ARMOR & Mobility

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Commander's Corner

Colonel Jack J. Jensen
Commander
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Fort Bragg, NC

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WARFIGHTER EQUIPMENT & GEAR GUIDE

Insights

As a new year dawns, DoD is facing a pivotal six months as it prepares for the final drawdown of troops in Iraq while maintaining the pressure on fleeing Taliban forces across the mountains of Afghanistan. Within this critical balancing act, the Department is working to maximize budgetary resources in leveraging joint service capabilities to bridge manpower and expertise shortfalls.

In this issue, readers are treated to an in-depth interview with Col. Jack Jenson, Commander, 1st Special Warfare Training Group (SWTG)- Airborne (A), Ft Bragg, NC, as he explains his role in the training of special forces, civil affairs and military information support operations personnel. With the exception of ranger, special operations aviation and medical training, all institutional training for Army Special Operations Forces (ARSOF) happens within the 1st SWTG (A). From air to sea, A&M explores efforts by the U.S. Navy to procure the next generation in appliqué ship armor to counter the increasing threat of small craft explosive delivery. On the Marine Corp front, current upgrades being made to next-gen Expeditionary Fighting Vehicle (EFV) test prototypes are moving the platform ever closer to procurement and fielding.

From the ground fight, the U.S. Army's FBCB2, better known as Blue Force Tracking, system are seeing vast improvements to signal speed, bringing information to critical endpoints where and when it's needed. The recent introduction of Army PEO C3T's Joint Battle Command- Platform (JBC-P), the next generation of FBCB2, is is now in use with DARPA's Tactical Integration Ground Reporting (TIGR) application, providing joint commanders access to much greater data diversity for assessing the tactical picture.

From an air perspective, the U.S. Army Aviation Center of Excellence (USAACE), Ft. Rucker, AL is working to produce the next generation of Army aviation professionals to prepare them for the manned and unmanned systems they will operate. Not to omit the research being done to put the latest in Smartphone Droid technology into the hands of the world's finest soldiers, TDM reports on the latest developments here.

As always, your comments and questions are welcome. Thank you for your continued readership!

Kevin Hunter
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Letter to the Editor

Dear Editor;
Your recent article on upgrades to the Stryker ("Stryker: Dictating the Battlespace") provides an eye-opening discussion of the wide range of improvements being implemented to the Stryker. It is difficult too believe that this was once considered to be only an interim combat system. The addition of slat and reactive armor and now the V-hull have substantially increased vehicle protection. Coupled with an improved engine, drive train and suspension system and the mobility, and hence, survivability, of the Stryker has been substantially enhanced. These technical changes when combined with new tactics will make the Stryker brigades even more effective than they have already prove to be in Afghanistan.

Dr. Daniel Goure
Vice President
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Special Forces: **At the Fore of the Fight**

U.S. Army Special Forces, a premier component of DoD's highly-trained Special Operations Forces (SOF) community, have long been at the fore of special operations know-how, effectively applying skills that serve the nation well on an increasingly asymmetric and global battlefield.

By USASFC (A) G8 Section

Today, Special Forces (SF) operators are scattered around the world, conducting missions across the entire spectrum of our charter. As a result, the range of SF vehicles has grown during the past nine years of conflict. As the future unfolds, deployed teams will be required to cover even more battle space, conduct more diverse missions, and be more combat effective – and vehicles will need to keep up.

The increase in current SF vehicle platforms is a direct reflection of the expanded role SF is required to perform in diverse geographic areas and varying climatic conditions. In many areas of operation, the best vehicle may be a commercial ATV, snowmobile, or dirt bike. Other areas require commercial cars, pickup trucks, or SUVs, for mission peculiar reasons. Some teams require, at their disposal, many different types of vehicles; from dirt bikes to MRAPs. This is due, in part, to the large geographical area a 12-man ODA, or a split team of six, is required to operate in. It is not unusual for one ODA to conduct a medical visit to a local village, a direct action mission in the mountains and a reconnaissance mission at another location within their AOR all in the same week. Traveling from location to location requires the ability to move quickly and methodically, off-road whenever possible, to minimize exposure to IEDs, ensuring mission success.

Platform Modularity

The number of configurations to each different vehicle platforms is a direct result of the SF operators performing field modifications of the vehicles to successfully complete the mission. And when an in-field modification makes sense, SF has a streamlined process to quickly allow that item to become a manufactured product.

Simply put, SF operators will continue to play important roles in the evolution of a varied, multi-functioning vehicle inventory. To complete greater mission requirements, SF will require vehicles with greater modularity, mobility, lethality and C4I capability as well as overall reliability. The majority of vehicles required by SF missions will be lightly armored (if at all), easily transportable by rotary wing aircraft, and highly mobile platforms with a high payload capacity built for long duration missions in non-permissive environments. Some missions will require more protection, such as the heavily armored, MRAP and off-road capable M-ATV.

The goal is to have a modular platform that is flexible enough in configuration to support as many different missions as possible. On long duration missions of 14 or more days unsupported, vehicles need to carry large quantities of ammunition, fuel, additional mission equipment, spares and

food. Shorter, more deliberate missions trade off the weight of consumables for more personnel and equipment.

Mobile and Deadly

Mobility is the ability to traverse any and all terrain thought impassible by the enemy. This is not "4–wheeling," but technical off-road driving using the capability of the vehicle to the fullest extent. Driver vision, knowing the position of each tire, and knowing how to manipulate the vehicle over an obstacle are critical for successful mobility.

Greater lethality provides SF the ability to engage targets at greater distances and with greater accuracy, regardless of visibility. An integrated networked C4I system allows operators to coordinate with other weapons platforms, provide better inter-service interoperability, send/receive any ISR and data feeds, and maneuver through the battle space with accuracy in concert with other, unseen SF vehicles.

In the end, our base SF vehicles will be able to accept user-friendly, bolt on armor kits. If a more heavily armored vehicle is required, the MRAP fleet will provide this capability. The construction of the base vehicle will be that of a complete system; however it must also have the modular capability required to modify the vehicle, for different missions. Components must be easily removable, by the operator, with a minimum of tools, including seats, ammunition storage and other essential items. These items can then be located in various configurations, or left off the vehicle, depending on mission. Electrical components and power

supplies are to be optimized, to avoid interference with other electrical powered, mission equipment.

Sustainable and Adaptable

The final, selected vehicles will not be a science or engineering project. Rather, the optimum vehicle will be composed of simple, proven, reliable components. These components on a standard, ruggedized chassis and complimentary power train will make a dependable, flexible, combat vehicle. The electronic components selected require the sustainability and reliability to prevent mission failure. The vehicle must have easy to repair/replace components that are readily accessible by the operator with minimal training or special tools. The basic design of the base vehicle must accommodate a fully-kitted operator and crew, and not a modified administrative vehicle.

As the future unfolds, these modular vehicles will allow operators to cover more terrain in austere environments enhancing our persistent engagement. The vehicles will ensure SF remains at the cutting edge, able to conduct the full spectrum of diverse missions tasked and continue to be the preferred option of diplomat and combatant commanders alike.

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Navy Armor: Countering the Small Craft Threat

The U.S. Navy is investing in new types of add-on, ship-protective armor to address the growing, often unseen dangers posed by small craft-delivered firepower.

By Christopher Brown, Engineer, Crane Naval Surface Warfare Center

On October 12, 2000, a small boat laden with explosives crossed the Yemeni port of Aden and detonated next to the USS Cole killing 17, injuring 39. The investigation of the incident found that insufficient force protection equipment plans, and training; in conjunction with limiting rules of engagement allowed the terrorist to succeed.

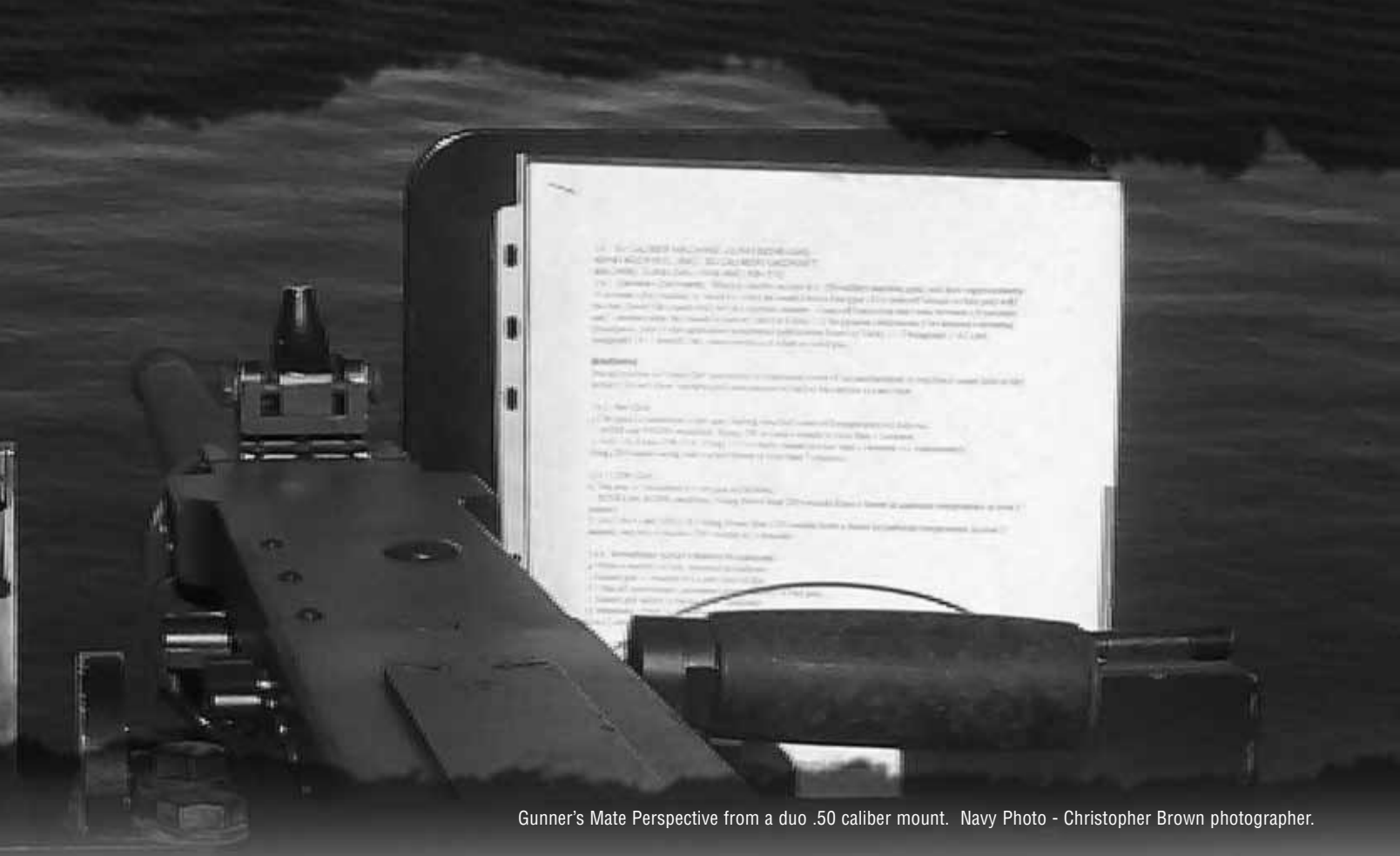
Christopher Brown

Alongside the threat of more terrorist attacks, the Iranians continuously postures in the Hormuz Strait. The Iranian Navy, consisting primarily of small patrol boats, have been harassing merchant vessels in the Straits for years as a show of force. In February of 2007, the Iranian Navy began increased probing of the sovereignty of Iraqi territorial waters culminating with 15 British Marines and Sailors being taken hostage in March of 2007. While in January 2008, five Iranian patrol boats took aggressive action, maneuvering within 500 yards of U.S. Navy vessels.

Concurrently, the U.S. Navy began stepping up anti-piracy efforts in Gulf of Aden and Indian Ocean when they received permission from the UN to enter Somali territorial waters in late 2007. By January of 2009, the U.S. Navy took the reigns of a newly formed international anti-piracy fleet, Task Force 150.

These incidents and the growing number of similar missions require tracking and engagement of relatively small boats at typically short ranges. The primary weapons employed are crew-served weapons. Placing sailors on the gunwales with crew-served weapons to engage small craft bearing automatic weapons requires a level of protection not currently installed on Navy vessels.

To this point, armor development for vehicles, ships, and airframes has been exclusive. Typically, a program office develops a requirement based on a specific threat



Gunner's Mate Perspective from a duo .50 caliber mount. Navy Photo - Christopher Brown photographer.

assessment. The requirement is then written directly into the acquisition documentation. Due to the threat assessment being classified, the armor solution becomes classified. This system results in limited development by industry and reinventing of the wheel by the government when armoring a new vehicle. The combination of MIL-PRF-XX613 (the number is not finalized until the document is signed) and MIL-STD-X618 paint a target on the wall for industry. The documents are designed to encourage industry to develop off the shelf solutions in the interim between acquisition programs. This approach will allow more competition. Additionally, the availability of certified off the shelf solutions speeds up the acquisition process while reducing the overall cost to the government.

Performance-based

When authoring the Military Performance Specification XX613, the team felt it was important to not limit innovation and encourage all solutions. These goals are achieved by not specifying the materials, the construction methodology, or the mounting methodology. Additionally, the specification covers special considerations for permanent, semi-permanent, and removable designs. Unlike the previous fielding effort, the specification includes provisions for material handling, coatings, environmental testing, ship unique issues (green water loading, vibrations, etc.), flight operations, and storage provisions.

The performance specification is further written to ensure that it applies to all ship classes. Rather than specify particular dimensions, the dimensions are determined by the lateral traversing limits based on installation and the gunners working circle dimensions, while height is measured based on the user's position. The threat level is based on DDG, FG, and CG classes, but may not be applicable to all ship classes. To keep the document relevant, the threat level references a second document allowing various program offices to easily alter the threat level during the acquisition process. The second document, Military Test Standard X618, contains the ballistic testing procedures and threat levels.

Up to the Threat

When the warfighter stands behind armor they expect to be protected from particular weapon systems. The warfighter does not worry about the science of armoring. MIL-STD-X618 was written to ensure that the armor will protect against the threat level. It is designed to result in a simple yes or no versus "as long as it is this far away and coming from this direction only."

The authoring team began by reviewing the majority of armor related test standards and performance specifications. The best practices from among all reviewed were selected. The material was massaged when possible, loopholes were

closed where necessary, and new material authored to fill in gaps when found. The standard was written to reduce the ambiguity by addressing some of the known discrepancies encountered in other MIL-STDs. The reduction of ambiguity is accomplished in part by eliminating obliquity allowances and basing round velocity on the advertised muzzle velocity of a given threat.

Furthermore, MIL-STD-X618 expands the list of threat rounds to include the most likely direct fire threats to be seen in traditional theaters of operation and asymmetrical conflicts. The majority of ballistic standards consider primarily NATO rounds. MIL-STD-X618 includes Warsaw Pact rounds in addition to the traditional NATO rounds. The threat levels go from 9mm Parabellum to 30mm and are separated as ball and armor piercing rounds. The standard includes classifications for both single shot and multiple shot solutions. The classifications are shown in Table 1.

The focus on real world protection continues with additional requirements for certain classes of armor. The standard adjusts for transparent armor by specifying a thinner witness plate for transparent armor testing, simulating the differences in the typical installation and application of the armor. The standard also limits the ability of tiled solutions to "game" the tests. Tiled solutions require additional shots along known weaknesses as shown in Figure 1.

Additionally, the new standard encourages new chemical compositions of existing classes of armor such as steel or aluminum by not specifying materials or construction techniques. Development in aluminum and steel armor has been fairly stagnant due to the fact that the acquisition of these armor styles primarily occurs through the usage of the existing performance specifications which specify chemical compositions.

The key to getting the right protection to the warfighter lies in communication. The warfighter must be able to communicate the prevailing threat to the program office. The program office must, likewise, be able to communicate the threat to the acquisition community. Then the acquisition community must be able to communicate the threat to the test community. In this process a break often occurs resulting in protection that may be insufficient for the warfighter. MIL-STD-X618 works to reduce the likelihood of miscommunication by providing both data for the testing community and the user community in their own language.

Looking Ahead

Implementation involves the user or program office selecting a threat level based on the weapon and round encountered in theater. The testing community cross references the threat level with testing data. To reduce the confusion to either group, the data is separated into two different tables with only the information relative to that community. At the writing of this article, both MIL-PRF-XX613 and MIL-STD-X618 are in the review process. Both documents are slated to be signed and published in early February 2011. Following the signing of the documents, an SBIR will be released to encourage development of initial designs. The SBIR will bridge the gap until the funding request, currently in POM cycle, is approved allowing shields to be fielded on DDGs, FGs, and CGs. In anticipation of the upcoming efforts, NSWC Crane has created a Ballistic Test Group to provide the required government certification for the Navy.

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Rugged on the Move

Leading DoD industry partners are providing solutions to meet the comms challenges of asymmetric warfare.

Soldier Digital Comms:

COTS Capability Addresses Tactical Necessity

The U.S. Army is experimenting with the latest in handheld digital Smart Phone technology in determining the potential for near-term comms integration.

By Kim Ploskonka, Chief of the Commercial Technologies Integration and Evaluation Branch (CERDEC S&TCD)

The Army Smart Phone pilot program is an initiative out of TRADOC ARCIC so I am unable to speak specifically about the intent or execution of the overall pilot program itself, but as the Army RD&E center investigating the technical challenges with integrating this capability into our operational forces, CERDEC's work in the commercial cellular arena involves a strategy to evaluate commercial cellular for military operations, augment commercial technologies to work in military scenarios and field militarized commercial technologies.

Kim Ploskonka

Through evaluation of commercial cellular technologies we can assess and document: capabilities, limitations and survivability.

- An example of our plans to provide support to the U.S. Army's efforts include a CERDEC Army Technology Objective, Multi-Access Cellular Extension, or MACE, which aims to adapt and implement independent and commercial cellular technologies to operate effectively in the tactical environment for the networked Warfighter.

- MACE will provide the Army a foundational architecture that unifies commercial technologies with military needs.

  - This architecture will promote the independent evaluation, introduction and integration of cellular solutions into current and future force networks.

MACE, in tandem with other R&D work done in CERDEC's labs will enable our scientists and engineers to better militarize commercial technologies for the battlefield through the introduction of feature sets not included in traditional cellular solutions like:

- increased security measures
- spectrum allocation
- and the seamless handoff between 3G/4G and wi fi.

Additionally, we will look at ruggedizing the cellular devices through physical hardening and efficiency in power requirements to ensure survivability in austere environments.

The technical challenges associated with inserting commercial-off-the-shelf cellular technologies are not addressed in a vacuum. We've been conducting research in the area of commercial cellular capabilities for 10+ years, and have many partnerships across industry like Ericsson, Motorola, Lucent Government Systems (LGS), and BAE to collaborate with CERDEC on assessment of wireless solutions and spectral access Joint testing in a lab and field environment.

For fielding, we plan to integrate the capabilities with the WIN-T architecture, provide continuous support throughout technology insertion, provide applications through the network and collect input and lessons-learned from the field.

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Special Training Breeds Special Forces

Colonel Jack J. Jensen

Commander
1st Special Warfare Training Group (Airborne)
Ft Bragg, NC

Colonel Jack J. Jensen enlisted in the Army in 1985, and received his commission from Officer Candidate School in April 1986. He is a graduate of the Army Command and General Staff College, the Naval Postgraduate School's Special Operations/Low Intensity Conflict master's program, and the Industrial College of the Armed Forces. He holds a B.A. in Biology from the University of Texas, an M.A. in National Security Affairs from the Naval Postgraduate School and an M.S. in National Resource Strategy from the National Defense University. His awards and decorations include the Bronze Star Medal, Defense Meritorious Service Medal, Meritorious Service Medal with 4 Oak Leaf Clusters, Joint Service Commendation Medal, Army of Occupation Medal, Humanitarian Service Medal, Combat Infantryman Badge, Special Forces Tab, Ranger Tab and Master Parachutist Wings.

Following a tour in the U.S. Army Berlin Brigade from 1986-1989 , where he witnessed the fall of the Berlin Wall on November 9, 1989, Jensen attended Special Forces Assessment and Selection and graduated from the Special Forces Qualification Course in 1991. He then commanded Special Forces Operational Detachment-Alpha 044 in the 10th Special Forces Group, Fort Devens, Mass. His time there was highlighted by leading a deployment to Krakow to conduct the first U.S.- Polish combined airborne training since World War II and commanding Advanced Operating Base 040 during Operation Provide Comfort II in Turkey and Northern Iraq.

His follow-on assignments include service as a plans and programs officer in the U.S. Army Special Operations Command G3, the S3 for the 1st Special Warfare Training Group (Airborne) and a tour at the U.S. Army Personnel Command as the Special Forces Branch field-grade assignment officer.

In 2003, Col. Jensen deployed to Afghanistan with the 3rd Special Forces Group as the director of operations for Combined Joint Special Operations Task Force-Afghanistan and in 2004 as the SOF Planner for Combined Forces Command – Afghanistan. From 2004-2006, he commanded the 1st Battalion, 1st Special Warfare Training Group (Airborne) at Camp Mackall, N.C., where he trained a generation of new Green Berets in the capabilities required to conduct unconventional warfare. In 2006-2007 he deployed to Iraq with the 5th Special Forces Group as the SOF liaison officer to the MNC-I commander. Subsequently, he served as the 16th Special Forces Branch Chief at U.S. Army Human Resources Command and, following attendance to Senior Service College, assumed his current position as Commander of the 1st Special Warfare Training Group (Airborne) at Fort Bragg.

Col. Jenson was interviewed by A&M Chad Samuels.

Q: Please talk about your role as Commander, 1st Special Warfare Training Group (Airborne).

A: As Commander, 1st Special Warfare Training Group (Airborne), part of the U.S. Army John F. Kennedy Special Warfare Center and School, I oversee entry-level through advanced training for Special Forces, Civil Affairs and Military

Information Support Operations (PSYOP) officers and NCOs. With the exception of ranger, special operations aviation and medical training, institutional training for Army Special Operations Forces (ARSOF) happens within the 1st SWTG (A). 1st SWTG (A) is a brigade-level organization comprised of six battalions: 1st Battalion conducts entry level Special Forces training; 2nd Battalion conducts Special Forces advanced skills training including courses in Intelligence and Operations, Military Freefall, Combat Diver, Sniper, Close Quarters Combat, Combatives, and Mountaineering; 3rd Battalion conducts Civil Affairs training; 4th Battalion provides student management and small group mentorship for all Special Forces candidates throughout the Special Forces Qualification Course; 5th Battalion (provisional) conducts Military Information Support Operations training; and the Group Support Battalion (GSB) executes all logistical support and maintenance within the command.

Beyond its main campus at Fort Bragg, N.C., 1st SWTG (A) operates a satellite campus at Camp Mackall in Hoffman, N.C. which is home to all of the field training for our three qualification courses (CA, MISO, and SF). We like to say the state of North Carolina is also part of our satellite campus; our Special Forces unconventional warfare exercise, Robin Sage, is run on civilian property in 15 rural North Carolina counties, and is successful due to the volunteer support of the local citizens. We also have adjunct campuses at Yuma Proving Ground, Ariz. for military free-fall training, in Key West, Fla. for underwater operations instruction, the state of Colorado for mountaineering and the state of Washington for advanced special operations training.

Q: Please talk about 1st SWTG (A)'s role as part of the greater Department of Defense special operations environment.

A: As a world-class special operations training school, we are building a professionally trained, agile, adaptive force with the intuitive abilities to work through or with indigenous partner force prepared to address the diverse range of threats posed by an uncertain 21st-century environment.

For ARSOF, it's all about our people – their ability to achieve effects far greater than otherwise indicated by the small size of their formations. This is reflected in the five "SOF Truths": Humans are more important than hardware. Quality is more important than quantity. Special operations forces cannot be mass-produced. Competent special operations forces cannot be created after emergencies occur. Most special operations require non-SOF assistance.

Through exceptional training, experience, and education - we are developing "3-D Warriors" with the advanced operational skills, regional knowledge, cultural awareness, and higher cognitive abilities to succeed in the JIIM environment and from the tactical through strategic levels.

Q: What are some of the key challenges you see facing 1st SWTG (A), considering current requirements to operate within an increasingly asymmetric battle space?

A: An increasingly asymmetric battle space is nothing new or unfamiliar to our organization, which has been DOD's sole training institution for unconventional warfare since the 1950s. Unconventional warfare (UW) seeks and exploits the inherent asymmetry between insurgents (weak actors) and enemy states or organizations (strong actors). By definition, unconventional warfare involves activities conducted to enable a resistance movement or insurgency to coerce, disrupt or overthrow a government or occupying power by operating through or with an underground, auxiliary and guerrilla force in a denied area.

Our most important challenge at 1st SWTG (A) is to build a well educated and professionally trained Special Forces with the necessary skills to wage this type of nuanced and highly sensitive application of military power in complex 21st century environments. We have several ongoing initiatives in meeting this challenge, two of which I will highlight. First, we are developing a comprehensive training environment (CTE), defined by the dynamic application of human and physical infrastructure, language, culture and scenario-based training, unmatched in depth and substance, integrated into all phases and aspects of our Special Forces Qualification Course. This ensures a gradual, systematic exposure to the increasing complexity of training required for unconventional warfare. Second, we are developing advanced UW education in developing networks and UW operational design for experienced Special Forces officers, warrant officers, and NCOs.

Q: How is the 1st SWTG (A) adapting training to provide relevant capabilities to Army special operations soldiers?

A: Special operations forces deployed in areas from Afghanistan to the Philippines are developing new capability requirements as U.S. forces and their allies, enemies and environments change. As a result, the 1st SWTG (A) has been working hard to update existing courses and develop new ones to provide those capabilities to our special operators in the field. In the past year, we established the Joint Exploitation Training Center which is now providing holistic USG state-of-the-art training for Special Forces operators to exploit information gained on targets. Our Military Freefall School started conducting an Advanced Tactical Infiltration Course to train special operators in full-mission profile high altitude - high opening (HAHO) clandestine infiltrations employing night vision, GPS-guided bundles, and military working dogs. The Special Forces Qualification Course has integrated training on a broader range of tactical combat skills applicable to the contemporary operating environment and has developed a progressive approach to teaching UW skills through each consecutive phase. Finally, the SFQC culmination exercise, Robin Sage, is increasing the role of the interagency and the use of foreign language and cultural dilemmas. During

this exercise, 12-man student teams infiltrate a fictitious country to organize, train, advise and assist a resistance force to overthrow an oppressive regime assisted by a foreign occupying government. Students are placed in an austere environment requiring them to negotiate complex human terrain typified by multiple dilemmas, ambiguity, foreign language and interagency relationships.

Q: Describe the importance of intelligence in SOF missions and how the 1st SWTG (A) is providing greater organic intelligence capability to Special Forces ODAs.

A: High fidelity intelligence is critical to the successful execution of Special Operations. This is especially true in the 21st century operational environment, where Special Operations forces are increasingly called upon by the nation to counter a variety of irregular challenges, often in sensitive, uncertain and austere environments. These operations, often joint and interagency in nature, require precision application of the various elements of national power, guided by an unprecedented granularity of intelligence and operations fusion. Due largely to training received at the 1st SWTG (A), Army Special Forces are uniquely well-suited to thrive in these complex, ambiguous environments and meet the challenges of the 21st century.
Joint Pub 3-05, Doctrine for Joint Special Operations, succinctly highlights the criticality of detailed intelligences to Special Operations: "the nature of many special operations objectives and tactics requires intelligence support that is frequently more detailed than that needed in conventional operations….the need and opportunity to attack or engage strategic or operational targets with small units drives the formation of special units with specialized, highly-focused capabilities…timely, detailed, tailored, and fused all-source intelligence is vital in determining Special Operations mission objectives, identifying relevant targets, and mission planning and execution." When this intelligence construct is applied to the Army Special Forces decentralized operational methodology, where 12-man Special Forces Operational Detachments – Alpha (SFODAs) are often deployed individually around the world, it becomes paramount that SFODAs possess an organic intelligence capability that is highly specialized and uniquely capable.

To provide this specialized capability to SFODAs, 1st SWTG (A) executes several intelligence-centric training courses. These curricula are designed to provide SFODAs with the organic capability to collect, analyze and fuse intelligence, in any operational environment, in support the full range of Special Operations. These courses include: the Special Forces Intelligence Sergeant Course (SFISC), the Advanced

Special Operations Techniques Course (ASOTC), the SOF Site Exploitation Operator Advanced Course (OAC) and the SOF Technical Exploitation Course (TEC). Reflective of current and future operational paradigms, these courses are joint in nature and conducted in close collaboration with numerous DoD, intelligence community (IC) and law enforcement (LE) partners. It is important to highlight that the students in these courses are predominantly Special Forces operators, who are selected to receive additional advanced training. This approach increases the capability of each SFODA and enables the Special Forces decentralized operational methodology. The intelligence-centric training conducted by 1st SWTG (A) provides SOF the tools required to be successful in these operational environments, where achieving detailed understanding of the confluence of numerous complex human and environmental factors, such as social networks, tribal dynamics and violent extremist ideology, with traditional intelligence paradigms, is critical to mission success.

Over the next 6 months, 1st SWTG (A) will further expand its capability to conduct Special Forces intelligence training. These initiatives includes the activation of the 6th Special Forces Intelligence and Operations Training Battalion (Airborne)(Provisional). This Battalion will be responsible for the execution of the aforementioned courses and several additional curricula currently being piloted. These new curricula include the SOF Technical Surveillance Course (SOFTSC), the Advanced Special Operations Manager Course (ASOMC), Advanced Special Operations Leader Course (ASOLC), Special Operations Digital Targeting Training (SODTT) and the Special Operations Advanced Intelligence Course (SOAIC). Taken together, these curricula will significantly expand SFODA organic capability to collect, analyze, leverage and fuse multi-INT intelligence up to the TS-SCI level.

Q: Feel free to discuss any current goals/long-term objectives you think are critical to the training of ARSOF.

A: Army special-operations soldiers are culturally astute — their language skills, regional orientation, and cultural awareness set them apart from conventional-force service members. The USAJFKSWCS acts as an intellectual repository for SOF-related regional studies, foreign languages and cultures, adaptive thinking, leadership, behavioral science and education. While not within 1st SWTG (A)'s purview, one of our command's key educational initiatives is its foreign language initial acquisition program, which is second only to the Defense Language Institute in its throughput. Annually, more than 1,500 special-operations Soldiers go through one of the program's 17 core languages, focusing primarily on their ability to communicate verbally. Once soldiers graduate from training and report to their units, they have continued access to language and cultural training through a language support program, which is a network of satellite training facilities wherever ARSOF soldiers are stationed. The program's mission is to maintain or improve ARSOF soldiers' regional level of understanding. More than 8,500 soldiers train through this program each year. The command's newest initiative is the development of a new series of intermediate language courses which take soldiers beyond oral language comprehension, and provide a commensurate degree of competency in culture and regional studies. Eventually, this program will grow to include an advanced course for all core languages taught at SWCS. In addition, international students are welcomed at the Special Warfare Center and School. Allied forces are given the opportunity to go through our SFQC, the officer CA and MISO Qualification courses, the Special Operations Medic Course, as well as some advanced skills with their American counterparts. This training allows soldiers to operate on common ground in the battle space, as they have trained together.

"The future of our regiments is predicated upon our ability to produce adaptive special-operations leaders who have leadership qualities based upon humility, critical thinking, comfort with ambiguity, acceptance of prudent but calculated risks and the ability to make rapid adjustments based upon a continuous assessment of the situation. These leaders must be highly trained in warrior skills, and highly educated." – Brig. Gen. Bennet S. Sacolick, U.S. Army John F. Kennedy Special Warfare Center and School Commanding General

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Clearing the Way

The latest in ground-penetrating radar is giving soldiers added situational awareness where and when they need it most.

Submitted by NIITEK

Verifying that a road or path is clear and safe for passage, Before the First Step, has been the mission of Non-Intrusive Inspection Technology, or NIITEK, part of the Chemring Group, since its establishment in 2000. NIITEK has developed and delivered a high-performance ground penetrating radar system called VISOR 2500 Ground Penetrating Radar (GPR) offering a precise, on-road detection capability that uses automatic threat recognition (ATR) algorithms in a software package to locate hidden explosive devices.

NIITEK was recently awarded its fourth production contract for $106.5 million from the U.S. Army, to supply and support 76 Husky Mine Detection Systems for route clearance in U.S. peacekeeping operations around the world. Deliveries under the contract will be made over the period to May 2011. The contract award was for over $200 million.

Mounted on the front of the U.S. Army s Husky Mounted Detection System (HMDS), the VISOR 2500 GPR is based on NIITEK s breakthrough GPR technology. VISOR 2500 GPR technology sits on the Army s Husky, but shrink it down to fit a small, portable robot, that s the R-VISOR, a robot-mounted subsurface visualization and buried threat detection system. The system addresses the immediate dismounted warfighter needs to detect similar threats as the vehicle mounted system, in a portable and highly-mobile package that is operated from a safe, stand-off position. NIITEK s successful fielding of HMDS provides the foundation for a future fielding of R-VISOR, offering the warfighter additional capability.

Enemy mines and other unseen man-made hazards continue to be the most dangerous and lethal threat to warfighters on the battlefield, said John Domitrovits, vice president of NIITEK. Thanks to many recent technological developments, including NIITEK s high performance ground penetrating radar (GPR) systems, many of these weapons have been located and neutralized before being detonated and potentially harming U.S. or coalition warfighters.

The U.S. Army clearly understands the benefits of this GPR and is steadily increasing the number of NIITEK s mine-detection systems on the battlefield, said Domitrovits. These systems are also integrated onto robotic platforms and on several types of human-operated, mine-protected vehicles.

For more info visit: www.niitek.com.

FRIEND OR FOE:
Handheld Comms Integration

The U.S. Army is working with industry to deliver handheld capability that offers warfighters combined mission and geographical information from a global JBC-P network perspective.

By Claire Heininger, Symbolic Systems, Inc., Supporting the PEO C3T

It weighs less than a helmet or a pair of combat boots, but for isolated soldiers it could be just as critical to survival.

Through an unconventional approach – connecting an everyday cell phone to a tactical radio – soldiers could soon have a handheld device to access information about their mission and surroundings.

"It will be under two pounds, and they'll be able to do over-the-horizon command and control and beyond-line-of-sight situational awareness," said Maj. Shane Robb, assistant product manager for Joint Battle Command – Platform (JBC-P). "For a dismount, that's really important. It also has global coverage – even up at the North Pole and South Pole, you don't have to set up channels."

By plugging into a powerful existing network, Robb and his colleagues believe their handheld combination will provide an inexpensive interim solution that could be demonstrated to soldiers as soon as February. The concept was demonstrated at the Association of the United States Army (AUSA) Annual Meeting and Exposition in Washington, DC, along with other evolving capabilities in JBC-P such as TIGR integration.

"We saw a lot of potential for beyond line-of-sight capabilities to dismounted soldiers," said Dick Sparshatt, the lead system engineer for JBC-P. "So rather than trying to bite off everything, we said we'd leave the network side alone and look to use an existing network, and just provide a small handheld-type device which is the computing platform and the user interface."

Integrated Battle Command

JBC-P is the second generation of Force XXI Battle Command Brigade and Below (FBCB2) - Blue Force Tracking (BFT), a digital system assigned to the Program Executive Office Command, Control and Communications

– Tactical (PEO C3T). Primarily used in military vehicles, FBCB2's display screen shows blue and red icons over a geospatial imagery map. It paints a complete picture of the battlefield – including friendly forces, enemy combatants and landscape hazards – so units can synchronize operations and avoid fratricide.

While the JBC-P team is initially seeking to prove its handheld concept with commercial technology, like the Android operating system on a Nexus One phone, the Army is also pursuing prototypes for a more rugged version, Robb said. In the coming months, "user juries" of soldiers will provide their feedback on how well the different combinations meet their needs.

But the immediate goal is to get the capability to the battlefield, fast – allowing soldiers with handhelds to communicate over a range of 100 to 200 miles, Robb said. At the same time, the radios will serve as one-way "beacons" that show up as blue icons in the larger family of FBCB2 systems.

"It isn't the full capability that we would want, but it's an interim step until we can provide it," Robb said. He added that with the network and radios already fielded, costs would be limited to smaller items like the phones, cables, training and supporting equipment like batteries and chargers.

Also on display at AUSA were other JBC-P upgrades, including better maps and more precise location information for icons representing vehicles, aircraft and dismounted Soldiers.

This greater accuracy is made possible by the BFT 2 network, which has 10 times higher bandwidth than the current BFT 1, Sparshatt said. BFT 2 is slated to begin fielding later this year as part of the Joint Capabilities Release (JCR), the bridge to JBC-P.

TIGR Tracking

Both JCR and JBC-P will also leverage Tactical Ground Reporting (TIGR), a collaborative software tool that uses a "Google Earth"-like interface, pictures and text to provide a searchable database of unit activities. Along with routes and places, TIGR is valuable for tracking people – such as local police chiefs, religious leaders or even a high-value enemy target, said John Gillette, PM FBCB2 lead for TIGR.

In JCR, users will toggle between TIGR and FBCB2; in JBC-P both applications will display on a single screen. With TIGR at their fingertips – instead of back at the base – Soldiers on patrol can adapt to changing circumstances, Gillette said.

"For the first time, TIGR will be actually on a platform-based system that can go out with vehicles," Gillette said. "In the past, Soldiers would have executed their mission based on planning they conducted on TIGR back at their operating base. Now, they can react to changes in the mission and conduct planning while in their vehicle. Leaders can plan their actions based on what is happening in the area, as well as what has happened historically. This capability increases their safety and gives them some additional resources while they're out there."

With features like drag-and-drop icons, touch-to-zoom maps and group chat, the new user interface combining JBC-P and TIGR was designed so Soldiers could learn it intuitively with little training, Robb and Gillette said.

"It was done intentionally, and it was done with user feedback," Gillette said.

Sparshatt, a former exchange officer in the British Army, has worked with FBCB2 since 1997 and said the new interface will be "more modern" than what users are accustomed to.

"You'll have a better map, and you'll be able to manipulate it – zoom in and out, move around it – much quicker," he said.

Rapid Fielding

With 95,000 FBCB2 systems already fielded, PEO C3T will execute the JBC-P improvements by upgrading software on existing computers rather than immediately replacing them. That strategy is expected to yield significant cost savings, Robb said.

As they need to be refreshed, the computers will then be rotated out and replaced by models that fully meet JBC-P requirements. Eventually, commanders will be able to remove the screen from its fixed position and take it to the back seat or the hood of the vehicle, he said.

The ability to track friendly and enemy force activity and share that information with fellow soldiers makes FBCB2 a "confidence builder" for units fighting today, said Sergeant Major Anthony B. Miller, currently serving as the G6 SGM for the U.S. Army Africa(USARAF) , who served as the Chief of signal (S3 SGM) with the 51st ESB while deployed to Iraq.

"It took all the guesswork out," Miller said. "FBCB2 was able to allow the Soldiers to have better situational awareness on the battlefield, feel a little safer as they travel down a convoy route."

He said the possibility of a new handheld device with FBCB2 capabilities will benefit lower echelons.

"It's up-to-date, real-world collaboration of information," Miller said. "What's happening with technology today is just that – allowing commanders to make a combat decision to save the life of a soldier."

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Blue Force TIMES TEN

The U.S. Army is upgrading its tried and true Blue Force Tracking System to accommodate data throughput at speeds much faster than current platform capability.

By Kris Osborn, PEO C3T Public Affairs

The U.S. Army is in the midst a host of high-tech upgrades to it force tracking system – Force XXI Battle Command Brigade-and-Below (FBCB2) – to include new, next-generation software and a new, faster satellite network, service officials said.

As part of this overall effort, the Army is preparing to deploy the high-tech, high-speed Blue Force Tracking (BFT) 2 --- a force tracking satellite communications network. Although difficult to compare, it is roughly 10-times faster than the existing BFT system, said Lt. Col. Bryan Stephens, BFT product manager.

Dual Capability

The current BFT uses half duplex capability, a term which means that it has only one-way transmission and cannot receive and transmit at the same time; BFT 2 data rates are exponentially faster than the current BFT.

"BFT 2 is full duplex which means you can transmit and receive at the same time. It is an entirely different architecture," said Stephens.

In addition, BFT 2 shortens the distance information has to travel; transceivers send information up to a satellite and then immediately down to a ground station – which then quickly sends the information back to deployed units. Current BFT architecture requires that information reach a Network Operations Center located in the U.S., Stephens said.

"Today, if you transmit your position location information in theater operations, it goes to a satellite and then to ground station – then it is transmitted to a Network Operations Center (NOC) in the states. The NOC sorts it all out and re-broadcasts. When you deal with satellites you are dealing with latency – as information travels up and down a couple of different times," said Stephens. "With the BFT 2 system we changed that architecture. Instead of going all the way to the NOC, information is going up and down to a ground station. That is much different than going through multiple satellite hops to get processed at the NOCs."

With BFT 2 - situational information can be beamed across the network in seconds, sending images to a ground station – then back up through commercial satellites to forward deployed units on the move.

Updates on the Fly

The new system vastly improves refresh time as well. Based on a few factors current BFT can take minutes to load new data and update position location information, whereas with BFT 2 refresh time is reduced to a matter of seconds, Stephens said.

The new BFT 2 tracking system, which is slated to begin fielding by the end of 2011, is engineered to synch with new BFT software called Joint Battle Command-Platform (JBC-P) designed to run on existing JV-5 computers or hardware, said Maj. Shane M. Robb, JBC-P assistant product manager.

"With JBC-P what we are doing is we are leveraging the successes of FBCB2 and the investment in that system," Robb said.

The Army has about 95,000 BFT systems, the bulk of which are on JV-5 computers already in service, he added.

"The JV-5 computer is in most of the vehicles that are in theater, such as MRAPs and HMMWVs. Rotary wing assets have different hardware variants. We don't want to replace all that hardware at once – we are going to use the same hardware with our new software and our new capabilities. The hardware now is running prototype JBC-P software. As we refresh the hardware, which we need to do after a few years anyway, then we will upgrade it with more capable tablet style computers that more fully meet our requirements for JBC-P," Robb said.

JBC-P also comes with improved requirements for accuracy; an icon representing a vehicle on a JBC-P screen has to be within 200 meters of its actual location.

"If you are driving down the road and you see a vehicle or a person, you can look at your screen and associate an icon with what you see on the ground. It helps to mitigate fratricide," Robb said.

Functional Redesign

The original Force Battle Command Brigade-and-Below (FBCB2) screen, which was designed in the 90's, has an old drop down graphics interface, Robb said.

"JBC-P has a completely redesigned interface, designed to be more intuitive, faster, and more collaborative. It has "free draw" graphics -- whereas in the past you had to go through a whole graphics menu. This is powerful for a platoon leader on the ground. In the past to do a change of mission on the fly, you had to go through a cumbersome graphics drawing process and send it – or you had to talk someone through everything on the radio," said Robb. "Now, you can draw an arrow or a circle and say 'I want you to go along this route I want a support by fire here.' You can send things easily and it is easier to collaborate on the move with chat and messaging."

The JBC-P interface, which will begin fielding in 2013 and 2014, is engineered to integrate Tactical Ground Reporting (TIGR) of Area, Structures, Capabilities, Organizations, People, and Events (ASCOPE) data.

"TIGR is designed for the lower echelon units – patrol leaders. In the past -- a patrol leader would take notes or logs regarding their area in his green book or binder -- but the data gathered was not very easy to search and reuse. With TIGR, which is currently in the company level TOCs [tactical operations center] after a patrol, the patrol leader can type out their report into the TIGR system. They upload any photos or reports of interviews, or other events. The data is all geo-referenced and time stamped and it feeds into a larger database" said Robb.

As a result, the next time soldiers prepare to go out on a patrol, they can highlight their route and any events that have occurred along that route will show-up as icons, Robb explained.

"They are then able to view the reports, photos and other data associated with each icon and modify their patrol plan as needed. While TIGR currently exists in the TOC, with JBC-P, TIGR will be integrated and on the vehicles," Robb said.

BRAC Spotlight

Greater Synergy Breeds More Capability

As part of a 2005 BRAC Recommendation realignment, the U.S. Air Force Research Laboratory Sensors Directorate, Hanscom, MA is relocating to Wright Research Site (WRS) at Wright-Patterson AFB, OH (WPAFB). The consolidation includes relocation of the Outdoor Radar Range facilities at Rome, NY and the laboratories and anechoic chambers at Hanscom AFB, MA to WPAFB.

The mission consolidation integrates research facilities for a reduction in laboratory square footage and support staff. The combination will provide significant savings in infrastructure maintenance and staff support at two other operating locations. The Sensors Directorate will relocate 160 staff positions to Wright-Patterson from Hanscom and Rome AFBs.

Q: Please briefly explain the primary objectives of the relocation for the Air Force and greater WPAFB and DoD communities.

A: The relocation moves the sensors research missions from Rome, NY and Hanscom AFB, MA to a single Sensors Research Center of Excellence at WPAFB. The location of the entire directorate mission at one location will provide synergy in Electro-Optical (EO)/Radio Frequency (RF) materials and devices research and EO/RF sensor and countermeasure techniques. The relocation of the directorate's Outdoor Range will also provide synergy in space and airborne radar research and development of enhanced detection, tracking and handoff of airborne & ground targets. The single operating location will improve coordination within the directorate and with our customers to reduce development time of sensors technology for air, space and cyberspace applications.

Q: Please detail the completed and forward-looking objectives of the move.

A: The consolidation includes renovation of 57,000 ft2 of laboratory space to accommodate relocation of basic and exploratory research facilities for development of EO/RF materials and devices and EO/RF sensors and countermeasures. The relocation requires 92,000 ft2 of new construction for office space, an Indoor Range, and an Outdoor Range. The expanded office space will accommodate the additional 160 members of scientist and engineering technical staff that are relocating from Hanscom AFB and Rome, NY facilities.

The Indoor Range facility consolidates the capability of multiple anechoic chambers to one R&D anechoic chamber with multiple operating modes. The Outdoor Range facility will support the outdoor radar range relocating from Rome, NY. Currently, we have completed construction of the new office building and Outdoor Range building. The Indoor Range building construction is nearly complete with the anechoic chamber integration scheduled for completion in May 2011. The relocation of the radar range facility from Rome, NY is planned for completion by the end of 2010 while the relocation of laboratory equipment and people from Hanscom AFB, MA is planned for August 2011.

Q: Please explain how the relocation of the Sensors Directorate is intended to enable greater readiness for Air Force and joint warfighters in facing 21st century threats (i.e. research, development, technology fielding, etc.)

A: The consolidation will increase the likelihood of fielding interoperable systems, reduce overlapping infrastructure, and increase the efficiency of operations. In addition, it will provide greater synergy across technical capabilities and functions and positions the Air Force to exploit co-located scientific, technical and acquisition expertise.

Q: Please speak to any future goals/initiatives for the Directorate at WPAFB and the Air Force at large.

A: The consolidated sensor technology research capability provides key infrastructure for development of multi-use sensors for aircraft, spacecraft and small/mini/micro UAV applications. The sensor research is focused on providing autonomous, agile and reconfigurable sensors for adaptability to future sensor platforms. The application of small and adaptable sensors will be key to implementation of the system of systems concept for multi-INT data collection. The sensor technology development will directly support collection and transmission of information that are essential to the execution of network centric warfare.

For more info: visit www.first.army.mil

Multi-Radar UAV Platform Sensor

Northrop Grumman Corporation has delivered the first production Multi-Platform Radar Technology Insertion Program (MP-RTIP) sensor to Edwards Air Force Base for integration on the first U.S. Air Force Block 40 Global Hawk. The first MP-RTIP Global Hawk flight is scheduled to occur by early 2011.

The MP-RTIP technology is unprecedented and unique in its ability to provide critical coverage for the warfighter. MP-RTIP's unique application of advanced technologies can detect multiple stopped, slow and fast-moving objects on the ground in any weather, day or night. This capability combined with the endurance of the Block 40 Global Hawk provides the warfighter with more than 30 hours of greatly improved situational awareness and combat identification per mission.

"The MP-RTIP equipped Global Hawk is an unprecedented combination because it provides greater situational awareness for the warfighter," said George Guerra, vice president High Altitude Long Endurance (HALE) programs. "We are currently on track leading up to first flight and look forward to meeting all upcoming milestones to ensure we provide this critical resource to the warfighter as quickly as possible."

Global Hawk's range, endurance and large payload capabilities are well suited to provide persistent surveillance with MP-RTIP. Flying at altitudes up to 60,000 feet for more than 30 hours per sortie at speeds approaching 340 knots, the MP-RTIP-equipped Block 40 Global Hawk can persistently see through most types of weather, day or night. As the world's first fully autonomous HALE UAS, Global Hawk is the platform of choice for a wide variety of sensors, foreign and domestic, meeting the global need for persistent ISR.

For more info: contact Sherri Pineda Hargrove at sherri.hargrove@ngc.com

MRAP Recovery Vehicles

Navistar Defense, LLC has announced that it received a delivery order for 250 International® MaxxPro® Recovery vehicles from the U.S. Marine Corps Systems Command. The $253 million order was placed under the company's Mine Resistant Ambush Protected (MRAP) indefinite delivery / indefinite quantity contract and includes contractor logistics support. This is Navistar's eighth major MRAP variant.

Navistar originally unveiled the MaxxPro Recovery vehicle, also known as a wrecker variant, in February 2009 as a new utility vehicle offering.

The MaxxPro Recovery vehicle is based on the same International® WorkStar® platform that lends its flexibility to the company's growing family of vehicles. MRAP ballistic, mine and improvised explosive device (IED) protection will now aid two- to three-man crews as they retrieve damaged or mission-disabled vehicles and carry out other support missions.

The vehicle is powered by the MaxxForce® 9.3D engine. Production of MaxxPro Recovery units will be completed by fall 2011.

For more info: www.navistar.com/newsroom

Composite Armor Joint Venture

Plasan, a survivability systems and armor solutions company and Q-Flo, a University of Cambridge spin-out company, have announced the formation of TorTech Nano Fibres Ltd, a joint venture between the two companies.

TorTech, based in Israel, will produce carbon nanotube fibre for the enhancement of body armor and composite armor systems for vehicles. The new material is stronger than Kevlar and other ballistic fabrics, but still flexible and lightweight.

"Through Tortech, we intend to produce a carbon nanotube-based yarn, which can be woven into the strongest-ever manmade material," said Dr. Dai Hayward, Q-Flo's CEO. "Plasan's expertise will then enable the design and production of a revolutionary new range of body and vehicle armor."

For more info: www.plasan.com or contact Hadas Weizman at hadasw@plasan.com

Ruggedized Computing

VT Miltope, a company of VT Systems, Inc. (VT Systems), has announced a new family of ruggedized computer products that represent the next generation of mission critical rugged computers, HARD WEAR™ for demanding military environments.

The company's launch of its newest rugged family, which includes clamshell laptops, convertible laptops, handhelds, and mounted computers, solidifies VT Miltope's position as a leading provider of rugged computers that meet the difficult real-world mission requirements our military faces daily.

VT Miltope now has a full spectrum of ruggedized mobile computing solutions and form factors that meet the growing mission and application needs of today's military. In garrison or in the field, the company's HARD WEAR™ sets a new standard for military rugged computers.

For more info: www.vtmiltope.com

New Targeting Sight

Aimpoint, the originator and worldwide leader in electronic red dot sighting technology, has announced that the company's shipments of M68 Close Combat Optics under contract to the U.S. Army recently passed a total of one million sights. Contracts for the M68CCO have been issued to Aimpoint by the U.S. military since 1997, and continue with shipments as part of the latest contract for 565,000 sights awarded to the company in August 2009.

The M68CCO is an electronic red dot reflex sight which increases effective marksmanship, and allows the user to acquire and engage targets with increased speed and accuracy without diminishing situational awareness. The optic is extremely rugged, and the latest versions of the sight operate continuously for up to 8 years using a single AA battery.

The contract for the M68CCO is administered by the US Army Materiel Command's Armament Research, Development and Engineering Center (ARDEC) located at Picatinny Arsenal, New Jersey, in close cooperation with Program Executive Office Soldier (PEO Soldier).

For more info: www.aimpoint.com

Spec Ops Fire Control Technology

SureFire, LLC, manufacturer of high-end illumination tools and tactical products, has been awarded a major military contract to produce the VBL-H (visible bright light heavy) fire control device for the crew-served weapon systems used by U.S. Special Operations Forces. The $16.6 million contract, for an indefinite quantity of SureFire HellFighter heavy-gun WeaponLights, was awarded by officials of the Naval Surface Warfare Center, Crane Division, in Crane, Indiana.

The primary objective of the VBL-H program, a subsystem of the Miniature Day/Night Sight - Crew Served Weapons project of the U.S. Special Operations Command Weapon Accessories program, is to provide increased optical augmentation to crew-served operators. This increased optical augmentation is expected to help crews with target detection, recognition, and identification in low-light/observation conditions on the battlefield.

SureFire's HellFighter WeaponLight—designed specifically for the M2HB .50 caliber machine gun, M134 Mini-Gun, and M240—generates 3,000 lumens of focused, HID (high intensity discharge) light capable of reaching hundreds of yards into the darkness. HellFighter has been used in combat operations in both Iraq and Afghanistan and has proven to be an effective target illuminator and searchlight, as well as a non-lethal escalation-of-force preventer. In addition to mounting to the .50 caliber M2HB, M134 Mini-Gun, and M240-variant machine guns, HellFighter can also be hand carried as a searchlight or mounted to a vehicle or watercraft.

Work will be performed by SureFire at their Southern California facilities and is expected to be completed by September 2015.

For more info: www.surefire.com/heavygunweaponlight or contact Ron Canfield at rcanfield@surefire.com

SMSS: Taking a Load Off

By Jim Gribschaw
Director - Combat Maneuver Systems
Lockheed Martin Missiles and Fire Control

Jim Gribschaw

The Squad Mission Support System (SMSSTM) is a light, squad-sized unmanned vehicle platform designed primarily to serve as a utility and cargo transport for dismounted small unit operations. Funded entirely by Lockheed Martin as an independent research and development project, SMSS will provide unmanned transport and logistical support to the Light and Early Entry Forces.

Tactical and Transportable

The SMSS vehicle is based upon the 6x6 Land Tamer chassis produced by PFM Manufacturing, Inc., in Townsend, Montana. After significant modification by Lockheed Martin and the addition of a standard set of accessories (e.g. Soldier battery charger, winch, tow bar, spare tire, tire tools, etc.), the SMSS vehicles weigh approximately 4,300 pounds, and are capable of carrying approximately 1,200 pounds of cargo.

The six-wheeled, hydraulic drive transmission produces high torque for conquering rough terrain while remaining stable during long hours of continuous operation at 4 mph walking speed. This is enabled by the vehicle's diesel engine that has dual fuel capabilities, running on diesel or JP8. The cargo deck has modular/moveable tie-down points for securing all types of cargo, to include: overhead cover, sandbags, small arms ammo, additional food and water, heavy weapons, medical supplies, humanitarian aid supplies, and virtually every other class of supply required for any mission or situation, as well as litters for emergency casualty evacuation.

"We designed the SMSS to fit the load requirements of both the CH-47 (internally and sling-loaded) and the UH-60L (sling-loaded) so that forward operating troops could bring the capabilities of this unmanned system to the front lines," said Jim Gribschaw, director of Combat Maneuver Systems at Lockheed Martin Missiles and Fire Control in Dallas. "SMSS is capable of carrying gear for a 9- to 13-person Light Infantry squad of Soldiers or Marines, or provide a utility platform for a Special Forces team."

For transportation utility, SMSS also possesses a moveable winch with front and rear hitch receivers for self-recovery, or mounting a hitch ball or pintle hook to tow trailers; lock-out hubs permit towing the SMSS; a stowable tow bar mounted in either

front or rear hitch receivers (interchangeable with the winch); and high-intensity task lights.

"SMSS possesses excellent mobility in most terrain, with the ability to go with dismounted Warfighters where they need to go," said Gribschaw. "SMSS, with its supervised autonomy and exceptional environmental perception, will provide the Warfighter with a reliable squad-sized vehicle which will improve combat readiness by reducing combat loads, and providing a means of casualty evacuations."

To accommodate ease of loading/unloading cargo, SMSS has removable side rails for securing packs and other gear, as well as a fold-down tail gate. Additionally, the Soldier-friendly modular storage racks can be lowered to the side to form a work bench area. SMSS possesses a standard NATO power port and a high-output alternator that can be used to provide up to 4 kW of off-board power for other military equipment, and can also be used to jump-start other military vehicles if needed.

Auto-sensory Capability

To enable autonomous operations, the SMSS vehicle has a sensor package consisting of a Light Detection and Ranging (LIDAR) sensor system, as well as forward-and-aft-mounted infrared and color day cameras, providing for environmental perception, situational awareness and day/night operations.

"SMSS night capabilities balance affordability with soldier capability," said Gribschaw. "The current sensor system allows local situational awareness around the vehicle and the ability to tele-operate the vehicle at night. We're always exploring new ways to enhance our capability through affordable solutions, and we are partnering with Lockheed Martin Gyrocam Systems to see how their technology can enhance our vehicle's existing RSTA capability."

The SMSS's autonomy is achieved by use of the operator control unit (OCU), which is capable of remote control, tele-operation, autonomous control of multiple SMSS vehicles and the ability to 'hand-off' an SMSS from controller to controller. It provides remote command and control using radio, Wi-Fi or Ethernet physical interfaces. The OCU provides a digital map of the operational area of interest that displays the location of the OCU, the SMSS, planned routes and "breadcrumb trails" of traversed routes. As contractor of record on the Defense Department's Common Controller program, which is currently in development, Lockheed Martin will transition the control of SMSS to the Common Controller once that program enters production/deployment.

Using the OCU, the SMSS can be operated in four modes: remote control, tele-operation (non-line of sight remote control), supervised autonomy and man-driven. Currently, SMSS platforms may be operator-driven for maintenance or emergency purposes, but it is not intended for passenger operations. Recent additions to autonomy include the ability to follow operator-laid Global Positioning System (GPS) "breadcrumbs," as well as follow vehicle-laid GPS "breadcrumbs." The ability to follow "breadcrumbs" was implemented to improve the system's autonomous capabilities to traverse off-road terrain with no well-defined road or paths, which is common in a combat environment.

Field Ops Testing

During November and December of 2008, two SMSS platforms were successfully used in Army Expeditionary Warrior Experiment (AEWE), Spiral E, at Fort Benning, Georgia, where a range of SMSS capabilities for "maneuvering with the troops in the field" was tested and evaluated by the Army. Following that successful event, SMSS was modified to incorporate lessons learned and soldier comments. In June 2009, the SMSS was tested in mountainous terrain near Denver, Colorado, and successfully transported a 1,000 pound payload while autonomously navigating a five kilometer route over a meandering, steeply hilled, narrow, dirt/rock/mud trail, at times under adverse weather conditions including driving rain. In August 2009, SMSS vehicles participated in a Military Utilization Assessment (MUA) conducted by the U.S. Army's Maneuver Center of Excellence, Maneuver Battle Lab, at Fort Benning, Georgia. The purpose of the test was to further assess the utility and value of the SMSS in support of small unit tactical operations. The success of this MUA resulted in current-on-going planning by the Army to continue the operational assessment of the SMSS in Afghanistan.

In July 2010, Lockheed Martin was brought under contract with PM Soldier Warrior to participate in a Portable Power Limited User Test (LUT) Excursion. The objective of the excursion is to evaluate various battery recharging schemes for support of Nett Warrior-equipped units; requiring solutions for the high-intensity battery requirements of the Soldier's advanced technology. SMSS was selected as one of the vehicles for mounting the various portable power solutions for evaluation.

"SMSS is an extremely flexible, utilitarian system that provides outstanding service to the Warfighter," Gribschaw said. "As the only unmanned vehicle we're aware of with four separate safety releases, SMSS has operated effectively with Soldiers in the field training. Through these operations, we are learned more about how to make this vehicle a valuable addition to the Warfighting unit. Additionally, our customer's are developing requirements and Tactics, Techniques and Procedures (TTP) that will ultimately bring the advantages of unmanned systems to our soldiers."

Lockheed Martin has produced seven SMSS platforms, four of which are intended for the deployment with active-duty forces to Afghanistan in 2011 for an in-theater Military Utility Assessment (MUA). The remaining SMSS vehicles will continue testing and evaluation stateside.

For more info: visit www.spawar/navy/mil

Industry Partner

Chuck Reiche is the Program Manager for Marine Corps Programs at iGov. He served over 21 years in the USMC working in IT as an operator, systems integrator and program manager before retiring in the summer of 2010. He is currently the Program Manager of MARCORSYSCOM's TCWS 2.0 contract, which was awarded to iGov in June 2010.

Mr. Reiche was interviewed by A&M Editor Kevin Hunter

Q: Can you tell our readers about your background?

A: Sure, I enlisted as a radio operator at 18. I then spent 11 years working with Multi-Channel and switched networks in both CONUS and OCONUS units. I received my commission after studying Management Information Systems and subsequently served as a Battalion Communications (S-6) Officer for 1stBn 3d Marines. I then did a tour as the Information Systems Management Officer (ISMO) for MCB Hawaii. In 2005, I attended The Naval post Graduate School to study Computer Science and was subsequently assigned as the Project Manager for an ACAT III Tactical IT program for Marine Corps Systems Command. I was heavily involved in all phases of the systems development life cycle, including feasability, requirements analysis, concept development, production, deployment and sustainment.

Q: Can you elaborate on your tactical IT and communications experience?

A: I was fortunate to spend some time as the Assistant Operations Chief for a Communications Company. It was my first exposure to the complexities associated with MAGTF system-of-systems concepts. As an S-6 I led the planning, installation and operation of the all telecommunications and data networks in support of the unit mission and objectives. It was during this assignment that I saw a significant increase in the bandwidth and data available at the lower echelons of command. As a result, I explored what could be done with existing organic assets, writing my thesis on VoIP via low-bandwidth radios. My final assignment before retirement was as the Project Manager for an Air Defense IT system called Composite Tracking Network (CTN).

Q: When did you get involved with Program Management? How has this experience helped you in your current position?

A: In 2004 when I was assigned as the ISMO for MCB Hawaii, one of my collateral duties was to lead the base transition to the NMCI network. It was "all-you-can eat" Project Management and it exposed a few gaps in my knowledge set. I ended up going back to school, picking up several Master's Certificates in IS/IT Project Management. From that point on I knew that Program Management was a good fit for me. In 2007, I became the Project Manager for the Composite Tracking Network (CTN). I gained tremendous insight as to how difficult it is to develop and integrate new technologies and how critical the Government – Industry relationship is. Now that I am with iGov I try to foster the same with our TCWS Government counterparts. It's a partnership, symbiotic, with the same objective. Deliver capability to the Marines on the ground. I am very proud of our efforts and the product we are delivering.

Q: What parts of your military experience have helped you the most in your transition? What advice would you give to other transitioning officers and servicemen?

A: Looking back, I was nervous about the transition. I wasn't quite sure which skills would transfer and which would not. The truth is the services do a terrific job in preparing servicemen and women for the transition. Continuous leadership training and professional military education are investments most companies don't make in their people. The key is making the connections and applying what you have already been taught. I was quite surprised how applicable those skills were. I am not big on advice, but I will offer this - find a company that fits your value system. Servicemen and women come from an organization with strong core values. Not all companies are the same. I was very fortunate to catch on with one that truly fit my beliefs.

Q: Why did you choose iGov?

A: As I mentioned previously, iGov really fit my ethos. I wanted to work for an organization that truly supports our servicemen and women. I've been both a user of USMC IT solutions, as well as a material developer, which has provided me with unique insight as to the challenges our Marine's and Acquisitions Professionals are facing on a daily basis. One of those challenges was dealing with sizable corporate beuracracy that severly impacted responsiveness and ultimately the Marines in the field. iGov's corporate culture and corresponding infrastructure is centered around the customer and satisfying mission critical needs. iGov has repeatedly demonstrated a commitment to getting the right systems into the hands of our warfighters, both in their work on TACLAN and TCWS 2.0. Mature processes are in place that allow for a degree of agility and flexibility that is typically not found in larger organizations burdened by heavy corporate bureaucracy. Coupled with programmatic experience and technical expertise, iGov is able to cost efficiently deploy products and services that support the Warfighter. It's a flat organization with ready access to executive decision makers. It was apparent to me that iGov placed the Warfighter ahead of the corporate bottom line. That resonated with me.

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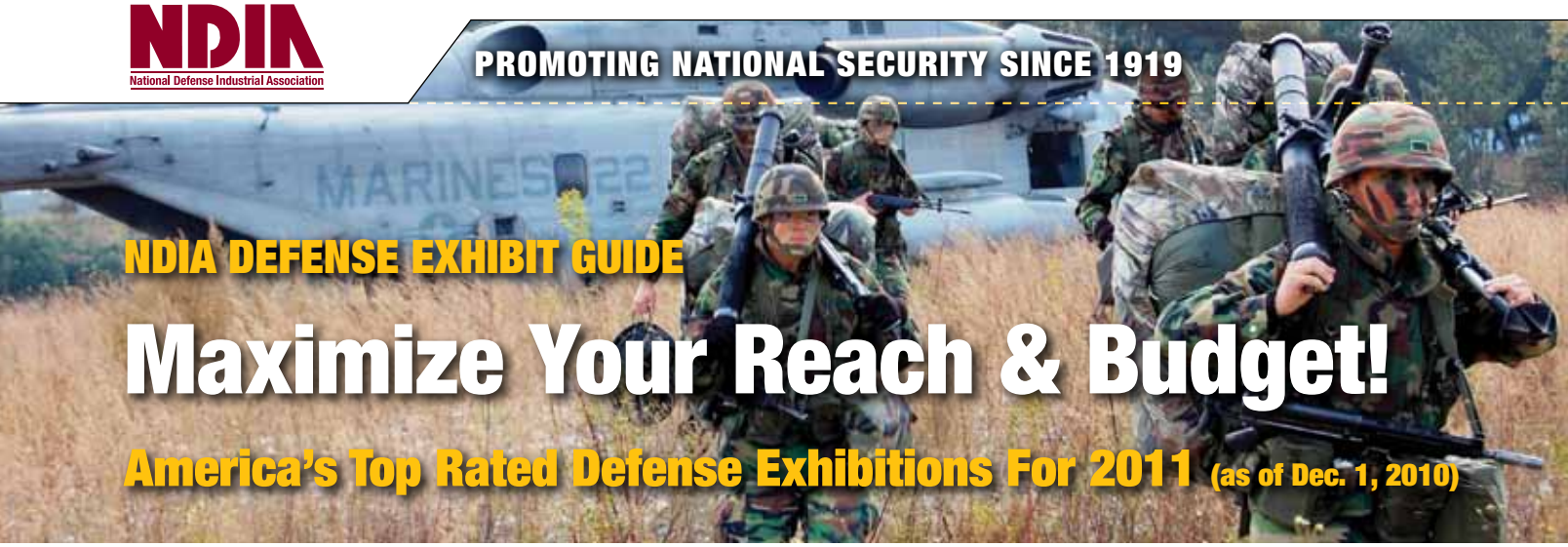

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22nd Annual SO/LIC Symposium & Exhibition – #1880
February 8-9, 2011 ▶ Washington, DC
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Meeting POC: Meredith Geary, CMP 703-247-9476

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March 14-16, 2011 ▶ Honolulu, HI
Exhibit POC: Luellen Hoffman, 703-247-9460
Meeting POC: Tia Pitt, 703-247-9467

2011 Ground Robotic Capabilities Conference & Exhibition – #1380
March 22-24, 2011 ▶ Orlando, FL
Exhibit POC: Alden Davidson, CEM 703-247-2582
Meeting POC: Mary Katherine Saladino 703-247-2540

27th Annual Logistics Conference & Exhibition – #1730
March 28-31, 2011 ▶ Miami, FL
Exhibits POC: Dennis Tharp, CEM 703-247-2584
Meeting POC: Kelly Seymour 703-247-2583

AFEI – Department of Defense Enterprise Architecture Conference
April 11-15, 2011 ▶ Hampton, VA
POC: Betsy Lauer 703-247-9473
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April 11-14, 2011 ▶ Miami, FL
Exhibit POC: Taryn Crowder 703-247-2566
Meeting POC: Allison Doherty 703-247-2570

12th Annual Science & Engineering Technology Conference/DoD Tech Expo – #1720
April 12-14, 2011 ▶ Charleston, SC
Exhibit POC: Allison Hitchner 703-247-2573
Meeting POC: Mary Anna Christiansen 703-247-2596

2011 Joint Service Power Expo – #1670
May 2-5, 2011 ▶ Myrtle Beach, SC
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Meeting POC: Angie DeKleine 703-247-2599

Global Explosive Ordnance Disposal Conference & Exhibition – #1950
May 3-5, 2011 ▶ Ft. Walton Beach, FL
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Meeting POC: Mary Anna Christiansen 703-247-2596

2011 Environment, Energy & Sustainability Symposium & Exhibition – #1440
May 9-12, 2011 ▶ New Orleans, LA
Exhibit POC: Allison Hitchner 703-247-2573
Meeting POC: Kari King, CMP 703-247-2588

2011 SOFIC Conference & Exhibition – #1890
May 17-19, 2011 ▶ Tampa, FL
Exhibit POC: Alden Davidson, CEM 703-247-2582
Meeting POC: Meredith Geary, CMP 703-247-9476

International Infantry & Joint Services Small Arms Systems Symposium Exhibition & Firing Demo – #1610
May 23-26, 2011 ▶ Indianapolis, IN
Exhibit POC: Dennis Tharp, CEM 703-247-2584
Meeting POC: Kelly Seymour 703-247-2583

8th National Small Business Conference and Exhibition – #1140
June 7-8, 2011 ▶ San Diego, CA
POC: Britt Bommelje 703-247-2587

2011 Joint CBRN – #1300 (Tentative)
June 21-23, 2011 ▶ St. Robert, MO
Exhibit POC: Luellen Hoffman 703-247-9460
Meeting POC: Julie Veldkamp 703-247-2577

2011 Defense Logistics Agency Enterprise Supplier Conference and Exhibition – #1780
June 28-30, 2011 ▶ Columbus, OH
Exhibit POC: Dennis Tharp, CEM 703-247-2584
Meeting POC: Taryn Crowder 703-247-2566

26th International Ballistics Symposium & Exhibition – #1210
September 12-16, 2011 ▶ Miami, FL
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WE HOUSE OVER 10 MILLION SPARE PARTS FOR ALL AIRCRAFT

Sweet Home, Fort Rucker, Alabama

The U.S. Army Aviation Center of Excellence (USAACE) is headquartered at Fort Rucker, Alabama, and is the Army's premiere installation for developing Army Aviation professionals and aviation capabilities to support ground commanders around the world.

Submitted by the U.S. Army Aviation Center of Excellence Commander's Initiatives Group

Nestled about 30 miles from the Alabama-Florida state line in the upper corner of lower Alabama, or "UCLA" as some locals like to describe it, sits Fort Rucker, the home of Army Aviation.

While many of its streets are adorned by some of the original magnolia, oak and pine trees that were mere saplings when the War Department christened the installation Camp Rucker in 1942, very little of its physical appearance shows evidence of its early existence.

Aerial view of Hanchey Army Heliport, Ft. Rucker, AL showing fleet of AH-64D Apache Helicopters receiving maintenance. (U.S. Army Photo)

"You don't have to be from Alabama to love Alabama," said Brig. Gen. Anthony Crutchfield, commanding general of the U.S. Army Aviation Center of Excellence (USAACE) and Fort Rucker and chief of the Army Aviation Branch, upon his return to the installation in the summer of 2010. "We all come back to Mother Rucker, the birthplace of our Army Aviation careers, at one time or another and I'm thrilled to have returned."

Crutchfield is not here this time to undergo more flight training but to lead the Army Aviation branch and the men and women who call Fort Rucker their "Sweet Home, Alabama."

Like other commanders who have assumed the dual-hatted role of branch chief and senior commander at Fort Rucker, he acknowledges that the mission of training military, civilian, and international personnel in aviation and leadership skills, and integrating Army Aviation warfighting doctrine and requirements into the Army operational concept is enduring and will not change. However, his intent for ensuring the installation and branch produce a world-class aviation warfighter is unique and timely given nearly ten years of combat in Iraq and Afghanistan, and a future operating environment that remains complex and uncertain."

"Nothing is more important than how we train and sustain the flow of highly-qualified aviation professionals to rapidly meet the demands of commanders worldwide and expertly employ the full spectrum capabilities aviation brings to the Army and joint force," claims Crutchfield as he describes his intent. "Trained by strong leaders, they are mentally, spiritually, and physically tough, and are unsurpassed in their commitment. We must ensure all our efforts are synchronized with Army Force Generation (ARFORGEN) and our process must be impossible for any other organization to duplicate."

With demand for Army Aviation capabilities increasing worldwide, the installation and branch walk a fine line between meeting the training requirements for the Army's operating force and ensuring the branch remains rapid and responsive given nine years of combat. To do so, Crutchfield developed eight imperatives that drive his focus, four of which are discussed in this article.

One Team, One Fight

At the center of the teamwork stage is the Aviation Enterprise (AE). The AE is not an organization but a process used to identify program gaps and issues, assess those issues, make programmatic and execution decisions, and ultimately support our aviation warfighters.

The AE ranges from the aviation leaders down to the soldiers in the field and connects all organizations and agencies with aviation equities. Network connected, the goal of the AE is to adopt an enterprise approach to Army decision making that allows the Aviation Branch to more effectively and

AH-64D Apache Longbow Helicopters return home to Hanchey Army Heliport following training exercise. (U.S. Army Photo)

efficiently generate trained and ready forces for the combatant commanders.

The process is enabled by a "culture of collaboration" that exists between all organizations that encourages decentralization, accelerated knowledge transfer and gathering and decimating information from the edge of the network.

"Collaboration, using advanced technology, is allowing us to adapt the institution rather than merely adapting each organization," said Wade Becnel, chief knowledge officer for the Aviation Center. "We must develop the enterprise, as well as the Aviation Branch, with tools that allow it to learn, act, adapt, and then learn again. Our adversaries and their networks are learning organizations. We have to be faster, better and smarter than they are on their best day."

The AE extends from the Department of the Army to the Combat Aviation Brigades (CABs) and from the institutional Army to the industrial base. All the people, processes and business practices required to support our aviation soldiers are stakeholders in the Aviation Enterprise. Army Aviation has functionally operated as an enterprise for many years. The Aviation Branch complexity and cost mandates that issues are quickly identified, closely coordinated, brought before the leadership in a timely manner and decisions made that benefit the Army, the Aviation Branch and its soldiers across all components. The AE is governed by a General Officer Steering Committee (GOSC). The principal members of the GOSC are the Commanding General, U.S. Army Aviation Center of Excellence (USAACE); the Commanding General, U.S. Army Aviation and Missile Life Cycle Management Command (AMCOM); the Program Executive Officer, Aviation (PEO Aviation) and the Director of Army Aviation (HQDA G3/5/7).

Referring to the enterprise, Army Vice Chief of Staff, Gen. Peter Chiarelli said in April 2010, "There is not a branch in our Army that is run any better than Army Aviation. The functional alignment you have, the synergy you have between the building, and Rucker, and the units is absolutely amazing. If we were not organized this way, there is absolutely no way we would be able to meet the demands of today."

Developing the Correct Aviation Force

At the direction of the Army Chief of Staff (CSA) Gen. George Casey, the Army G3 tasked USAACE in early 2009 to form a task force to study Army Aviation's modernization strategy. The CSA's guidance was concise: Ensure Army Aviation continues to be a full spectrum force (offense, defense, stability), continues to support a rotational ARFORGEN model, and that it is balanced among components.

What resulted was Aviation Study II, an assessment of Army Aviation across Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTML-PF) that includes the integration of lessons learned from recent operations, and informed by potential emerging missions and changing threats. The study included the key recommendation that Army Aviation restructure and standardize its warfighting units into Full Spectrum Combat Aviation Brigades (FS CABs), both active and reserve components, while retaining the flexibility of the modular design, ensuring the aviation units are modular, capable, lethal, tailorable, and sustainable.

In April 2009, Gen. Casey, approved the redesign of the CABs. In keeping with former Army Chief Gen. Peter Schoomaker's Army modularity efforts in which combat brigade organizations (armor, mechanized infantry, and Stryker) were standardized, Army Aviation went through the same transformation to become modular and self-sustaining. The modular design of the CAB, now FS CAB, will enable task organization while optimizing Army Aviation capabilities for specific missions of specified duration. It will complete the effort to standardize the CAB design across the Army Aviation

branch in order to deliver maximum aviation capability in the most timely and flexible manner. The FS CAB is doctrinally sound. It delivers the combat, combat support and combat service support to enable "Steady State" operations required across the full spectrum of conflict. It delivers combat power while maximizing efficiencies in training, maintenance and support across Army Aviation.

The 101st CAB will be the first aviation formation to convert to the full spectrum design in 2012. Using current organizational building blocks to provide full spectrum capability, the FS CAB allows CAB commanders to quickly task and organize for combat and adds manned / unmanned operations (MUM-O) capability using Army unmanned aircraft systems (UASs) to enhance intelligence, surveillance, and reconnaissance operations. The organization is designed around a General Support Aviation Battalion (GSAB), an Assault Helicopter Battalion (ASLT), an Attack Helicopter Battalion (ATK), an Air Reconnaissance Squadron (ARS) and an Aviation Support Battalion (ASB). While the Army is on track to convert its 12 active component and three reserve component CABs, Army Aviation's force development goes well beyond the FS CAB conversion. Army Aviation is currently building a twelfth CAB out of existing assets and coordinating resources needed to build a thirteenth CAB that will provide additional capability and flexibility to support ARFORGEN rotation requirements. With eyes on the horizon and further, Crutchfield is looking at Army Aviation's capabilities now and beyond Afghanistan and Iraq.

"Aviation has become the capability of choice for ground maneuver commanders," said Ellis Golson, director of the USAACE Capabilities Development and Integration Directorate (CDID). "Our challenge is to ensure we have the right balance of aviation to support their missions today while identifying future capability gaps in the force. We cannot develop Army Aviation to fight the current fight," he argues. "If we do, we'll lose our relevancy because that is not going to be the environment or the threat we'll face."

Professional Development

There is an old saying that amateurs practice until they get it right whereas professionals practice until they can't do it wrong.

"The development and sustainment of a professional Army Aviation force requires a commitment to excellence that starts before recruits enter the service, is put into practice while in service, and continues beyond departure," said Crutchfield. "To settle for anything less is to place Army Aviation, and therefore the Army and nation, in peril."

According to the Institute of Land Warfare, at the intersection of globalization, environmental calamity, resource scarcity, demographic strain, and international political military competition lies a complex interconnected future that will be filled with persistent conflict and instability. The Army's Leader Development Strategy (ALDS), released by the U.S. Army Training and Doctrine Command (TRADOC), builds on the Army's experiences since the end of the Cold War including the past nine years of war in Iraq and Afghanistan, and on the Army's assessment that the future operational environment will be even more uncertain, complex, and competitive as hybrid threats challenge us across the full spectrum of operations. Developing Army Aviation leaders, to include the Army civilian workforce, to operate in such an environment is one of the Aviation Branch's greatest challenges.

"It will likely take another few years before we achieve a steady-state dwell time for Army Aviation soldiers that is in line with the rest of the Army, said Command Sgt. Maj. Tod Glidewell, Aviation Branch senior enlisted soldier. "While our soldiers are getting operational experience, we, as a training institution, are challenged in some cases to provide the needed education and training opportunities, beyond foundational training, based on the current operational tempo."

While seasoned by nearly a decade of deployments, there is a generation of Aviation mid-grade officers and non-commissioned officers, who know no other operating environment than what they have experienced over the past nine years. When coupled with the future complex and uncertain operating environment, the Army's historical leader development model is obsolete.

AH-64D Apache Longbow Helicopters return home to Hanchey Army Heliport following training exercise. (U.S. Army Photo)

AH-64D Apache Longbows fly in close formation during training exercises over Ft. Rucker. (U.S. Army photo)

According to Gen. Martin E. Dempsey, TRADOC commander, the Army must develop leaders who understand that context matters.

"The complexity of today's challenges and the uncertainties of tomorrow's require a much broader approach to leader development and a clear understanding of the operating environment," Dempsey said.

At a recent USAACE off-site conference, the command addressed the challenges of leader development and how the training institution can better prepare leaders in a competitive learning environment that focuses on the "learner" more than it does the "instructor." While institutional training such as Initial Entry Rotary Wing (IERW) that commissioned and warrant officers undergo for flight training or air traffic controller training, advanced individual training that soldiers receive will not likely change in the foreseeable future. Developmental training courses such as the Aviation Captains Career Course (CCC), the Senior Leaders Course (SLC) and the Advanced Leaders Course (ALC) for NCOs, and the Warrant Officer Advance Course (WOAC) are all under review.

"We're at a point where our key training metric cannot just be the number of folks we push out the classroom door," said Col. Tim Edens, USAACE Deputy Commander overseeing all aspects of training at the Aviation Center. "Given the OPTEMPO, we have to optimize training to suit both their needs and those of the force. We also have to develop ways to continue training our soldiers when they are physically not in the classroom in meeting other ARFORGEN requirements. We may find that brick-and-mortar classrooms are a thing of the past. We don't have answers to all the questions, but everything is on the table."

Cost Culture

Last spring, guidance from the Office of Management and Budget (OMB) placed the burden to fund operations of military installations solely out of the base budget. Without supplemental war appropriations augmenting operations at Army installations, commanders across the Army are reviewing current practices by adopting a "Cost Culture."

In May 2010, Secretary of Defense Robert M. Gates, directed the military services, the Joint Staff, the major functional and regional commands, and the civilian side of the Pentagon to "take a hard, unsparing look at how they operate – in substance and style," Gates said, as the Defense Department began the process of preparing next year's Fiscal Year 2012 budget.

Two months later, Joseph Westphal, Under Secretary of the Army, reiterated the Sec Def's guidance when he said, "We also have established an aggressive cost culture initiative by which Army Leaders make resource decisions that are cost-informed. We are training military and civilians throughout the Army to conduct rigorous cost benefit analyses to support decision making and we now require that cost benefit analyses accompany proposals for new and increased requirements. This directive has permeated our resource reviews and given the Army an approach, not to make decisions based solely on cost, but to consider cost in making decisions."

Measuring Mission by Value

"Shift your thought process from 'accomplishing the mission at any cost' to 'accomplishing the mission at the best value," Crutchfield said.

It is the process in which leaders focus on identifying and implementing initiatives impacting people, processes, and technology that will enhance the Army's ability to manage costs and conduct more efficient and effective operations.

While USAACE and Fort Rucker, and the Aviation Branch, are in relatively good fiscal shape, Army Aviation consumes 40 percent of the Army's equipping budget. With expected downward pressure to reduce spending, creating a cost culture

now as a strategic approach to cost management will help Army Aviation weather unexpected economic hardship that could occur years from now.

"Since September 11, 2001, we as Army leaders have rarely been asked to do the hard financial math when it came to mission accomplishment," said Crutchfield. "Developing a cost culture is not new to many of us who came into the Army before Sept. 11, 2001, because that is how we operated. Our success will likely be measured on how well cost-related targets impact the orderly room, office and hangar floors."

The Future

In January 1942, a few weeks after the surprise Japanese attack, the U.S. Army Corps of Engineers completed construction plans for the 4,600 acre cantonment area of Camp Rucker that included 1,500 buildings. The work was completed in fewer than 120 days. Each structure was identified with "T" next to the building's identification number indicating it was a temporary structure. Today, less than a handful of the original buildings exist. The transformation of the Army Aviation Center and Fort Rucker continues under the leadership of BG Crutchfield and the soldiers who comprise the Army Aviation Team.

"Our soldiers and civilians are contributing daily to the warfight while we balance today's requirements with the capabilities we'll need years from now," Crutchfield said. "The end state of our efforts is a healthy Aviation Branch, postured for full-spectrum operations, in defense of our national interests and our nation."

For more info: www.rucker.army.mil/usaace/usaace.html

Ad Index

2011 January

Commander's Corner

MG Robert B. Brown

Commanding General
U.S. Army Maneuver Center of Excellence
Ft. Benning, GA

Features

Tactical Transport Ops
Designed to provide transport capabilities for re-supply of combat vehicles and weapons systems, the U.S. Army's second-generation Heavy Expanded Mobility Tactical Truck (HEMTT) is poised to eliminate mobility limitations experienced by earlier HEMTT platforms.

Spider Silk Armor
The U.S. Air Force Research Laboratory, in conjunction with the University of Wyoming, is working to develop a next-generation body armor based on the chemical components of spider silk, three-times stronger and two times lighter than current Kevlar vest armor.

Integrated ISR
U.S. Army 170th Infantry Brigade Combat Team (IBCT) has completed Joint Multinational Readiness Center (JMRC) training in preparation for enhanced ISR asset integration during joint and coalition ops in Afghanistan.

Emerging Forecast

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Unmanned & Beyond: Robotic Scouting

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Tactical Vehicle Summit
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Global EOD Conference
SpecOps Warfighters West

Calendar of Events

January 17-20
Shot Show
Las Vegas, NV
www.shotshow.com

January 25-27
Tactical Power
Washington, DC
www.idga.org

January 25 – 27
Counter IED Summit
Washington DC
www.idga.org

January 25 – 17
CBRNE Summit
Dallas, TX
Marcus-Evans.org

January 31-February 3
Soldier Technology US
Crystal City, VA
www.wbr.com

February 7-9
International Armoured Vehicle
London, UK
www.iqpc.org

February 8-9
SO/LIC
Washington, DC
www.ndia.org

February 23-25
AUSA Winter
Ft. Lauderdale, FL
www.ausa.org

February 28-March 1
Defense Maintenance and Sustainment
Washington, DC
www.wbr.org

Editor's Clarification:

In the A&M November 2010 issue feature entitled "Bridging the Autonomy Gap", under the heading "CUSV", input was contributed by AAI Corporation, a business unit of Textron Systems, Inc. This input was contributed separately from the input provided by Mr. Bart Everett, Chief Technology Officer for Unmanned Systems, SPAWAR Systems Center Pacific, San Diego.

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