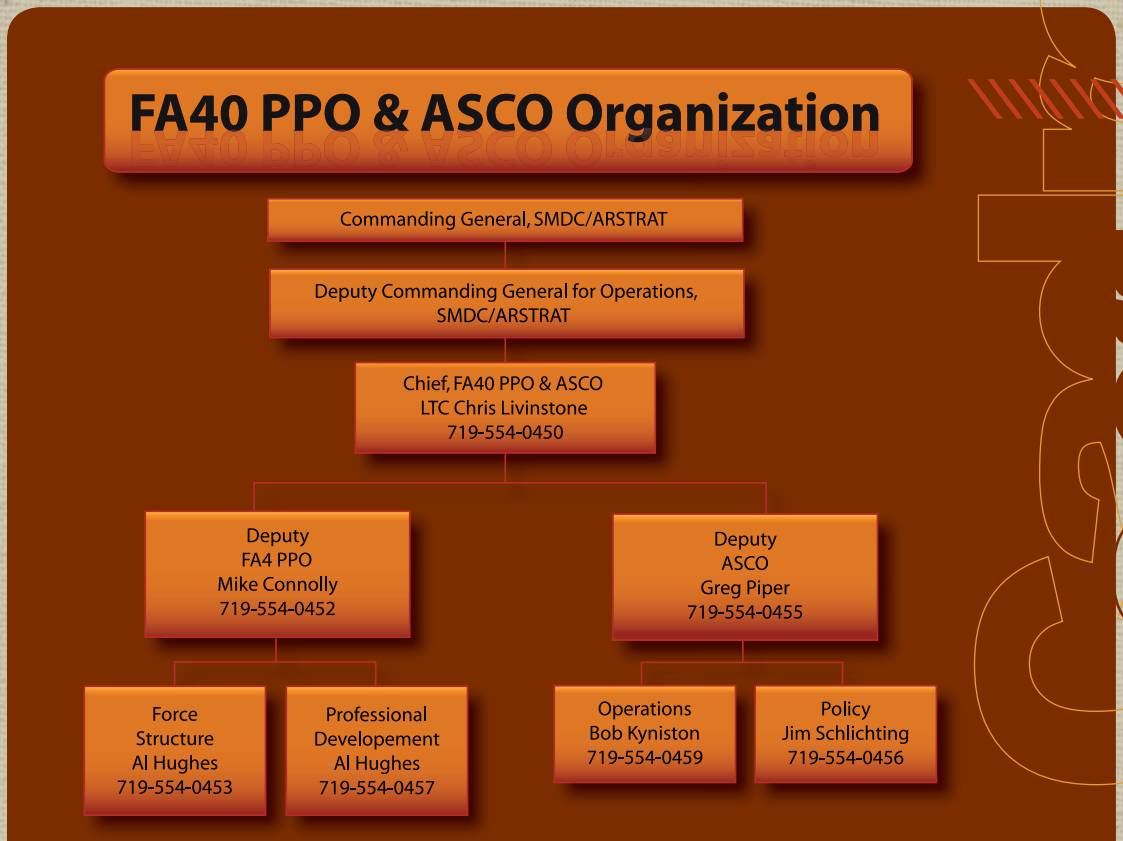
- Director of Space Forces Course

Ground-based Midcourse Defense GMD

Operators and AN/TPY-2 Sensor Managers

In 2003, formal Ground-based Midcourse Defense (GMD) institutional training commenced with the first of 14 GMD Operator Courses. Since then, 184 Active Component, Reserve Component, National Guard Army, U.S. Navy, and U.S. Air Force officer, warrant officer and noncommissioned officer students have graduated. After two years of analysis and development, Directorate of Combat Development (DCD) formalized its newest course, the AN/TPY-2 (FBM) Sensor Manager Qualification Course. With the pilot in the spring of 2008, four classes have graduated thirty-eight officer and noncommissioned officer Army, U.S. Air Force, and U.S. Navy students from U.S. Pacific Command and U.S. European Command Aerospace Operations Centers and the 94th Army Air and Missile Defense Command.

In the similar best-business-practice partnership between DCD and National Security Space Institute for Space education and training, GMD training leverages the same synergies with a DCD-Missile Defense Agency partnership. GMD Operator Courses are conducted at the GMD Training and Exercise Center, a Missile Defense Agency operated facility. Formalized through a Missile Defense Agency and Future Warfare Center signed agreement on Mar. 1, 2008, the initial step at transitioning GMD training from the Missile Defense Agency to DCD was established. DCD was designated the GMD Operator Course Manager with bilateral responsibilities codified. In the same regard, DCD has received paralleled support from the Missile Defense Agency as it develops and matures the Sensor Manager Qualification Course.



GERMANY PROFICIENCY FOR CHARLIE COMPANY SOLDIERS

Charlie Company, 53rd Signal Battalion

LANDSTUHL, Germany — On Sept. 10, three Control Warriors from Charlie Company, 53rd Signal Battalion tested their skills on several German weapon systems. CPT Pedro Sanabria, Charlie Company Commander, SSG Corey Wilson and SGT Guy Jackson were invited along with several Soldiers from the 21st Theater Support Command to compete for the prestigious German Schützenschnur on a German rifle range just outside the city of Kastellaun, Germany. The Control Warriors were tested on their marksmanship skills on the German P8 9mm pistol, the MG 3v 7.62mm machine gun, and the German service rifle (G36 / G3). The Schützenschnur is the German weapons qualification badge which is close to the U.S. Army weapons qualifications badge. The training event, which is an important partnership program, provides the Soldiers the opportunity to earn a foreign award such as the German's Marksmanship Badge and create a greater bond with their German Military partners.

The Schützenschnur is a silver colored rope with a round metal badge on a flat end near the top of the rope. The center of the badge displays the German eagle surrounded by a wreath of oak leaves, which is a symbol of the Bundeswehr, the Armed Forces of the Federal Republic of Germany.

"The history of the qualification badge is more than 150 years old," said Lt. Col. Michael Dörr, a German liaison officer with the 21st Theater Support Command. "Even though the name has changed several times, the importance of having a weapons qualification to test the proficiency of your Soldiers weaponry skills is very important." Wilson and Jackson earned a Bronze badge while Sanabria earned Gold.

FROM LEFT TO RIGHT: CPT Pedro Sanabria, Charlie Company, 53rd Signal Battalion commander, SSG Corey Wilson and SGT Guy Jackson proudly display their Schützenschnur awards, the German Marksmanship Badge which is similar to the U.S. Army weapons qualifications badge. *Photo by SSG Brandon Hayman*

NO STRANGER TO COMMAND

Next Commander of 100th Missile Defense Brigade (GMD) chosen

By MAJ Laura Kenney, 100th MDB PAO

PRICE ANNOUNCED AS NEXT COMMANDER FOR 1ST SPACE BATTALION

By Sharon L. Hartman

PETERSON AIR FORCE BASE, Colo. — An Army Command Selection Board named a former company commander within the 1st Space Battalion as the battalion's next commander. LTC J. Dave Price, currently the Joint Senior Space Duty Officer and Chief of Special Technical Operations, J39 Division, Joint Functional Component Command – Space, will replace current Battalion Commander, LTC Tom James some time next summer.

"I am honored, excited and humbled at the opportunity to serve in the 1st Space Battalion," said Price.

"From STRATCOM and JFCC SPACE, I have heard only glowing remarks about the unit and the Soldiers of the 1st Space Battalion and their exemplary and critical support to the Joint Space mission area. My family and I are looking forward to being a part of this experience and to serve with and for the unit once again."

Price entered the Army in 1985 and served three years on Active Duty. In 1990, he was commissioned a second lieutenant in the Oklahoma Army National Guard. He graduated from the University of Oklahoma the following year and returned to Active Duty in 1992. Price has served in assignments in Kentucky, Texas, Oklahoma and Bosnia, and deployed to Iraq with the 3rd Armored Cavalry Regiment out of Fort Carson, Colo. He served as the 1st Space Battalion's 1st Space Company (Theater Missile Warning) commander from May 2004 - May 2006.

Price graduated from the following Space courses: Space 200, Space 300, Space Operations Officer Qualification Course (FA 40), Space in the Air Operations Center Course and the Inter-service Space Intelligence Operators Course.

The 1st Space Battalion provides Space Support to combatant commanders in the form of Space-based capabilities to include Space Imagery, Space Weather and Early Missile Warning.

James' follow on assignment has yet to be determined.

COL Timothy Coffin, Joint Functional Component Command – Space, J3, administers the oath of office to LTC J Dave Price, Joint Senior Space Duty Officer and Chief of Special Technical Operations, J39 Division, Joint Functional Component Command – Space.

LTC J. Dave Price stands with his wife Linaye and daughters Nikita (12) and Mattie (8) after his recent promotion. *Photos courtesy of COL Timothy Coffin, Joint Functional Component Command – Space, J3*

COLORADO SPRINGS, Colo. — LTC Gregory Bowen has been selected as the next commander of the nation's only missile defense brigade and is due to replace the current commander, COL Michael Yowell, May 15 of next year.

Bowen is uniquely suited to lead the 100th Missile Defense Brigade (Ground-based Midcourse Defense) headquartered here since he has been with the unit from its very beginnings. He was the first commander of the system's battalion, based in Alaska, and helped to build that unit, the 49th Missile Defense Battalion, from the ground up.

One of the first of the now growing field of Space Operations Officers, Bowen was born in Colorado but grew up in North Dakota, joining the National Guard there. An Air Defense Artillery officer, he became involved in the burgeoning Space area of operations with a move to Colorado Springs in the year 2000.

The ground-breaking ceremony for the missile defense complex at Fort Greely, Alaska was held in June 2002, and the unit was formally activated in January 2004. Bowen commanded the battalion from May of 03 to May of 06, overseeing the emplacements of the first interceptors to guard the nation against ballistic missile attack.

"I am deeply honored and humbled to have been selected as the next commander of the 100th Missile Defense Brigade. After spending most of the past ten years working on strategic missile defense, this assignment will allow me to continue contributing to a mission area that I believe is very important to this nation. I am looking forward to working directly with Soldiers again, as well as with the staff at U.S. Space and Missile Defense Command, Northern Command and the Colorado and Alaska Army National Guard," said Bowen.

VIRTUAL PROMOTION

By DJ Montoya

Photo by DJ Montoya

PETERSON Air Force Base, Colo. – 1st Space Battalion has taken the 21st Century approach of conducting a traditional promotion board via video teleconferencing (VTC.) Seen here is a VTC promotion board, conducted for the first time in the newly outfitted 1st Space Battalion Conference Room at the U.S. Army Space and Missile Defense Command / Army Forces Strategic Command Operations building on Peterson Air Force Base, Colo., during the afternoon of Oct. 24. SSG Stephanie Weber of the battalion brought up on a high definition screen candidates SPC Michael Moore and SPC Jerry Wardlaw, two Joint Tactical Ground Station operators from Headquarters, D Detachment, 1st Space Company, Misawa Air Force Base, Japan. The two Soldiers faced tough questions from board members seen at the table (left to right) SFC Erik Johnson, SGM William Baker and SFC Dustin Swinney.

"Because the battalion is globally dispersed, VTC is the perfect venue to conduct NCO and Soldier of the Quarter Boards too," said 1st Space Battalion CSM James Ross.

"This technology opens up the opportunity to compete for our Soldiers who are stationed in Germany, Korea, Japan, and CENTCOM."

Ross also stated that the battalion has been conducting this type of promotion board in other conference rooms throughout the building utilizing VTC technology with other outlying locations worldwide for the past eight to ten months.

CUSTOMER SUPPORT PRIORITY FOR 53RD SIGNAL BATTALION

By Sharon L. Hartman

Photo by DJ Montoya

Air Force Lt. Col. Peter J. Flores, Deputy Chief, Combat Operations Division, JFCC-Space, speaks at the 53rd Signal Battalion Operations Conference, which was conducted at the ITT and ARINC facilities, and the Global SATCOM Support Center, Oct. 15-21. *Photo by DJ Montoya*

COLORADO SPRINGS, Colo. — Key players and policy makers from the Satellite Communications community were invited to the 53rd Signal Battalion's annual Operations Conference Oct. 15-21. The event, conducted at the ITT and ARINC facilities and the Global SATCOM Support Center, allowed attendees to discuss and review current policies, as well as look at the road map for the upcoming Wideband Global Satellite activations.

According to SFC Robert Lewis, 53rd Signal Battalion Operations Noncommissioned Officer and facilitator for the conference, the occasion was an opportunity to focus on improving the battalion's customer support to the SATCOM community.

SSG Kenneth Merritt and SSG Jason Burnett (left to right) received a Joint Service Achievement Medal for actions during Operations Enduring Freedom IX and became the first Division-level Space support NCOs to earn the U.S. Air Force Space Badge. *Courtesy Photo*

EAGLE SPACE NCOS

By MAJ Andrew D. Hittner, USA, CJTF-101 Knowledge Management Officer

On Sept. 11, 2008, the 101st Airborne Division (Air Assault) presented the first two division-level Non-Commissioned Officers with the United States Air Force Space Badge. The ceremony occurred at the Joint Operations Center for Combined Joint Task Force–101, Bagram, Afghanistan and represented the evolving mission of the 101st Space Support Element and Army Space forces.

Staff Sergeants Kenneth Merritt and Jason Burnett were Screaming Eagles for two combat deployments, both times supporting the 101st Space Support Element (CJ3 Space and Special Technical Operations). They saw divisional Space support change from the Operation Iraqi Freedom IV, where their mission was to operate and maintain the Space Application Technology User Reach back Node (SATURN) and Space Operations Systems. Now both Soldiers support the mission in Afghanistan for Operation Enduring Freedom IX. In order to keep up with the growing demand of Space technology proficiency, both SSG Merritt and SSG Burnett completed numerous Space courses, and dedicated themselves to expanding their education beyond the basic duty requirements within their Military Occupational Speciality. SSG Merritt's previous Army experiences as an artilleryman and SSG Burnett's infantry background enhanced their application of new and emerging Space technologies to meet warfighting needs. While in Iraq they became proficient in imagery acquisition utilizing national and commercial imagery. Here in Afghanistan, they merged their previous training with new efforts to support the Afghanistan Space Operations Center, which utilizes USASMDC, NRO and Special Operations Command systems. They currently assist Joint Personnel Recovery Cell efforts, disseminate Overhead Non-Imaging Infrared data and monitor world-wide Theater Ballistic Missile/Space launch activity while conducting daily analysis for the joint staff. With eight combined years of experience in Army Space, both SSG Merritt and SSG Burnett have proven their dedication to the Army Space mission and represent its progression as an indispensable facet to the U. S. Army's warfighting capabilities.

LTC Patrick J Mullin speaks to his CJTF-101 Space and Special Technical Operations Soldiers and audience during a 2008 Operation Enduring Freedom award ceremony, Sept. 11. All members were awarded the Joint Service Achievement Medal and SSG Kenneth Merritt, SSG Jason Burnett and MAJ Christopher Oxendine received the U.S. Air Force Space Badge. Pictured left to right – MAJ Andrew Hittner, MAJ Christopher Oxendine, CPT Michael Bancroft, SSG Kenneth Merritt, SSG Jason Burnett and SGT Jose Ibarra. *Courtesy Photo*

LEFT TO RIGHT: SPC Jedidiah Berry, SGT Matt Davidson, SGT Nick Murja, SPC Scott Oleath, SPC Adam Olson, SGT John Wischmeier and SPC Roy Dilworth (kneeling), of Bravo Company, 53rd Signal Battalion, participated in Habifest, a Habitat for Humanity 5K run that took place Sept. 20 in Howard County, Md.

BRAVO COMPANY

BRAVO COMPANY RUNS FOR HUMANITY

Bravo Company,
53rd Signal Battalion

FORT MEADE, Md. — On Sept. 20, seven Bravo Company Soldiers participated in Habifest, Habitat for Humanity of Howard County's largest fund raiser of the year. The proceeds help fund construction for two single-family homes in Howard County Maryland, near Fort Meade. The run is a Nationally Certified 5K course bringing in many extremely talented runners. Of the 175 runners the winner was Nicholas Kurgat of Chapel Hills, N.C., who ran an astounding 14 minutes and 43 second. The 53rd Signal Battalion was well represented by SGT Matt Davidson, SPC Adam Olson, SGT John Wischmeier, SPC Roy Dilworth, SPC Scott Oleath, SPC Jedidiah Berry, SGT Nick Murja and SPC Orion Strater. Of the eight, seven ran and one served as the photographer.

Habifest is the third community service event participated in by Bravo Company's Operations Platoon Fourth Squad in the past four months. In May, fourth squad organized a clothing drive making a large donation of clothing to a local Women's and Children's Shelter. Shortly after that, they spent time at an Assisted Living Facility with fifteen veterans of WWII, Vietnam, and the Korean War. Each event has been well supported by the entire company, all benefiting the surrounding community and representing the United States Army.

"As Soldiers we are organized and equipped to do more than any other group. We have established leaders, hard workers, motivation, and an ingrained sense of servant hood," one Noncommissioned put it. "When others see us serving they see us, but also the U.S. Army. It gives them a sense of pride for our military. That makes me proud of what I do."

The next community event being organized is time with a local elementary school class. The details are not yet planned.

ALPHA COMPANY'S ULTIMATE FIGHTERS

Alpha Company,
53rd Signal Battalion

FORT DETRICK, Md. — The 4th Annual All-Army Combatives Tournament was held at Fort Benning, Ga., Oct. 3 – 5, and the first ever Fort Detrick combatives team was there to represent. All five members of the team came from Alpha Company, 53rd Signal Battalion, and competed in four different weight classes. SGT Buddy Blackham competed at 155 lbs, SSG Gary Grooms and SPC Jacob Hackenberg competed at 170 lbs, SPC Nicholas Smith competed at 185 lbs and SFC Jared Roy competed in the 205 lb weight class.

The tournament was designed to reflect the three levels of the Army Combatives Program. It begins at Level 1 where grappling is legal but strikes are not allowed. Points are awarded for take downs and dominant body positions. If a competitor is able to string together enough wins, he moves into the Level 2 portion of the tournament where slaps to the face, body punches, and body and head kicks are all legal. In the final match that takes place between the top four ranked fighters after the first day of fights, punches to the head are allowed. The finals are televised and held in a full ring.

Of the five competitors one of them was able to rise to the top. Roy dominated his first fight with a superb kimora to an arm bar transition. His second fight turned out to be more of a challenge. Both competitors grappled for the first five minutes with no victor. The match went into overtime where Roy was able to pull off a duck under and take his opponent down, scoring the first point of the match and being declared the winner. His next fight went in the same manner, a tense Greco-Roman grappling match in which he was able to score the first point of the match with an arm drag takedown. With his third win Roy secured a spot in the semifinals.

SFC Jared Roy took third place in the light heavyweight division at the 4th Annual All-Army Combatives Tournament at Fort Benning, Ga., Oct. 3-5. *Photos taken by SFC Garrison Mothershead*

After a two hour intermission, it was back to the grind. Roy's first semifinal match found him facing a fighter about the same height as his own 6'3" frame. After a furious bout exchanging slaps, punches, and kicks, his opponent was awarded the decision. After having his arm raised, the winning opponent limped off, collapsing and being tended to by his fellow teammates and medical personnel while Roy nonchalantly walked off to find out about his next fight. In his last semifinal fight, he was able to pull of a submission from his back. After a grueling day, Roy was into the finals fighting in the consolation match for third place.

In the final day, after demonstrating outstanding physical fitness through five intense, hard-hitting fights, Roy was to face his last challenge. His competitor, a short, hulking Soldier, took the fight right to him by bull-rushing him, pinning him against the ropes and taking him down to the mat. After a grappling struggle, Roy was in a bad place taking blows to the back of his head. With the referee nearly stopping the fight due to a Technical Knock Out, Roy got to his feet and was able to sink in a guillotine choke ending the fight and securing third place in the light heavyweight division.

The five outstanding Soldiers from Alpha Company displayed amazing personal courage while representing their unit and Fort Detrick. Their motivation, dedication and incredible physical fitness has set the way ahead for the future by showing the Army what Signal Soldiers really have to offer.

The Fort Detrick Combatives team. (Left to Right) SPC Jacob Hackenberg, SPC Nicholas Smith, SFC Jared Roy, SSG Gary Grooms, SGT Buddy Blackham.

JTAGS

Members of Charlie Detachment, 1st Space Company undergo combatives training, a vital skill in which every Soldier should receive training. *Photos by CPT Johnny Honnaker*

COMBATIVES TRAINING FOR JTAGS-KOREA

By SGT Jeremy Latorre

OSAN AIR BASE, Korea — Proficiency in hand to hand combat is a vital skill that all U.S. Army Soldiers should possess. Recently, members of Charlie Detachment, 1st Space Company, JTAGS-Korea went through both Level I and Level II combatives courses.

SGT John Hardegree, SGT Charles Menard, SPC Brian Fisher and SPC Christopher Pond completed the Level II certification course that was offered through coordination with MSG Xavier Whitehead and SPC Patricia Nicholas from Headquarters and Headquarters Battery, 35th Air Defense Artillery Brigade. The Detachment has an outstanding relationship with 35th ADA Brigade and the benefit is obvious, as 86 percent of their Soldiers are now Level I certified and 26 percent are Level II certified. While each course was intense and strenuous, the attendees felt the knowledge and confidence they gained would be invaluable to them during their Army careers.

Hardegree said that Level II will help during combat because "I would probably know more than the other person and be able to take control of the situation … this, along with building the confidence that it takes to defeat an opponent." These are two very important points of the Army Combatives program; it tries to instill the fighting spirit in Soldiers and to train them so they have other options should they need them in actual combat situations.

Warrant Officer 1 Cleveland Butler, the Level III trainer, oversaw the Level I course in which SSG Baron Godfrey, SGT Jesse Jacka, SGT Jason Whitley, SPC Robert Swain, SPC Jerome Williams and PFC Albert Almas trained hard and earned their Level I certification. Throughout the course of the week they learned different dominant body positions, defensive postures and submission moves. While difficult at times, the course gives valuable training to these Soldiers that they will use throughout their Army careers. According to Whitley, "It was difficult at times, but well worth it. It was a good break from the normal routine."

The Level I course concluded with a tournament to determine the class champion. In the first match, Godfrey went wire to wire with Jacka before finally winning on points awarded for achieving various dominant body positions. In the second match, Williams defeated Almas by achieving the rear-mount position and applying a rear naked choke. In the championship match, Godfrey used his strength and newfound techniques to secure a win over Williams using a cross-collar choke.

Modern Army Combatives is an excellent way to build unit cohesion, while at the same time offer training on vital skills that every Soldier requires. Charlie Detachment will continue to incorporate combatives as part of their regular physical fitness program. This will ensure Soldiers stay proficient on what they've learned and will allow them to introduce new techniques as well.

35th Air Defense Artillery coordinators Whitehead and Nicholas gave outstanding support and offered their off duty time every week to train Soldiers and Airmen at Osan Air Base in Modern Army Combatives. Their efforts have had a direct impact on the success of Charlie Detachment which hopes to continue this strong relationship for many years to come.

USASMDC/ARSTRAT REPRESENTED @ ARMY TEN-MILER

By MAJ Mike Russell,
1st Space Battalion Executive Officer

WASHINGTON, D.C. — U.S. Army Space and Missile Defense Command/Army Forces Strategic Command showed its colors well this year in Washington, D.C. Twenty one Soldiers assigned to the command ran in the physically challenging Army Ten-Miler race on Sunday, Oct. 5. The Army Ten-Miler is America's largest ten-mile race, held every October in Washington, D.C., and sponsored by the U.S. Army Military District of Washington. There were over 18,000 participants in this year's run. The 1st Space Brigade sponsored two teams, the Space Sentinels and the Mercury's Minions, and the 100th Ground-based Midcourse Defense Brigade sponsored five individuals in an unofficial team named Team America.

The USASMDC/ARSTRAT Commanding General, LTG Kevin T. Campbell and CSM Ralph Borja, were both present at the Redstone Arsenal Hooah Tent and start line to wish the team members a speedy race. Race Day was a beautiful day in Washington D.C., with a slight chill in the air at the 8 a.m. start time and warm temperatures throughout the race. The USASMDC/ARSTRAT runners demonstrated great drive and motivation for the train up and performed well during the actual event as they ran the ten-mile course surrounded by one remarkable monument after another. The three team captains, Bortolutti, Russell and Wheeler encourage and challenge others within the command to come out next year and represent the command as well.

In the week following the Army Ten-Miler race, eight Soldiers and a dozen government civilians and contractors manned the USASMDC/ARSTRAT exhibit at the Association of the United States Army Annual Meeting and Exhibition at the Walter E. Washington Convention Center in D.C. The USASMDC/ARSTRAT team was responsible for conveying the commanding general's mission, vision, and responsibilities to visitors from the Army and other organizations around the world. In this task, the Soldiers and civilians did a superb job of telling visitors what USASMDC/ARSTRAT does to contribute to the Army, both in Space support to the Warfighter and to research, development and acquisition of Space and missile defense systems.

The 24 USASMDC/ARSTRAT participants and their respective times for the Army Ten-Miler are as follows:

Mercury's Minions

SPC Christopher Saylor - 1:08:41; SSG Corey Wilson - 1:10:40; SPC Travis Parsons - 1:12:24; SGT Matthew Caple - 1:17:53; MAJ Randy Wheeler - 1:21:40; CPT. Carlos Santana - 1:23:05; 2LT Mathew Songy - 1:23:08; and SPC Ryan Shea - 1:33:36.

Space Sentinels

SSG Randolph Brown - 1:17:43; MAJ Michael Russell - 1:18:44; SGT Lamario Harris - 1:19:33; CPT Allyn Ruckdeschel - 1:27:48; SSG David Rodgers - 1:21:17; SGT Michael Landry - 1:31:12; SSG Stephanie Weber - 1:36:32; and SFC Dustin Swinney - 1:42:19.

Team America

MAJ Martin Bortolutti - 1:16:34; 2LT Jeremiah VanDorsten - 1:16:43; CPT Orlando Cobos - 1:21:16; CWO 3 Matt Betzmer - 1:26:39; and CPL Grant Henne - 1:23:19.

Members of USASMDC/ARSTRAT pose with Commanding General, LTG Kevin T. Campbell (in black shirt) and CSM Ralph Borja (wearing hat) prior to the 2008 Army Ten-Miler. *Photo by Dottie White*

FIRST FA40 SELECTED FROM CAREER FIELD FOR PROMOTION TO GENERAL

By Sharon L. Hartman

"I think if we look to vision, confidence, care, enthusiasm and the traditional Army values... I think that's what makes general officers. Those are the attributes you find in Kurt Story," said Campbell.

COL Kurt Story is promoted to the rank of brigadier general by his father Bill and his mother Jan, during a ceremony at the Peterson Air and Space Museum Dec. 2. *Photo by Craig Denton, USAF*

PETERSON AIR FORCE BASE, Colo. — U.S. Army Space and Missile Defense Command/Army Forces Strategic Command takes pride in the many firsts in Army history. The Peterson Air and Space Museum was the setting for another Army first as the first Space Operations Officer (Functional Area 40), groomed and selected from the career field, was promoted to the ranks of general officer. During an afternoon ceremony, COL Kurt S. Story, deputy commander for operations, USASMDC/ARSTRAT was promoted to the rank of brigadier general.

The career field of Space Operations Officers (FA40s) began in the Army in 1997 and Story was designated an FA40 in 2001. Shortly after coming to U.S. Army Space Command (ARSPACE) as Chief of Staff in 2002, Story attended the Space Operations Officer Qualification Course. Today, there are approximately 250 active duty FA40s serving in the Army.

In 2003, Story became USASMDC/ARSTRAT G3, Chief of Operations, and then in 2004 and 2005 served as commander of the 1st Space Brigade. In 2006, Story left the command to serve as the Director of Operations (J3) for the Joint Functional Component Command – Space at Vandenberg Air Force Base, Calif. In July of this year, Story once again returned to USASMDC/ARSTRAT in his current position. Although the position Story has been serving in since July of this year remains the same, the title changes from Deputy Commander for Operations to Deputy Commanding General for Operations (DCG-O), USASMDC/ARSTRAT, with the rank change.

Presiding over the promotion ceremony was USASMDC/ARSTRAT Commanding General, LTG Kevin T. Campbell, who conveyed in his remarks his confidence in Story to carry out the role of a general officer.

COL. Kurt Story is promoted to the rank of brigadier general by his wife Holly and LTG Kevin T. Campbell, during a ceremony at the Peterson Air and Space Museum Dec. 2. *Photo by Craig Denton, USAF*

"I think if we look to vision, confidence, care, enthusiasm and the traditional Army values — loyalty, duty, respect, selfless service, honesty, integrity and personal courage — I think that's what makes general officers. Those are the attributes you find in Kurt Story," said Campbell.

"We are at an age when we really do need combat multipliers such as you. It is people that make the difference, and you're one of the people who make a difference and I know that you're going to make a difference in Space and Missile Defense Command. You come with great Space expertise and you know that we're doing quite a bit today in Space, deploying forces and supporting commanders. That's important work and there couldn't be a better person doing that than you today on behalf of the Army and on behalf of combatant commanders."

LTG Kevin T. Campbell administers the oath of office to BG Kurt S. Story after Story was pinned with his star during a ceremony at the Peterson Air and Space Museum Dec. 2. *Photo by Craig Denton, USAF*

After Campbell's comments, Story's wife, Holly, father Bill and mother Jan assisted in the pinning ceremony. Story's father, a retired Army lieutenant colonel, upon pinning his son with a star, stepped sharply in front of him and gave him his first salute as a general officer.

In his first remarks as a general officer, Story gave credit to the many people who have had an impact on his successful military career.

"Though I am the one here today who is being pinned and being honored with the promotion, it really is not about me ... and I don't mean those as little words. They're very important words to me," Story began. "I was molded and taught and trained and mentored and corrected by the finest Army in the world — the privates, the specialists, the sergeants, the noncommissioned officers, the warrant officers the civilians and in the modern day Army the contractors. They're the ones who basically molded me and shaped me into what I am.

"They're not here … but I'm representing them here today because they took me and basically made me understand what it means to serve a country, and I would like to honor them by saying I appreciate everything they've done for me."

BG Jeffrey Horne, a former USASMDC/ARSTRAT DCG-O, was also a Space Operations Officer. Story is the first officer specifically groomed and selected from the Space career field to be promoted to general.

Astronauts Shane Kimbrough and Sandra Magnus, both STS-126 mission specialists, are pictured with fresh fruit floating freely on the middeck of Space Shuttle Endeavour during flight day three activities. *Photo Courtesy of Nasa*

Astronaut continued //

On Nov. 17 Kimbrough and Pettit used the Canadarm2 robotic arm to move the Multi-Purpose Logistics Module named Leonardo into position for installation on the Earth-facing port of the Space station's Harmony node.

Leonardo contained systems which were installed in the U.S. Destiny lab and Harmony node, such as: two water recovery systems racks for recycling urine into potable water, a second toilet system, new galley components, two new food warmers, a food refrigerator, an experiment freezer, a combustion science experiment rack, two separate sleeping quarters and a resistance exercise device.

The first Space walk to service the International Space Station took place on Nov. 18 with Kimbrough serving as the intra-vehicular officer guiding fellow crew members Stefanyshyn-Piper and Bowen during their excursion.

Kimbrough then got ready for his turn outside with crew member Stefanyshyn-Piper on the evening of Nov. 19 as he spent the night in the Quest airlock. The stay lessened the preparatory time before beginning his scheduled Space walk on the afternoon of Nov. 20, the 10th anniversary of the International Space Station.

It would be another four days before Kimbrough would venture out for his second Space walk, and the final one of STS-126 mission, with Bowen on Nov. 24. Total time for both of his Space walks amounted to almost 13 hours at 122 nautical miles above the Earth.

With an extra day added to the mission and the crew's work done both shuttle and International Space Station crews packed up the Multi-Purpose Logistics Module and placed it back aboard Endeavour for the trip back home on Nov. 26.

The shuttle and International Space Station crews then took time out for a Thanksgiving Day celebration high above the Earth prior to saying their goodbyes and undocking the next day.

Due to threatening weather in Florida, the Space Shuttle Endeavour landed at Edwards Air Force Base in California at 4:25 p.m. EST Nov. 30, ending the STS-126 mission to the International Space Station. The shuttle traveled over 6.6 million miles in Space on its 16-day journey.

With his first successful Space flight complete Kimbrough gave some advice to the youth of America by stating, "You're going to be the next generation of leaders in our country or in our world."

"It's all in your hands and that's a big responsibility. But if you folks challenge yourselves, with the technology out there, there's really no limit to what you can do."

Trial BY Fire

DA Best Warrior 2008

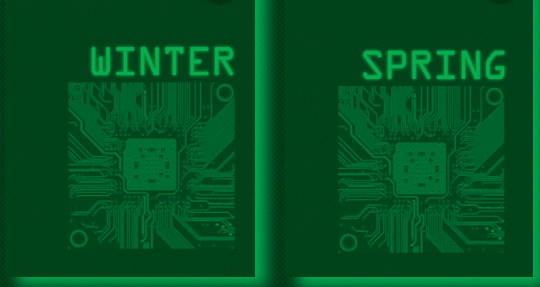
TOP: USASMDC/ARSTRAT NCO of the year SSG Christopher Barber awaits written exam in Department of the Army's Best Warrior competition. Photo by Amy Perry, Fort Lee Public Affairs Bottom: USASMDC/ARSTRAT Soldier of the year SPC Michael Moore plots his points for the Land Navigation portion of the competition. Photo by T. Anthony Bell, Fort Lee Public Affairs

By Sharon L. Hartman

FORT LEE, Va. — U.S. Army Space and Missile Defense Command/Army Forces Strategic Command was well represented during the 2008 Department of the Army Best Warrior Competition. The event, in its seventh year, took place at Fort Lee, Va., from Sept. 29 – Oct. 3, and pitted the top Noncommissioned Officers and Soldiers from 12 commands against each other, in the quest for the titles of Department of the Army Noncommissioned Officer and Soldier of the Year. Representing USASMDC/ARSTRAT was SSG Christopher Barber as the command's Noncommissioned Officer of the Year, and SPC Michael Moore as the command's Soldier of the Year.

At the end of the week long competition, SSG Michael N. Merino, a U.S. Army National Guardsman, was named the 2008 Department of the Army Noncommissioned Officer of the Year, and SPC David R. Obray from U.S. Army Reserve Command was dubbed the 2008 Department of the Army Soldier of the Year.

A Soldier competing in the "Best Warrior" competition participates in a night-fire exercise at Fort Lee, Va., Oct. 2. Twenty-four of the Army's finest warriors representing 12 commands from across the Army gathered at Fort Lee, Va., from Sept. 29 to Oct. 3 to compete in the competition which named the Army's Soldier and noncommissioned officer of the year. *Photo by Sgt. 1st Class Tom Steber/Photo Illustration provided by Michael Kahl*



//Input Required

- EDITION:
  - Winter 2009
  - Spring 2009
  - Summer 2009
  - Fall 2009
- ARTICLE DEADLINE:
  - 9-13 February
  - 11-15 May
  - 10-14 August
  - 9-13 November
- PUBLICATION DATE:
  - 23 March
  - 22 June
  - 21 September
  - 21 December
- FOCUS/THEME:
  - "Hot New Space Concepts"
  - "Space — The Best Job in the Army"
  - "Tapping into Space — A How-To Manual"
  - "Space Warrior METL"

To submit articles and article concepts for any of these editions, please contact the Army Space Journal editorial staff at space.journal@us.army.mil

Against a black sky, the Space Shuttle Endeavour and its seven-member STS-126 crew head toward Earth orbit and a scheduled link-up with the International Space Station. Liftoff was on time at 7:55 p.m. (EST) on Nov. 14, 2008 from launch pad 39A at NASA's Kennedy Space Center. Onboard are astronauts Chris Ferguson, commander; Eric Boe, pilot; Steve Bowen, Shane Kimbrough, Heidemarie Stefanyshyn-Piper, Donald Pettit and Sandra Magnus, all mission specialists. Magnus will join Expedition 18 in progress to serve as a flight engineer aboard the ISS. The mission will feature four spacewalks and work that will prepare the Space station to house six crew members for long-duration missions. *Photos Courtesy of NASA.*

ARMY ASTRONAUT ASSISTS WITH ISS UPGRADE

By DJ Montoya, 1st Space Brigade

PETERSON AIR FORCE BASE, Colo. — Army LTC Robert S. Kimbrough proved he had the 'right stuff' completing his first flight into Space aboard the Space Shuttle Endeavour as part of STS-126 mission in November after four years of intensive astronaut candidate training.

Kimbrough is the junior member of the Army's National Aeronautics and Space Administration Detachment located in Houston, Texas. The detachment currently has four active duty Army Astronauts on its roster.

Kimbrough served as a mission specialist along with shuttle crew members Navy Capt. Stephen G. Bowen, Navy Capt. Heidemarie M. Stefanyshyn-Piper, Donald R. Pettit and Sandra H. Magnus. Navy Capt. Christopher J. Ferguson commanded the STS-126 mission and Air Force Lt. Col. Eric A. Boe served as the pilot.

The STS-126 mission featured important repair work and prepared the International Space Station to house six crew members on long-duration missions beginning in 2009. The new station equipment includes a water recovery system, additional sleeping quarters, a second toilet and an exercise device.

During four spacewalks, the crew serviced the station's two Solar Alpha Rotary Joints, which allow its solar arrays to track the sun, and installed new hardware that will support future assembly missions.

In a NASA interview back in early November, Kimbrough explained how the opportunity arose to become an astronaut during his military career by saying, "I was lucky enough to get called to come down to Johnson Space Center as a major in the Army to just work a technical job down here which happened to be out at Ellington Field (Houston)."

"I was flying the shuttle trainer aircraft and helping train the pilot and commanders on how to land the Space shuttle, so that was a neat deal. And then after that I just stayed here and I was lucky enough to get picked up in the 2004 astronaut class."

Asked how his Army background will help in the role of being an astronaut during this mission Kimbrough said, "I think my operational background is really what most Army folks kind of bring to the table here at NASA and that's really what I'm going to draw off of, just being in an operational environment, whether that's in my case helicopters or whatever — actually doing real time operations in some pretty tough situations not always nominal."

Astronaut Shane Kimbrough, STS-126 mission specialist, attired in his Extravehicular Mobility Unit (EMU) spacesuit, awaits the start of the mission's second scheduled session of extravehicular activity (EVA) in the Quest Airlock of the International Space Station. *Photo Courtesy of Nasa*

"I think that's what we bring to the table and what I'm going to draw off of for my mission."

And Kimbrough got his chance to do that on the evening of Nov. 14th as he along with fellow crew members Stefanyshyn-Piper, and Magnus took their assigned seats on the lower level of the shuttle's crew compartment prior to launch.

At 6:07 p.m. MST Endeavour lifted off from Launch Pad 39A at NASA's Kennedy Space Center in Florida for a rendezvous with the International Space Station early on the morning on Nov. 16.

With the opening of the shuttle and station hatches both crews exchanged the traditional greetings prior to getting down to the busy work schedule that lay ahead of them.

flipside

Army Expands Station Capabilities