ARMOR & MOBILITY

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May/June 2018

MAXIMIZING OPERATOR STEALTH AND COGNITION

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SOCOM FOCUS

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Command Senior Enlisted Leader
U.S. Special Operations Command

Squad Multipurpose Equipment Transport ■ Family of Special Operations Vehicles
DLA Acquisition Partnering ■ Tactical Assault Lightweight Operator Suit ■ Manned-Unmanned Teaming

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By PEO CS&CSS

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PROGRAMS UPDATE

Maximizing a $7 billion budget to ensure operator mission success

James Smith

Acquisition Executive
SOF Acquisition, Technology & Logistics
U.S. Special Operations Command (USSOCOM)

SOCOM FOCUS

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Command Sergeant Major Patrick L. McCauley

USSOCOM Command Senior Enlisted Leader

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Stuart Hatfield

Robotics Branch Chief
Deputy Chief of Staff, G-8
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Cover: Special Operations Soldiers fire upon an enemy vehicle during a capabilities exercise hosted by United States Army Special Operations Command on Fort Bragg, NC. (Photo by Michael Bottoms, USSOCOM Office of Communication)

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INSIGHTS

The May/June Special Forces issue of Armor & Mobility sheds light on the evolution in acquisition and procurement processes going on at U.S. Special Operations Command (USSOCOM), including much of which is being fueled by enhanced partnering between DoD and industry. Programs essential to the sustainment of U.S. Special Operations Forces (SOF) global overmatch on land, sea, and air are extending SOF mobility to places not long ago considered "off the grid" thanks to advanced solutions fielded or soon to be. Efforts to bring the next-generation in Ground Mobility Vehicle (GMV 1.1), Light Tactical All-Terrain Vehicle (LTATV), and Family of SOF Vehicles (FOSOV), among other ground assets are moving forward with rapid prototyping and technology demonstrations of future Robotics and Autonomous Systems (RAS) for both Conventional and SOF application.

In this issue's cover interview, readers go inside USSOCOM HQ as Command Sergeant Major Patrick McCauley speaks to SOF force modularity and flexibility in conforming to changing readiness requirements set forth by the U.S. National Defense Strategy (NDS). With more than 9,000 operators in more than 80 countries worldwide, USSOCOM is at the ready to support National Command Authority and Geographic Combat Commanders anytime, anywhere. On the Acquisition, Technology & Logistics (AT&L) front, USSOCOM Acquisition Executive James Smith provides a Programs Update on the state of special operations-peculiar equipment and services essential to U.S. SOF and, in many situations, joint coalition SOF support.

As unmanned systems become a greater part of U.S. defense operations, force integration and interoperability challenges grow as well. From the Office of Deputy Chief of Staff, Army G-8, Robotics Branch Chief Stuart Hatfield speaks with A&M about expanding portfolio initiatives including the Squad Multipurpose Equipment Transport (SMET), Common Robotic System and Next Generation Combat Vehicle (NGCV) Robotic Combat Vehicle (RCV), among other capabilities in current development. Within the scope of unmanned autonomous evolvement, manned-unmanned teaming (MUM-T) is integral to much of U.S. Army multi-domain battlespace vision. From U.S. Army Training and Doctrine Command (TRADOC), COL Paul Cravey, Capability Manager for Recon and Attack, provides insight on the latest in AH-64 Apache MUM-T operability and software-based Scalable Control Interface (SCI) for ground control stations to better determine appropriate levels of interoperability (LOI) for future integration.

This issue also highlights the work the U.S. Defense Logistics Agency (DLA) is doing to bring about greater cooperation between government and industry to enable SOF and Conventional force capability cultivation through partnership development.

As always, we welcome your comments and suggestions.

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U.S. Special Operations Command's Office of SOF Acquisition, Technology & Logistics, led by Acquisition Executive James Smith, is charged with maximizing a $7 billion budget to ensure that everything from armor protection to ammunition to land, air and marine mobile platforms, both manned and unmanned, enables operator mission success.

Special Operations Forces Acquisition, Technology and Logistics (SOF AT&L), a part of U.S. Special Operations Command (USSOCOM), ensures SOF have special operations-peculiar equipment and services required for them to complete missions across the globe. SOF AT&L consists of eight program executive offices (PEOs) and four directorates. The PEOs are C4, Fixed Wing, Maritime, Rotary Wing, Services, SOF Support Activity, Special Reconnaissance, Surveillance and Exploitation and SOF Warrior. The Directorates are Acquisition Comptroller, Logistics, Procurement and Science and Technology. The portfolios span everything from satellites to submersibles and bullets to bytes. Because of this diversity, SOF AT&L teams with a wide range of industry, government agencies and academic partners to advance and field SOF capability.

Mr. Jim Smith
USSOCOM Acquisition Executive

SOF AT&L is manned by military and civilians from all four military Services. While SOF AT&L is co-located with USSOCOM headquarters at MacDill Air Force Base in Tampa, Florida, these SOF acquisition professionals are located around the country in numerous centers of excellence on bases and posts such as Fort Eustis, Wright Patterson Air Force Base, Naval Surface Warfare Center Crane, the Navy Yard, Fort Belvoir and Natick.

SOF AT&L is uniquely organized to provide full-life cycle management of SO-peculiar equipment by seamlessly developing technologies within the Science and Technology Directorate, to producing and fielding that technology through the PEOs, and finally to sustainment and eventual divestiture through our Logistics Directorate. In order to provide this support, USSOCOM executes roughly $7 billion per year through SOF AT&L; evenly distributed between equipment and services. Ultimately, SOF AT&L's efforts are directed by the USSOCOM commander and informed by our operators to ensure rapid and focused support to SOF.

Services

PEO Services provides the commander USSOCOM and acquisition executive with leadership and oversight of the administration of all USSOCOM service acquisition actions. Additionally, program management staff support USSOCOM's headquarters, component commands, and theater special operations commands with services acquisition training, requirements and execution documentation, cost estimating, source selection and contract administration support, as well as policy and process oversight for the command's requiring activities.

PEO Services manages more than $2.2 billion spent each year for contracted services. USSOCOM's contracted services include Special Operations Forces training, education, exercises, staff planning and operations, acquisition program management, and Preservation of the Force and Family missions. Program managers coordinate with requiring activities throughout the SOF enterprise and identify best value technical solutions and optimize special operations resources expended in support of the warfighting command's missions. Program managers work side-by-side with the requiring activities' subject matter experts to ensure contracted services requirements are clearly articulated, evaluated and efficiently acquired.

By exercising the senior services manager's acquisition responsibilities for governance in planning, execution, strategic sourcing, category management and management of service contracts, PEO Services collects, analyzes, addresses and reports on all data required to provide visibility of services contracts and resource execution to the USSOCOM commander and acquisition executive, the Office of the Secretary of Defense and, ultimately, to Congress as required under public law.

SOF Warrior

PEO SOF Warrior leads an organization of 10 joint program management offices with more than 200 military, civilian and contractor personnel. By cultivating an aggressive, risk-taking culture amongst acquisition, financial, and contracting personnel, the team executed $1.8 billion deemed critical to the development, management and worldwide fielding of SOF-peculiar equipment in support of USSOCOM components. This team provides lethality, survivability and air, ground, and sea mobility overmatch in all environments.

While responding to an urgent deployment acquisition to fill a critical mission gap, PEO SOF Warrior accomplished a $13.8 million combat evaluation to field a new, integrated, precision-guided mobile missile system in less than four months. Agile and responsive, this team took on numerous, urgent and unplanned challenges from the battlefield as articulated by SOF. Specifically, they planned, orchestrated and executed $72 million to provide combat-critical warfighting capabilities. Enduring capabilities fielded included: fielding of electronic countermeasure efforts in the fight to counter-radio-controlled, improvised explosive devices; fielding low-visibility, non-standard commercial vehicles in support of denied area operations; countering unmanned aerial vehicle systems and the rapid introduction of a new Ground Mobility Vehicle (GMV) 1.1 equipped with a survivability armor package.

SOF Warrior organized a rapid response team to address rapid deployment of current systems that could be modified to counter small, unmanned aerial systems. Working in a tight-knit, collaborative environment, a dozen capabilities were brought to bear quickly, with longer term, and better solution sets being investigated for further development.

The PEO SOF Warrior team continues to ensure SOF have the technology and equipment to prosecute the fight – anytime, anywhere, both now and into the future.

Tactical Assault Lightweight Operator Suit (TALOS)

Joint Acquisition Task Force (JATF) TALOS is a USSOCOM initiative with the goals of increasing battlefield survivability, capability, situational awareness, and lethality while operating in high-risk environments, enabling new mission profiles, addressing historic casualty vulnerabilities and decreasing the physical and cognitive load on the SOF operator.

JATF TALOS is comprised of SOF operators, acquisition professionals, and relevant subject matter experts. JATF TALOS projects have advanced technology through multiple research and development efforts in functional areas of base layers, exoskeletons, power systems, armor, helmets, visual augmentation systems, and open-software architecture and operator interfaces.

JATF TALOS is scheduled to deliver a first-article prototype combat suit in 2019 that demonstrates the ability to augment human performance in a close-quarters battle with the critical path being the Exoskeleton subsystem. The Exoskeleton structure is the most difficult component of the Mark 5 prototype and is highly dependent upon the designs of the other hardware components; system-wide dependencies are complex and extensive.

The other TALOS subsystems, encompassing base layer, visual augmentation systems - operator interface, helmet, armor, power and communications, continue to be refined in support of the Exoskeleton subsystem development.

To achieve its desired end state, the JATF TALOS vision focuses on four principles:

- Increased operator survivability through comprehensive and improved ballistic protection and developing an exoskeleton that supports near unconstrained movement and provides a load bearing structure.
- Increased operator capability through independently powered actuation of the upper and lower body with integrated biomedical monitoring and thermoregulation to extend thresholds of human performance.
- Increased operator situational awareness through visual augmentation, multidimensional display of fused sensors and an integrated array of intelligence and operational data.
- Increased operator surgical lethality by shortening time to target engagement and creating options for novel weapon integration.

Future variants of TALOS will build upon the technology and lessons learned from the Mark-5 prototype, enabling operation beyond standard human capability in the most extreme future direct-action mission profiles.

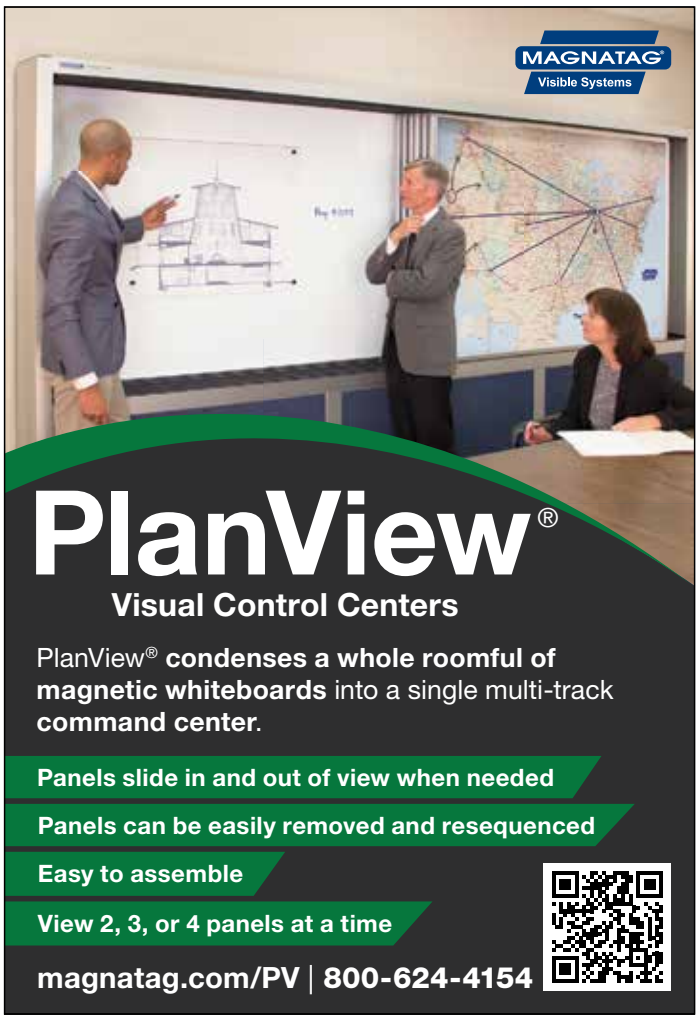
Fixed Wing

PEO Fixed Wing delivers SOF-peculiar manned and unmanned fixed-wing airpower capabilities. Overall, the PEO effectively executed more than $2 billion in fiscal year 2017 to develop, deliver, and sustain a portfolio of fixed wing intelligence, surveillance, and reconnaissance (ISR), strike, and mobility weapons systems in direct support SOF operations worldwide.

The two major aircraft programs are the AC-130J and MC-130J recapitalization efforts. The AC-130J recapitalization efforts include adding a precision-strike package to provide close-air support and precision fire capability. To aid in the AC-130J's precision fire, stand-off precision-guided missiles works to deliver increased accuracy, ability to hit static and moving targets and contains a minimal visual and acoustic signature. The MC-130J recapitalization efforts include adding radio frequency countermeasure systems. This system enables force protection and survivability against radio frequency threats, avoids detection from radars and, if detected, recognizes the threat and employs necessary countermeasures.

In addition, the MC-130J is integrating the airborne mission networking system. This system provides the aircrew and mission personnel onboard with the ability to rapidly and effectively transmit mission-critical data to and from a variety of tactical and operational nodes. Lastly, the MC-130J is integrating a SOF-common, terrain following and terrain avoidance radar that would enable the aircrew to conduct clandestine, air refueling, air-drop, insertion, extraction and resupply missions under adverse and hostile conditions. The CV-22 is being updated with this radar, as well as, a color helmet-mounted display and specialized automated mission suite-enhanced situational aware.

The airborne ISR team is fielding unmanned aerial systems (UAS) that include improved full-motion video and electronic warfare capabilities. The Group 4 UAS system (i.e. MQ-1C) is responsible for developing, testing, and procuring SOF-peculiar mission kits for the MQ-1C. These kits include sensor payloads and pods, moving target tracking, improved communications and improved weapon integration. Another example of this team's efforts is shown in Multi-mission Tactical UAS. These systems provide Naval Special Warfare (SEALs) an organic platform for imagery and signals intelligence support.



PEO fixed wing supports the high-energy laser demonstration as well as advanced technology sensors, defensive countermeasures, advanced avionics, and mission training systems. The high-energy laser is to be integrated onto the AC-130 platform. This weapon demonstrates a precision, scalable, low-kinetic weapon with the integration of "best-in-breed" subsystems.

Collectively, the teams have significantly advanced SOF capabilities by supplying them with the most up-to-date, reliable and safe programs. These programs allow the operator to better complete their mission.

Maritime

PEO Maritime is responsible for delivering cutting-edge surface and undersea technology to Naval Special Warfare Command. PEO Maritime is composed of five program offices that focus on the development, production, and sustainment of surface craft, wet and dry submersibles, combat diving equipment and submarine-hosted dry-deck shelters.

The dry-deck shelter hosts the SEAL Delivery Vehicle (SDV) and is undergoing extensive modernization. In particular, we are enhancing operator interfaces and the ability to carry additional payloads.

The Shallow-Water Combat Submersible (SWCS) is in production and is the replacement for the SDV. Both are wet submersibles that require operators to be exposed to the environment and on underwater breathing gear while conducting operations.

Joining the undersea fleet is the Dry-Combat Submersible (DCS), also in production, closing a 10-year capability gap and enabling increased range and payload, and protecting the operators from the environment within a pressure vessel. To prepare Naval Special Warfare for the delivery of SWCS and DCS, both programs have delivered platforms currently utilized for training, programmatic risk mitigation and technology insertion.

Over the last few years, the surface fleet has undergone an extensive recapitalization effort consisting of the Combatant Craft Assault (CCA), Combatant Craft Medium (CCM), and the Combatant Craft Heavy (CCH) mobility platforms along with enhanced mission-equipment technology that augments capabilities. The production of CCA continues with the addition of a low-velocity, air-drop capability while the CCM is in full-rate production. The CCH maintains a forward-deployed presence on a rotational basis, with one craft in production.

The SOF combat diving program rounds out the maritime portfolio and is developing new equipment focused on diver communications, navigation, mobility, and environmental protection; each piece of gear is integrated with our platforms and delivers cutting-edge technology to our operators, not only enhancing the diver's ability to conduct their mission but also expanding their mission set.

Special Reconnaissance, Surveillance and Exploitation (SRSE) PEO SRSE is responsible for the acquisition, development, fielding, sustainment, and upgrading of state-of-the-art technical collection and exploitation capabilities for SOF. Current and projected threats to our national security continue to evolve in response to the increased technological sophistication and effectiveness of our fielded capabilities. PEO-SRSE's acquisition, development, and improvement strategies have evolved into innovative contracting approaches, robust systems engineering, evolutionary technology insertions, and a prudent balance of cost, schedule and performance requirements.

PEO-SRSE's capability portfolio enhances the SOF warfighter's ability to find, watch, and report on enemy forces' activities and interactions through tagging, tracking, and locating systems; blue force tracking; sensor systems; biometrics and forensics systems; joint threat warning systems; distributed common ground/surface systems; integrated survey programs; and focused research, development, tests, and evaluations.

Science and Technology (S&T)

USSOCOM's Science and Technology Directorate seeks to develop and integrate technology to enable SOF to achieve and maintain overwhelming advantage in conducting assigned missions. We have identified three "hard problem" sets: small unit dominance, mission assured communications and signature management.

S&T developed a fiscal year 2019 virtual symposium that outlines our current six SOF challenge areas. The intent of the SOCOM S&T Virtual Symposium is to communicate the critical needs of the SOF warfighter in the next five to seven years, based on an assessment of what the future operating environment will look like, how it will constrain the mission, and what development needs to occur in order to obtain an asymmetric advantage.

USSOCOM S&T continues being adaptive, agile and positioned to meet technology demands across the SOF enterprise. We are staged to not only maintain awareness of ongoing efforts and needs of the warfighter in the near-term, but also those of future missions. The S&T futures process integrates the effect of changing strategic conditions, varying mission objectives, changing environments and rapidly changing technology.

S&T's ultimate goal is to empower the operator by delivering integrated information and technology to enable decisions and actions at the point and time of need resulting in mission success.

Acquisition Agility

The SOF AT&L Acquisition Agility Directorate mission is to create the networks, venues, and tools to support warfighters, acquisition program managers and the USSOCOM enterprise through SOFWERX, a collaborative partnership intermediary agreement between USSOCOM and the Doolittle Institute.

A significant focus area for SOFWERX this year has been the continuing ThunderDrone efforts, under a partnership between USSOCOM and the DoD Strategic Capabilities Office. Rapid prototyping events composed of technical expositions, demonstrations and experiments, to showcase both offensive small unmanned autonomous systems and counter-SUAS technologies have been conducted at SOFWERX in Tampa, Fla. and an outdoor range at Fort Bragg, N.C. The ThunderDrone events will culminate this year with a final rodeo that will be conducted at Nellis Air Force Base, Nevada in June.

The SOFWERX model has proven to be a useful tool to advance solutions to some of SOF and the military's toughest challenges. This year SOFWERX has worked in concert with the SOF enterprise on projects such as basic concepts and designs for precision engagement on combatant craft and partnering with other government agencies to develop platforms to explore open source data and methodologies and rapid prototyping of high altitude oxygen masks for canine activities.

SOFWERX events assist USSOCOM prior to making investment decisions through the iterative capability development model that is used in industry and what the DoD is aiming to scale in the acquisition community.

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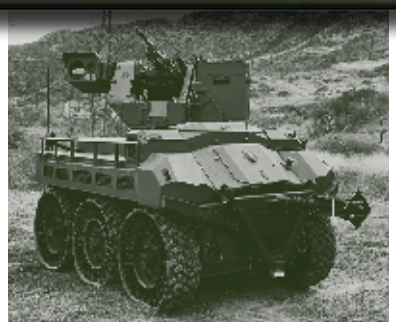

ADVANCING SQUAD-LEVEL MOBILITY

U.S. Army Program Executive Office Combat Systems and Combat Service Support (PEO CS&CSS) is leveraging Other Transactional Authority (OTA), technical demonstrations, and Soldier feedback to speed acquisition of the Army's new Squad Multipurpose Equipment Transport (SMET) robotic 'mule.'

By Program Executive Office Combat Support & Combat Service Support

By 2025, the Army sees ground troops conducting foot patrols in urban terrain with robots—called Squad Multipurpose Equipment Transport vehicles—that carry rucksacks and other equipment. (U.S. Army)

As power and equipment demands continue to increase Soldiers' logistical burdens, the U.S. Army is working with industry to capitalize on advances in power efficiency, robotic technology, and acquisition tools to accelerate a new "robotic mule." Commercial industry thrives on rapid technological development, but current acquisition processes often make it difficult for the military to follow suit—meaning that technology can become obsolete before it is even in the hands of Soldiers. In the words of Lt. Gen. Paul Ostrowski, Principal Military Deputy to the Army Acquisition Executive, "I've got to get that capability out there faster. I've got to think of innovative ways to do so." Key leaders in Congress and DoD have recognized this deficiency in the acquisition process and have outlined initiatives to shrink the timeline required to develop and field new capabilities to Soldiers.

U.S. Army Program Executive Office for Combat Support and Combat Service Support's product management team for Applique and Large Unmanned Ground Systems developed a strategy using experimentation and technical demonstrations to streamline the SMET acquisition process. (U.S. Army)

Experimentation conducted at Fort Benning, Ga., last fall then led to the down select of four systems to advance to Phase II of the SMET program. The companies selected to participate in Phase II are Polaris, HDT, Howe & Howe, and General Dynamics Land Systems. (U.S. Army)

After initial work with industry to define the art of the possible and potential requirements for a system that would help carry Soldiers' loads and charge their batteries, the Army set a new, faster course in early 2017. The Army Requirements Oversight Committee (AROC) Capabilities Board gave clear direction to "get it done faster and cheaper," and the Squad Multipurpose Equipment Transporter (SMET) program, managed within the PEO CS&CSS, began to break new ground.

Shortly after that meeting, Lt. Gen. John Murray, Deputy Chief of Staff, G-8, approved a "Directed Requirement" for SMET with three basic requirements:

- Carry up to 1,000 pounds of Soldier load
- Operate for 60 miles within 72 hours
- Silent run-capability generating 3 kilowatts stationary power and 1 kilowatt mobile

Accelerating Capability Procurement

At its core, the SMET program aims to lighten Soldiers' loads by providing infantry brigade combat teams (IBCTs) the ability to removing physical loads to improve Soldiers' physical and cognitive capabilities. PEO CS&CSS's Product Management Team for Applique and Large Unmanned Ground Systems (PM ALUGS), within Program Manager for Force Projection, undertook the challenge to "get it done faster and cheaper" by developing a strategy using experimentation and technical demonstrations to streamline the acquisition process. Using an innovative contracting approach through an "Other Transactional Authority" (OTA) - a more flexible, responsive, and collaborative tool designed to speed acquisition and modernization - the SMET team hosted an industry day and released a request for project proposal just six weeks after the directed requirement was issued.

Designed to alleviate contracting, communication and collaboration issues common to the FAR-based acquisition process, OTAs invigorate research and development by allowing the military to incentivize industry to team with nontraditional and small business partners. Utilizing the National Advanced Mobility Consortium OTA in coordination with the Vehicle and Robotics Alliance Program Office of the U.S. Army Tank Automotive Research, Development and Engineering Center, this flexible contracting mechanism made it possible for the SMET team to tap into the cutting-edge capabilities of nontraditional defense contractors—embracing experimentation and assessment to inform and speed program decisions.

Under this OTA, PM ALUGS established a rapid, multi-phase acquisition strategy for SMET to rapidly work with both industry and Soldiers—harnessing the best feedback from both. For Phase I, after just a week of reviewing proposals, PM ALUGS invited 10 industry robotic suppliers to bring their SMET candidate systems to a challenging five-day assessment held at Fort Benning, GA, in September 2017. In Phase I, contractors demonstrated their respective systems' capabilities through rigorous 24-hour testing, which included off-road maneuvering, gap crossing, water fording, and lateral and vertical slope testing. Using the test data collected at the assessment, an evaluation team in one week utilized OTA principles of open communication and "less paperwork is more" to select four system solutions for Phase II.

Implementing an IBCT Approach

The SMET Phase II technology demonstration strategy calls for issuing 16 systems from each of the final four designs to infantry brigade combat teams. The IBCTs will train with the systems for one year with maintenance support from the vendors on the platforms using commercial-off-the-shelf operator manuals and training packages. This approach gets at a core Army leader priority: early Soldier input. In a typical acquisition strategy, a limited user test occurs after a system contract award, but the SMET strategy involves Soldiers early in the acquisition process to experiment and assess the systems to influence system requirements and determine if current industry solutions will work. The Soldiers' feedback will directly refine the programs requirements well before the Army decides to acquire or develop the final system design.

The Phase II yearlong technology demonstration also allows industry to continue to competitively develop robotic technology while the Army finalizes SMET system requirements. The Phase II technology demonstration incentivizes the four contractors throughout

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The SMET program seeks to address three basic requirements: carry up to 1,000 lbs. of Soldier load; operate for 60 mi. within 72 hours; and provide a silent-run capability generating 3 kilowatts of power stationary, and 1 kilowatt while on the move. SMET aims to lighten Soldiers' loads and enable U.S. Army Infantry Brigade Combat Teams to significantly bolster physical and cognitive capability. (U.S. Army)

Employing an alternative contracting approach through an Other Transactional Authority, the PEO's PdM ALUGS team hosted and industry day and released a request for project proposal just six weeks after the SMET directed requirement was issued. OTAs are designed to unencumber contracting, communication and collaboration issues common to the FAR-based acquisition process. The intent is to rapidly acquire a much-needed capability. (U.S. Army)

the yearlong event to advance their respective systems as the program moves to select one solution at the completion of the demonstration as the program of record. This acquisition strategy provides for a competitive, technology-driven milestone development decision—moving right into a program of record low rate initial production solution just 18 months after validation of the capability production document. And because of the team's flexible approach, future capabilities, changes, and adjustments are also possible. Future capabilities could be introduced in the form of modular mission payloads tailoring the SMET to specific mission needs, such as dismounted engineer mobility systems; remote weapon stations; casualty evacuation, and unmanned aerial systems and reconnaissance.

Looking Ahead

The SMET is the benchmark for rapid acquisition within PEO CS&CSS, as PM ALUGS has employed innovative methods for hosting an industry day, source selection and experimentation for requirements, thereby championing experimental acquisition processes. Implementing a strategy using a competitive OTA in lieu of an engineering and manufacturing development FAR-based contract, industry and the Army are able to create an open and collaborative working environment during the establishment of program requirements and objectives. Program requirements are not set at a micro level but are instead established at the macro level, giving industry the ability to provide a wide range of solutions, not just for the Army, but with the Army. Working openly with industry, utilizing currently available technology and employing nontraditional acquisition practices provides a path to streamline acquisition while simultaneously confirming through Soldier experimentation and feedback that the requirement fills a capability gap.

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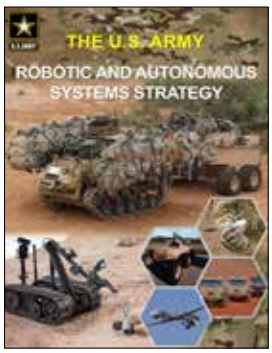
SHAPING MODERNIZATION TO ADDRESS AUTONOMY IN FORCE CAPABILITY

Mr. Stuart Hatfield is the Robotics Branch Chief for the Deputy Chief of Staff, G-8, Department of the Army in the Pentagon. He manages the U.S. Army's $1.6 billion Robotics modernization portfolio, including resources and requirements for ground Robotics and Autonomous Systems (RAS), Small Unmanned Aerial Systems (UAS), and Soldier Power Systems. He is the Army Staff lead integrator for Robotics, and he co-chairs the Joint Staff Unmanned Ground Systems Integrated Product Team to synchronize concepts, requirements, resources, technology, and standards for RAS across the Department of Defense. He was honored by the National Defense Industrial Association as the 2012 Ground Robotics Champion.

A&M: Tell us about your role as Robotics Branch Chief, Army G-8, and some key focus areas for the Pentagon's Robotics and Autonomous Systems (RAS) effort in 2018.



Mr. Hatfield: The Army G-8 Robotics Team manages the requirements and resources associated with implementing the Army's Robotic and Autonomous Systems (RAS) Strategy (March 2017). The Army Robotics modernization portfolio is structured for managing the equipping budget for ground robotics, Soldier power systems, and, as of September 2017, small unmanned aerial systems (UAS) (less than 20 pounds). As of April 2016, responsibility for the Army Requirements Oversight Council (AROC) transitioned from the G-3/5/7 to the G-8 in order to better synchronize requirement document approval with program funding. As force developers, our team collaborates with the capability developers to gain Chief of Staff approval for new requirements. In accordance with Army priorities, we then build the budget to support those programs to deliver RAS capabilities to the Warfighter through programs of record or urgent Operational Needs Statements.

Key focus areas:

As per the RAS Strategy, our purpose is to provide a modernized force equipped with affordable, modular, interoperable, and increasingly autonomous RAS that enable Army formations, through Manned-Unmanned Teaming (MUM-T), to increase their endurance, persistence, lethality, protection and depth.

The RAS priorities are: 1) Improve situational awareness 2) Lighten physical and cognitive workloads, 3) Sustain with increased distribution, throughput, and efficiency, 4) Facilitate movement and maneuver, and 5) Protect the force.

Stuart Hatfield

Robotics Branch Chief
Deputy Chief of Staff, G-8
Department of the Army

We are accelerating development using a Buy-Try-Decide methodology with rapid prototyping to conduct technology demonstrations and Soldier experiments for the Squad Multipurpose Equipment Transport (SMET), Common Robotic System – Heavy (CRS-H), Leader-Follower, and the Next Generation Combat Vehicle (NGCV) Robotic Combat Vehicle (RCV).

The Soldier Borne Sensor (SBS) and the Short Range Recon UAS provide organic UAS support down to the Squad and Platoon for a quick look over the hill, around the corner, or in the next room.

The Universal Robotic Controller will unite all air and ground systems at the Battalion and below level.

Non-standard equipment robots continue to bridge the gap until we begin fielding in the next year programs of record implementing our open architecture, modularity strategy for common chassis and modular mission payloads.

A&M: In terms of current budget allocation, what are some factors redefining RAS capabilities acquisition in response to the Pentagon's changing global strategy?

The Army's Common Robotic System-Heavy (CRS-H) in Leader-Follower convoy test operations. (TARDEC)

Mr. Hatfield: There are three factors critical to delivering capabilities to the Warfighter: Senior Leader vision, clear and technologically achievable requirements, and stable resources.

The Secretary and the Chief have provided a clear vision for the Army to balance readiness, end strength, and modernization. The new National Military Strategy, Multi-Domain Battle Doctrine, and assessments of near-peer competitors provide the focus to maintain our readiness to "fight tonight". We are beginning to "grow the Army" to better provide the quantity and quality of forces required by the Combatant Commanders to meet contingency operations. To focus our Science and Technology (S&T) investments and guarantee our Soldiers have formation based tactical overmatch and technological superiority in the near to mid-term, the Army has established six modernization priorities and a new Army Futures Command with and associated Cross Functional Teams (CFT) empowered to expedite and deliver next-generation-systems that make our Soldiers and units more lethal.

The Army is capitalizing on the powerful acquisition reform tools provided by Congress in the National Defense Authorization Acts of 2016 and 2017. We can leverage rapid prototyping and rapid fielding to buy down risk of innovative system components or technologies. We can increase acquisition agility by delegating materiel development authority down to the lowest level. Smart contracting, Other Transaction Authority (OTA), commercial item procurement, and reduced testing time and costs enable program managers to rapidly deliver systems to operational units for early Soldier Feedback on concepts and production requirements. We cannot let the perfect be the enemy of the better or good enough.

Sufficient and stable funding is required for program managers and industry partners to deliver capabilities to the Warfighter. Congress has provided the Army with additional funding in FY18 and FY19, but we are still recovering from the extended series of Continuing Resolutions over the last several years. Any new start items in FY18, such as Leader-Follower, SMET, and SBS cannot begin start of work until funding from the 2018 Omnibus is made available, expected in May 2018. This delay in funding created six month delays in both the Leader-Follower and SMET technology demonstrations, detailed below.

A&M: With regard to current Army modernization efforts for Robotic and Autonomous Systems (RAS), can you speak to key programs exemplifying successful integration of autonomous capability?

Mr. Hatfield: The success of Army RAS programs is more than just amazing technology for the Soldier. These innovative programs have also pioneered many of the acquisition reforms desired by our Senior Leaders, including Directed Requirements, rapid prototyping, rapid fielding, hands-on Soldier experimentation, Other Transaction Authority (OTA) smart contracting, open architecture, modularity, interoperability, and buy-try-decide methodology.

In February 2017, the Army Chief of Staff rejected a deliberate, seven year, traditional acquisition approach for the integration of Leader-Follower autonomous vehicle technology onto Heavy Tactical Wheeled Vehicles (HTV). He challenged the Robotics Enterprise to get a good enough, fast enough, cheap enough Leader-Follower capability in the hands of Soldiers within thirty-six months. A manned Leader vehicle is followed by three to seven unmanned vehicles on primary roads for local and line haul convoys at speeds up to 45 miles per hour, the maximum safe speed limit for a human operated fully

Army Modernization Priorities

1. **Long-Range Precision Fires**
2. **Next Generation Combat Vehicle**
3. **Future Vertical Lift**
4. **Army Network**
5. **Air and Missile Defense**
6. **Soldier Lethality**

Man Transportable Robotic System Increment 2. (TARDEC)

Concept for Universal Robotic Controller. (TARDEC)

loaded Palletized Load System (PLS). The Army G-8 quickly approved a directed requirement for the United States Army Tank Automotive Research, Development and Engineering Center (TARDEC), in collaboration with Program Manager (PM) Force Projection (FP), PM HTV, Training and Doctrine Command (TRADOC), Forces Command (FORSCOM), and Army Test and Evaluation Command (ATEC), to develop and issue up to 150 Leader-Follower kits to two FORSCOM Palletized Load System (PLS) companies no later than January 2020 for a twelve month Operational Technology Demonstration (OTD). The trucks are already rolling to the Oshkosh factory for drive-by wire modifications. TARDEC was prepared to award the procurement contract in December 2017; however, the FY18 funds from the 23 March 2018 Omnibus budget will not become available until on or about 01 May. The first ten systems will be quickly installed and begin extensive safety and reliability testing to be certified for Soldier use. An additional sixty trucks, thirty per company, will be available to begin the OTD on schedule in January 2020, meeting the Chief's challenge.

Also in February 2017, SMET faced a similar schedule challenge, but with the added uncertainty of a known materiel solution configuration. The aim of the SMET is to increase the small unit's combat effectiveness and endurance by reducing the Soldier load and decreasing the reliance upon daily external sustainment support by carrying one thousand (1000) pounds of squad equipment, supplies and generating 1Kilowatt (KW)-3KW of power to a nine-man squad for a seventy-two (72) hour mission operating over 60 miles. Again, the Army G-8 approved a directed requirement in May 2017 for PM FP to procure up to 80 surrogate SMET systems from up to four vendors, with some unmanned and some optionally manned. By June 2017, PM FP had issued a request for vendors to compete at Fort Benning, GA in October 2017, resulting in four selectees ready for a contract award in December 2017, delayed until May 2018 as a new start by the Continuing Resolution. Each of the four vendors (General Dynamics, Howe & Howe, HDT, and Polaris) will deliver the first of twenty of these systems in June for five months of safety and reliability testing. Two Infantry Brigade Combat Teams will begin a twelve month OTD in December 2018 to try-decide on which vehicle will become the SMET before Army the commits to large scale acquisition of the projected Army Acquisition Objective of over 5700 systems.

In support of the Army's number two priority, the Next Generation Combat Vehicle (NGCV) Cross Functional Team (CFT) has outlined similar ambitious timelines for the Robotic Combat Vehicle (RCV). The NGCV RCV is an unmanned close combat platform (tele-operated, semi-autonomous and autonomous) that delivers decisive lethality and overmatch in a future operational environment executing combined arms maneuver. The NGCV CFT's experimental prototyping and technical demonstrator effort will demonstrate, align, and integrate critical enabling and potentially disruptive technologies, combat vehicle capabilities, inform future combat vehicle requirements, and reduce risk to future programs of record by informing senior leaders as they make key programmatic decisions. Live vehicle experimental prototypes and technical demonstrators provide a tangible and physical bridge between S&T investments and future combat vehicle role decisions while simultaneously allowing Soldiers and units to evaluate technology and provide critical user feedback through a series of Soldier experiments at the system (FY20), platoon (FY21), and company (FY23) levels.

"A modern Army must be well equipped with the most advanced, capable, and survivable combat systems industry can provide quickly. A decade from now – and preferably sooner -- we will see our formations begin to field a variety of ***manned and unmanned*** combat vehicles, aircraft, sustainment systems, and weapons. ***Greater use of autonomous systems, robotics, and AI promises to make our units more lethal, our Soldiers less vulnerable, and the Army far, far more effective.*** "

—Dr. Mark T. Esper, Secretary of the Army

A&M: From a Manned-Unmanned Teaming (MUM-T) perspective, how is your office helping to facilitate the integration of autonomy into proven ground capabilities such as the Manned Transportable Robotic System (MTRS), TALON, and other small RAS?

Mr. Hatfield: We continue to issue and sustain existing nonstandard equipment RAS to Warfighters in theater. Every robot lost in action equates to saving the life, limb or eyesight of a Soldier. These systems serve as bridging solutions until our programs of record can be fielded, and we have made a lot of progress towards those goals in the last year.

In February 2018, we fielded the first TALON 5A to explosive ordnance disposal (EOD) units at Ft. Carson, CO. The TALON 5A is recapitalized version with full Interoperability Profile (IOP) compliance, updated communications, and improved manipulation. In September 2017, the Army awarded a production contract to Endeavor Robotics for the Man Transportable Robotic System (MTRS) Increment 2, and first unit equipped is scheduled in FY19. Intense competition amongst our industry partners resulted in meeting all requirements with a unit cost reduced by half.

In March 2018, the Army awarded two contracts for the Common Robotic System – Individual (CRS-I) to Endeavor and Qinetiq for the final ten month competition. This acquisition approach keeps competition high and costs low, delivering a CRS-I at nearly a third of the cost and half of the weight of the legacy Small Unmanned Ground Vehicle. Soldiers in operational units will provide input for the final selection to begin production in FY19.

We are combining both air and ground RAS requirements for the Universal Robotic Controller for all RAS from the Battalion level down to the platoon and squad.

Keys to success across the portfolio has been the close partnership of the program managers and our industry partners in developing and implementing the IOP standards and sufficient resources for procured quantities to allow awarded vendors to facilitize production for economical manufacturing.

A&M: Tell us about the state of the Army's Robotics Enhancement Program (REP) and current focal REP efforts in support of G-8 initiatives.

Mr. Hatfield: Started in 2015, the Robotics Enhancement Program (REP) provides both the Army and industry an opportunity to evaluate and assess emerging products and technologies to verify their usefulness, appropriateness, and readiness for Army utilization. A $350k REP assessment of Common Robotic System - Heavy (CRS-H) surrogates in REP 16.2 demonstrated sufficient maturity in the technology allowing the capability developer to enter the acquisition process with a Capabilities Production Document (CPD), saving the Army an estimated $35M and three years of development efforts.

To date, REP has conducted six Councils of Colonels leading to over twenty projects and evaluations. These events informed Army capability developers and materiel developers on the state of robotics technology and industry efforts. It is an important capability that improves industry and Army communication and engagement, allows better and smarter Army decisions, and helps bridge S&T to Programs of Record. It allows flexibility and agility that are key components of Army acquisition reform.

As we begin to field common chassis in each the various robot sizes, we begin to focus our search for the modular mission payloads that will expand their roles into multiple warfighting functions. REP will soon assess and verify the readiness and maturity potential robotics payloads from improved control, manipulation, navigation, increased autonomy, and even remote weapons. These events may allow several of these payloads to shorten or skip development which will save money and time.

A&M: Feel free to speak to any goals/challenges moving forward.

Mr. Hatfield: The Army's RAS enterprise is facing both opportunities and challenges. The hard work of literally hundreds of key people over the last decade has better positioned the portfolio to utilize increasing resources and deliver RAS capabilities prioritized today by Army Senior Leaders. TRADOC is establishing a centralized TRADOC Capability Manager (TCM) RAS for concept and requirements development. The Army Acquisition Executive is establishing a Program Director Autonomous Systems for centralized RAS acquisition. As systems are fielded and integrated into manned/unmanned teams, we will continue to gain Soldier trust and confidence in increasingly autonomous RAS.

We will always be challenged by the ever-accelerating pace of RAS technology, but we must endeavor to continue to deliver capability at the speed of relevance for the Warfighter. We must continue to work with our industry partners to bring costs down to an affordable level enabling RAS to be fielded to the entire force rather than a few users in the fight. Stable funding without continuing resolutions will facilitate both.

The state of the Army Robotics portfolio is strong and the future of the Robotics Enterprise is bright. We have some of the best minds in the world in academia, government, and industry unified with a singular goal: provide RAS to Army formations for Manned-Unmanned Teaming to increase the Warfighter's endurance, persistence, lethality, protection, and depth. RAS will improve the Army's ability to be ready to deploy, fight and win decisively against any adversary, anytime and anywhere.

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ARMY AVIATION WARFARE: MUM-T TO ADVANCED TEAMING

With recent decades of U.S. combat force engagement on multiple continents, the nature of warfare remains steadfast while its character continues to evolve. Nowhere is that change more evident than in the application of technology to gain and exploit advantage over an adversary.

By COL Paul A. Cravey, TRADOC Capability Manager for Reconnaissance and Attack, and COL Erskine R. "Ramsey" Bentley, TRADOC Capability Manager for Future Vertical Lift, U.S. Army Aviation Center of Excellence, Fort Rucker, AL

Army Aviation, both manned and unmanned, has experienced exponential leaps in technology. Continuous warfare on multiple kinetic battlefields has provided a real-time laboratory to accelerate advances in manned and unmanned teaming technology. The ability to identify, strike and protect more efficiently than the enemy continues to provide a decided advantage in tactical and operational scenarios. Manned-Unmanned Teaming (MUM-T), the ability of manned aviation platforms to operate in a complementary manner with unmanned assets, is more a technique than a technology.

COL Paul A. Cravey
TCM Recon/Attack

COL Erskine R. Bentley
TCM FVL

However, recent advances in technology have created large leaps in capability and facilitated the charting of a path for future success on the battlefield. Current advances in technology have proven highly lethal and survivable in the current operating environment. Traditionally speaking, however, aviation assets do not intuitively communicate across proprietary software lines or across disparate aerial platforms. This lack of platform and sensor interoperability has the potential to hinder situational understanding, lethality and survivability in the future near-peer operating environment. To counter this interoperability short-fall, Army Aviation is pursuing improved capabilities across the manned and unmanned fleet with a concerted effort for advanced teaming capabilities for the long-term future. These efforts build a strong case for real optimism in the field of manned and unmanned teaming.

AH-64 Apache Update

In recent Army Aviation attack operations, through highly technique-driven methodology, unmanned aircraft systems (UAS) operators would relay information via voice and occasionally a video feed to attack aviators to share situational awareness and, in more advanced platforms, display near-real-time operational information in the form of video feeds. While this process produced valuable information and resulted in increased situational awareness and operational effectiveness, the distribution of tactical information was often inefficient and sometimes irrelevant—thus the need for improved communications across both manned and unmanned aerial systems.

The Apache community overall evolved from voice-only target handovers to video feeds and telemetry targeting data in the cockpit. This heightened situational awareness created a hunter-killer relationship. In this scenario, the smaller and stealthier UAS offers reconnaissance with a reduced signature, thereby affording the AH-64 standoff outside of the enemies' weapons effective zone, increasing survivability. It also reduced the "kill chain" by providing more rapid engagement times due to shared situational awareness.

The next logical step in this process will increase interoperability between manned and unmanned platforms. Future AH-64 upgrades include the Apache crews' ability to control certain UAS sensors, the capability to change fields of view, use UAS laser for ranging, and weapons designation with the added potential to program UAS to fly specific routes and/or reconnaissance patterns. These upgrades, along with increased range and the capability to operate on multiple waveforms, will enable attack crews to communicate with multi-service UAS, facilitating true joint MUM-T interoperability. The AH-64 continues to be the most lethal weapon system on the battlefield and with the addition of increased MUM-T capability, promises increased sophistication of manned and unmanned teaming in an increasingly complex battlefield environment.

Unmanned Systems Update

Historically, manufacturers of the Army's reconnaissance and attack assets created their own "operating systems" for their respective products. Apaches, Gray Eagles, and Shadows (along with small UAS) were all approached with minimal specified teaming goals and with no hardline requirement to fully interoperate across disparate platforms and sensors. Sensor operators and supported elements were forced to resort to time-consuming and redundant workarounds to achieve any semblance of rudimentary interoperability. Needless to say, such an environment does not maximize the potential of all aviation systems on the battlefield.

Recently, however, the Army's Aviation Center of Excellence at Fort Rucker began creating the requirements for a standard "operating system" to normalize the user's experience. Just as teams collaborate in real-time on cloud computing, Commanders, Soldiers on the tactical edge, manned pilots, and UAS operators will communicate in real-time using the same base software to reference different payloads on multiple sensors. Overcoming this historical hurdle will exponentially increase the Commander's situational awareness.

Users will navigate the "operating system" using an authorizations-based Scalable Control Interface (SCI). A software-based solution that is platform agnostic, such as APP on a tablet or end-user device, will allow users to quickly access sensors and platforms within range based on their delegated Level of Interoperability (LOI). In this context, operators of unmanned aerial platforms in the Ground Control Station (GCS) will provide supervised management of multiple UAS while video feeds and permission-based control will be available to Soldiers at the tactical edge. SCI promises to level the playing field with respect to LOI application and ease of use. This approach to "right-sizing" UAS employment across multiple levels will only increase mission efficiency and overall aviation contribution to the battlefield.

The Future

Efforts to increase interoperability with current platforms carry us through the near-term fight. However, the future battlefield threat will require a much higher level of sophistication and survivability. Army Aviation will answer that threat with Future Vertical Lift (FVL). Along with

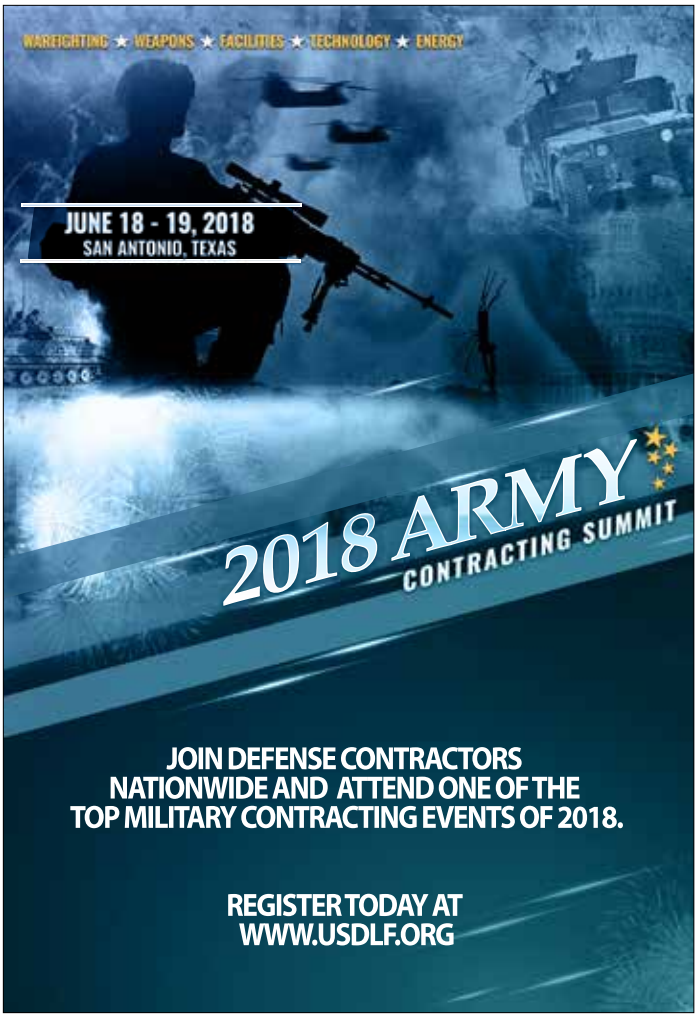
FVL comes the requirement for a more survivable, interoperable UAS capable of conducting "Advanced Teaming" with FVL platforms. As its name implies, Advanced Teaming is the next evolutionary step in manned-unmanned interoperability by leveraging autonomy improvements in sensors, flight computers, and mission planning systems to improve the effectiveness and efficiency of MUM-T, all while simultaneously reducing Soldier workload.

Basic requirements for advanced UAS should include a form factor that can hide in radar clutter, conduct electronic attack, and operate in the urban canyons of megacities. The advanced UAS, teamed with future attack reconnaissance aircraft, will need to foster the interoperability between our ground forces and our fires teams in order to detect and deliver lethal effects.

Together, this advanced team must be able to operate in contested airspace and be lethal at extended ranges. The platforms must team to create improved human-machine interfaces and still offload high cognitive workloads while increasing situational awareness. It must achieve higher levels of autonomy in order to dominate the area or corridor for the Joint Force, possess ultra-reliable designs that provide maintenance-free operating periods, and address future life-cycle costs.

Additionally, improvements in sensors automation of the Processing, Exploitation & Dissemination (PED) process will provide a capability for the system to perform automated target detection and identification. Sensors will autonomously scan the anticipated flight path and designate Named Areas of Interest (NAIs) for further investigation. Once an entity is found, the UAS would then compare those entities to known target profiles and provide those potential targets to the Soldier for confirmation or rejection. This level of autonomy would allow for more efficient teaming with manned aircraft during remote engagements, as well as decrease overall target engagement timelines.

The future of manned-unmanned teaming, from the current initiatives in Apache and UAS, to the Advanced Teaming work in future technologies, will allow for greater aerial autonomous capabilities which include swarming and collaborative engagement between manned and unmanned platforms. Moreover, future approaches in this field look to high-level autonomy to enable multiple UAS to collaborate "on their own" to solve problems and accomplish the mission goals. These efforts will continue to foster Army Aviation's ability to identify, strike and protect more efficiently than the enemy—the only way to win the future fight--and remain critical to our sole purpose of supporting commanders and Soldiers on the ground.



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SUSTAINING RESPONSE READINESS TO NATIONAL RE-PRIORITIZATION

Command Sergeant Major Patrick L. McCauley became the ninth Command Senior Enlisted Leader, U.S. Special Operations Command (USSOCOM), MacDill AFB, Tampa, Florida on July 7, 2016. USSOCOM is one of nine combatant commands within the Department of Defense unified command structure.

CSM McCauley enlisted in the Marine Corps Reserve as an Armor Crewman in 1986 and attended basic training at Marine Corps Recruit Depot Parris Island, South Carolina. Upon completion of his training as an Armor Crewman, CSM McCauley was assigned to A Company, 8th Tank Battalion, 4th Marine Division.

CSM McCauley transferred to the U.S. Army in August of 1988 as an Intelligence Analyst.

Upon completion of his initial training as an Intelligence Analyst, CSM McCauley was assigned to Headquarters and Headquarters Company, Combat Aviation Brigade, 2nd Infantry, Korea, where he served as an Intelligence Analyst. In 1989 CSM McCauley was reassigned to Headquarters and Headquarters Company 2nd Infantry Brigade, Fort Riley, Kansas, where he served as a Personal Security NCOIC. CSM McCauley went to Special Forces Assessment and Selection and the Special Forces Qualification Course in 1990. He was then assigned to Charlie Company, 1st Battalion, 3rd Special Forces Group in October 1990, where he served as a Special Forces Communications Sergeant until May 1994. In 1995 CSM McCauley assessed for a Special Mission Unit and served as a Team Member, Assistant Team Sergeant, Team Sergeant, Troop Sergeant Major, Operations Sergeant Major, Squadron Command Sergeant Major, and Unit Command Sergeant Major.

CSM McCauley transferred to U.S. Special Operations Command Central in June 2015 where he served as the Command Senior Enlisted Leader before assuming responsibilities at his current assignment in July 2016. CSM McCauley has deployed multiple times throughout his career, supporting Operations ENDURING FREEDOM, IRAQI FREEDOM, and INHERENT RESOLVE. CSM McCauley has completed the following military courses: Intelligence Analysis Course, Warrior Leader's Course, Special Forces Assessment and Selection, Special Forces Qualification Course, Advanced Leaders Course, Ranger Course, Basic Airborne Course, Arabic Course, French Course, Static Line Jumpmaster Course, Advanced Land Navigation Course, Free Fall Parachutist Course, Free Fall Jumpmaster Course, Senior Leaders Course, United States Army Sergeant Major Academy, the Summit Course and the Keystone Course at the National Defense University.

Command Sergeant Major Patrick L. McCauley

Command Senior Enlisted Leader
U.S. Special Operations Command

A&M: With the National Defense Strategy shifting priorities towards the 2+3 model, how is SOCOM poised to execute the emerging requirements given the current operational tempo?

CSM McCauley: Special Operations Forces (SOF) remain not only relevant to the 2+3 challenges outlined in the latest National Defense Strategy (NDS) but an element absolutely vital to its success. From the battlefields of Iraq, Syria, and Afghanistan, to the nations bordering Russia, across Africa, the Indo-Pacific, and South and Central America, SOCOM personnel stand side by side with our partners collectively facing some of the world's most difficult challenges. With nearly 9,000 personnel deployed to more than 80 countries around the world, USSOCOM is committed to providing trained, capable, and ready SOF in support of National Command Authority and Geographic Combatant Commander (GCC) requirements across the operational spectrum.

In order to ensure the most effective utilization of a finite SOF resource, USSOCOM continuously evaluates and prioritizes efforts through the Global Synchronization of SOF (GSOS) process. Informed

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U.S. Special Operations Forces load a NATO C-160 Transall before a mission during Emerald Warrior 18, at Hurlburt Field, Florida. At Emerald Warrior, the largest joint and combined special operations exercise, U.S. Special Operations Command forces train to respond to various threats across the spectrum of conflict. (U.S. Air Force photo by Staff Sgt. Michael Battles)

by national level priorities, the GSOS helps the command balance those areas of the world that may require more or less investment of unique SOF skillsets and those relationships where partner or conventional forces may be a better choice. In some cases, partner nation capabilities may have matured to a point where only episodic engagement is required. Simply put, we are trying to work ourselves out of a job from the very outset. This flexibility ensures SOF are able to balance commitments abroad with the training necessary to ensure readiness for all future contingencies.

The commitment to meet the many challenges facing this nation, however, does not come without a cost to our most important resource; our people. Unfortunately, there are simply not enough SOF to meet every requirement arising from a troubled world. Although a high demand signal for SOF is a great testament to the efficacy of the force, USSOCOM is currently deployed at our maximum sustainable level. Sustainable, however, is far from optimal and places stress on the men and women that make up this command. To that end, all USSOCOM components have been directed to attain a minimum 1:2 deployment to home station ratio by the end of this year. USSOCOM takes this issue very seriously and realizes that although we still have some work to do, we are on the right glide path for the force going forward. In the interim, programs such as our Preservation of the Force and Family (POTFF) initiative will continue to be absolutely essential in sustaining a force and family that has seen steady state use in the longest conflict in American history.

A&M: What techniques are you using or developing to keep personnel in the fight?

CSM McCauley: USSOCOM forces have been decisively engaged for nearly 17 years of continuous combat operations. This reality has generated significant stress upon our service members and their families. To help build resiliency across the force, USSOCOM created the Preservation of the Force and Family (POTFF) initiative with a stated mission to provide and integrate resources that optimize mental, physical, spiritual, and social performance in order to maximize and sustain SOF mission effectiveness. These four areas, known as "pillars" serve as focal points at all levels of command.

The POTFF model differs from other models in that it seeks to embed capabilities at the local level or "point of need" allowing the Commander to meet the unique requirements of his or her element. Essentially, POTFF is administered in this decentralized manner to provide maximum flexibility and increased likelihood of utilization down to the levels that often need it most. Each organization's team consists of experts from across the four pillars or domains to include; Physical Therapist, Athletic Trainers, Strength and Conditioning Coaches, Psychologists, Sport Psychologists, Social Workers, Nurse Case Managers, Chaplains, Peer Network Coordinators, and Family program leads. This is a robust team to be sure, but one that we see as absolutely necessary to maintain and sustain our most precious resource.

USSOCOM believes this commitment to our force absolutely must extend to our families. Our families are the foundation upon which the strength of our force is built. We simply cannot do what we do without them. A family that is resilient enables a SOF member to serve over a longer period of time, hopefully for an entire career. The families see and experience the commitment from their organization to take care of their loved ones while also taking care of the family unit itself. No doubt, this contributes to nearly 69% of SOF desiring to serve until retirement.

The SOF mission is incredibly demanding and takes a special type of service member to embrace. With that in mind, we recruit, assess, and select personnel specifically to serve in our formations. Certainly, this helps us ensure potential candidates have the right attributes for the demanding skillsets, but also are inherently resilient. Our missions are not easy, but our people have consistently proven that our processes work, and we have succeeded in building the greatest operators and enablers on the planet. The incredible demands on our SOF will continue for the foreseeable future, and USSOCOM will continue to work diligently taking care of our incredible force and families.

A&M: In terms of individual operator protection, what are current key priorities for the Tactical Assault Light Operator Suit (TALOS) capability to tenable mission readiness for fielding?

CSM McCauley: TALOS is not a program of record, and there is no intent to field the Mk 5 prototype. The mission of the Joint Acquisition Task Force (JATF) has not changed from its inception in 2013: to serve as a research and development (R&D) accelerator, a risk reduction mechanism and demonstrator for technologies that protect the SOF Operator at his most vulnerable moment. The TALOS Mk 5 prototype is a combat suit integrated from subsystems of eight different functional areas, each incorporating multiple Science and Technology (S&T) projects that meet the four principal tenets that encompass our desired end state: superior survivability/protection, enhanced human performance, heightened situational awareness and surgical lethality. While the prototype will not be fielded, there will be technology transitions into existing SOF and Service-common programs of record, and potentially, the initiation of new programs of record based on future requirements.

From inception, the JATF understood that to significantly increase the ballistic protection coverage from today's current armor would result in additional, untenable weight and proportionally degrade the Operator's mobility and agility, and ultimately their security. Therefore, the JATF researched two different solution pathways for Superior Protection: to maintain the capability for carrying a heavy payload

by designing an integrated, powered exoskeleton; and to aggressively challenge the armor industry to make significantly lighter products that maintain performance.

TALOS has focused significant resources on development of superior individual operator protection. Our team, comprised of industry armor designers and manufacturers, government subject matter experts, National Laboratory materials scientists and TALOS engineers, has worked hand-in-hand with SOF Operators embedded in the JATF to meet the extremely aggressive survivability goals laid out in 2014. The JATF team has been exploring novel materials, improved manufacturing processes, upgraded plate and helmet designs, next-generation padding systems protecting against blunt and blast injury, as well as more lightweight and robust helmet retention systems in an attempt to provide the SOF Operator with a leap-ahead capability in survivability. While the bulk of the effort has been in research of ballistic protection technology that can be incorporated into a combat suit - whether through research into integration of power with armor, or ballistic protection integrated with exoskeleton structural components - TALOS has also accelerated the state of technology within the industry. Our industry partners have utilized lessons learned from their work with TALOS and, combined with Operator feedback, implemented processes and material upgrades through independent research and development that have surpassed the objectives originally laid out for TALOS. The JATF has encouraged these efforts and is actively facilitating three near-term transitions to the operational Force.

A&M: What is the state of SOCOM's Ground Mobility Vehicle (GMV) 1.1 modularity and deployment with SOF units in maximizing firepower and operational effectiveness?

CSM McCauley: Ground Mobility Vehicle 1.1 currently is in full rate production with SOCOM units training and conducting deployed operations using the vehicle. GMV 1.1's modularity gives operators in a deployed environment the capability to tailor the vehicle to fit their needs. By tailoring certain vehicle attributes – a commander can maximize the vehicle's effectiveness for assigned missions. For example, users have the flexibility to reconfigure the vehicle from an unarmored condition to an armored variation. This modular feature enables commanders to armor up the vehicle based on threat analysis to achieve an increase in protection. In these circumstances, a small degree of payload is sacrificed, but overall vehicle mobility remains high. On the other hand, if the mission called for an increase in payload, maintenance personnel have the flexibility to remove the armor prior to a mission.

GMV 1.1's modular design enables additional configurations other than armor. For example, operators have the flexibility to make tradeoff decisions between protection, payload, and performance. Another more basic example is the seating kit. A seating kit is available; it can be installed at the user level to provide a capability to carry one additional SOF Operator on the vehicle. Additional modularity features available at the unit level include tailoring for mounting of individual or crew served weapons systems, medical evacuation with litters, personnel transport, and communications suite which all allow the commander to tailor the GMV 1.1 for mission success.

GMV 1.1 has been deployed with SOF units in combat zones since the first combat mission needs statement for the vehicle was satisfied in May of last year. The combination of mobility performance over rugged terrain, maneuverability, ride comfort, and the overall vehicle power are some of the key attributes validated during overseas operations. Operators also like the GMV 1.1 for the center drive design of the vehicle and the low noise signature of the engine. The weapons mount on the GMV 1.1 has also been praised by operators for their accessibility and ease of use. Because the GMV 1.1 was deployed much sooner than expected, it has led to further investment by HQ USSOCOM to purchase more armor kits and accelerate the development and integration of a Common Remotely Operated Weapons System (CROWS) into the vehicle.

GMV 1.1 hasn't specifically held any SOFWERX events to date, but the Family of Special Operations Vehicles (FOSOV) program at large is very active there. SOFWERX, working with FOSOV and PEO C4, conducted a joint effort to integrate communication systems onto the Light Tactical All-Terrain Vehicle resulting in a proof of concept for vehicle C4 solutions and generated a project to look at C4 holistically on the GMV 1.1 which is currently underway. Additionally, FOSOV has engaged industry through SOFWERX to explore alternate fuel and electric power technology that resulted in direction from USSOCOM Commander General Raymond A. Thomas III to fund research of this technology in his POM20 guidance. The FOSOV team is looking at GMV 1.1 as a candidate for the CG's alternative / electric power initiative.

ESTABLISHING RELIABILITY AND DURABILITY PRECEDENCE FOR ENHANCED SUSTAINABILITY

USSOCOM's Family of Special Operations Vehicles (FOSOV) provides SOF Operators with myriad solutions for mission execution. Improving platform survivability and maneuverability while reducing lifecycle costs is at the heart of program full operational relevance.

By Mr. Logan Kittinger, Deputy Program Manager, Family of Special Operations Vehicles

A GMV 1.1 on display at U.S. Special Operations Command headquarters in preparation for this year's Special Operations Forces Industry Conference in Tampa, FL. (USSOCOM)

A&M: What is your role and primary focus as Program Manager, Family of Special Operations Vehicles (FOSOV)?

Mr. Kittinger: As Deputy PM FOSOV, I have the responsibility to provide the overall management, direction, and guidance for the planning, development, acquisition, testing, and product improvement efforts for the portfolio of SOF vehicles. SOF vehicle programs under FOSOV currently include light tactical all-terrain vehicles, non-standard commercial vehicles, ground mobility vehicle 1.0, GMV 1.1, and mine-resistant ambush protected vehicles. In the execution of my duties, my primary focus is committing to and performing within the approved program baselines; evaluating cost, schedule, and performance and ensuring all program requirements are met. As a PM office, we are always looking to industry to help make our vehicles more survivable, more maneuverable, and reduce overall lifecycle costs through reliability and durability improvements.

Mr. Logan Kittinger
Deputy PM FOSOV

A&M: Regarding FOSOV goals/challenges in addressing the Protection, Performance, Payload "Iron Triangle", how do you see FOSOV embracing modularity for future SOF operations in areas such as greater firepower and transportability?

Mr. Kittinger: There are tradeoffs in the Iron Triangle. While having a single vehicle that can be modular and reconfigurable at any given time, we remain cognizant of the fact that adding modularity for the sake of being a "jack-of-all-trades" vehicle that can lead to a vehicle that is "average" at completing a mission and thus may not provide optimum benefits to SOF.

On the other hand, having a greater variety of vehicles makes sustainment more challenging and increases maintenance costs, which results in more mechanic and operator training and greater parts inventories. This was the genesis of a family of special operations vehicles: Having vehicles similar in nature and support concept, but tailored to accomplish a specific mission.

Modularity in vehicles provides SOF commanders more flexibility in configuring a vehicle to their mission needs, whereas static, unchangeable and preconfigured vehicles may cause them to request multiple separate and unique vehicles to meet specific mission requirements.

Modularity and transportability are linked. Vehicles are restricted by the weight and height requirements of air transport. Vehicle integration focuses on these design constraints and allows for easy installation and removal of necessary components, such as roof racks, turret

systems, weapons mounts and ammunition storage.

In terms of modularity as it relates to greater firepower, we continue to innovate with enhancements to existing common remote weapons station to ensure operability with new and future lethality systems.

As a matter of routine, we constantly evaluate the performance of our vehicles and their effectiveness in support of SOF operators. We continue to work through our SOF operators and industry counterparts on modularity where possible and allowable without sacrificing unwarranted tradeoffs in vehicle performance.

A&M: With regard to Light All-Terrain Vehicle (LTATV) evolution, how is SOCOM addressing challenges in thermal signature, mobility, and C4ISR?

Mr. Kittinger: The LTATV is a flexible, transportable, mobile, affordable and sustainable vehicle that bridges the gap between individual and medium ground tactical platforms. In order to keep it affordable and mobile, and reduce vehicle weight and power generation, current requirements do not focus on C4ISR integration. In addition, current thermal signature enhancements have been evaluated, but at this time, in order to maintain an affordable solution for this class of vehicle, we remain in the assessment phase with SOF operators.

A&M: As it pertains to SOCOM's Ground Mobility Vehicle (GMV) 1.1, what are the primary challenges with achieving advanced survivability and mobility while maintaining manageable thermal signature?

Mr. Kittinger: Survivability is usually applied as terminology that is synonymous with ballistic force protection from the effects of blast and/or projectiles of some nature. However, mobility can also be key in helping to achieve both vehicle and operator survivability.

Armor undoubtedly increases weight, which has a detrimental impact on mobility performance and payload. Balancing these remains a continual challenge while also ensuring an appropriate blend of cost, schedule, and performance impacts. The GMV 1.1 is built as a modular vehicle, allowing for the armor kits to be swapped as necessary depending upon mission requirements.

Signature management is usually acoustic, thermal, as well as visual and optical. When factored in properly, signature management is also a key in overall survivability. One challenge faced on both the survivability and signature management fronts is the validation and verification costs associated with these capabilities due to associated complexities.

Additionally, in terms of thermal signature, the results can vary widely with respect to how material performs in different conditions and locations where SOF may be deployed. Balancing this is a challenge. For example, sounds are usually more audible in very cold temperatures and in open air, but these may perform completely different in another area or climate.

A&M: From a Non-Standard Commercial Vehicle (NSCV) standpoint, what are some primary challenges to upgrading fleet survivability such as armor kitting, mobility, and C4ISR?

Mr. Kittinger: While Toyota trucks have been proven to be reliable and rugged from the original equipment manufacturer, the non-standard commercial vehicle program faces many technical challenges in ensuring an appropriate blend between protection, performance and payload.

First, despite generous Toyota engineering margins, these original equipment manufacturer vehicles are subjected to significant forces when accommodating additional armor mass to ensure our required force protection is achieved. Therefore, the vendor must significantly reinforce the frame and chassis attachment points and other structural members found in the body. These upgrades continue to drive additional complexity and costs to the vehicle.

SOF mobility requirements are extensive to ensure mission success. These are global vehicles expected to perform at any time and any place. The terrain also rebounds large forces back at the vehicle. The drivetrain and suspension must be modified to perform across the entire terrain spectrum from asphalt roads to true off-road negotiation of rock fields. Despite advances in suspension tested by off-road racing, there is no perfect solution given the vehicle requirements. Engineers must tune somewhere in the middle and account for large payloads required by SOF operators that are expected to be self-sufficient when on mission.

Lastly, technology continues to benefit SOF's ability to communicate. That said, C4ISR and other mission equipment require power, cooling, a significant space claim, and an assessment of radio frequency interference. These factors drive upstream requirements for improved electrical output, storage of that energy, and additional demands on the engines. The need to maintain pace with new innovations in C4ISR drives continual upgrades to NSCV integration. In turn, these improvements often times can come with size, weight, and power increases, reducing usable cargo space in these already compact vehicle cabins.

For over a decade, the NSCV program continues to evolve to ensure the vehicles meet user requirements in a demanding operational environment, and strives for continued capability improvements through the sharing of lessons learned with and through our SOF operators and industry.

A&M: In terms of acquisition needs and budgetary realities, how is FOSOV working to maximize capability through partnering with industry suppliers to ensure best for least?

Mr. Kittinger: We understand industry engagement is a key to our success and remains in a continual state of market research on a routine basis. This is achieved in a number of ways: (1) The Annual Special Operations Forces Industry Conference in May; (2) The Annual Special Operations Forces Warrior-Systems Industry Collaboration in October/November; (3) Program-specific Industry Day, most recently the purpose-built NSCV event in February; (4) SOFWERX capability collaboration events; (5) Technology and Industry Liaison Office briefings; (6) Direct industry engagement through Requests for Information, teleconference communications or vendor site visits.

These industry engagements are essential in ensuring maximum transparency into our various lines of effort, key capability gaps, and focus areas for product improvement. This also allows for industry to gain a better understanding of possible program capability transitions, ensuring their internal research and developmental funds have the best chance for return on investment. We continue to explore small business innovative research projects and other transaction agreements where possible as a means for more rapid development and testing of capability improvements for our SOF mobility portfolio.

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STRATEGIZING FOR ACQUISITION ENABLEMENT

The U.S. Defense Logistics Agency has announced its new Industry Engagement Plan to better support acquisition processes and enable its ombudsman to strengthen industry engagement.

By Dianne Ryder, Defense Logistics Agency Public Affairs

DLA will host industry events throughout the year, including its Land & Maritime Supplier Conference and Expo in Columbus, Ohio, as a way to maintain strong industry partnerships that focus on collaboration, innovation, and open dialogue. (DLA photo by Charles Morris)

For many years, the Defense Logistics Agency has sought opportunities to engage new industry partners, work more with existing partners by adopting their best practices and develop innovative contracting solutions that improve DLA's support to warfighters. Now DLA's Acquisition Directorate will be boosting those efforts with a new DLA Industry Engagement Plan and an industry ombudsman to help implement the plan's features.

The Plan

The IEP is a major element of the Strong Partnerships line of effort in the new DLA Strategic Plan, released last fall. It's also part of a broader engagement strategy DLA Acquisition is leading to strengthen the agency's relationship with industry, said Matthew Beebe, director of DLA Acquisition.

"As with everything we do here at DLA, our ultimate goal is Warfighter First," Beebe said in a recent blog, referring to the first line of effort in the DLA Strategic Plan. "The IEP describes how we intend to enhance our contributions and support to this goal by working collaboratively with industry," Beebe said.

The Man

In October 2017, Air Force Col. James Davis became DLA's ombudsman to industry. He first began working for DLA Headquarters at Fort Belvoir, Virginia, in May 2017, in the Joint Contracting Acquisition Support Office, first as director of a mission support team and then as the JCASO deputy chief for performance-based logistics. As the ombudsman, Davis serves as the principal adviser to the DLA director and reports to Beebe, coordinating industry engagement strategies to enhance partnerships with 12,000 suppliers.

"At first I thought, 'Well, maybe I can't keep a job,'" Davis quipped. "I've learned a lot in a short time about DLA, and I think this job [will allow me] to learn even more."

Davis graduated from the Air Force Academy in 1994. His career assignments include several leadership positions, including contracting officer, grants officer and program manager. Before coming to DLA, Davis served as deputy executive director of the Contracting Directorate at Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio. He's also served as a traditional industry ombudsman before.

The Task

"The term 'ombudsman' has its purest form in the acquisition arena as someone who adjudicates concerns and issues from the larger contracting populace and business sector," Davis said. His current position expands the role "to be more proactive with an enterprise perspective at executing and ensuring the relationships between ourselves and our industry partners are good. [I'm] like a corporate business adviser who's trying to make sure that the right parties are able to work together to support their common interests."

Davis helps keep the lines of communication open with DLA's major subordinate commands and industry partners to ensure a capable defense industrial base, generate innovative and efficient solutions and maintain resiliency across nine supply chains managing more than 5 million line items.

"Every day has its new set of challenges and opportunities, which is good; it keeps the office very busy," Davis said. But he insists he doesn't do his job alone. "Being embedded in DLA Acquisition, I have [the whole directorate] as a support team."

Davis consistently interacts with the agency's logistics operations directorate, information operations, general counsel and many others, including counterparts in DLA's MSCs. "We're networked across the entire enterprise," Davis said.

The Focus

He's also been instrumental in developing the agency's Industry Engagement Plan, with initiatives aligned among five focus areas:

I. Supplier communication and interaction
II. Balancing business decisions and fiduciary responsibilities
III. Supplier feedback management and advocacy
IV. Drive efficiencies and innovation in our business
V. Assess and mitigate supply chain risk

"Each of these focus areas brings together activities and initiatives that are already going

on to some degree across the agency," Beebe said.

Regarding the first focus area, Beebe said, "it should come as no surprise we are already very active and engaged, as evidenced by the many industry events put on by [DLA's] MSCs." He said that interaction will continue with further dialog at DLA's enterprise industry day Sept. 19.

Matthew Beebe
Director, DLA Acquisition

Col. James Davis
DLA Ombudsman

Focus Area II talks about striking the right balance, Davis said.

"We're trying to comply with all the laws, policies and regulations: a lot of the socioeconomic programs, special interest programs [and] the demands that come down when you're dealing with government to strike a good deal and ultimately meet the warfighter's needs," he said. "Sometimes those priorities compete with each other, but as we continue to move forward we want to infuse more critical thinking and innovation into our process of compliance so that we strike the right balance."

Davis addressed the issue of transparency in the process and noted the third focus area deals with being "the honest broker of soliciting feedback" and being willing to make adjustments as a strategic partner within the industrial base.

Beebe hopes DLA employees will focus on obtaining valuable industry feedback.

"We realized that while we get a lot of feedback from suppliers on a transactional level, we don't have a good way of assessing that feedback strategically," he said. "To address that, we're planning a supplier survey to be conducted this summer … to get a better idea of how suppliers view their relationship with DLA and identify areas where we need to improve."

To help DLA drive efficiencies and innovation, Davis and Beebe agree that innovation drives efficiencies in DLA's daily business.

"Enterprise process management, continuous process improvement efforts, audit readiness — it's all in the same vein of discipline and efficient activity," Beebe said. "It's looked at for different reasons, but it's all toward having consistent processes across the enterprise, to maintain efficiency and effectiveness."

Davis also noted that many of the acquisition reforms are driving DLA to examine how to increase agility in its processes.

Beebe agreed. "The healthier we can make that industrial base, the better options I have to support readiness requirements, the better competition I get for pricing, the more innovation I get, because there are more people with new ideas — it's all good for us if they have a good opportunity."

Davis points to the fifth focus area as the most critical:

"[We're] assessing the health of our industrial base and trying to identify systems and programs so we can mitigate some of those vulnerabilities," he said. "This gets to the whole commercial and government entity compromise — cyber vulnerabilities and fraudulent actors that are out there. We're not in it by ourselves; our industry partners are part of [the solution] as well."

The Partners

The plan also includes a section titled, "Working with DLA," which lists resources and contact information and highlights DLA's research and development, as well as the agency's valued partnerships with small businesses.

"One-third of our dollars have gone to small business," Davis said. In addition, "78 percent of our 12,000 contractors and suppliers are small business. … [and] 2,400 new small businesses work with DLA every year," Davis said. "If that experience is bad because we didn't have the right conversation, we lose them. We want to build on that momentum so that we have a stronger industrial base and that number continues to grow."

But the plan and the ombudsman are just parts of the overall strategy, Davis noted. "We're trying to increase meaningful communication and collaboration with our industry partners, showing we're invested together to ultimately support our warfighters," Davis said. "Through trust and making sure we have strong partnerships, I know DLA and ultimately our warfighter will be in a better position of readiness and lethality when they need it."

Engagement and Feedback

Primarily, the IEP is a communication document to industry, but Beebe noted it's also a message to the agency's workforce.

"There are times when our workforce has been hesitant to interact with industry, and sometimes that's appropriate. But in many cases, we need to interact with industry in order to address readiness, innovation and many other things to build and maintain the trust of our partners," he said.

Through the plan, Beebe said he hopes industry will recognize DLA's capabilities.

"I don't mean recognition on how good we are, but recognition that there are those different means of support; it's a balance, and we need to keep working that balance," he said. "It's not always about price, it's not always about competition, it's not always about small business, it's not always about readiness. It's always about all of those."

Beebe also stressed that the capstone events listed in the plan should not be the only means of acquiring valuable feedback.

"We've got to have multiple ways of gaining that feedback because very often it gets tempered or filtered based on the moment," Beebe said, explaining that industry leaders may be reticent to provide candid feedback if they wish to do business with DLA.

Industry feedback will also help DLA in forecasting the agency's strategic climate and future business opportunities.

"[Defense leaders] are saying the department needs to have a consistent message with the defense industrial base — but I need it to get to where we have a consistent DLA enterprise interaction message or expectation."

Beebe said DLA needs to use relationships with industry "to address obsolescence or to talk about intellectual property … Right now the strategy is very localized," he said.

The Beginning

"This IEP is not done; it's only the start," Beebe said. "Talking about a focus area isn't accomplishing it. There's a lot more that needs to be built into the plan and/or extended before we can claim major progress in any of these areas."

Even a year from now, after the plan has been distributed to DLA's industry partners, the job still won't be done, Beebe said.

"I will probably be saying, 'Boy, we learned a lot, and we might need to update this,'" he said. "There's already a lot of dialog going on, it's a matter of capturing it and finding out if the plan resonated. That discovery is continuous."

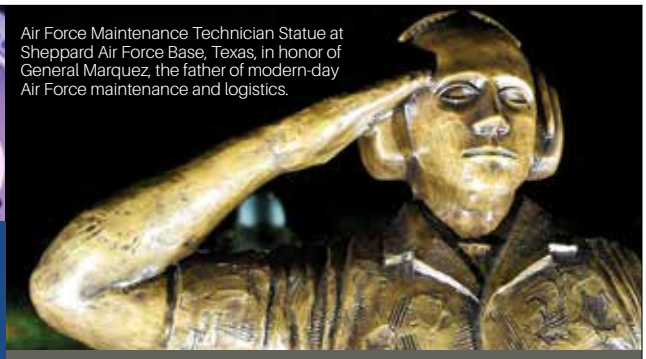
Beebe said the plan's key points won't be news to companies DLA has dealt with for years.

"It's really not this document [that's new]," he said. "It's the fact that we have a plan, a strategic framework, and we're going to further our strategy to have additional interactions and have some consistency of what's being communicated and capture the feedback at the level needed."

Davis agreed. "We are constantly trying to improve the communication — leveraging what we're doing now, but [doing] even more, with a strategic plan and a desired outcome. This gives us that focused dialog to have, but by no means, is it the end. If anything, it starts an even more robust conversation."

Customers and agency employees can view the Industry Engagement Plan, upcoming events and related documents on the IEP webpage (http://www.dla.mil/Info/strategicplan/IndustryEngagementPlan/).

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SUPPLIER CONFERENCE RETURNS TO COLUMBUS

By Dana Thornbury, DLA Land and Maritime Public Affairs

Defense Logistics Agency Land and Maritime announces the return of the DLA Land & Maritime Supplier Conference and Exposition to downtown Columbus, Ohio.

The 2018 conference will be held at the Greater Columbus Convention Center June 19 – 20.

This year's theme is "Improving Warfighter Readiness by Strengthening Industry Alliances and Reforming Business Processes."

"This two-day conference brings together both our key industry partners and numerous prospective suppliers who will gather to mutually collaborate, partner, and learn of our near-term acquisition strategy." said DLA Land and Maritime Commander Navy Rear Adm. Michelle Skubic. "The ultimate goal of the conference is to strengthen our industrial base, diversify the suppliers that we work with, and build collaborative partnerships that positively impact materiel procurement. Ultimately this effort will serve to improve the readiness of the Warfighter."

Managing a Vast Enterprise

DLA Land and Maritime manages more than 2 million unique inventory parts to support several thousand multiservice weapons systems and the Warfighters who rely on them, working with 6,000 suppliers at 350 different corporations throughout America.

DLA's business model is evolving from a primarily transactional model to one that values long-term relationships.

"To help advance the evolution of our strategic acquisition processes, DLA is executing an aggressive Industry Engagement Plan that fosters innovation through research and development," Skubic said. "Improving Alliances and Reforming Business Processes expands opportunity for all businesses, invites smarter and innovative ways of doing business and creates greater synergy with our service partners and industry."

The educational conference will offer benefits to both small and large businesses by providing an opportunity to build and strengthen partnerships at the strategic and tactical levels.

The conference will feature dynamic speakers from industry, to include both small and large businesses. Panel discussions will occur throughout the conference featuring industry and defense leaders with backgrounds in logistics and acquisition. General officer speakers from the Army and Navy will also speak providing the voice of DLA customers.

Breakout topics include Future Requirements Outlook, Doing Business with DLA, Small Business Association - Access to Capital, Coffee with Contracting, Quality Notifications, DLA Internet Bid Board System (DIBBS), Value Engineering, Cyber Security, Cost and Pricing, Supplier Assessment and Recognition, Vendor Payment Processes and Accounts Payable, Vendor Shipment Module, and Aircraft Launch and Recovery Equipment.

Networking breaks will occur throughout the event allowing attendees to make contacts with those in the industry, the DLA Land and Maritime workforce and key leaders.

DLA Land and Maritime Small Business office will also be hosting on-site training.

"The DLA Land and Maritime Office of Small Business Programs is here to assist small businesses in discovering business opportunities and help them navigate doing business with DLA," said Coleen McCormick, DLA Land and Maritime Small Business director.

The Small Business Office will offer breakout sessions that will aid small businesses in determining if they need to work with a large business as a subcontractor or if they should become a prime contractor directly with Land and Maritime Small Business.

Consumers on Hand

In addition to the educational aspect of the conference, Land and Maritime buyers will be on-site making connections and executing contracts.

"DLA welcomes new businesses that want to join the team and those businesses that have been working with us for years, said McCormick. "Our shared conference goal is improving alliances and reforming business processes to continually improve Warfighter readiness."

Those interested in attending the conference should register online at www.ndia.org/events/2018/6/19/dla-land-and-maritime-conference.

Registration includes general session and breakout sessions, exhibit hall, continental breakfasts, networking breaks, networking luncheons, reception, on-site agenda, meeting materials and post-event online speaker proceedings (if releasable by speaker).

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Show is not open to the general public. Appropriate attendees include U.S. military, law enforcement, industry and consultant representatives. Foreign military and student organizations are also welcome with prior registration.

CALENDAR OF EVENTS

MAY 22 - 24
SOFIC
Tampa, FL
Sofic.org

JUN 7 - 10
Int'l. HazMat Response Teams Conference
Baltimore, MD
Iafc.org/hazmat

JUN 11 - 12
Transport Security & Safety Expo (TSSX 2018)
Washington, DC
Transportsecurityworld.com

JUN 18 - 19
Army Contracting Summit
San Antonio, TX
Usdlf.org

JUN 19 - 20
Internat'l Summit on Borders
Washington, DC
Internationalsummitonborders.com

JUN 19 - 20
DLA Land & Maritime
Columbus, OH
Dla.mil/landandmaritime

JUN 25 - 26
Mass Casualty Incidents: Response and Readiness
Orlando, FL
Insightxnetwork.com

JUN 25 - 27
AUSA Medical Symposium
San Antonio, TX
Ausa.org/army-medical-symposium

JUN 25 - 27
Robotics and Autonomous Systems
Detroit, MI
Roboticsautonomous systems.iqpc.com

JUN 25 - 27
Directed Energy & Next-Gen Munitions
Washington, DC
Distributedlethality.iqpc.com

JUN 26 - 27
CBRN Exhibition
Ft Leonard Wood, MO
Cbrnexhibition.com

JUN 26 - 27
Police Security Expo
Atlantic City, NJ
Police-security.com

JUL 9 - 12
Nat'l. Homeland Security Conference
New York, NY
Nationalhomeland security.org

JUL 11 - 12
Adv Materials for Defense Summit
Alexandria, VA
Materials.dsigroup.org/

JUL 18 - 19
Multi Intelligence Exploitation Summit
Alexandria, VA
Multi-int.dsigroup.org/

JUL 24 - 25
CBRN Defense Conference and Expo
Wilmington, DE
Ndia.org

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FULL-MISSION AUDITORY ASSURANCE

TEA Headsets, Inc., provider of quality radio ancillaries, is working to redefine communications and advanced hearing protection for the U.S. Department of Defense on the 21st Century battlefield.

By Jeffrey L. Norment, President, TEA Headsets

TEA Headsets has partnered with GN Hearing, Inc. and their new Advanced Hearing Protection Division to provide users with the latest in state-of-the-art communications and hearing protection.

In the past, Soldiers, Sailors, Airmen, and Marines have relied on foam ear plugs for hearing protection, limiting their ability to communicate and successfully perform tactical missions. As a result, they are removing their hearing protection and exposing themselves to high levels of damaging sounds prompting the VA to spend millions of dollars each year in compensation for hearing loss.

Leveraging TEA Headsets' experience in tactical communication systems and GN Hearing's history in hearing solutions, the partnership provides military personnel with the protection they need without hindering their ability to communicate.

They have to be able to maintain clear and concise communications at all times. This helps mitigate friendly fire incidents, collateral damage and greatly enhances mission success. If they have full situational awareness of their surroundings, they are less likely to duff their hearing protection and expose themselves to high levels of damaging sounds in order to function effectively.

FalCom - Advanced Communications

TEA and GN have developed an in-ear advanced communication system, called FalCom, based off three main factors: comfort, clarity, and protection. If the system is comfortable, the user is less likely to not wear his or her hearing protection. Once again, if the incoming audio is clear and concise while maintaining his or her situational awareness and simultaneously protecting their hearing, they are less likely to not wear the system. When Servicemembers deployed during combat operations after 9-11, the only thing available was either foam ear plugs or old analog ear muff style headsets. Since very few outside of SOCOM even had hearing protection or limited access to it, Servicemembers went without hearing protection in order to survive.

The FalCom - Multi-Function Control Unit has a 3-D audio spatial awareness feature which allows incoming audio to be heard from different directions. (TEA Headsets)

This prompted the development of the FalCom system for current, future SOCOM and DoD programs.

Situational Awareness and 3-D Audio

Providing comfort and situational awareness is a critical component of a hearing protection device (HPD). Situational awareness is a complex psychological phenomenon, which consists of several perceptual and cognitive factors. This article discusses some of the tests that were conducted to analyze the performance of HPDs on measures of situational awareness, and tests for hearing protection devices on measures of sound localization. Some differences in fine localization-discrimination and number of large quadrant errors were observed when compared to other systems currently being used by SOCOM and DoD.

Another key feature of the FalCom system is its 3-D (Programmable 4D-Q3) audio spatial awareness feature. This allows the user to hear incoming audio from different directions in the ear buds. Therefore, instead of receiving audio from left-right or both sides the user will be able to hear sounds coming from left rear, right rear or the front. This greatly enhances the user's ability to easily distinguish a higher priority channel over a lower priority channel.

Pinpointing Sound Origins

We conducted several localization tests at the University of Minnesota, comparing our product against those currently offered according to publicly listed specifications. With BAS representing natural hearing, CAR representing the basic foam ear plug, and FalCom representing the TEA/GN In-the-Ear (ITE) headset.

The TEA/GN ITE device was able to consistently localize sounds at approximately 17 degrees. This allows the user to more accurately localize and determine the direction the sound comes from. This is one of the key attributes that has been specifically requested in a recently released RFI from SOCOM. The TEA/GN ITE device scored significantly higher in tests, three times better in localization and five times better in Very Large Errors (VLE) tests compared with systems currently used by SOCOM and DoD (when compared to the normal ear). This will give users an unparalleled ability to accurately detect where the threat is coming from while at the same time provide state-of-the-art hearing protection with a certified industry-leading noise reduction rating (NRR) of 31 dB. This allows the wearer to stay in a high noise environment for a longer period of time without sustaining hearing damage.

Plug and Play Beyond Today

Together, all these features combine to make the new FalCom an easy to use, "Plug and Play" system providing unmatched comfort, situational awareness, and hearing protection. On today's asymmetric battlefield, the old adage, shoot-move-and communicate is more important than ever. The ability to hear clear and concise radio communications is critical therefore industry-leading hearing protection is a force multiplier greatly enhancing the potential for mission success and more importantly increasing the protection of our greatest asset, those who serve the nation.

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www.tacticaldefensemedia.com | scan the code to sign up now!

FalCom

FULL MISSION

COMFORT | CLARITY | PROTECTION

The FalCom is one of the easiest and most advanced headset/PTT systems to use. Simply connect the system to a radio and it's ready to go. The FalCom utilizes modular radio/device interface cables that allow the user to interface with the newest radios, legacy radios, ICS systems for ground, fixed/rotary wing aircraft and maritime platforms.

- 30% smaller than current In-The-Ear headsets and ergonomically designed for maximum comfort over long periods
- Malleable ear hanger allows for customized individual fit to secure the ear piece
- Unmatched audio clarity and situational awareness gives the user a natural hearing experience
- Advanced 3D special audio technology allows the user to receive multiple channels from perceived different directions
- Certified industry leading hearing protection (31NRR)
- Situational protection by isolating only audio bands experiencing high noise levels

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