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ARMY AVIATION COMMUNITY NEWS

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On The Cover

PAID ADVERTISEMENT: ON THE COVER: Gray Eagle Extended Range (GE-ER) from General Atomics is the unmanned solution for Multi-domain Operations today and into the future. It delivers 40+ hours of endurance and modular architecture to integrate advanced payloads. GE-ER provides the warfighter persistent and reliable mission support. *Caption provided by the advertiser.*

Briefings ▶ *Late Breaking News - Announcements*

POTUS Welcomes New CJCS

U.S. ARMY PHOTO BY SGT. JAMES E. HARVEY

An Armed Forces Welcome Ceremony in honor of the 20th Chairman of the Joint Chiefs of Staff, U.S. Army GEN Mark A. Milley, was held at Joint Base Myer-Henderson Hall, Arlington, VA, Sept. 30, 2019. The ceremony was hosted by President Donald J. Trump and included remarks by Vice President Michael Pence and Secretary of Defense Mark T. Esper. Milley, the former Army chief of staff, replaces U.S. Marine Corps GEN Joseph F. Dunford who retired after 42 years of service and four years in the job.

McCarthy Sworn In As SECARMY

U.S. ARMY PHOTO BY SGT DANA CLARKE

Secretary of Defense, Hon. Mark T. Esper (right), hosted a Swearing In Ceremony in honor of Secretary of the Army, Hon. Ryan D. McCarthy, on the steps of the Pentagon in Arlington, VA, Oct. 10, 2019. The former captain in the 75th Ranger Regiment with a combat deployment to Afghanistan, he took the oath of office with his wife and daughter by his side to become the 24th secretary. He had served three times as acting secretary since August 2017.

PEO Aviation Assigned to USF-A

U.S. ARMY PHOTO

The chief of staff of the Army announced on Oct. 25 the assignment of MG Thomas H. Todd III, program executive officer, aviation, Redstone Arsenal, Alabama, to deputy commander, Combined Security Transition Command-Afghanistan, United States Forces-Afghanistan, Operation Freedom's Sentinel, Afghanistan at a date to be announced. No replacement had been announced at press time.

NCMAS Wants Your Input

U.S. ARMY CAB, 1ST INF. DIV. COURTESY PHOTO

A team of retired generals and other top military aviation experts is traveling to aviation units throughout the Army, Air Force, Navy and Marine Corps, as well as their Reserve and National Guard components around the world to help the Defense Department solve issues with aircraft and aircrew readiness. "We're going to write the report for Congress, for the services, and write it with an eye toward making it useful on the flight line – so somebody will read it," said chairman retired Army GEN Dick Cody, a former vice chief of staff, career helicopter pilot and aviation maintenance officer. The feedback they collect from pilots and maintainers will be compared with information from the services on their Class A, B and C mishaps. Service members can anonymously submit their own tips on the commission's website - *http://www.militaryaviationsafety.gov/contact/contact.html.* The final report is due in December 2020.

CORRECTIONS:

On page 6 of the August/September 2019 issue, LTG Laura Richardson is the first female Acting FORSCOM commander; and MG (Ret.) Jessica Wright is the Army's first female aviation combat arms general officer.

National Award Nominations Open
See Page 65 for more details.

Valor power

Photo Credit: Bell ©2019

Rolls-Royce has been the industry leader in powered vertical lift for more than 60 years and we are excited to collaborate with Bell on the next-gen V-280 Valor aircraft - the most affordable and sustainable solution. The collaboration will focus on the integration of our proven low-risk and advanced propulsion systems into future Bell aircraft. We will offer technical expertise in propulsion systems to provide the US Army with tested, high-performance solutions. This collaboration extends a successful, decades-long relationship between Bell and Rolls-Royce.

Throttle Full Open!

AAA PHOTO BY BILL HARRIS

October was a busy month for us at AAAA, as we held our semiannual National Executive Board meeting on Sunday, 13 October, followed by an AAAA Past President's reception.

AAAA National President MG (Ret.) Jeff Schloesser welcomes members of the Army Aviation Congressional Caucus and Army Aviation senior leaders to the Congressional Caucus breakfast at the Rayburn House Office Building, Washington, DC, October 17, 2019.

At the board meeting we featured for the first time a conference call-in capability, and we received very positive feedback from board members who were unable to attend the meeting in person but did so virtually. This also marked the first meeting attended by new board member, Active duty Sergeant Ashley Sanchez, who provided us a great perspective as a junior noncommissioned officer in Army Aviation. We will be seeking a few other active duty board members to represent our junior warrant officer and junior officer members as well.

Later that same week we hosted the Army Aviation Caucus on Capitol Hill, chaired by Congresswoman Rosa De Lauro, Congressman Mo Brooks, and Congresswoman Martha Robey. They had a superb and detailed exchange with Army Aviation senior leaders, with Branch Chief MG Dave Francis shaping the discussion.

That evening General Francis and the Aviation Six-pack joined our AAAA National Executive Group for dinner with AAAA Senior Executive Associates, a distinguished ten member group of retired four and three star generals, hosted by Chairman General Scott Wallace and me. All in all, it was a very productive series of engagements during that busy AUSA week.

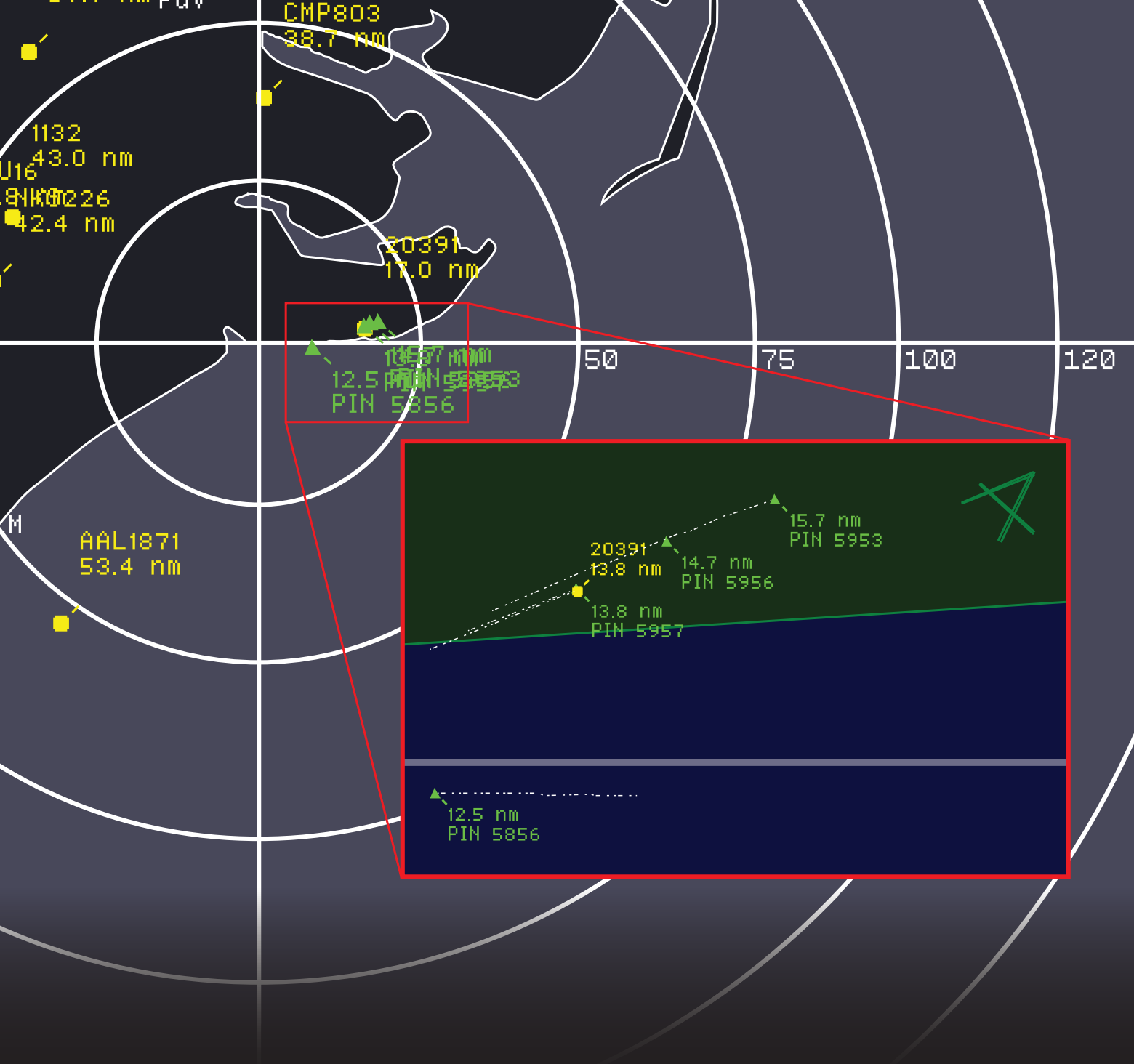
We look forward this month to our Aircraft Survivability Equipment Symposium followed by our Cribbins Aviation Product Support Symposium, 18-21 November in Huntsville, Alabama.

In this issue of Army Aviation, MG Francis speaks to the importance of ASE in preparing for MDO Large Scale Combat Operations, as well as highlighting the essential support provided by Army Aviation UAS and Air Traffic Control soldiers and their capabilities. Deeper inside the magazine are great updates from associated project managers for UAS and ATC, as well as an update from PM Fixed Wing. If you want to be current with what's happening in the broader Army Aviation enterprise, read this issue cover to cover!

Finally, our Hall of Fame nominating committee under the leadership of CW5 (Ret.) Randy Jones has completed this cycle of voting among our chapter presidents and National Board members. Our next group of Hall of Fame inductees will be announced later in the month so pay attention to your emails from AAAA!

As always, it's an honor to serve as your AAAA President. Keep sending me those cards and letters on how we can improve!

MG Jeff Schloesser, U.S. Army Retired
34th President, AAAA
jeff.schloesser@quad-a.org



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Army Aviation – Survivable & Decisive

By MG David J. Francis

U.S. ARMY PHOTO BY SGT THOMAS MOIR

There is a reason the Army has selected six priority systems as the centerpiece of the Army modernization strategy.

An AH-64 Apache attack helicopter with the 1st Squadron, 6th Cavalry Regiment, 1st Combat Aviation Brigade, 1st Infantry Division hovers just over the tree line to mask itself against ground observation, as part of the culminating force on force exercise of Combined Resolve XII at the Joint Multinational Readiness Center in Hohenfels, Germany Aug. 22, 2019. Combined Resolve is a biannual U.S. Army Europe and 7th Army Training Command-led exercise intended to evaluate and certify the readiness and interoperability of U.S .forces mobilized to Europe in support of Atlantic Resolve.

Each of these systems provides specific capabilities that when employed as a single combined arms capability is what we need to retain overmatch.

In the same way, each of these systems has to bring together its own intrinsic capabilities that combine to facilitate its survival on an ever more complex and technical battlefield.

As a consequence of Army Aviation's range, maneuverability, lethality, and the decisive results this combination historically delivers, we also present a complex problem to the enemy. They in turn continuously search for ways to neutralize the threat of our aircraft systems. This adversarial to-and-fro has gone on since Army Aviation's introduction to the battlefield.

A comprehensive understanding of our enemy's actual capabilities has always driven innovative experimentation and approaches to countering the threat, approaches that are modeled, further developed in simulation and prototyped for further testing. This process has driven the creation of some of the most effective aircraft survivability equipment (ASE) in the world.

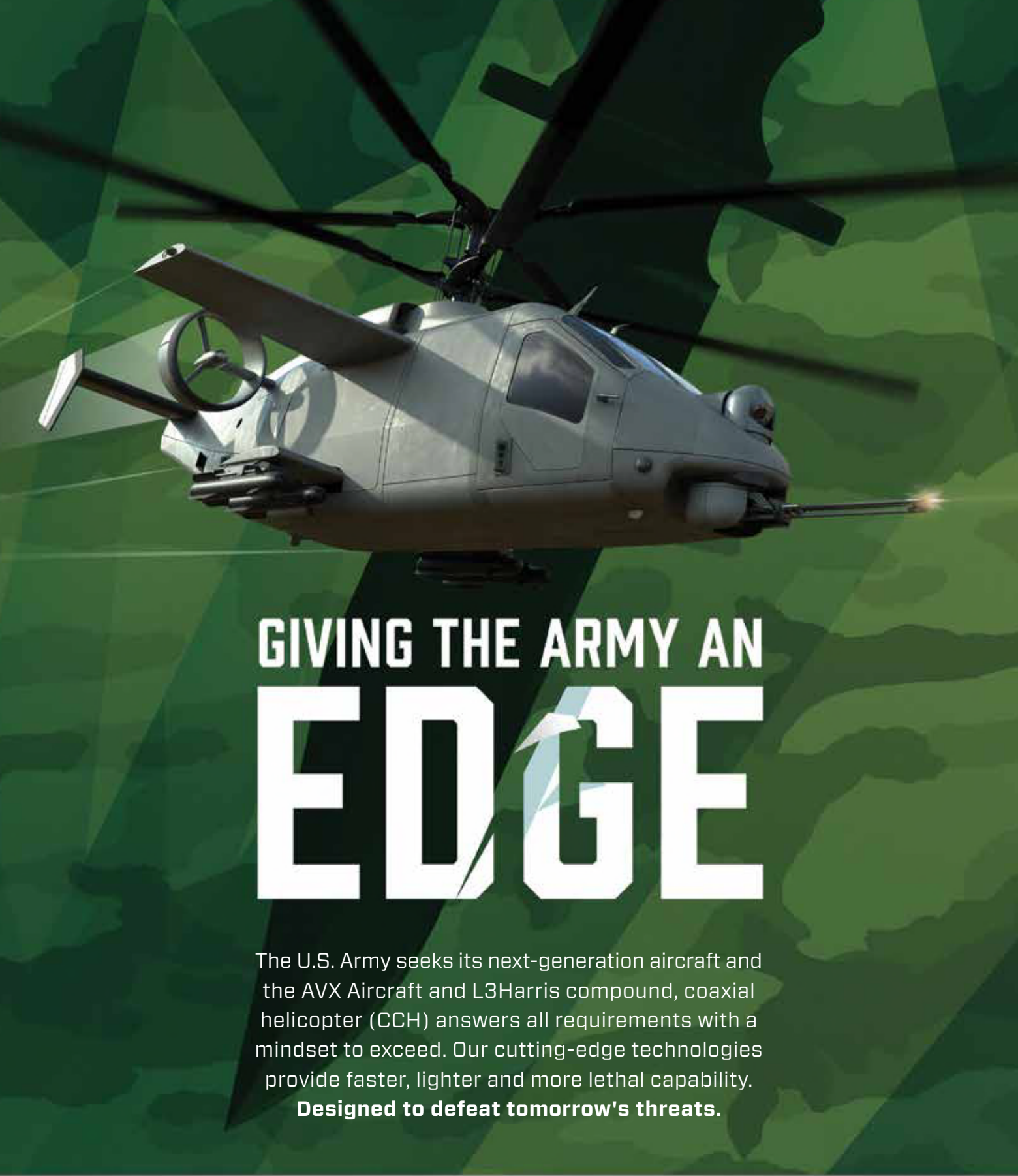
Threat detection and countermeasures are a critical part of aircraft survivability, but just as critical are the development and training of validated tactics, techniques and procedures (TTP) to employ these ASE systems. This is an enduring process that is conducted and shared to stakeholders across the Joint Force.

The most important aspect of this system is, and always has been, leadership. The decisive results that come from aviation have always been a result of leaders that understand their aircraft, understand their enemy, and thoroughly plan, rehearse and train to win.

Combine all aspects of survivability, the right equipment, realistic training, and sound leadership, and you have created the ability for Army Aviation to be decisive as part of the combined arms team, and ensure we maintain our competitive advantage in the next 'first battle.'

Above the Best!

MG David J. Francis is the Army Aviation branch chief and commander of the U.S. Army Aviation Center of Excellence and Fort Rucker, AL.



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Chief Warrant Officer of the Branch Update

As part of this month's magazine focus on unmanned aircraft systems, I asked our most senior 150U Unmanned Aircraft Systems expert, CW5 Frank Volpe to give his perspective from his DAMO-AV vantage point. In the article below, Frank reflects on the history of UAS and how we will fight in Large Scale Combat Operations in the future to penetrate, dis-integrate, and exploit the enemy. Above the Best! -CW5 Koziol

Evolving UAS Integration
Past, Present and Future

By CW5 Frank Volpe

AAPI VISUAL BY ANNE EWING

Prior to 9/11, the Army only had corps-level Hunter UAS. These ~two dozen aircraft were equipped with basic electro optical/ infra-red (EO/IR) capability and operated well above the coordinating altitude in restricted/ combat airspace with little to no impact on rotary wing Aviation.

Fast forward to today; UAS has grown to well over 8,000 aircraft of varying sizes comprised of both programs of record (PORs) and non-standard commercial off the shelf (COTS) systems. These UAS support maneuver units from 100ft Above Highest Obstacle (AHO) to 25,000 ft. MSL in both the National Airspace (NAS) and in combat. The bulk of this increase are small unmanned aircraft systems (sUAS) of < 55lbs., which over the next five years will swell to over 20,000 aircraft when the Army fields the new sUAS Short Range Reconnaissance (SRR), Long Range Reconnaissance (PUMA replacement) and over 10,000 Soldier Borne Sensors (SBS).

Deconflicting and Integrating

During the last 18 years of the COIN fight, we achieved effective UAS integration by de-conflicting manned / unmanned aircraft via vertical separation (altitude) and the use of Restricted Operating Zones (ROZs) for separation in time. This was an adequate process while operating from a fixed base configuration. Soldiers learned to activate pre-coordinated ROZs for sUAS below the coordinating altitude and used kill boxes and keypads above the coordinating altitude for larger UASs. These current procedures may not be adequate for airspace deconfliction in more complex Multi Domain Operations (MDO) with discussions ongoing in several airspace working groups. The challenges of enemy Integrated Air Defense Systems (IADS), enemy UAS, the exponential growth of DoD sUAS, and the introduction of Air Launched Effects (ALE) coupled with manned RW aviation pushing down to lower altitudes for survivability will strain an already congested airspace. In addition to the increased complexity of manned/unmanned systems operating in closer proximity, the electromagnetic environmental effects on Army communications, navigation, and targeting systems will further contribute to these synchronization challenges. How we com-

mand and fight Army Aviation operations in Large Scale Combat Operations (LSCO) is more than just avoiding running into each other. It's about achieving the simultaneity of operations that allows us to fly and fight while defeating adversary threat UAS / counter-UAS and manned aviation.

Setting Conditions

For example, during the competition phase, the Army must actively engage across domains (including space and cyberspace), in the electromagnetic spectrum (EMS), and in the information environment to set the conditions that enable the Joint Force's rapid transition to armed conflict. Our large UAS are uniquely suited for this competition; they can deploy all over the world without risk to the Soldier or need for dedicated large boots on the ground presence. They are optimized for long endurance and provide a persistent presence. They are cost efficient; even our most advanced UAS costs are modest when compared to larger turbine powered aircraft. Modernization efforts will continue to build on these capabilities improving unmanned systems / sensors with greater range (standoff), flight in the national/international airspace with reduced ground footprint that enables tactical /strategic movement, all while improving their survivability.

Having set the conditions during the competition phase, the Army must be able to penetrate, dis-integrate, and exploit the enemy. During the penetration phase, UAS will leverage the deep sensing / penetration payloads, which provide targeting data, and generate multiple dilemmas with the use of air launched effects (ALE) that include both lethal and non-lethal systems. Having exploited the vulnerabilities of enemy IADS, UAS and ALE coupled with Long Range Precision Fires (LRPF) and manned platforms are optimized to dis-integrate (destroy) the enemy's stand-off capabilities, prevent the re-integration of remaining capabilities, and enable freedom of maneuver. Army forces at echelon employ cross-domain fires to defeat the enemy's long-range systems and begin the neutralization of the enemy mid-range systems. Convergence optimizes the employment of capabilities across all domains, to stimulate, see, and strike the enemy. This allows the Joint Force continued exploitation and destruction of enemy IADS to ultimately achieve campaign objectives. This complex environment presents never experienced challenges to the joint force to deconflict both ground and air, manned and unmanned assets in an ever-changing environment. As we have in the past, the military will remain agile and adaptive adjusting to these challenges with additional training, systems and automation.

Now more than in any point in our over 30+ year history, the future of Army Aviation includes unmanned systems. Army forces and partners will employ layered UAS, both organic and joint, to develop an understanding of the enemy's attack and their capabilities. The proliferation of UAS on the modern battlefield, coupled with improved man-machine interfaces and advanced teaming requires the Army to attract, train, retain, and employ leaders and Soldiers who collectively possess a significant breadth and depth of technical and professional expertise. Army aviation is more lethal, effective and committed today than ever in support of the ground commander, and we will only become more lethal.

CW5 Jonathan P. Koziol is the chief warrant officer of the Aviation Branch with the U.S. Army Aviation Center of Excellence, Fort Rucker, AL; CW5 Frank G. Volpe Jr., is the unmanned aircraft systems officer in the HQDA DCS G-3/5/7 (DAMO-AV).

UAS Warriors

By CSM Brian N. Hauke

I hope this finds everyone having had a phenomenal summer with some well-deserved time off. If you were able to get away and work on that balance I discussed a couple issues ago, congratulations. If not, please take some time for yourself over the rapidly approaching holidays.

PERSONAL PHOTO PROVIDED BY CSM HAUKE

The Aviation Branch Command Sergeant Major, CSM Brian Hauke (right) and The Aviation Branch Training Sergeant Major, SGM Lloyd Ankrum (second from right) having lunch at Fort Huachuca with 15W and 15E students.

Retroactive Award of Army Aviation Badge Update

First, I wanted to thank SGM (Ret.) James Minor who served over 29 years in Army Aviation across four different MOSs 93H, 93J, 93C, and 93P with multiple combat tours for initially contacting both AAAA and the Branch asking for clarification on the awarding of the Aviation Badge. Likewise, I also wanted to thank MSG Daniel Baeza from OPFD (Organization and Personnel Force Design) Directorate for the insight on the badge in that article. However, as SGM (Ret.) Minor pointed out there is more to the process, and we want to ensure everyone has all the details involved in not only obtaining the basic badge but also for obtaining the Senior or Master badges.

In the previous issue, we shared how an individual goes about retroactively seeking award of the Basic Aviation Badge. However, we neglected to list one step in the process of meeting the requirements for the Senior or Master badges. That step is as follows: you are required to receive an endorsement from USAACE OPFD at Ft. Rucker in order for the Human Resources Command (HRC) to approve the Senior or Master badges. Go to - *https://www.rucker.army.mil/usaace/directorates/cdid/opfd/enlisted/badges/* I hope this further clarifies the process of obtaining the badges as we want to recognize all the outstanding contributions to our branch past, present and future!

Now for this month's topic...

If you were not already tracking, unmanned aircraft systems (UAS) will be the way of the future. UAS will continue to grow within our branch well into the next century. Whether it's in the form of dropping long range precision munitions on our enemies or delivering pizzas and Amazon packages, UAS will forever be a part of our lives and a part of Army Aviation. I reinforce this fact with our UAS warriors as it is critical we stress just how large an impact UAS will have on the current and future battlefields.

At the beginning of FY19, personnel numbers in our UAS community were bleak, especially in our operator numbers. We started the fiscal year at 56% within the staff sergeant population, which is critical because our senior instructor and standardization operators come from this population of NCOs. But, due to the deliberate efforts across the Aviation Enterprise to identify the root problems, analyze courses of action, and recommend solutions, the staff sergeant operator population is on the path to recovery. At the end of FY19, our staff sergeant personnel strength stands at 92%. This has also had a significant impact on the increase in instructor operators on hand.

The Branch implemented two specific solutions in order to help increase our UAS instructor operator population. First we increased the through-

put of the Instructor Operator (IO) Course. This was done by increasing the number of instructors at the Institution along with the Branch CG approving the IO Course to be taught at the Special Operations Aviation Training Battalion (SOATB). Second, a selective retention bonus (SRB) targeting the IO ASI - U7 was implemented. Year to date, we have contracted for 27 of the U7 bonuses. Bottom line, the staff sergeants are getting it done!

Lastly, I would like to share a couple personal observations from my recent trip to the Institutional Training Base at Fort Huachuca, AZ. I was able to spend some time having lunch and interacting with some students, both operators and maintainers at various stages of training. Rest assured these young men and women are ready, hungry and excited to be serving! Every time I engage our young Soldiers, I am amazed at their level of commitment and dedication. I'd also like to highlight our trainers at Fort Huachuca. If it were not for these professionals, our young Soldiers wouldn't be ready. Our staff sergeants, sergeants, DA Civilians and contractor professionals are selflessly serving as they coach, teach and mentor our next generation of UAS Soldiers. The entire team at 2nd Battalion, 13th Aviation Regiment can truly be proud of the UAS warriors they are building for our Army!

Thanks for the dedication to our Branch, Army and Nation!

Above the Best!

CSM Hauke

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CSM Brian N. Hauke is the command sergeant major of the Aviation Branch and the U.S. Army Aviation Center of Excellence, Fort Rucker, AL.

Enlisted Aviation Soldier Spotlight

Each month we will feature a past AAAA National or Functional Enlisted or NCO Award winner as part of our ongoing recognition of the Best of the Best in our Aviation Branch. The CY 2019 National winners were featured in the April/May AAAA Annual Summit issue.

SGT Sergio Roman II

Company E, 3rd Aviation Regiment
Hunter Army Airfield, Georgia

AAPI FILE PHOTO

Unmanned Aircraft System Soldier of the Year Award, 2014

Sponsored by General Atomics Aeronautical Systems, Inc.

From July 15, 2013 through July 31, 2014, SGT Sergio Roman II, Echo Company, 3rd Aviation Regiment demonstrated exceptional professionalism and expertise as the unit Master Gunner and Instructor Operator. SGT Roman was primarily responsible for developing the unmanned aircraft systems (UAS) gunnery training and qualification program for the 3rd Combat Aviation Brigade (CAB); he established procedures for the first UAS Laser Training Area with Fort Stewart Range Control benefiting all UAS platforms within the 3rd Infantry Division and the local National Guard RQ-7B Shadow Platoon; and finally, he conducted the first Gray Eagle Table VI Gunnery Qualification at Fort Stewart, GA. As the unit master gunner and instructor operator SGT Roman facilitated Echo Company's accrual of over 2,000 accident free flight hours in support of International Security Assistance Force (ISAF) ground force commanders, over 500 combat and training sorties, and completed successful engagements of two autonomous Hellfire missile strikes within the first two months of the current deployment to Afghanistan; one of which severely disrupted the indirect fire threat in an entire province.

The Future Ecosystem of Army Aviation

By MG David J. Francis

U.S. ARMY PHOTO BY SGT. JORDAN TRENT

SPC Fernando Marzan, a 15E UAS Maintainer with Det. 1, D Co., 177 BEB, 48th Infantry Brigade Combat Team conducts preflight inspections on the RQ-7B Shadow UAS in eastern Afghanistan, April 16, 2019.

As we continue to chart our transition from a prolonged Counter Insurgency fight to address the complexities of Large Scale Combat Operations (LSCO) and move towards Multi Domain Operations (MDO), we look at the ecosystem we operate in today and contrast it with the ecosystem we expect in 2028 and 2035.

Two of the elements from Army Aviation that will populate this ecosystem are our Air Traffic Services (ATS) and our Unmanned Aircraft Systems (UAS).

On the UAS side of the house, specifically the RQ-7B Shadow, we are currently working with our combined arms team partners – the brigade combat teams (BCTs) – to define the capabilities they will need a UAS to provide them in the 2028 through 2035 timeframe. At a minimum, we know it needs to be purpose-built for multi-domain lethal and non-lethal fires environments, able to detect, acquire, identify, and prioritize targets in order to suppress, neutralize, and destroy enemy forces. Our approach for developing a viable, more comprehensive body of knowledge on what else is needed, begins this fiscal year and consists of taking several different off the shelf systems and placing them with multiple BCTs for long-term evaluation in as many different environments as possible.

After an in-depth train up with these off the shelf systems, including the time needed to develop Tactics, Techniques, and Procedures (TTP), the BCTs will employ and evaluate how well they perform their mission. Even more importantly, they will also determine what else they need the UAS to do for them in order to execute their mission in the future ecosystem. As the brigades conduct operations and provide feedback, we expect to be able to build a pretty clear understanding of the capabilities that we will need to replace the BCT Shadow.

We are also looking closely at the capabilities our ATS units will need. Based on modeling of how we will have to fight in an austere LSCO, we conducted multiple, realistic tabletop exercises (TTXs). Each one depicted a peer adversary conducting LSCO against a U.S. Theater force structure comprised of a U.S. Corps HQs, with three subordinate divisions, with each division supported by a combat aviation brigade, all of which were conducting expeditionary operations.

This gave us the ability to validate our fielded force doctrine straight out of FM 3-04 regarding ATS and Mission Command support at the strategic, operational and tactical level. We were also able to look at several different alternatives of employing our ATS Soldiers and their equipment to facilitate coverage for an array of missions across a battlespace that include jump and silent forward area refueling points (FARPs) and command posts (CPs) during offensive and defensive operations.

The hands-on development of defining capabilities and the employment of TTXs for the validation of doctrine are just two of the many tools we will continue to use as we define and establish waypoints from today's force to the ecosystems of 2028 and 2035 in order to fight and win in Large Scale Combat Operations.

Above the Best!

MG David J. Francis is the Army Aviation branch chief and commander of the U.S. Army Aviation Center of Excellence and Fort Rucker, AL.

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FY19 Year in Review – How Army Aviation Performed

By COL Jason L. Miller

As we close out Aviation Operations in FY19, I come to you with both good and bad news. First, the good.

Army National Guard UH-60 Black Hawk crew prepares for a flight to support the Innovative Readiness Team (IRT) Newtok to Mertarvik mission June 24, 2019, at Bethel, AK.

Army Aviation is in its safest five-year period in history. In FY19, Army Aviation mishaps, Class A-C, continued a downward trend with an almost 40% reduction over FY18. Class A-C flight mishaps (58), as well as rates (5.54 per 100,000 flying hours), are the lowest in the past 10 years. The bad news is that despite the overall downward trend in total mishaps, Class A mishaps increased by one from FY18, and four over the post 9-11 low of eight in FY16, for a total of 12 Class A flight and flight-related mishaps. Army wide emphasis on ground taxi mishaps helped reduce those preventable mishaps from four Class As in FY18 to zero in FY19. So, well done. Finally, the number of Soldier fatalities in Aviation mishaps decreased from six in FY18 to two, the lowest total on record.

The 12 FY19 Class A mishaps do not show any discernable trend. They cross six different airframes and run the gamut of human error to materiel factors. Two mishaps were passengers exiting or falling from an aircraft during an approach or a go-around. Four were attributable to materiel failures during training and mission execution. That leaves a total of six flight mishaps attributable to human error. The known human errors account for six of the 10 Class A mishaps where aircraft were damaged or crew injured, lower than the historic norm of 80%. These six also show no specific trends. They include a tail rotor strike to terrain, a tree strike, a gear up landing, a dust landing rollover, a power management failure, and a wire strike. They also span four continents and many different units.

Of concern is that five of the 12 Class A mishaps occurred in the fourth quarter of the fiscal year. A quick review of historical statistics indicates this phenomena has been present in four of the last five years. In fact, 45% of all aviation mishaps over the last five years have occurred in the fourth quarter of the FY, while only 27% of our flying hours were flown in those quarters. We are beginning a study to determine why this tendency is there, so look for more in future articles.

The Aviation enterprise working together has encouraged the historical improvements in Aviation safety. The Combat Readiness Center presents Aviation mishap prevention products at all Aviation pre-command courses; "Near-Miss Briefings" have been executed at all 12 active CABs, three National Guard CABs, and two CTCs within the past two years; mishap summaries are posted to CALL and USACRC website; and online publications and exportable briefs are available to the force. The USACRC is preparing to reach out with an updated "Near-Miss Brief" to all brigades and prioritize briefings and engagements to units preparing to deploy. The USACRC annually works with USAACE to improve and update the Air Crew Training program and to address mishap recommendations. AMCOM supports the USACRC investigation teams and works diligently to address materiel issues. You, the aviators in the field, are the final defense in our loss prevention mission. We truly appreciate what the TEAM is doing to ensure the success of the force!

Readiness Through Safety!

COL Jason Miller is the deputy commander of the Combat Readiness Center at Fort Rucker, AL.

Theater Aviation Sustainment Maintenance Group (TASMG) – Sustaining Army Aviation

By COL Joseph Bishop

Today's Army National Guard (ARNG) TASMG organizations have a distinguished lineage dating back to the Transportation Aircraft Repair Shop (TARS) organizations.

MSG Brandon Creel (right) Aircraft Maintenance Supervisor, and SGT Kevin Cooke (left) Sheet Metal Mechanic, Federal Military Technicians with Company A, 1108th TASMG, MSARNG move the aft section of a CH47F away from the airframe following an aircraft de-splice procedure.

The TARS, during the 1970s, provided geographic regional intermediate level and limited depot level maintenance support to ARNG Army Aviation Support Facilities (AASF). In 1979 the TARS organizations converted to the Aviation Classification Repair Activity Depot (AVCRAD) organizational design and an element of the Aviation Roundout program. The AVCRADs emerged as a key component to the Army's Aviation depot level capacity and a component of the Army Materiel Command upon mobilization. AVCRADs assumed a dual mission; to provide regional intermediate level maintenance support and limited depot level support to units stationed at ARNG AASFs, and as in Operation Desert Storm, mobilize to support the Army.

In 2008 the Army began laying the groundwork to convert the AVCRADs into TASMGs and convert the single Aviation Depot Maintenance Roundout Unit (ADMRU) to a TASMG Headquarters. Unlike the TARS, AVCRADs and the ADMRU, which were tables of distribution and allowances (TDA), the TASMGs would become modified table of organization and equipment (MTOE) organizations. The MTOE design was a paradigm shift for the ARNG but would ensure the TASMGs possess the intrinsic war fighting functionality needed to conduct the deployable Army mission.

Location and Mission

The ARNG, as planned in 2009, organized TASMG Headquarters in California, Connecticut, Maryland, Mississippi and Missouri. Four of the five TASMGs are aptly configured to perform the MTOE mission and the fifth TASMG possesses the command and control functionality only, but can be task organized as needed to accomplish all TASMG MTOE functions. The TASMGs also have

a coexisting augmentation TDA for special tools and equipment, which further enables the AASF mission support.

The TASMGs, since inception and following the AVCRAD legacy when deployed, provide to a theater of operations fixed base dedicated theater Aviation sustainment / depot capability support to the combat Commander. The TASMG full-time TDA workforce provides vital regional support to the unit aircraft stationed at ARNG AASFs, provides ongoing maintenance repair programs for Aviation Missile Command and conducts aircraft and component repair for Army Aviation.

The ARNG utilizes the TASMGs and full-time personnel to apply a holistic approach to Aviation sustainment and maintenance for the 54 States, Territories and District and the respective 97 AASFs. The NGB Staff annually promulgates strategic mission guidance part and parcel to the ARNG's holistic approach to Aviation sustainment and maintenance. The strategic guidance includes budget execution, lines of effort and objectives intended to produce positive mission capable aircraft readiness rates. The ARNG's ability to consistently sustain a high rate of successful Aviation unit deployments is a testament to the role and impact of the TASMGs.

Initiatives

A few recent and future initiatives aim to improve TASMG capabilities and mission success. The first initiative was a Manpower Study of the TASMGs. The study purpose was to update the current manpower model and ensure the minimum essential full-time manpower requirements exist. Results are beginning to emerge with anticipation of positive adjustments in future full-time support staffing models. The second initiative was a reassessment of the TASMG regions of responsibility. Minor changes in regional areas of responsibility across the four TASMG regions and aligning one Attack Reconnaissance Battalion to each of the four TASMG regions. The third initiative will seek to update and accurately capture the TASMG MTOE doctrinal mission essential tasks and unit design needs supportive of future Army Aviation changes. The final initiative involves placing a UH-72A maintenance capability within the TASMG MTOE structure (targeting FY 2022) thus adding another mission, design, series platform to the TASMG support portfolio.

The TASMGs are essential to sustaining and maintaining Army aircraft. The pre / post mobilization mission the TASMGs perform results in increased total Army Aviation readiness. As Army Aviation looks forward to 2020 and beyond, the TASMGs are well ingrained to adapt and continue to meet Army Aviation needs of the future.

COL Joseph Bishop is the chief of the Army National Guard Aviation and Safety Division located in Arlington, VA.

Making the Aviation War Fighters More Lethal and Ready to Win our Nation's Wars

By MAJ Zachary F. De Groot and MSG Mark A. McKain

The 128th Aviation Brigade produces quality Aviation Maintainers for the operational force. The Brigade sets high standards for every member of its ranks because it is shaping the future of Army Aviation through the training of every Initial Entry Training (IET) Aviation Maintainer student.

Aviation maintainers require proficiency in their military occupational skill (MOS)-specific tasks and must be fully prepared to endure the rigor of the increasingly lethal and expanded battlefield in Multi-Domain Operations (MDO).

On February 14th, 2019, the Army Training and Doctrine Command (TRADOC) Commander GEN Stephen Townsend passed his intent to increase the already high quality of Soldiers in the U.S. Army by continuing the acculturation process that is initiated in Basic Combat Training – more commonly known as increasing "rigor" in advanced individual training (AIT). This process consists of five focus areas; Shoot, Move, Communicate, Survive, and Discipline and Warrior Spirit. Through guidance given from the United States Army Aviation Center of Excellence (USAACE) the 128th AB established working groups to develop its strategy to meet the TRADOC CG's intent. 1-222d Aviation Battalion, the 128th's IET unit that the Army's premier trainers, Drill Sergeants are assigned took lead on the implementation of the Brigade's strategy. During this initial planning phase, the Drill Sergeants identified training that was currently conducted and expanded its scope to encompass many of the requirements defined by USAACE.

Initial guidance specified that the increase in Rigor must include a culminating 72 hour field training exercise (FTX) with a focus on a realistic and rigorous Decisive Action Training Environment (DATE) driven scenarios that certifies all Soldiers in their MOS-specific tasks in an austere field environment. The FTX reinforces the skills learned in basic combat training (BCT) and is a graduation requirement.

128th AB began by identifying and verifying the resource requirements to sustain Soldiers in the field training environment. Resource challenges which affected both students and instructors were identified, and courses of action (COAs) were developed to mitigate resource shortages in the areas of an initial issue at Central Issuing Facility (CIF) and organization property. During this phase, the Brigade conducted two one day training events that enabled battalions to refine their respective training lanes and train and certify leaders in the various events.

U.S. ARMY PHOTO BY SPC REBECCA A. CHADWICK, 1-210TH AVN. REGT.

SSG Christopher Maxwell, 1-210th Aviation Regiment, trains AIT Soldiers on the proper method to request medical evacuation.

After completing the FTX development and certification, the Brigade moved to validate the FTX in August 2019. Three 72-hour FTXs were executed to confirm the strategy, concept of operation, and command and control. The FTX is a resource-intensive event which requires the participation of elements from across the 128th AB and the Non-Commissioned Officer Academy-Eustis (NCOA-E). Across the three days of the FTX, battalions are responsible for one of three training sites where the Soldiers are exposed to the following events: 1. Land Navigation/Ethical Decision Making, 2. Communication STX/Obstacle Course, and 3. Grenade Assault Course/Engagement Skills Trainer/Downed Aircraft Recovery Team FTX. Additional events to increase rigor in AIT and prepare Trainees for the FTX include weapons immersion, road marches, and combatives.

TRADOC Regulation 350-6 (09 August 2019) requires AIT to conduct no less than a three day and two night (72-hour minimum), culminating FTX in an austere field environment that integrates warrior tasks and battle drills (WTBDs) and MOS tasks in a rigorous, realistic, DATE-driven scenario. The completion of the FTX results in awarding a military occupational skill in the designated field of study.

128th AB's number one priority is to maintain relevance to the operational force by providing disciplined, physically fit, technically proficient Aviation maintenance Soldiers that can contribute to the fight. Aviation maintenance Soldiers will arrive better equipped and ready to deploy, fight, and win our nation's wars.

Born Under Fire!

MAJ Zachary F. De Groot is the 128th Aviation Brigade Operations Officer and MSG Mark A. McKain, the S3 NCOIC at Joint Base Langley-Eustis, VA.

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Innovative Airworthiness Qualification

By Mr. Bill McCandless

Innovation is defined by Merriam-Webster as "the introduction of something new." In business, innovation is seen as evolutionary or revolutionary solutions to meet current or emerging needs. In Acquisition, these "needs" are codified into "requirements".

As Army Modernization drives towards the prioritized solutions of Future Vertical Lift, the Aviation Engineering Directorate (AED), as part of the U.S. Army Combat Capabilities Development Command Aviation & Missile Center (CCDC AvMC) must embrace innovation. Innovation in the sense of a willingness to qualify something new on future platforms, and in transforming our own processes for qualification. The challenge is to meet these demands without compromise to airworthiness.

FVL explicit program requirements (applicable to both FARA and FLRAA) come in many forms, addressing lifecycle costs, aggressive schedules, and performance capabilities. Offerors incorporate innovation to open a constrained design space, taking calculated risks to increase the overall probability of viable solutions. To independently qualify these systems, AED's experts and processes must continue to evolve. Technology advancement has highlighted several areas of growth (not a comprehensive list):

Technology Areas of Interest

- Advanced engine and drive systems
- Highly integrated flight control systems, cueing, and sensors for Degraded Visual Environments
- Autonomy/Optionally-piloted aircraft
- Multi-UAS Control/Teaming
- Cyber resilience
- Optimal human-machine integration
- Decision aiding / Artificial Intelligence
- Aircraft flight loads and vibration for advanced configurations

Some of these areas are evolutions of traditional aerospace disciplines like aeromechanics, propulsion, and structures. Some are a synthesis of disciplines that require an understanding of secondary effects of decisions made in that functional area. Engineering has always been a field where optimization of a particular area leads to compromise in others (e.g. an aircraft designed specifically to perform well in hover will likely under-perform in high speed forward flight.) Any highly integrated system has a myriad of complex dependencies to be understood.

Understanding the engineering complexities of new technologies is only a partial solution. The AED must also focus on process innovation to qualify FVL platforms for airworthiness. This has invited increased collaboration with industry partners who may recommend innovative approaches to airworthiness assessments for advanced technologies.

A comprehensive set of airworthiness requirements has been compiled as the Army Military Airworthiness Certification Criteria (AMACC). AMACC is like the Federal Aviation Regulations and provides a one-stop set of airworthiness requirements, standards, context, and means of compliance to start planning the path to qualification.

To conduct the full qualification, particularly considering schedule demands, requires a significant commitment of resources in the earliest stages of the program. The AED FVL Systems Division has teams of engineers supporting each of the five FARA performers and the FLRAA Project Office. Early engagement provides more time and resources for adjudication. Rigorous system safety processes then classify, mitigate, and accept hazards at the appropriate levels.

In support of the FARA program, unprecedented access to subject matter experts has been made available to help clarify airworthiness requirements. The goal is to work collaboratively with design teams to form the airworthiness substantiation necessary for first flight of prototypes and eventually, the field release.

Emphasis has been placed on leveraging internal company processes to the maximum extent possible. For the FARA, this goes beyond delivering plans and reports in contractor formats and moves the team towards paperless artifacts. Models communicate technical details with very few official deliverables. This sharing of information through modeling is a key tenet of the DoD Digital Engineering construct.

Digital Engineering has driven the application of Model Based Systems Engineering (MBSE). MBSE is being applied to describe and analyze the requirement sets of the new platforms. MBSE reaches further than requirements, housing valuable artifacts, identifying and defining valuable dependencies throughout the system. The AED must be savvy in understanding how to leverage the work being done in these areas to prevent costly inefficiencies.

AED has recognized and appreciates the fundamental conflict between the weighted experience basis of accepted means of qualification and the agility needed to innovate. Conflict is inherently neither good nor bad but serves as catalyst for change. AED is making deliberate strides to collaboratively embrace innovation in support of the successful modernization of Army Aviation.

Mr. Bill McCandless works in the Future Vertical Lift division of the Aviation Engineering Directorate at Redstone Arsenal, AL.

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Back and Neck Pain

By CPT Peter Petrillo, P.A.

Q: My neck and upper back have been bothering me for a while and now I've started to notice pins and needles in my hand. Are these related?

PA: We live in a world that encourages sitting for long periods of time; at desks, in front of computer screens, at staff meetings, cramped cockpits, etc. Such conditions encourage poor postures with head forward, shoulders slumped and hands rotated in. This routine results in tightening of the muscles in the chest and front of the neck and weakens the opposing muscles in the shoulder blades and the back of the neck.

Hand symptoms such as numbness, tingling, "pins and needles" or weakness can have several causes that warrant further medical evaluation. Of all the potential causes, the compression of a nerve or nerves somewhere between the neck and hand is the most common. When this compression occurs at the wrist it is called carpal tunnel syndrome; at the elbow it is called cubital tunnel syndrome. Pilots are at a higher risk for two additional nerve compression concerns: the first is at the neck as nerves exit the cervical spine through relatively narrow boney passages, and second is at a chokepoint within the chest wall where groups of nerves and vessels combine to exit the chest, or thorax, on the way to the arm.

The human head weighs about twelve pounds and your cervical spine is well designed to handle that weight without difficulty, if you balance the load by maintaining an upright posture. For every inch forward of neutral that you carry your head, your neck will feel an additional ten pound increase in strain. The donning of a flight helmet, ALSE equipment, night vision goggles, batteries and counterweights increases that strain significantly. In addition, most aircrew seats are not recessed for the NVG battery pack that promotes a forward head position while in flight. Aircraft vibration can create a vicious cycle of fatigue that worsens posture to create even more fatigue.

These conditions may adversely affect aircrew safety in a few ways. Neck or shoulder pain can be a significant distraction from flight crew duties. Numbness or weakness of a hand can impair the ability to locate and directly operate flight and optic controls or even hamper safe egress.

Degenerative Joint Disease

Flight conditions and postures (along with your genetics) may lead to a wearing down of the cartilage and remodeling of the bone in the cervical spine. Also known as osteoarthritis, these boney changes may narrow the spaces that exist between vertebrae, "pinching" the nerves as they pass through. This can lead to hand numbness, tingling or weakness. The hand symptoms can vary with neck position and are usually associated with neck or shoulder pain. With time, muscles associated with the pinched nerves may lose mass and become noticeably smaller. Military aircrew may be at increased risk of developing degenerative joint disease of the neck as their number of flight hours increases.

Thoracic Outlet Syndrome

Thoracic outlet syndrome is a condition that can cause hand symptoms like those seen in degenerative joint disease. Here, nerves are compressed by bone or muscle as they pass under the collar bone and beneath the chest muscles. Poor posture is the chief cause, but work or sports that involve frequent overhead arm activities may also be involved. As in degenerative joint disease, weakness and noticeable shrinking of the muscles of the hand may occur over time.

What Next?

If you have symptoms of hand numbness, tingling or weakness, with or without neck or shoulder pain, it is important that you see your flight provider right away. Nerve tissue is sensitive to pressure and the sooner you are diagnosed and treated the less likely that any of your symptoms will become permanent. It is often possible to tease out the origin of the problem by the history of symptoms and physical examination alone. However, further exams to include X-ray, MRI and nerve conduction testing may be necessary to confirm the diagnosis.

Physical therapy is the first line of treatment and will include strategic stretching and strengthening of muscles to encourage good posture. In more severe cases, surgery may be indicated to prevent permanent damage or alleviate symptoms. Most surgical procedures are eligible for flight duty waivers and should be discussed with your flight surgeon before you proceed.

How Can I Reduce My Risk?

An ounce of prevention is worth a pound of cure, so pay attention to your posture during your day and while performing flight duties. Have your physical therapist or flight provider show you some stretches and exercises that can help to discourage poor posture. A strong, supple neck and upright posture is your best defense against these conditions. Of course, just like any other physical or mental issues you might experience, you should talk with your flight provider because it is always better (and safer!) to treat earlier in the process.

Fly safe!

Peter M. Petrillo is an aeromedical physician assistant with the Arizona National Guard and a third year medical student at the Arizona College of Osteopathic Medicine.

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PM Unmanned Aircraft Systems –
Delivering Systems in Support of Multi Domain Operations

By COL Scott Anderson

SPC Trever Weber, a U.S. Army paratrooper assigned to the 1st Battalion, 503rd Infantry Regiment, 173rd Airborne Brigade, throws a small unmanned aircraft system (SUAS) Raven into flight prior to expected enemy contact in Hohenfels Training Area, Germany, during Saber Junction 19 (SJ19), Sept. 22, 2019.

In December 2018, Training and Doctrine Command (TRADOC) released TRADOC Pamphlet 525-3-1, "The U.S. Army in Multi-Domain Operations 2028." This document serves as the first step in the doctrinal evolution for future operations of the Army of 2028 across all warfighting domains – air, land, sea, space, and cyber. It provides a foundation for continued discussion, analysis, and development of our warfighting methods to comprehend enabling the joint force on the future battlefield. This evolution of comprehension and understanding will guide organizational change, as well as inform decisions about future operational changes and commitment of resources for Army modernization efforts.

The Multi-Domain Operations (MDO) concept departs from the Army Force 2025 concept, which focused on operating with a much leaner force. The new guidance shifts the emphasis from counter-insurgency operations (COIN) to threats from near peer and great power adversaries. China and Russia have committed immense capital to the development and deployment of widespread Anti Access/Area Denial (A2/AD) systems. Arrayed in layers, these systems create immense standoff ranges to attempt to deny U.S. forces the ability to gather intelligence and to maneuver uncontested as in past conflicts.

Our enemies have and will continue to develop and improve A2/AD systems; including conventional forces, air defenses, long-range fires, disruptions to communications, and denial of navigation timing. To defeat these multiple layers of standoff, we must leverage the joint force across multiple domains. The breadth and depth of these threat effects could render our forces to limited windows of uncontested maneuver.

As a result, the MDO concept envisions Army formations (operating as part of the Joint Force) penetrating and disintegrating enemy A2/AD systems; exploiting the resulting freedom of maneuver to defeat the enemy and achieve our objectives; and consolidat-

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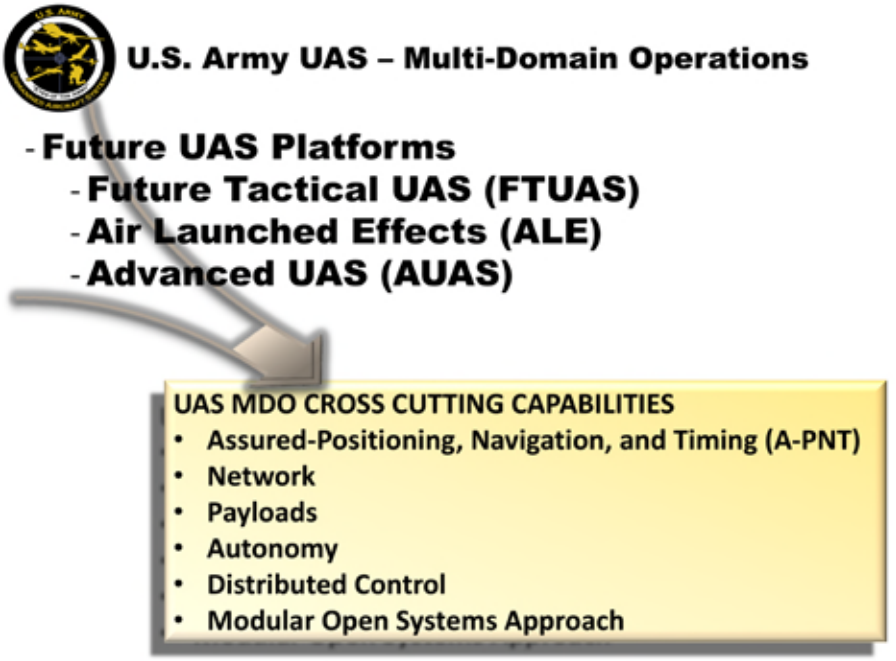

ing gain to return to competition on terms more favorable to the U.S., our allies, and our partners.Unmanned aircraft systems (UAS) are critical to overcoming our enemies' attempt to create standoff, to enabling our ability to penetrate and dis-integrate the enemy's A2/AD systems, and to exploiting the windows of supremacy to maneuver our forces.

Our Mission

Creating an MDO capable force by 2028 requires utilizing all available acquisition initiatives and strategies. We must focus on our core competency – Design, Develop, Deliver. We should challenge existing timelines for requirements development, acquisition, materiel development, and production to initiate and execute capability delivery by 2028.

When envisioning the MDO capable force of 2028, and the MDO ready force of 2035, one of our key responsibilities is to clearly understand and communicate Army priorities to the UAS community and its stakeholders at every critical juncture.

We must maintain our current readiness and support the Soldier, prepared to "fight tonight" with our current platforms. We must bridge gaps and identify key capabilities required in 2028 to enable the MDO capable force, and we must attain overmatch and provide an MDO ready force in 2035.

PM UAS must attain improvements to survivability and address critical capability improvements to reach, protection, and lethality. Essential to the successful delivery of MDO 2028 capability is the implementation of cross-cutting, technology enablers; such as Assured Position, Navigation, and Timing (A-PNT), networks, payloads (sensors / weapons), autonomy, and distributed control. Ultimately, PM UAS will incorporate these technologies, resulting in affordable, producible, reliable, sustainable, and highly integrated platform capabilities.

Simultaneously, we must work across all stakeholders to formulate the UAS Strategy for an MDO ready force of 2035. PM UAS will continue to engage industry about current capabilities while conducting demonstrations to assess those capabilities, while monitoring S&T efforts to capture mature technology insertions. These efforts are essential to informing requirements, developing successful acquisition strategies, and ultimately delivering timely capability to the Soldier.

The fundamental capabilities provided by Army Aviation are reconnaissance and security, air assault and air movement, and attack. These capabilities do not change under MDO but become more complex and more difficult to deliver. Currently, PM UAS fields and supports the reconnaissance, security and attack core Army Aviation capabilities.

In the future, that role could expand into the Aviation capability of air movement. In support of MDO, UAS could serve as the last mile for precision logistics to provide rapid and agile sustainment from strategic support areas to the deep maneuver area, further removing the Soldier from harm's way.

By understanding the current UAS technologies and examining all aspects of our warfighting methods and how those technologies and methods are challenged in the future by near-peer and great power adversaries, the PM UAS team is well-equipped to challenge assumptions and understand how to create the systems required to excel in Multi-Doman Operations. Team UAS will design, develop, deliver and support ready and lethal unmanned systems to ensure America's Army is prepared to succeed in any domain, anytime, anywhere.

COL Scott Anderson is the project manager for Unmanned Aircraft Systems assigned to the Program Executive Office, Aviation at Redstone Arsenal, AL.

Unmanned Aircraft Systems Increase Integration through Simulation and Platform Modernization

By COL Michael E. Demirjian, MAJ Steven R. Cusack, CW4 Brett N. Horner, SSG Jordan M. L'Heureux

On 22 August 2019, the Army's Shadow unmanned aircraft system (UAS) celebrated its 20-year anniversary. In 2018, UAS community transitioned from governance under AR 95-23 to operating under AR 95-1, further aligning the UAS mission, training, weight and balance, and other operational considerations with Aviation. Although the shift in proponent responsibilities is a significant development to unite the UAS with the Aviation community, incorporating UAS into ground and air operations needs continued attention to fully realize UAS intelligence collection and direct fire capabilities. For example, TRADOC Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*, calls out a specific requirement to integrate UAS with the Aviation mission, acknowledging that integration gaps still exist to fully utilize UAS into scheme of maneuver. Feedback from combat training center rotations and unit feedback further confirm these gaps and the opportunities to incorporate UAS to improve the commander's ability to understand the battlespace and mission command. These shortcomings in UAS integration at the tactical level of warfighting indicate that commanders can improve their effectiveness in large scale combat operations by further integrating UAS in training opportunities prior to combat. The UAS community has made significant progress to further integrate its capabilities through improved simulation capabilities, electro-optical sensors and communication systems.

Universal Mission Simulator Integration

Previous simulation software limited UAS training effectiveness with its user community from static training scenarios and primitive graphics that were not realistic. Responding to these simulation limitations, the program executive offices for Aviation and simulation, training, and instrumentation developed the Universal Mission Simulator (UMS), a simulation tool that allows UAS to train with

U.S. ARMY PHOTO BY GERTRUD ZACH

U.S. Army SPC Phillip Villegas with Delta Troop, Regimental Engineer Squadron, 2nd Cavalry Regiment monitors the flight of a RQ-7B Shadow tactical unmanned aircraft system from the ground control station.

various other users on simulation platforms such as the Longbow Crew Trainer (LCT), the Aviation Combined Arms Tactical Trainer (AVCATT), or Virtual Battlespace 3 (VBS3). This improvement to simulation capability created an opportunity for UAS to join different user communities in the simulation system that they use for their training and mission rehearsals.

UAS and their community of interest can now train with increased realism, in real time, away from a combat environment. One example where enhanced simulation will further integrate UAS capabilities to synergize weapon system capabilities is in AH-64 gunnery tables VII, and X.

U.S. ARMY PHOTO BY GERTRUD ZACH

An RQ-7B Shadow tactical unmanned aircraft system launches from a ramp at the Regimental Engineer Squadron, 2nd Cavalry Regiment at Balli UAS Airfield on Rose Barracks, Vilseck, Germany.

In these gunnery tables, crews achieve optimal training by teaming with simulated UAS assets at the team and platoon levels. The simulation capability now allows Apache crews to bring actual UAS operators into the loop, combining what was formerly two separate simulations, and increasing realism and human factors considerations in dynamic engagement scenarios. This gunnery vignette is one of many examples to integrate manned/unmanned team training to ensure team proficiency prior to combat.

The effects of simulator integration create an opportunity for increased training realism with a greater variety of users. UAS can now participate in remote or on-site training scenarios that use VBS3, LCT, or AVCATT, depending on the training audience and required training output. These advances directly address brigade combat team commander requests to integrate UAS into their operations. Although simulation does not

represent a new battlefield capability, it creates an opportunity to maximize resources available for mission command.

Shadow Sensor and Communication Improvements

As part of the enduring fleet, the Army continues to assess the capabilities that Shadow brings to collect information and share in real time and is increasing the capability of the Shadow's sensor through the Block III upgrade. Two major improvements that the UAS operators and their greater community will notice is the improvement to selected system sensors and significant improvements in communications. We anticipate these upgrades will also help inform capability requirements for any future UAS platforms.

The anticipated fielding of Shadow MX-10 sensor improvement and laser designator capability will increase the optical range of the sensor, the quality of the picture, and increase the distance at which a target may be designated by the laser. The program office anticipates fielding 55 of these new sensors to the current fleet of Shadow systems in order to get this capability in the hands of the deployed warfighter as quickly as possible.

UAS users can also expect greater communications capabilities and increased ranges to enhance radio relay capability. The VOIP (voice over internet protocol) capability will change the way the Shadow operates as a communication platform by receiving voice communication through any number of communication mediums including SINCGARS, VHF-AM ATC, SRW, ANW2, ANW2C, UHF-AM, single channel, and UHF-AM frequency hopping. Once the voice communication signals reach the Shadow, they are converted and transmitted over VOIP which significantly increases communication range and reliability. This improvement in communication will increase the number of systems available and will also provide enhanced communication ability over multiple frequency bands in a degraded or jammed environment.

UAS will continue to integrate and operate as an Aviation maneuver asset, embedded in Aviation brigades and brigade combat teams, contributing to mission command in multi-dimensional battlespace. UAS improvements in system hardware, software, and simulation capabilities are critical integration efforts for UAS assets into the Aviation warfighting scheme of maneuver. While UAS has been available for decades, the UAS community of interest is now able to train dynamically before combat, experiment with different techniques in low risk environments, and detect and engage enemy targets from further distances. The ability to train and communicate in dynamic complex environments will continue to increase in importance as the Army prepares to fight in Multi-domain Operations.

COL Michael E. Demirjian is the TCM, MAJ Steven R. Cusack the military deputy TCM, CW4 Brett N. Horner the UAS Chief, and SSG Jordan M. L'Heureux the senior NCO UAS Ops for the TRADOC Capability Manager Recon/Attack, located at Ft. Rucker, AL.

Mobile Air Traffic Control at the Ready

By Mark Hampton

U.S. ARMY PHOTO BY MAJ MICHAEL ZENDEJAS, 164TH TAOG

1-58th Avn. supporting ATC operations at Tyndall AFB after hurricane damage, March 25, 2019.

The U.S. Army maintains a unique air traffic control capability "at the ready" to support Aviation operations across the Joint force. After Hurricane Michael swept through the panhandle of Florida wreaking devastation, the 1-58th Airfield Operations Battalion received the call to support Aviation operations at Tyndall Air Force Base. The Battalion deployed its Mobile Tower Team and partnered with U.S. Air Force (USAF) Air Traffic Controllers from 7 March to 30 April this year to provide essential air traffic services in support of disaster relief and base restoral activities. The Mobile Tower Team was able to integrate into USAF operations and seamlessly provide air traffic control support for 1,956 aircraft flight movements during the deployment.

Is Your Mobile Tower Team Ready?

The Army, like all the uniformed services, models its Air Traffic Control training and certification program after the Federal Aviation Administration (FAA) policies and directives. Adherence to these FAA policies and directives provides flexibility to support Joint Air Traffic Control operations during contingency operations seamlessly. Maintaining parity in the Air Traffic Control training and credentialing programs across the Department of Defense will be required as we set the conditions to win decisively in Large Scale Combat Operations (LSCO). Paramount to the successful development of Army Air Traffic Controllers (15Q) today and well into the future is the execution of training in environments that support a wide variety of aircraft types, flight profiles, and air traffic density. Like most military operations, currency and proficiency of key tasks are the real discriminators between success and failure. Are your mobile tower teams using their organic equipment on Army installation airfields to stay proficient?

Airfield restoral operations like the activities recently undertaken at Tyndall Air Force Base serve as an opportunity for the Army to examine how it will prepare its Air Traffic Control expeditionary forces for future success. Vital to a successful training program in the future will be the exercise of mobile Air Traffic Control systems on the Army's installation airfields and during Joint exercises to foster partnerships with

the other branches of service to learn service specific tactics, techniques, and procedures (TTPs).

Air Traffic Control Facility Contingency Plans

The Federal Aviation Administration has had a long-standing policy documenting Air Traffic Control Operational Contingency Plans. FAAJO 1900.47 details contingency planning as a key component in ensuring safety and continuity of services in the National Airspace System (NAS). The overriding concepts contained in the FAA order seek to minimize the impacts of "ATC Zero" events; events defined as when an air traffic control facility is unable to safely provide air traffic services or traffic flow management. A key mitigation and safeguard to "ATC Zero" events is the utilization of mobile Air Traffic Control systems when available. The Army documents mission essential functions critical to installation activities under the Continuity of Operations Planning, commonly referred to as COOP. While Air Traffic Control services are not singled out as Mission Essential Functions (MEF), Army Policy, AR 500-3 defines an MEF as any function that is vital to the continuation of operations of the organization or agency. These functions include those required by statute or Executive Order, and other functions deemed essential by the head of each organization. MEFs are those continuing activities that must be performed without interruption to execute critical Army missions. MEFs may be prioritized, which allows for a graduated response and relocation to emergency relocation facilities with minimum interruptions to operations during a national/local emergency or during normal operations. Appointing Air Traffic Control services as an installation MEF at locations where mobile Air Traffic Control systems are executing tabletop planning, functional, and full-scale exercises with mobile Air Traffic Control systems and military Air Traffic Control personnel at installation airfields will be the key to ensuring this program is effective in the future.

Army Mobile Air Traffic Systems Strategy for the Future

Along with the future employment of mobile air traffic systems to support installation air traffic contingency plans, is the resounding need to incorporate military Air Traffic Controllers into complex air traffic environments to enhance their skills. ATC skill enhancement is required both at the individual and collective level. While the Army has made great strides improving the opportunity for military air traffic controllers to obtain individual Air Traffic Control credentials, a broader and more comprehensive approach is required to immerse entire Air Traffic Control teams into installation air traffic environments. Routinely using mobile Air Traffic Control systems on installation airfields will more readily allow our air traffic contingency formations to build air traffic skills required to mitigate Aviation risk during deployments and contingency operations. Installation Air Traffic Control and Airfield Managers should seek opportunities to minimize their risks during interruptions, ATC facility closures, and natural emergencies with the inclusion of mobile Air Traffic Control systems in their response plans. Additionally, the routine employment of these mobile Air Traffic Control systems on their airfields will help build a better Air Traffic Control community for the future.

Mark Hampton is an air traffic control specialist at the Air Traffic Services Command (ATSCOM) located at Ft. Rucker, AL.

PM Assured Airspace Access Systems (A3S)

Tactical and Fixed Base Air Traffic Control System Update

By Patrick Layden

ALL PHOTOS U.S. ARMY PDM A3S

MOTS Controlling USAF Fixed Wing Aircraft (F-15 Strike Eagle).

Mobile Tower System (MOTS) Tactical Air Traffic Control System

The A3S Product Office recently fielded the final MOTS AN/TSQ-135A configuration to F/1-126 General Support Aviation Battalion in Los Alamitos, CA. MOTS is a critical asset providing a highly mobile, self-contained, integrated, and reliable information system platform for visual and procedural aircraft de-confliction and aircrew force protection in unified action terminal airspace environments. This fielding marked a significant milestone for MOTS. In November 2015, a contract for 17 systems was awarded to Consumer Fuels Incorporated, and a contract was given to Tobyhanna Army Depot to apply the 135A Modification Work Order (MWO) kits to 11 systems. The Sierra Nevada Corporation and the Prototype Integration Facility built and modified seven MOTS for Low Rate Initial Production and MWO verification.

The MOTS fielded to Los Alamitos, CA was an engineering development model (EDM) and was the first MOTS to be deployed to Kuwait with the 3rd Infantry Division in 2011. Upon return from active deployment, it was sent to Ft. Rucker, AL for reliability, availability, and maintainability data collection until 2016. The system was then shipped to Tobyhanna Army Depot for review to establish the necessary changes that would update the system from the AN/TSQ-135 EDM configuration to the AN/TSQ-135A Production Configuration. The effort meant manufacturing custom built components to match the production models due to unique pieces and parts fabricated only during the prototype stage of MOTS development. The system upgrade was completed in June 2019. New Equipment Training (NET) took place 5-21 August 2019 and completed the training for three 94D Maintainers, and five 15Q Operators.

MOTS Disaster Relief Support to Tyndall Air Force Base

On October 10, 2018, Hurricane Michael made landfall in the Florida Panhandle region as a Category 5 Hurricane. The storm caused catastrophic damage from wind and storm surge, which resulted in damage to Tyndall Air Force Base (AFB) and the Fixed Base Tower Facility. This caused critical operations to come to a halt, and at the time there was no near-term replacement solution available. Air Force leaders, including the 325th Operations Support Squadron (OSS) at Tyndall, searched for ways to maintain operations until the long process of cleaning up and rebuilding was complete.

The Army Tactical Air Traffic Control (ATC) community came to the rescue with their new, highly capable tower team and the brand new, state-of-the-art MOTS developed by A3S. This system provided nearly identical services as the permanent United States Air Force (USAF) Control Tower and greatly exceeded that of the current USAF mobile tower system, the MSN-7. From 5 March - 30 April 2019, the 1-58th Airfield Operations Battalion from Ft. Rucker, AL supported USAF Tower operations as well as provided MOTS familiarization training to USAF controllers assigned to the 325th OSS. This was an excellent opportunity to showcase the rapid response capability and inter-service versatility of the MOTS, and provided Army controllers with a unique training opportunity to control high performance USAF fixed wing aircraft. The result of this support meant operations were able to resume with no reduction in the level of service.

Fixed Base

Several of the Army's A3S Fixed Base ATC programs are nearing the end of 13 years of intensive modernization. The Army Advanced Automation System (AAAS) has been deployed and is in the final phase of Pre-Planned Product Improvement with the last AAAS G-4 system install at Ft. Sill, OK. The AAAS has been deployed and the latest technical refresh cycle completed in FY18. The Interim Voice Switch Replacement is being fielded to replace the unsustainable Small Tower Voice Switch and is on schedule to be completed in FY20.

The fixed base Precision Approach Radar is being replaced by the Precision Approach Radar 2020 (PAR2020), and an Instrument Landing System (ILS) program is being stood up. ILS will continue to be the solution for the Instrument Meteorological Condition primary precision approach landing capability. As GPS becomes the primary means of navigation down the road, the ILS will become the backup precision approach capability aligning with the Assured-Position, Navigation, and Timing Cross Functional Team.

Additionally, surveillance radars located at Army Radar Approach Controls and Ground Controlled Approaches provide a supplemental non-precision approach capability. A3S plans to update the existing Doppler Very High Frequency Omni-directional Range (DVOR) from analog to digital components at Camp Humphries, Korea. This update is scheduled to be completed in late FY20.

A3S is working to replace the current Digital Legal Voice Recorder with the National Airspace System Voice Recorder (NVR). The NVR contract was awarded to NICE Systems LTD on 31 July 2019. The NVR provides legally accepted recordings between air traffic controllers, pilots, and ground-based ATC facilities, supports accident and incident investigations, as well as applications in other operational areas.

NET of MOTS for F Co, 1-126th Operators and Maintainers with A3S NET Team Members.

These Fixed Base ATC programs are currently being addressed in the requirements, budgetary, and programmatic arenas. As always, operational priorities and the ongoing necessity to maintain interoperability with the other services and the Federal Aviation Administration must be weighed against future budget constraints and national policies.

Mr. Patrick Layden is the product manager for A3S located at Redstone Arsenal, AL.

U.S. ARMY AERONAUTICAL SERVICES PHOTO

The 2019 Air Traffic and Airspace (AT&A) Officer Training Seminar

By Ms. Sydney Tutein

On 22 August 2019 a group of dedicated military and civilian aviation professionals completed training aimed at ensuring air traffic, airspace and airfield expertise is resident at U.S. Army installations globally. Annually, the U.S. Army Aeronautical Services Agency (USAASA) provides the only formal training available to Army AT&A Officers worldwide. Army AT&A Officers serve as advisors to Installation Commanders and are responsible for identifying and defining installation airspace requirements; developing, coordinating and processing airspace proposals; obtaining certificates of authorization for unmanned aircraft system operations; managing assigned airspace requirements; and maintaining records and submitting required reports. Army organizations depend on the exceptional knowledge of AT&A Officers to assist them in preparing requests for new or modified airspace to meet special military operations requirements.

The 2019 AT&A Officer Training Seminar was held 20-22 August 2019, at the Professional Education Center, Camp Robinson, North Little Rock, AR. The seminar planners at USAASA worked diligently to integrate fundamental lessons with a hands-on-approach to training (which was requested in course critiques over the past few years). Instituting this newly structured training methodology was considered an overwhelming success. More than 180 military and civilian personnel were in attendance, representing Army commands, direct reporting units, and the U.S. Army National Guard and U.S. Army Reserve Component forces worldwide. AT&A seminar attendees, of which more than fifty percent were first time participants, had an opportunity to partake in well thought out hands-on training.

This year's AT&A seminar provided training to support installation operational requirements for unmanned aircraft system (UAS) operations, air traffic control support, airfield operations and instrument procedures in accordance with Army regulations and to support the Army's plan for development of a more lethal and capable force structure. The presentations highlighted recent trends and changes to Army aeronautical products, current and future aviation capabilities and changes to policy on a broad range of airfield and airspace topics. The seminar also included key presentations from briefers on topics such as the Army airfields and Heliports Management Decision Package/Program Objective Memorandum overview, the U.S. Air Force's Weather Support to the U.S. Army, an FAA National Airspace System update, and an overview of the FAA's Air Traffic Representative Program. This event included more than 20 other presentations, practical exercises and hands-on training over a 3-day period. The 2019 AT&A seminar was a successful event by all accounts; even so, as in past years, USAASA will conduct a thorough review of seminar critiques and make relevant adjustments to the course of instruction to cement the continued delivery of a high-quality training program. USAASA will begin planning for the next evolution of the AT&A Officer Training Seminar in the not too distant future and hopes to see many more readers of this article in attendance.

Conference attendees participate in a practical exercise during the 2019 AT&A Officer Training Seminar 22 August 2019, at the Professional Education Center, Camp Robinson, North Little Rock, AR.

Ms. Sydney Tutein is an air traffic and airspace specialist at the U.S. Army Aeronautical Services Agency, Fort Belvoir, VA.

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The Fixed Wing Project Office and Army Fixed Wing Aviation – Modernizing Capabilities to Support Near-Peer Operations

By COL James DeBoer and Ms. Tracey Ayres

For several decades now, the Army has concentrated its efforts on Counter Terrorism/Counter Insurgency operations (CT/COIN) in the Middle East and Afghanistan. While our efforts have been focused there, other world powers, namely Russia and China, have significantly improved their military capabilities, subsequently becoming near-peers of the U.S. and its allies. The increased threat posed by these countries prompted the Army to shift its focus from CT/COIN operations to Multi-Domain Operations (MDO). We must adapt and evolve our way of fighting wars so that we remain not only competitive but a superior force on land, air and sea, as well as in cyber and space.

To support MDO strategies, additional capabilities are being developed for the near-peer environment. One such capability is the Enhanced Medium Altitude Reconnaissance and Surveillance System - Electronic Intelligence (EMARSS-E), a quick reaction capability (QRC) that will fill the gap between CT/COIN operations and MDO and support strategic dynamic force deployments.

Filling Gaps

The EMARSS-E capability addresses the National Defense Strategy guidance to maximize competitive advantage and address near-term capability gaps by the modernization of existing systems and provide increased Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) capability. EMARSS-E will provide increased capability for threat indications and warnings, target detection and improved target location accuracy.

Capabilities

The first EMARSS-E will be a prototype aircraft that will be capable of intercept, direction finding and geolocation capability including support to All-Domain Overhead Cooperative Operations (AOCO). The EMARSS-E solution will include electronic intelligence (ELINT), communications intelligence (COMINT) and line-of-sight/beyond-line-of-sight (LOS/BLOS) data link capabilities. The aircraft will also contain survivability equipment and assured-position navigation timing (A-PNT) which allows the aircraft to operate in a contested environment.

OTA

The Fixed Wing Project Office is using an Other Transaction Authority (OTA) contracting option to develop up to two EMARSS-E prototypes. The Department of Defense allows an OTA to be used to carry out prototype projects that are directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components or materials. The OTA also allows the contracting process to move forward more quickly than traditional contract award practices.

Funding for the prototype was provided as a Congressional plus-up of $57.7 million in FY19 with a Directed Requirement approved on May 20, 2019. To kick-off the OTA, the Fixed Wing Project Office, in concert with the PEO Intelligence, Electronic Warfare and Sensors, Project Office for Sensors - Aerial Intelligence, held an industry day in July 2019.

The prototype contract is expected to be awarded by the end of February 2020 and will be followed by a 24-month design, build and test phase. Upon completion of this effort, the Army intends to take ownership of the proto-

U.S. ARMY PAPO PHOTO

type EMARSS-E aircraft and conduct an Expeditionary Operational Assessment (EOA), with the support of the U.S. Army Test and Evaluation Command (ATEC), to determine the military utility of the system.

An EOA is anticipated to take place in the European Command (EUCOM) in 3QFY22. Follow-on build efforts for the EMARSS-E will be dependent upon an Army decision for the future AISR fleet.

Capitalizing on Success

The EMARSS-E prototype will be based on the successful EMARSS Program of Record (POR), a capability that detects, locates, classifies/identifies and tracks surface targets in day/night, near-all-weather conditions with a high degree of timeliness and accuracy. The collected information is processed, and actionable intelligence is provided to commanders on the ground.

Additional AISR Development

As MDO continue to increase, so does the need for a competitive advantage. With EMARSS-E being used to fill the gaps between CT/COIN operations and MDO, the Army could utilize a deep sensing aircraft to fill the full MDO requirement and support strategic readiness. This deep sensing aircraft could provide increased range, potential for air launched effects and advanced aircraft survivability equipment to succeed in MDO.

The National Defense Strategy requires survivable platform/sensor pairings optimized for intelligence collection in contested spaces. Integrating a deep sensing platform is the first step toward gaining an advantage against threats posed by adversarial anti-access and area-denial capabilities (A2AD) and supports the foundational mission objectives of the National Intelligence Strategy. The Army's proposed deep sensing aircraft provides the strategic collection platform to understand and anticipate near-peer activities, in addition to deep targeting in support of operational commands. The deep sensing aircraft could meet Initial Operational Capability (IOC) by 2028 and Full Operational Capability (FOC) by 2035.

To accelerate the acquisition process, PM FW is exploring the use of an Abbreviated Capability Development Document (A-CDD) that would permit the build of a prototype system.

Summary

The way the world conducts warfare continues to change and we must change with it. We must adapt. We must modernize. We must anticipate. The Fixed Wing Project Office is modernizing its fleet by developing new capabilities to fill operational gaps. We remain steadfast in our dedication to provide our Soldiers, whether in the air or on the ground, with the critical capabilities they need, when they need them. Hooah!

COL James DeBoer is the project manager for the Fixed Wing Project Office, Program Executive Office, Aviation; and Ms. Tracey Ayres supports that office as a strategic communications specialist with KBRwyle. Both are located at Redstone Arsenal, AL.

U.S. ARMY PHOTO

U.S. ARMY PHOTO

Above: Long Range RADAR mounted on a test DHC-8 aircraft in preparation for developmental testing.

Left: Long Range RADAR undergoing inspection and Lab testing after a recent test flight.

Deep Sensing: The Quest to See Further from the Aerial Layer

By MAJ Alex Morse

Throughout the history of warfare, the advantage was with those who possessed the ability to detect first and deliver effects furthest. Over time, technological advancements enabled military evolutions in long range optics, Radio Detection, and Ranging (RADAR) technology, and electronic sensing capabilities. In early military engagements, ground reconnaissance parties collected information on patterns of life and vulnerabilities in an adversary's formation. This reconnaissance, coupled with long range weapon systems, enabled forces such as the Mongolian Empire to siege entire cities from ranges outside the defending party's capability. Fast forward to the advent of RADAR, detection ranges increased exponentially; particularly as aircraft utility grew in military application. Through the second half of the 20th century and into the 21st century, new understanding of RADAR technology propelled the topic of long-range observation to new levels. But the problem remains of how to extend the range of observation mediums to collect valuable, timely, and accurate information.

Project Manager Sensors – Aerial Intelligence (PM SAI) develops and manages numerous capabilities for the Army's Intelligence, Surveillance, and Reconnaissance (ISR) aerial fleet. PM SAI is the Army's lead agency for lifecycle management of airborne ISR sensors and processing on both manned and unmanned fixed-wing platforms. One of its programs, the Long-Range RADAR (LRR), is designed to identify Moving Target Indicators (MTI) and provide near-real time mapping through advancements in Synthetic Aperture RADAR (SAR) technology. Nested within the Cross Functional Team (CFT) concept of the newly minted Army Futures Command, LRR is a key enabling observation and detection capability for the Long-Range Precision Fires efforts under the Army's Modernization Priorities. Developed in conjunction with Northrop Grumman, the LRR project looked to build upon current technology and push the limits on deep sensing for the Army ISR Fleet. Not only did LRR need to detect further than current airborne MTI/SAR RADARs, but also minimize Size-Weight-and-

Power (SWaP) for maximum applicability across various aerial platforms.

The transition from an asymmetric counter insurgency (COIN) battlefield to a more linear operational environment, against a near-peer adversary, calls for technologies to be effective in contested environments or face extinction. Over the past decade, while the United States operated primarily in permissive and semi-permissive environments, some nations invested heavily in integrated systems designed to deny access of air, land, and sea. Commonly referred to as Anti-Access and Area Denial (A2AD) these systems often operate as part of a larger network known as an Integrated Air Defense System (IADS). As the effective range of integrated systems increase, so does the need for observation technologies to respond in kind. Aircraft, particularly slow-moving ISR platforms, are especially sensitive to air defense environments and must be capable of operating on the fringe of these anti-air defense networks. Critical to this problem set are the many ways to approach deep sensing; from Special Operations deep in denied territory to space-based collection measures.

The LRR is designed to increase the Army ISR fleet's effective range for all-weather mapping and MTI. Furthermore, it is scheduled for integration on the fleet of ARL-E Aircraft designed for multi-domain operations. It is more capable in adverse weather with greater stand-off range than previous generations of aerial RADAR systems of similar size. Additionally, it will be optimally positioned for cross-cueing of multiple collection techniques for better situational awareness.

During the competition phase against a near-peer adversary, air dominance is not a guarantee; therefore, long range sensing technology is vital to successful intelligence gathering. Close attention to optimizing altitude, speed, and frequency band usage is a key tenet of LRR's success in recent development test events across multiple environmental conditions. This is not a RADAR designed for one type of environment, or one region for that matter. It is poised to perform across the globe anywhere the U.S. Army requires.

Multi-domain operations is not a new concept; however, its recent advancements are at the forefront of the Army's 2028 strategy. Deep sensing is vital to maintaining information dominance soon. PM SAI and the LRR program will be invaluable to long range intelligence gathering operations and continue to develop leading technologies for the U.S. Army.

MAJ Alex Morse is an acquisitions officer and the assistant program manager for Long Range RADAR located at Aberdeen Proving Ground, MD.

U.S. ARMY OSA-A PHOTO

A C-12 landing following completion of a cargo mission.

Army Fixed Wing Transport: Bridging a Gap to the Future

By LTC W. Darrell Rasor

As the Army establishes solid footing in Multi-Domain Operations, Aviation is rapidly approaching the Future Vertical Lift era. Throughout on-going transformation of doctrine and shaping the force, a consistent, low-cost, and proven performer will continue to be Army fixed wing transport.

Lethality

Since 2002, Army fixed wing transport units have maintained a continuous and steady BOG to dwell ratio flying C-12s, C-26s, and UC-35s overseas. Units delivered over 10, 550,000 pounds of cargo and transported over 136,000 passengers in direct support of combatant command operational requirements in Theater. Continuous mobilization has yielded the execution of over 180,500 hours in Kuwait, Iraq, Afghanistan, Horn of Africa, Colombia, and Guatemala. In 2019 alone, these units moved over 421,760 pounds of time-critical cargo and over 5,600 mission essential passengers in the combat theater.

Multi-Role Aviation Force

In addition to supporting these missions, the Army was able to rapidly leverage fixed wing transport formations in less than six months to stand-up support to an emerging, unique requirement for aerial electronic warfare (EW) capability in Afghanistan. This EW mission has been successfully sustained by Army National Guard fixed wing units since its inception in early 2011. Fixed Wing transport crews fly these specially modified fixed wing EW aircraft in support of combat operations throughout Afghanistan.

This same flexibility allowed fixed wing transport units to rapidly train, man, and equip formations to execute manned, fixed wing aerial intelligence surveillance and reconnaissance (AISR) missions in Iraq and Afghanistan. The Army Reserve pioneered this development of the AISR in the early years of Operation Iraqi Freedom. The concepts and tactics developed for fixed wing AISR flight were soon employed in Afghanistan by Regular Army and National Guard units.

These Army missions are still active today and sourced by Contractors, many of whom recently retired from Army fixed wing transport formations.

Low Operating Cost with Measurable Benefit

The Total Force maintains a fleet of 154 fixed wing transport aircraft for an annual cost of less than $200 million (this figure includes crew training, annual fuel expenditures, and maintenance). This total cost includes those deployed units supporting wartime requirements.

Most of the transport fleet resides in the National Guard and the Army Reserve; with two battalions per component for a total of 96 authorized aircraft. In addition to supporting wartime requirements overseas, these units source wartime

U.S. ARMY OSA-A PHOTO

The C-12 interior configured for the cargo role.

U.S. ARMY OSA-A PHOTO

Loading blood into a C-12 in support of a humanitarian relief effort.

requirements in CONUS via support to the USTRANSCOM opportunity airlift system.

USTRANSCOM manages a network of operational support airlift requirements to fulfill both Army and Department of Defense airlift needs, while providing "real-world" aircrew and collective training to enhance wartime readiness. Missions include: blood plasma transfer, movement of high-priority classified materials, Wounded Warrior transport, Civil Authority support, domestic operations response, and movement of Key Leaders.

Less than 40% of CONUS Army fixed wing missions flown support Key Leader movement.

Overcoming the Fixed Wing Stigma

Despite a proven successful, operational record of fixed wing transport, at first glance these leather-bound, white aircraft appear to be suited to comfortably transport Grandma and her cocktail on a relaxing journey over a long weekend. This fact in appearance is mainly attributed to the initial, low-cost, off-the-shelf procurement price tag for these aircraft. When they were purchased over 30 years ago, they came right off the line from Beech, Fairchild, and Cessna and immediately put into transport service.

Time and operational demands have transformed the roles and missions for these aircraft. In the last several years the Program Manager, Fixed Wing in coordination with the National Guard and Reserves developed a removable, hardened alloy cargo tie down platform system that allows quick conversion from passenger to cargo role in support of a variety of missions.

Future procurement effort should focus on variants of aircraft kitted with troop seats and cargo holds to optimize support to mission critical, time-sensitive transport requirements.

Future of Fixed Wing Transport

Time and the pace of technology will inform the future relevance of fixed wing. However, these factors will always be compared against cost, efficiency, and effectiveness. Army fixed wing is proven to provide a low-cost, short-field, long range solution to fill the airlift gap. Transport fixed wing is currently a validated requirement in the Total Army Analysis (TAA) force and will likely remain as a proven capability supporting current and future Multi-Domain Operations.

LTC W. Darrell Rasor is the commander of the Operational Support Airlift Activity (OSA-A) of The Army Aviation Brigade (TAAB), Fort Belvoir, VA. OSA-A provides training, readiness, and oversight to ARNG fixed transport units.

Army Reserve Fixed Wing Aviation

By COL Lee D. Hyder and MAJ Daniel M. Cedillo

Soldiers from 6-52nd Theater Fixed Wing Battalion landed at NSA Naples, Italy, for refuel and services. The two UC-35s and crew departed from Los Alamitos, California, and flew east to Okinawa, Japan, due to fuel requirements. The Army Reserve aircraft and crew prepositioned these aircraft to support ongoing operations in the U.S. Indo-Pacific Command Area of Responsibility.

For a third year in a row 6-52nd Theater Fixed Wing Battalion (TFWB) of the Army Reserve Aviation Command (ARAC) has provided a self-deployable and proficient capability to the U.S. Indo-Pacific Combatant Commander. The fixed wing requirement has developed over time and highlights the ready and relevant force the Army Reserve Fixed Wing program can deliver. Real-world fixed wing training has improved unit readiness and provided a conduit to train as we fight.

Over the past three years, 6-52nd TFWB has progressively increased training and mission support in the Asia-Pacific region. The focus was born out of a necessity to build and sustain unit-training readiness while executing operations in support of a geographic combatant commander. The balance of these two requirements mandated the need for a fully developed and large-scale training exercise.

Assessing Capabilities

The 6-52nd required an exercise that would assess their ability to self-deploy, provide rapid intra-theater transport for commanders and mission command across a large area. Exercises and real-world operations in the INDOPACOM AOR provided the solution. The support requirements from the region have progressively grown as 6-52nd continuously proves the capabilities relevance to the ground commander. To the extent the unit has been requested to support Defender Pacific 20 with fixed wing support.

6-52nd TFWBs initial support in FY17 consisted of crews for a couple of aircraft tasked with a rough concept of support. In FY19, 6-52nd TFWB self-deployed three C-12s and two UC-35s, along with a battalion-minus worth of Soldiers and support personnel.

From June 5 to Aug. 6, 2019, roughly 60 days, Soldiers from three locations of the geographically dispersed battalion consolidated at Kadena Air Base in Okinawa, Japan. Operation Cryptic Dragon II would be the third and most robust battalion operation to date. Air movement support to the ground commander, METL validation and

Mission Command were the key tasks for the organization. The main effort would be exercise Talisman Saber 2019 (TS19), a combined and joint force operation concentrating on combat readiness and interoperability between Australian and U.S. Forces (AGDD, 2019). During this operation, the battalion forward deployed again, providing a tactical command post and three C-12s to Townsville, Australia, to support the exercise.

The lessons learned from these movements provided a one-of-a-kind training environment for the battalion. The staff coordinated worldwide contract maintenance for the UC-35 aircraft who, due to internal fuel restrictions, flew east from California to Japan. The 6-52nd TFWB had to ensure equipment was packed and shipped from separate locations months in advance to ensure a timely arrival in Okinawa.

Battalion staff planned, tracked and moved Soldiers on and off the island multiple times and to multiple locations. The logistics section coordinated lodging for Soldiers on a rotational basis in Australia, Philippines, Japan, Thailand and many more. The transportation of equipment and Soldiers around the AOR were completed in part by the battalion aircrews. The organic air movements, equipment transfers, and mission support proved to be significantly more intense than the average OCONUS "milk run."

U.S. ARMY PHOTO BY JUSTIN N. KING

Aircrews from Charlie Company, 6-52nd Theater Fixed Wing Battalion transported MG Ronald P. Clark, the 25th Infantry Division commander and staff during Talisman Saber 2019. The flight was one of many inter-theater air movements between Darwin and Townsville, Australia that supported the ground forces.

Diverse Missions

Typhoon season in the Japanese archipelago begins in May and peaks in August and September. These storms can reach above 50,000 feet and span distances of hundreds of miles, many of which occur in succession with little time for recovery in between.

The experience young aviators receive from operating in this environment is levels above CONUS based training. The requirement to navigate, plan for fuel, reserve fuel, alternate landing locations, request country clearances and fly over open ocean are enough to test the most experienced aircrews. However, in this type of environment, the skillset of Army Reserve aviators proves to be invaluable.

Many of the Soldiers of 6-52nd TFWB are employed by the civilian airlines. These aviators bring a wealth of knowledge and experience which in part allows the battalion to successfully execute at such a high level. During TS19 alone, the battalion flew over 350 hours, transported 134 passengers and moved 6,100 pounds of cargo in 20 days. Included on the passenger list was the 3rd MEF commanding general, Lt. Gen. Herman S. Clardy and the 25th Infantry Division commanding general Maj. Gen. Ronald P. Clark, to name a few. The success achieved by the aircrews of 6-52nd TFWB can only be marginally equaled by the leadership and support of the battalion.

The 6-52nd TFWB was able to conduct mission command across the Asia-Pacific and CONUS regions simultaneously. The risk associated with an endeavor of this scale is potentially very high. The adeptness to skillfully balance risk with detailed planning, realistic training and experience takes a high level of competence. This skill level was built over time using the traditional "crawl, walk, run" model.

Cryptic Dragon II

Key to the battalion's success was an ability to improve upon previous training events. In FY18 the battalion executed Cryptic Dragon, the second of its three operations in the Asia-Pacific AOR. During this exercise, the emphasis for the battalion came in the form of purchasing tents, updating SOPs, re-familiarizing with CPOF and staff processes. The staff and Tactical Operations Center (TOC) conducted operations at home station in Los Alamitos while the battalion commander lead from Okinawa. This forced the team to work on their "lead and support" responsibilities, a critical component of mission command.

The 6-52nd TFWB's hard work paid off during Cryptic Dragon II. The battalion deployed to Kadena Air Base and set up a working TOC. From the facility, they utilized a combination of CPOF and Flight Aware to track the battalion's assets over the horizon, in real time. The battalion provided an intertheater-level air movement capability and tracked it thousands of miles away. The staff tested the efficiency of their Tactical Standard Operating Procedure and validated its effectiveness by executing numerous battle drills. The unit was evaluated during their TOC operations and received high marks, to include an assessment of T for all 3 METs by their higher command. Finally, after self-deploying across the globe, executing operations at the graduate level for the combatant commander, the battalion redeployed back to home station.

The requirement for Army Reserve fixed wing in the Asia-Pacific region is increasing due to the professionalism of the Soldiers of 6-52nd TFWB. The necessity to train in the most challenging environments has proven to increase readiness and shown the ready, relevant and skilled capability the Army Reserves can provide to the Army.

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UAS: Survival in a Contested Environment

By CPT Brandon R. Jack

U.S. ARMY PHOTO

An MQ-1C ER flies a mission profile over China Lake. The task to creatively integrate a UAS platform in denied area planning and execution was a tremendous success.

Army Special Operations Aviation (ARSOA) recently took to the desert in an effort to push the tactics envelope and develop the capability to win in the most challenging, contested environments. The MQ-1C Extended Range (ER) served as the focal point of this year's Special Operations Aviation-Advanced Tactics Training (SOA-ATT). After demonstrating nearly two decades of combat effectiveness during the Global War on Terror, the question of unmanned aircraft systems (UAS) survivability in a global power competition loomed large on the minds of those within the manned and unmanned aviation enterprise.

One of the goals of SOA-ATT was to train MQ-1C ER operators in a contemporary electronic warfare (EW) / anti-access area denial (A2AD) environment facilitated by focused, iterative training. This concept was centered on developing and sustaining ARSOA's EW/A2AD capability to conduct Joint Operations in a denied environment against a peer/near-peer adversary. MQ-1C ER personnel were integrated across a broad spectrum of joint participants, each with a wide range of capabilities. Special operations ground forces, rotary wing elements from the 160th Special Operations Aviation Regiment (SOAR), in addition to fixed wing and tilt-rotor aircraft from the Air Force Special Operations Command, rounded out the team.

MQ-1C ER operators received academic instruction and mentorship from the 160th SOAR (Abn) Aviation Mission Survivability Officers (AMSO). Topics such as denied area planning, offensive and defensive maneuvers, advanced radio frequency tactics, techniques and procedures (TTPs), and passive defeat tactics were covered in depth. Operators flew in an MH-47G simulator in order to familiarize themselves with the terrain and develop route corridors to and from the target areas.

Participants conducted detailed mis-

sion planning and briefings throughout the exercise, focused on denied area intelligence preparation of the battlefield, spectrum management control, route analysis, environmental factor analysis, performance planning, individual threat analysis and risk mitigation throughout all aspects of the mission profile. The objective of such detailed planning and preparation was to seamlessly integrate into a Joint Force while enabling mission accomplishment through penetration and neutralization of a complex integrated air defense system (IADS) network. Using threat overlay software and route analysis tools throughout their planning and analysis, the MQ-1C ER operators discovered inherent weaknesses in traditional employment profiles. Ultimately, identifying these weaknesses became the catalyst for developing new engagement procedures.

Working their way through incremental changes in their traditional flight profile, the MQ-1C ER performed multiple flights up to and even inside the weapons engagement zone of multiple threat systems. These threat systems represented a vast array of capabilities from range finding emitters and jamming devices to passive detection emplacements and visual observation teams armed with simulated man-portable air-defense weapons. By executing these maneuvers during rehearsals, ARSOA MQ-1C ER operators built the confidence in their premission planning necessary to execute profiles that would ultimately prove decisive during SOA-ATT's culminating full mission profile (FMP) event.

The FMP represented the pinnacle of two weeks of training and mission planning. This preparation enabled the Joint team to capitalize on the weaknesses and vulnerabilities of future threats, utilizing a combination of advanced flight envelope management and detection mitigation techniques. The MQ-1C ER flew a total of 38.2 hours in support of SOA-ATT. Operators were successful in avoiding detection and neutralized enemy IADS positions in support of follow on forces. The integrated use of the MQ-1C ER and other enablers ultimately resulted in the successful suppression of multiple surface to air threats and allowed the ground force and supporting helicopter assault force to access areas that previously exceeded risk thresholds.

Overall, the task to creatively integrate a UAS platform in denied area planning and execution was a tremendous success. SOA-ATT provided UAS aircrews with a unique venue to develop TTPs for denied area operations. In doing so, they also demonstrated a proof of concept that may ultimately change the employment of UAS in a future contested battlespace. Global Power Competition stands to challenge many paradigms within manned and unmanned aviation and the success demonstrated at SOA-ATT signifies an integral step in shifting both tactics and tribal lore. ARSOA will build upon the success achieved throughout SOA-ATT while continuing to incorporate the associated communication and navigation challenges inherent in multi-domain operations.

CPT Brandon R. Jack is the electronic warfare officer for the 160th Special Operations Aviation Regiment (Airborne) located at Fort Campbell, KY.

Operation Flying Heroes

By Vicki Cody

GEN (Ret.) Dick Cody (back row, sixth from right) with Wounded Warriors at Operation Flying Heroes.

OFH COURTESY PHOTOS

Once a month for the past 10 years, at a small airfield in Carlisle, Pennsylvania, a group of former and current Army aviators gathers in a hangar for Operation Flying Heroes (OFH). With Dick "Commander" Cody as the leader, this unlikely group of warriors spend the day giving back to some of this generation's Wounded Warriors (WWs).

This story really begins back in 1980 when then Captain Dick Cody and CW2 Ned Hubard were crewed together flying "little bird" helicopters out in the Arizona desert, part of the genesis of the 160th Special Operations Aviation Regiment. It was also the start a lifelong friendship.

Fast forward to 2009 when Dick purchased the OH-6 Loach, tail number N9010F, from AAAA Hall of Famer, Dr. Harry Robertson. He and Ned, also an AAAA Hall of Famer, picked up the aircraft in Arizona and flew it cross country, eventually landing at the Carlisle airport where Dick keeps his Cessna 206.

Shortly after, Dick and I met a group of WWs at an event in DC and Dick invited one of the young men to go flying with him. The next Saturday they went up to Carlisle for a day of flying and a chance to get away from the hospital. A seed of an idea began to form with that first ride and then with some brainstorming and help from close friend Ned Hubard, the idea became a reality.

Each participant receives a certificate and has their photo taken with "Commander" Cody at the end of the day.

Our premise is to give WWs, injured in Iraq and Afghanistan, a day away from the monotony of endless appointments, surgeries, and therapy while introducing them to flying. And to thank them for their service and sacrifices. Our son, Clint, came up with the name Operation Flying Heroes and within two months, we were off and running.

Between Dick, Ned and their many connections and friends in the Army aviation and Special Operations communities, it didn't take long for word to get out about OFH and the volunteers began checking in with Dick and Ned. The number of Dick's cadre grew along with the number of WWs participating. It seemed like every month another old friend showed up to help us, sometimes flying in from as far away as Jacksonville, FL.

Our cadre, a group that averages about 15 members at any given time, represents every war and conflict from Vietnam to the present day wars in Iraq and Afghanistan, and with over 400 years of service, cumulative. From all walks of Army aviation, from crew chiefs to Hall of Famers, and every rank, it is a great group of talented and compassionate aviators who just want to give back. OFH gives them the chance to do that. Each year the senior Army aviator from the War College joins us and becomes the Air Mission Commander for that year. (This year it happens to be our son, LTC Clint Cody). As the operation expanded Dick needed help with the flying duties and so entered old friend and fellow Army aviator, Jim Viola to the cadre. Jim flies an R-44, giving the WWs another flying experience.

Black Hawk Pilot Awarded the Distinguished Service Cross

By CPT Veronica Aquila

U.S. ARMY PHOTO BY SFC JOSHUA JOYCE

Retired CPT Christopher C. Palumbo receives the Distinguished Service Cross from GEN James C. McConville, Vice Chief of Staff of the Army, during a ceremony at John F. Kennedy Hall, Fort Bragg, NC, June 27, 2019. Palumbo was awarded the DSC for his heroic actions April 11, 2005. While serving as a UH-60 Black Hawk pilot then-CW3 Palumbo was part of a quick reaction force supporting conventional and Special Operations Forces when his Black Hawk crew received the call to infill a Special Forces unit responding to an ambush high in the mountains.

After the unit received heavy enemy fire and sustained critically wounded Soldiers, he and his crew reacted to the urgent casualty evacuation request. Unable to land because of rough terrain, he placed his Black Hawk between the wounded and enemies allowing his crew to engage the insurgents. He rotated his helicopter, allowing one gunner to engage insurgents, while the other gunner reloaded, providing continuous suppressive fire, despite taking heavy, direct enemy fire. An enemy bullet ricocheted off the crew station injuring a crewmember; though wounded, the crew continued to shield the service members on the ground from the enemy until the aircraft ran low on fuel, ammunition and had sustained significant damage. The support the crew provided allowed medical care to reach the wounded and for additional support aircraft to successfully recover the unit and service members.

U.S. ARMY PHOTO BY SFC JOSHUA JOYCE

Then-CW3 Christopher C. Palumbo (right) poses for a photograph with members of his Black Hawk crew from A Company, 3rd Battalion, 158th Aviation Regiment, days after a battle April 11, 2005, in Afghanistan.

All the U.S. military personnel survived the attack by enemy forces. Palumbo and his Black Hawk crew returned to flying missions the next morning. The DSC is the second highest military decoration awarded to a member of the U.S. Army.

We gather one Saturday a month from June to November. The WWs, from all the services, come by bus from Walter Reed/Bethesda, MD and Fort Belvoir, VA. We average 10 WWs each time and they usually bring family members with them. In the early days we had an occupational therapist; we usually have a doctor and at times, have had a chaplain join us. The group has grown to about 35-40 people at each event. Dick and Jim take them on flights around the Carlisle area while the rest of the cadre supports with safety, getting the participants in and out of the aircraft, and coaching and mentoring. By lunchtime we are comfortable with each other and conversation flows easily.

When we break for lunch, the heart and soul of OFH becomes evident. With the tables and chairs set in a U shape and the WWs seated around Dick, he asks them to share their stories; why they joined the military, where they are from, how they got injured, and any future plans. It is amazing to listen to them and watch as they tell their stories. For some it is the first time talking about a traumatic event, but they feel comfortable enough to do it. Their stories are as varied as they are and sometimes it is sad, sometimes we laugh, but always their spirit shines through. A camaraderie forms between them and us during those personal moments.

When the day is over, we gather by the aircraft for photos while Dick awards each participant with a certificate and a patch. As we say our goodbyes, every one of us feels like we have been part of something special that day. It is such an honor to be among the fine men and women who sacrifice so much for our country. And if we have given them something that day, they have surely given us something as well. Their courage in overcoming obstacles inspires each one of us and motivates us to keep doing what we are doing. And for Dick and Ned and their fellow Army aviators, it has given them, in retirement, an opportunity to continue their passion for flying but with a new mission.

Vicki Cody spent 33 years as an Army wife, supporting her husband, former Army Vice Chief of Staff, GEN (Ret.) Dick Cody, in his career. While raising their two sons and moving all over the United States and overseas, she served as a coach and mentor for Army spouses and as an advocate for Army families. She is the author of "Army Wife: A Story of Love and Family in the Heart of the Army."

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INNOVATIONS FROM VIETNAM

In this method the tear gas mixed immediately with the air while the remainder fell to the ground and saturated the area. Dropping the tear gas barrels at 3,000 feet altitude was developed after testing drops at various altitudes.

This unique "bombing" by the *Chinook* proved extremely effective, and a major access route was denied to the Viet Cong for over three days.

A UNIQUE "DUSTOFF"

THEY *want what?*", gasped *Major Gilbert R. Hickenbottom*, commander of a Da Nang-based 1st Aviation Brigade outfit called I Corps Airlift Company.

Marble Mountain's Navy hospital was on the phone. Their request was something the like of which the Army chopper contingent had never heard: a *request* to kick up one of those dust storms normally considered the scourge of rotary-wing machines.

The hospital representative said their 1800-sq. yd. helipad, used to land med-evac patients, had just received a new asphalt coat. He said that the heavy construction equipment used to do the job had left the pad less than tidy – buried, in fact, beneath at least two inches of Da Nang sand.

Hardly a broom-sized cleanup job, the task, he suggested, might best be done by having a hovering helicopter blow the sand away, before a med-evac chopper with an emergency patient came in.

It was a request for something that 'copter commanders normally try hard to avoid. Aircraft have been destroyed and pilots killed from hovering over loose earth, whipping up blinding dust clouds, losing sight of the ground, drifting and crashing. Besides, the helicopter's ability to raise dust is probably its least attractive feature to the ground troops on whom the dust settles. No one had ever asked for a demonstration before.

"*But under the circumstances it seemed reasonable*," Hickenbottom said. He selected one Huey conveniently due a maintenance hover check, and a veteran pilot, *Chief Warrant Officer Kyle Spaulding*, company maintenance chief, to tackle the tricky mission.

Spaulding, cautiously approached the sand-covered pad. A colossal sandstorm billowed before the Army ship, and within ten minutes the pad was clear. Several people watched from the ground, but this time none complained. In fact, the Navy Hospital Commander condensed his thoughts on the operation into one word, "*Fabulous*."

NATURAL LAWS

1. Chisholm's First Law of Human Interaction: **If anything can go wrong, it will.**
2. Chisholm's Second Law of Human Interaction: When things are going well, something will go wrong.
3. Rusk's Law of Delegation: **When exaggerated emphasis is placed upon delegation, responsibility, like sediment, sinks to the bottom.**
4. Finagle's Law: **Once a job is fouled up, anything done to improve it only makes it worse.**
5. **Feibleman's Law of Secondratedness:** To be second rate. (a) never be the first to do anything, and (b) never do anything as well as it can be done. These principles call for failure of originality and the absence of excellence.
6. **Harvard Law of Animal Behavior:** Under carefully controlled conditions, organisms behave as they jolly well please.

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Soldier Appreciation Dinner Concert

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Supporting the U.S. Army Aviation Soldier and Family

AAAA Chapter Affairs

By LTC (Ret.) Jan Drabczuk

I appreciate the support from Kelley Kirtz, the Cedar Rapids Chapter Treasurer, for authoring and sharing this chapter information.

Cedar Rapids Chapter

The Cedar Rapids Chapter, although headquartered in Cedar Rapids, encompasses members from across Iowa and western Illinois. Its growing membership includes defense contractors, Army National Guard and retirees.

AAAA GRAPHIC

Iowa is home to the Iowa Army National Guard with Aviation support facilities in Davenport, Waterloo and Boone. The chapter currently has 81 members and has experienced growth thanks to our increasing participation by National Guard members.

Supporting the Iowa Army National Guard

In recent years, the Cedar Rapids chapter has begun working more closely with the Iowa Army National Guard. The chapter members enjoyed meeting at the Army Aviation Support Facility in Davenport, touring the facility and getting an inside view of a resident CH-47F. The members were even given the opportunity to don a pair of night vision goggles and navigate a darkened classroom. This was a particularly rewarding opportunity for the chapter's civilian members to get a firsthand look at the facilities and equipment used by the Warfighters they support.

Last year the chapter supported the nomination of the 248th Aviation Support Battalion for the Logistics Support Unit of the Year which they received. The Chapter has also inducted four individuals into the Bronze Honorable Order of St. Michael and participated in the induction of three members of the battalion into the Silver Honorable OSM. A member of the Cedar Rapids Chapter was able to support the Battalion's "Dining Out" celebration and assist with the Order of St. Michael inductions. The long list of achievements by these individuals was impressive and the chapter was delighted to provide this well-deserved recognition.

Chapter History

The Cedar Rapids Chapter was founded by employees of what is now Collins Aerospace, a United Technologies Company, and continues to be well supported through membership and use of facilities. Other defense contractors in the surrounding area as well as active National Guard members and Army Aviation retirees have diversified the membership. In the past the chapter had sponsored many guest speakers, facility tours and other events such as a World Helicopter Day celebration last year. One guest speaker was Marty Walsh, Mission Systems Architecture Demonstration (MSAD) Lead, of the U.S. Army Aviation and Missile Research, Development, and Engineering Center who gave the chapter members an overview of the Joint Multi Role (JMR) Technology Demonstrator (TD) program. The chapter members enjoyed hearing how this program is going to demonstrate transformation vertical lift capabilities that will shape the future of the Army Aviation fleet.

Looking Ahead

With participation from the Iowa Army National Guard, the Cedar Rapids Chapter is working to establish strategic goals. The chapter wants to increase support to the Warfighter by providing more recognition through awards and supporting deploying units and families. The chapter plans to enhance and impact Iowa's Army Aviation Enterprise by providing more networking opportunities, by increasing chapter participation in Iowa Army National Guard celebrations and activities, and by establishing an annual chapter golf event. The members want the Cedar Rapids Chapter to be an enduring home for Iowa Army Aviation Professionals.

The Cedar Rapids Chapter looks forward to new and fresh ideas coming from the growing National Guard membership. Recent chapter elections have brought in new and diversified officers including a representative from the Iowa National Guard. The chapter will now be able to shift more focus to the people involved in day to day operations of the flight facilities in the chapter's area.

I see great movement in Cedar Rapids; this chapter is making a difference in keeping AAAA active for aviators, enlisted Aviation Soldiers and their families. Feel free to contact me if you need help for your Chapter, Executive Board support, would like your chapter featured in the AAAA magazine, establish a new chapter or to obtain clarification of National procedures. I look forward to working with you and supporting AAAA.

LTC (Ret.) Jan S. Drabczuk
AAAA VP for Chapter Affairs
jan.drabczuk@quad-a.org.

Aloha Chapter Golf Scramble

CHAPTER COURTESY PHOTO

The chapter sponsored an AAAA Scholarship Golf Scramble on June 28, 2019 at the Turtle Bay Resort George Fazio Golf Course, Oahu, Hawaii. It was to promote education and relationships among AAAA members, 25th ID Soldiers interested in AAAA, and community members. The Chapter raised $3,600 for scholarships and received tremendous support from five local companies (donated prizes and raffles), with 112 golfers participating, and seven volunteers helping to make it a success.

Connecticut Chapter Scholarship Event

CHAPTER COURTESY PHOTO

The Connecticut Chapter recognized eight scholarship winners and their families on August 14, 2019 during a reception and recognition ceremony at the Great River Golf Club in Milford. The chapter sponsors a total of nine scholarships annually.

Prairie Soldier Chapter Airborne Day

CHAPTER COURTESY PHOTO

The chapter provided support for the Nebraska Army National Guard National Airborne Day Exercise on Aug. 16, 2019. All NEARNG Airborne units conducted airborne jumps in celebration of National Airborne Day. The NEARNG Aviation units supporting the exercise were Co. B, 2-135th Gen. Spt. Avn. Bn. which provided a CH-47F for the drops and Co. G, 2-104th GSAB providing a UH-60L for MEDEVAC coverage. Over 150 people from the town of Seward attended the event. The chapter provided morning coffee and doughnuts in space provided by Whisler Aviation at Seward Municipal Airport.

Southern California Chapter Meeting & Museum Tour

CHAPTER COURTESY PHOTO

Following a Sept. 21st membership meeting at the Western Museum of Flight at the Torrance, CA Airport, several members took the opportunity to tour the aviation museum. From left to right, SGM Ron Cabrera, chapter VP Awards and Enlisted; LTC Tom Lasser (Ret.), Sr. VP; and COL (Ret.) Russ Chung, Secretary and VP Scholarships.

Tennessee Valley Chapter Trivia Night

CHAPTER PHOTO BY KATHRYN HUFF

The Tennessee Valley Chapter hosted their first Young Professional Outreach event, Aviation Trivia, at Salty Nut Brewery in Huntsville, AL on Sept. 19. Seventy attendees enjoyed a social hour with food and beverages and the top 3 teams received prizes. IronMountain Solutions sponsored the event. *Continued on page 68*

AAAA Membership Update

By CW4 Becki Chambers

The Membership Corner

This month, the member spotlight shines on the Anderson Family: CW2 Wade Anderson, his Spouse Emma Anderson, and their children Caleb, Levi, and Penelope.

ANDERSON FAMILY PHOTO

The Andersons – (left to right) Caleb, Emma, Penelope, Levi, and Wade.

Emma grew up in Florida, but after moving many times, she settled in Pennsylvania at 17 to take care of her Grandmother who had developed Alzheimer's. Wade grew up in Pennsylvania, in the same house his entire life.

Emma and Wade met in high school; he was in the split enlistment program. During the summer after his junior year, Wade went to basic training, then came back to school to finish out his senior year. He wore his uniform every Thursday while he participated in the program. Emma saw him walking the halls one day and had to find out who the "hot Army kid" was, she was a tutor for a math class that he was in. She struck up a conversation with him and that was the start of their life together, they have been together ever since!

Wade joined the military to follow in his father's footsteps. His father served for 32 years in numerous MOSs and Wade would like to proudly surpass him. Wade started out as a 92G (Cook) in the Army Reserves and worked his way up to E5. He then went on to become a 29E (Electronic Warfare technician), and a Master Fitness Trainer, before finally fulfilling his dream of becoming an Army Aviator. After Warrant officer candidate school, he completed initial entry rotary wing (IERW) training and graduated as a Black Hawk pilot but stayed to complete the multi-engine fixed wing course. The Andersons are currently stationed at Joint Base McGuire-Dix-Lakehurst in NJ flying C-12s and he will have served in the Army for 12 years this November.

Emma never planned on joining the military even though "most of the men in my life all had". After finishing cosmetology school, she had loans that needed to be repaid but didn't have a well-paying job. Wade's father, who used to be a recruiter, convinced her to go talk to one, just as an option. She ended up leaving within two weeks for Basic Training, with a $20,000 bonus and then enrolled in the student loan repayment program. Emma enlisted as a 91J (Chemical Equipment Repair Specialist) and served for 9 years before transferring into the IRR so Wade could further his career in aviation.

The Andersons have three "amazingly awesome" children. Caleb nine, Levi, six and Penelope three. Emma says their kids couldn't be more different from each other. Caleb loves all things science and gaming; he wants to be a paleontologist when he grows up and a professional gamer. He loves fossils and has quite an extensive rock and gem collection. Levi is a little Tarzan man. He loves being outside and would live out there if they let him. Emma says he's fearless and has been to the ER more in his 6 years than she has in her entire life! Penelope is a very sassy, independent little lady and has refined them more than they could have ever imagined. She loves dressing up and wearing the fanciest shoes and purses she can get her hands on, but will get them full of mud any chance she gets.

When asked why they believe it's important to join a professional organization like AAAA, Emma replied: "I believe it's important to join an organization like this because there are so many opportunities to support Soldiers and families through networking, camaraderie, and recognition. It gives people who join, a sense of security in knowing that while we may not all go through the same things, we will never go through them alone."

CW4 Becki Chambers
AAAA Vice President for Membership
beckichambers@quad-a.org

New AAAA Lifetime Members

Delaware Valley Chapter
CW4 Kent H. Harrington, Ret.
Jimmy Doolittle Chapter
1SG Kevin Wiliams
Lonestar Chapter
CW2 William McNease
Mount Rainier Chapter
CW4 Richard S. LaMonica Sr. Ret.
North Texas Chapter
Michael Hutton
Rio Grande Chapter
CSM Raleigh L. Matthews, Ret.
Tennessee Valley Chapter
COL Erskine Ramsey Bentley II
Monna L. Mosser
Washington-Potomac Chapter
COL Danny C. Cox, Ret.
LTC Cayton Johnson
CW5 Jeffrey T. Warfield

New AAAA Members

Air Assault Chapter
SGT Jordan R. Edwards
SGT Jose M. Garcia Guilarte
SGT Daniel E. Gonzalezrosado
SPC Darius R. Henry
WO1 Lamar T. Hizer
SGT Eric M. Jenkins
CW4 Michael Pounds
SPC Kyle M. Roberson
CW4 William S. Roth
CPT Nicholas Shumpis
CW3 Bruce C. Silva
SGT Sipriano Solis
1SG Guy Weaver
Aloha Chapter
1SG Gilbert B. Solano
CPT James A. Williamson
Arizona Chapter
Tonja Reinert
Aviation Center Chapter
WO1 Nivaldo Anderson
WO1 Chris M. Archung
MSG Daniel Baeza
2LT Joseph Bowman
WO1 Dakota T. Brizendine
WO1 Tucker Driskell
2LT Benjamin Habekost
WO1 Hunter Hardy
WO1 Ruijie He
2LT Nicholas W. Hylton
WO1 Jonathan W. Kao
2LT Demitrios Livanos
WO1 Gerald Martin
2LT Keegan A. McFatridge
WO1 Patrick H. Murphy
WO1 Kevin L. Satcher
WO1 Nicholas A. Smith
Thomas Taylor
1LT Jordan A. Thomas
2LT Connor Thornton
Black Knights Chapter
MAJ David R. Galbreath
Central Florida Chapter
MAJ Larry Bond
Eric Durham
Colonial Virginia Chapter
SSG Michael Arnett
SSG Tanya Dine
SGM Frank Giuseffi
SSG Allen Hennaman
David Starks
Empire Chapter
CW3 Christopher Seeger
Flint Hills Chapter
CPT Samuel Lagueux Chapin
1SG Gary Randell Ralston, Jr.
SPC Austin Ridgeway
Yossarian Silano
CPT Caleb Varacalli
CW2 Lindsay Nicole Walker
Gold Standard Chapter
WO1 Shawn C. Birch
CW4 Rondall Frazier
SFC Bradley R. Johnson
SSG Douglas R. Livingston
CW3 Thavy Roth Rosenberger
SSG Daniel W. Young
Great Lakes Chapter
SGT Zachary J. Sharpe
Greater Atlanta Chapter
CW2 Elizabeth Kruchek
Grizzly Chapter
SGT Peter Thach
SGT Xao Xiong
High Desert Chapter
LTC Peter Schmitt
Iron Mike Chapter
1SG Christopher R. Stevens Sr.
Jack H. Dibrell/Alamo Chapter
Chuck Ludwig
Lonestar Chapter
SPC Erikah D. Ellis
Morning Calm Chapter
CPT Mark Myers
Mount Rainier Chapter
SPC Gary K. Acton
SSG Timothy Carroll
CW3 Matthew Colon
CW3 Bradley James Courson
CW3 Ryan Gabrukiewicz
Robert Grimmett
SSG Ryan Thomas Schell
CW2 Phillip Schleicher
CPT Jacob Zinge
North Country Chapter
CW2 Vanessa L. Lopez
North Texas Chapter
Michael Hutton
Northern Lights Chapter
SPC Sambhu Magar
Oregon Trail Chapter
SGT David Chapman
Phantom Corps Chapter
Yancy Calderon
COL James Lucas
CSM Charles T. Walden
Pikes Peak Chapter
CPT Devin Lukomski
CW2 Francisco Rivera-Perez Jr.
Rio Grande Chapter
Matthew Keith Krehbiel
SFC Arthur J. Pruitt
SFC Menard Yalung Sanchez
Savannah Chapter
SPC Audrey Levin
Tarheel Chapter
SSG Kathryn McQuay
Tennessee Valley Chapter
COL Erskine Ramsey Bentley II
CW5 Christopher Dodd
Wayne Ferguson
Cedric Gosier
Jesse Guthrie
John Herrington
JoAnna Wright
Thunderbird Chapter
PFC Tori L. Buckman
SFC Grant Carter
SFC James Mahan
SPC Janae L. Ramirez
SPC Ivan Rivera
SPC Tyler D. Strong
SSG Melissa K. Underwood
Volunteer Chapter
WO1 Aaron B. Aguirre
WO1 Frank E. Green
Voodoo Chapter
SPC Michael Z. Adams
Washington-Potomac Chapter
CSM Phillip Peguese
Carlos Vicens
No Chapter Affiliation
CW5 Brian Bentley
CW2 Drew Boudrieau
CW4 Fred Bundy
CW3 Matthew Crysler
Matthew C. Lawrence
SPC Arthur C. Perez
SPC Olivia Smith
CAPT Shannon Williams

Lost Members

Help AAAA locate a lost member from this list and receive a FREE one month extension to your AAAA membership.
PFC Anthony Aleman
CPT Robert S. Boham
Harold V. Bowie Jr.
MAJ James E. Bruckart
SPC Brett Christopher Butler
E. W. Cavanaugh
LTC Richard G. Cercone Jr.
LTC Tzu-Shan Chang
SPC Derrell L. Coats
MAJ Harry L. Connors Jr. Ret.
Bruno Cussigh
SGT Travis Bonham Darnell
CW3 Matthew John Decker
2LT Arthur W. Galloway
Michael F. Glass
MAJ Gregory W. Glover
LTC William T. Goforth
Mary H. Gorman
COL Gerhard Granz, Ret.
Trevor Harker
COL Jose L. Hinojosa, Ret.
SFC Carroll Elmo Hinson V
CW4 Delbert Jackson, Ret.
MAJ Gregory R. Jenkins
MAJ David A. Jobe
LTC Peter D. Kowal
Beth N. Kramer
CW3 Vladimir Kultschizky
CW3 Timothy J. Larz
MSG David W. Little, Ret.
SPC Poblo C. Lopez
SFC Jim P. Moore
Fred A. Newcomb
SFC Henry R. Rathbone, Ret.
Brendon A. Roan
SPC Cameron B. Rumbo
LTC Martin Scheld
Thomas R. Schiltz
LTC Jerry D. Scott
SPC Jeremy L. Sharkey
SPC Shelton T. Shia
MAJ James F. Speelman
LTC Friedrich Stern
WO1 Armando B. Torres
Kevin L. Tucker
Rose Weast
Nadia O. Whatley
SSG Johan G. Zara

AAAA Family Forum

By Judy Konitzer

From Sesame Street to Youth Sports

Concussion Awareness

Time really flies, but has it really been 50 years since the beloved Sesame Street began its flagship program with iconic and lovable characters aimed at reaching children in their early years? The creators relying on research realized that before the age of 5, a child's brain grows faster than at any other time, laying the foundation for all learning, behavioral, physical, and mental health and decided to help young children reach their full potential through a variety of creative initiatives. I asked our "Magnificent 7" now ranging in age from 34 -50 who their favorite characters were, and all had amazingly quick responses from Big Bird to Snuffleafagus to Kermit etc. How fun to have such happy memories!

Sesame Street Workshop Initiatives for Military Families

Fast forward to 2006 when Sesame Street expanded its Workshop program (a non-profit educational organization) to offer initiatives for Military Families. *Sesamestreetformilitaryfamilies.org* is the online hub providing multi-media resources designed to help families navigate the challenges of military life, deployments, homecomings, grief and loss, military to civilian initiatives, staying healthy as a family, and more. Since its inception, the initiative has grown to include bilingual videos, storybooks, activities, TV specials, several "Sesame Rooms" in military spaces, with new topics and outreach programs added regularly.

In the U.S. we have an estimated 5.5 million caregivers for former or current military personnel with few resources devoted to little ones to help them understand the changes caregiving can bring to their lives. To address this, Sesame Street launched its latest "Caregivers Initiative" program in August. Its purpose is to help children understand, cope with, and ask questions about their parents military service and address "why their parents may look or act differently than before;" how to express complicated or confusing feelings; how their parent's injury or illness can change over time; and how to describe their family's new situation to themselves and others. There are 3 videos, mobile games, an activity board, and articles for parents about how to answer their children's questions,

Interesting to me as I did research for this article, was that Sesame Street Workshop produces programs in over 150 countries and in 70 languages. I was fascinated seeing videos showcasing children in Syria and Afghanistan. I encourage our readers to explore Sesame's programs and share them with anyone who is unfamiliar with them at *Sesameworkshop.org*

Youth Sports Programs and Facts About Concussions

Sports are a great way for children and teens to stay healthy and do well in school, but the chance for injuries and concussions is possible. A concussion is a type of traumatic brain injury (TBI), caused by a bump, blow, or jolt to the head or by a hit to the body that causes the head and brain to move quickly back and forth. This fast movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging brain cells.

PHOTO COURTESY OF SESAME STREET

Sesame Street's newest initiative for Military Families/Caregivers' video shows Rosita and her Mom and Dad embracing each other and how important this is when facing challenges. Rosita had been dancing with her Dad who is confined to a wheelchair after being injured during a deployment. She happily discovered that he was still the same Dad even with his disabilities.

CDC (Centers for Disease Control & Prevention) offers some facts to recognize symptoms and how to help lower your children's chances of getting a concussion:

1. Work with the coach to teach ways to lower the chances of getting a concussion.
2. Emphasize the importance of reporting concussions and take time to recover from one. Some think that if they report symptoms, they will lose their position on the team or look weak. Remind them that it is better to miss one game than the whole season.
3. Notice some signs and symptoms like losing consciousness, even briefly, appearing dazed or stunned, not being able to recall events prior to or after a hit or fall, experiencing headache or pressure in head, dizziness, or double or blurry vision, confusion, and just "not feeling right". More serious signs are increased headache, vomiting or nausea, convulsions, unusual behavior, unequal pupils, slurred speech, weakness, numbness, drowsiness, or loss of consciousness. If symptoms seem serious call 911 or take the child to urgent care or an emergency room.
4. If you suspect a concussion, keep your child out of play the day of the injury. Have a health care provider evaluate for concussion. If a child continues to play with a concussion or returns too soon - while the brain is still healing - there is a greater chance of getting another concussion and this can be very serious and affect a child or teen for a lifetime, it can even be fatal. Learn more at *cdc.gov/HEADSUP.*

Judy Konitzer is the family forum editor for ARMY AVIATION; questions and suggestions can be directed to her at judy@quad-a.org.

Thank You To Our Scholarship Fund Donors!

*AAAA recognizes the generosity of the following individuals, chapters and organizations that have donated to the Scholarship Foundation from January through October, 2019. The list includes donations received for all scholarships, as well as the General Fund which provides funding to enable the chapter, corporate, heritage and individual matching fund programs as well as national grants and loans. Donors marked with an * are partially or totally for the Families of the Fallen Scholarship. Every penny donated to the Scholarship Foundation goes directly to a grant or loan as a result of the Army Aviation Association of America subsidizing ALL administrative costs!*

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For more information about the Foundation or to make a contribution, go online to www.quad-a.org; contributions can also be mailed to AAAA Scholarship Foundation, Inc., 593 Main Street, Monroe, CT 06468-2806.

AAAA **Legislative** Report

By LTC Kevin Cochie, Retired
AAAA Representative to the Military Coalition (TMC)
kevin.cochie@quad-a.org

Happy Thanksgiving...

…. or is it Ground Hog's day? It seems like the latter on Capitol Hill since Congress has once again failed to meet their annual deadlines for completing the National Defense Authorization Act (NDAA) and Defense Appropriations Bill on time this September. Last year for FY2019, they accomplished this for the first time in over 10 years. So, should we assume they are going to pass legislation by Thanksgiving resulting in us being thankful that our politicians did their duty to provide for predictable defense spending? I guess it depends how sympathetic you feel on Thanksgiving Day and your compassion for the political impasses that result in Continuing Resolution (CR) situations.

On Sept 27th, the President signed a seven-week short-term funding resolution that Congress sent him just days before the end of the fiscal year. The goal is that Congress will have more time to work out long term resolutions for all the government agencies because in theory, they already agreed to two-year DoD funding levels, but there are considerable controversies concerning domestic programs. The CR allows for DoD funding at 2019 levels. This is fine, except if there are new 2020 programs, that did not have funding in 2019 and will be delayed until the CR is over.

What Now?

Ideally, you will be carving your Turkey and happy that, on Nov. 21, Congress worked out their issues and passed final appropriations bills funding the government for 2020. Ideally, we will be able to give thanks for our brothers deployed around the world, our families, and thanks to our political leaders for meeting the Nov. 21 timeline and an exit to the CR. Unfortunately, this is extremely optimistic. The reality is that there is a lot of arguing going on in Washington, D.C. and signals of a potential "Yearlong CR" are being transmitted around the Beltway.

Yearlong CR?

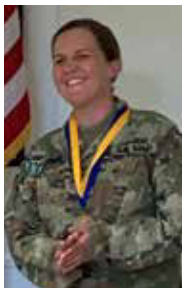
Is this a big deal? Yes, if Congress fails to pass a defense appropriations bill and exit the CR, the impacts are extensive. In its most basic form, the continuing CR means that the 2020 budget will only provide funding at 2019 levels. For example, if the Army planned to buy X number of Black Hawk Helicopters in 2020, an increase from what they bought in 2019, they are capped at the amount of money they spent in 2019. This hurts our ability to field new capabilities to the operational force. This hurts the defense industry partner's ability to plan production lines and workforce management. This hurts the Army's ability to plan and manage logistics; same as it hurts contractor's ability to manage supply chain. A yearlong CR broken up into multiple stop gap spending CRs creates a volatile and unpredictable situation for the entire Army Aviation enterprise. This is an example that illustrates the impact on modernization. The same argument holds true for operations and maintenance dollars that funds flying hours and maintenance programs. And the same argument applies to RDTE funding that seeds programs such as Future Vertical Lift. Continuing resolution means unpredictability for both the DoD and defense industry and is detrimental to our National Security.

FY21 Budget Process Amidst Chaos

So, one may ask, with all the unpredictable budget talk, what does that mean for the future funding of our programs? How does our Army Aviation leadership plan for next year when we are not even fully funded for this year? Those are great questions and the reason why we depend on leadership that thrives in chaotic situations. The minute you fall in love with your plan in Washington, D.C. is the minute you are going to come unraveled. We saw this years ago with Aviation Restructure Initiative (ARI) and the plan to reallocate all Army National Guard Apaches to the active force. Hope this isn't "too soon" to use that example for those that bear the battle wounds when Congress did not let the plan happen the way it was laid out. What we are saying here is that our Army and Army Aviation Leaders must remain rigidly flexible when working with Congress. It's nearly impossible to deliver an FY2020 budget request to Congress in February that is built on a stable budget process from the preceding year. How we successfully deal with this situation is twofold. First, as I already mentioned, we need leaders that understand the process and thrive in the ever-changing political dynamics of Washington. BG McCurry is a good example. He has a tremendous amount of time working this process and has developed trusting/transparent relationships with our lawmakers. The other way we can deal with uncertainty in the budget process is by leveraging processes built into the Congressional budget process. This includes the annual unfunded requirements lists (UFRs) which are a big part of the annual process that influence changes to the budget request after it has gone over to Congress. Also, there are above and below threshold reprogramming actions that influence changes to the authorizations that Congress grants each year. So, the way we deal with the chaos is through great leadership that thrives on being flexible and understands the processes that allow them to adjust throughout the Congressional process.

Order of St. Michael and Our Lady of Loreto Inductees

Bavarian Chapter


CHAPTER COURTESY PHOTO

CPT Amie Sughroue is inducted into the Bronze Honorable Order of St. Michael on Saturday, Sept. 28, 2019 by chapter president LTC Phillip Lamb. Sughroue was recognized for her dedication and selfless contributions to Army Aviation since 2012 as an Aeromedical Physician Assistant and Flight Surgeon with the Nebraska ARNG and for the last year on active duty with Falcon Team at the Joint Multinational Readiness Center, training units across USAREUR on MEDEVAC and medical standards and operations.

Idaho Snake River Chapter


CHAPTER COURTESY PHOTO

Stephanie Cantrell is induced into the Honorable Order of Our Lady of Loreto by chapter president, COL Christopher T. Burt Aug. 3 at . She was recognized for her tireless work in support of Army Aviation Soldiers and their families over the last 12 years, to include as the Family Readiness Group leader for both the 183rd ARB and Aviation Group. She became certified as a local instructor for the FRGs and trained command teams on FRG programs.

Mid-Atlantic Chapter


CHAPTER COURTESY PHOTO

CW3 Michael Frey and his wife, **Elaine,** pause for the Kodak moment after being inducted into the Bronze Honorable Order of St. Michael and the Honorable Order of Our Lady of Loreto respectively, by chapter president, COL (Ret.) John Gallagher at Joint Base McGuire-Dix-Lakehurst, NJ on Aug. 3, 2019. The couple was recognized for their many contributions to Army Aviation and Aviation Soldiers over the course of 41 years of military service.

Narragansett Bay Chapter


CHAPTER PHOTO BY OFFICER CANDIDATE ALEXANDRA CURTIS

SGT (Ret.) John W. Houston IV is inducted into the Bronze Honorable Order of St. Michael by chapter president, COL Andrew Chevalier (left) and MG Christopher Callahan (right) the Rhode Island Adjutant General, during an Aug. 9, 2019 recognition ceremony at Joint Forces Headquarters, Cranston, Rhode Island. Pictured with Houston are his wife, Patricia, and U.S. Senator Jack Reed, ranking member of the Senate Armed Services Committee. Houston was recognized for his distinguished service in Vietnam as an Observation/Scout and UH-1 helicopter repairer and crew chief with continued service in the RIARNG.

Tennessee Valley Chapter

AAAA National Senior Vice President, MG (Ret.) Tim Crosby inducts **Mr. Richard O'Connell** *(top photo next column)* into the Bronze Honorable Order of St. Michael together with COL Greg Fortier, Project Manager Cargo Helicopters, during a June 5, 2019 ceremony at Redstone Arsenal, AL. O'Connell was recognized for his decades of contributions to the CH-47 program culminating as a tech analyst at the Aviation Capabilities Development & Integration Directorate (CDID) at Ft. Rucker, AL.


CHAPTER PHOTO BY MARK MARQUIS


CHAPTER COURTESY PHOTO

MAJ Ryan McDonald, an experimental test pilot with the Aviation Flight Test Directorate of the Redstone Test Center, is inducted into the Bronze Honorable Order of St. Michael by RTC commander, LTC Joe Minor, on Aug. 22, 2019 at Redstone on the occasion of his change of duty. McDonald was recognized for leading the RTC's largest experimental flight test division and his service to Army Aviation during four combat rotations, accumulating over 2,200 flight hours (including 1,100 combat hours in Afghanistan). He is moving to PEO Aviation where he will serve as an assistant project manager.

Chapter News *Continued from page 57*

Wright Brothers Chapter Aviation Ball

AAAA Wright Brothers Chapter, with the assistance of AAAA National, and the Veterans of Foreign Wars helped support the 2019 Ohio Aviation Ball, Aug. 10 at Villa Milano in Columbus. This event was a culminating dining-out with 250 members of the Ohio Aviation Family, Army National Guard Aviation, and retirees and their guests attending. Virtually all Ohio Army National Guard Aviation units will be deployed in the next year, and the evening was designed to bring the entire organization under one roof to celebrate the State's rich aviation history and the upcoming year. This is only the second statewide Army Aviation Ball in 20 years.

Industry News

Announcements Related to Army Aviation Matters

Editor's note: Companies can send their Army Aviation related news releases and information to editor@quad-a.org.

Two More FARA Entries Unveiled

Bell 360 Invictus

BELL GRAPHIC

Karem Aircraft AR-40

U.S. ARMY PHOTO BY VISUAL INFORMATION SPECIALIST PASCAL DEMEULEIRE

In early October, Bell Textron unveiled its 360 Invictus prototype and two weeks later Karem Aircraft introduced its AR-40 entry into the Future Attack Reconnaissance Aircraft (FARA) competition, both of which were on display at the Association of the United States Army 2019 Annual Meeting in Washington, DC in mid-October. They are the most recent two of five designs competing for the Army's Future Attack Reconnaissance Aircraft – the other two that have been revealed are the Sikorsky and AVX competitive prototypes; Boeing is the one contender still deliberately concealing its design at press time.

DoD Announces Enterprise General Purpose Cloud Contract Award

On October 25, Microsoft Corporation, Redmond, WA, was awarded a firm-fixed-price, indefinite-delivery/indefinite-quantity contract with a ceiling value of $10,000,000,000 over a period of 10 years, if all options are exercised. The JEDI Cloud contract will provide enterprise level, commercial Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) to support Department of Defense business and mission operations. Work performance will take place at the awardee's place of performance. The base contract period is two years; Fiscal 2020 operations and maintenance funds in the amount of $1,000,000 are being obligated on a task order against this award to cover the minimum guarantee. The expected completion date is Oct. 24, 2029, if all options are exercised.

Contracts –

(From various sources. An "*" by a company name indicates a small business contract)

General Atomics Aeronautical Systems Inc., Poway, CA, was awarded a $29,316,074 modification to contract W58RGZ-19-C-0027 for performance based logistics support services for the MQ-1C Gray Eagle unmanned aircraft system; work will be performed in Poway, with an estimated completion date of Sept. 4, 2020.

Honeywell International Inc., Phoenix, AZ, was awarded a $46,965,295 firm-fixed-price contract for overhaul and repair of the T55-GA-714A engine; work will be performed in Phoenix, with an estimated completion date of Sept. 30, 2020.

Leidos Inc., Reston, VA, was awarded a $72,470,367 modification to contract W911QX-16-C-0012 for support of continued operations, sustainment and integration of the Saturn Arch Program; work will be performed in Bridgewater, VA, with an estimated completion date of Sept. 16, 2020.

Meggitt Defense Systems Inc., Irvine, CA, was awarded a $48,563,836 hybrid (cost-plus-fixed-fee and firm-fixed-price) contract for development, production, field operations support, installation support, training, cyber security support, systems and spares production and repairs of the Aerial Weapons Scoring System; work locations and funding will be determined with each order, with an estimated completion date of Sept. 8, 2024.

Moog Inc., Elma, NY, has been awarded a maximum $41,773,400 firm-fixed-price, indefinite-delivery/indefinite-quantity contract for aviation cylinder assemblies; this is a five-year contract with no option periods; location of performance is New York, with a completion date of Sept. 1, 2024.

Woodward Inc., Loves Park, IL, has been awarded a maximum $113,429,656 firm-fixed-price, indefinite-delivery/indefinite-quantity contract for aviation turbine engine main fuel controls; this is a five-year contract with no option periods; location of performance is Illinois, with a completion date of Sept. 20, 2025.

UPCOMING EVENTS

DECEMBER

14 120th Army/Navy Game, Lincoln Financial Field, Philadelphia, PA

JANUARY 2020

1 Submission Deadline – National Awards

10 ARMY AVIATION Magazine 2019 Photo Contest Deadline

27-30 HAI Heli-Expo 2020, Anaheim, CA

Advertisers Index

FALLEN HERO

AAAA is saddened to announce the loss of the following Aviation Soldier.

MRS. JENNIFER REIDY PERSONAL PHOTO

CW4 Reidy

Chief Warrant Officer 4 Paul Joseph Reidy, of Dothan, Alabama, was killed when his AH-6i crashed during a training flight at Khashm Al An airfield in Riyad, Saudi Arabia on September 6, 2018. One other crewmember was injured.

At the time of the mishap, CW4 Reidy was assigned as an instructor pilot and systems manager in the Office of the Program Manager-Saudi Arabian National Guard.

May he rest in peace.

(Information from Defense Department news releases and other media sources on Oct. 7, 2019.)

AAAA **Awards**

Order of St. Michael Recipients

SILVER

COL Adrew W. Batten
CW5 Brian C. Ellis
COL William D. Jackson
LTC Phillip E. Peters II

BRONZE

MSG Phillip R. Baldwin
MAJ John Q. Bolton
SSG Rebecca M. Castro
SSG Kara D. Clark
CW3 John Curatella
CW3 Paul Deaton
SGM Jose A. Fontanez
CW3 Dallas Garza
Michael A. Horrocks
CW4 Andrew F. Hudson
SFC Stephen Jackson
CW3 Michael J. Lawrence
CW3 Barry Mathias
CW4 Robert J. McCurdy
CW3 James R. Miller
CSM Andre Patterson
MAJ Kevin Power
1SG James J. Reeves
CW4 Trevor James Saari
CW4 Thomas Shellhart
CPT Amie D. Sughroue
CW3 Randy L. Varady
Steven A. Wade
SFC Jamie C. Werley
DAC MacKinsey Woodford
SFC Patrick Youngpeter

Honorable Knight Recipients

CPT Thomas H. Bloomer
MG Ronald P. Clark
1SG Jason D. Cox
CSM Brian A. Hester
CPT Jeffrey P. Kelly
MSG Jimmy L. Lancaster
CPT Benjamin Mackey
CSM JoAnn Naumann
COL Leo Wysznski

Our Lady of Loreto Recipients

Jessica Anthony
Kelly C. Bolton
Regina Irwin
Deidre B. Lockhart
Aaron Martin
Michelle Roush
Andrea Yielding

Nominate a Soldier TODAY!

AAAA Award Nominations Are Open NOW!

Awards To Be Presented at the Annual Army Aviation Mission Solutions Summit:

- Joseph P. Cribbins Department of the Army Civilian of the Year
- James H. McClellan Aviation Safety Award
- Henry Q. Dunn Crew Chief of the Year
- Army Aviation Soldier of the Year
- Rodney J.T. Yano NCO of the Year
- Michael J. Novosel Army Aviator of the Year
- Robert M. Leich Award
- Army Reserve Aviation Unit of the Year
- John J. Stanko Army National Guard Aviation Unit of the Year
- Active Army Aviation Unit of the Year
- Outstanding Army Aviation Unit of the Year
- Top AAAA Chapter of the Year
- Top Senior Chapter of the Year
- Top Master Chapter of the Year
- Top Super Chapter of the Year

Nominations Due: January 1, 2020

People On The Move

Aviation General Officer Retirement

FACEBOOK PHOTO

MG Troy Kok (right) retired from active duty during a ceremony hosted by MG John Evans, commanding general of U.S. Army Cadet Command, on October 25, 2019 at Fort Knox, KY with his wife, Sara, and family by his side. A Senior Army Aviator with more than 37 years of service, his terminal assignment was commanding general of the U.S. Army Reserve Accessions Task Force.

Awards

CPT HEISLER PERSONAL PHOTO

CPT Lindsay Gordon Heisler, Class of 2012, was selected by the West Point Association of Graduates to receive the 2019 Alexander Nininger Award for Valor at Arms. She is the first woman to receive the Nininger in the 14-year history of the award, which was presented on October 24, 2019, at West Point, New York.

In 2015, Heisler deployed as a platoon leader with Alpha Company, 1-101st Aviation Regiment, Task Force Shadow, to Bagram, Afghanistan in support of Operation Freedom's Sentinel. On December 5, 2015, she was serving as a co-pilot/gunner of an AH-64 Apache helicopter with CW2 David Woodward when they received orders to assist the 160th Special Operations Aviation Regiment with the extraction of a Ranger unit engaged in a firefight with enemy troops near the border of Afghanistan and Pakistan. Once over the objective area, Heisler proceeded to engage the insurgents with 120 rounds of 30mm high explosive dual purpose ammunition. Heisler and Woodward positioned their Apache directly between U.S. troops and enemy forces as the extraction got underway, continually using rounds from their 30mm chain gun to draw fire away from the assault force and suppress the enemy in the area. According to the narrative of the Distinguished Flying Cross she received for her actions, "1LT Gordon's exceptional aerial coverage and application of timely and accurate fires allowed the Helicopter Assault Force to safely land and extract the ground force despite the assault aircraft receiving significant battle damage on the LZ."

In addition to the Distinguished Flying Cross, Heisler has been awarded two Air Medals, the Army Commendation Medal with oak leaf cluster, the Army Achievement Medal with oak leaf cluster, the Combat Action Badge, the Aviator Badge, and the Air Assault Badge.

She will soon take her second company command of Delta Company, 1st Attack Reconnaissance Battalion, "Wolfpack," 82nd Combat Aviation Brigade, at Fort Bragg, NC.

Promotion Selections

FY 20 Army Sergeant First Class Selection Board Results

The fiscal year 20 Sergeant First Class promotion board results were released August 8, 2019.
AAAA congratulates the following 306 Staff Sergeants on their selection.

ACTIVE COMPONENT

NAME	MOS
Adams Ben Jr	15E3
Addison Lance Mitchell	15T3
Aguilar Steven Christopher	15N3
Allen Carl Xavier	15U3
Allen Nicholas Ryan	15B3
Alvarado John Kliver	15E3
Amos Christopher Daniel	15G3
Anderson Andrew Paul	15B3
Andres David William	15U3
Angel Talin Jareth	15W3
Anzola Rivas Magdiel Isaac	15N3
Arafat Adam Neil	15Y3
Aramanairajan Arun	15W3
Archer Joe Thomas II	15T3
Arechiga Jessica Ann	15P3
Arochopujols Luis A	15U3
Arrowood Calen Levi	15H3
Arterburn Chris Clay	15H3
Avera Austin Wade	15P3
Babauta Glen Michael	15U3
Baer Nathaniel Lee	15U3
Bagwell Johnny Grant	15T3
Baker Howard C	15R3
Barker Todd Andrew	15T3
Batts Joseph James	15U3
Bell William Alexander	15N3
Benson Daniel Adam	15Q3
Benson Ethan Richard	15W3
Bezner Raymond Lee	15U3
Bird Steven Dean	15T3
Blair Jacob Allen	15W3
Blassingame Brandon Wayne	15T3
Boisseau Christopher Lynn	15T3
Bowman Justin Charles	15R3
Broehm Joshua Thomas	15R3
Brosnihan Timothy Raymond *	15U3
Broxson Lucas Lee	15R3
Burns Brent Richard	15T3
Burns Jory Christopher	15T3
Busjahn Steven Allen	15U3
Buss Keith Gene	15T3
Bynes Naomi Kyong	15U3
Cabrales Wayne	15B3
Calderon Freddy Miguel	15F3
Cales Phillip Michael	15Y3
Caletz Ricardo Antonio *	15T3
Camachoquinones Francisco J	15E3
Campbellclay Brandon Scott	15R3
Canizares Edison Francisco	15T3
Carneal Clint Joshua	15B3
Carnes Gaige Allen	15E3
Carriere Shawn Patrick	15Q3
Carter Buford Daniel	15G3
Carter Shamika Nicole	15P3
Castelli Aaron Thomas	15T3
Cervantesgonzalez Luis Edua	15T3
Cole Michaela Marie	15Q3
Comstock Rajesh Michael	15T3
Contreras Frank Fraga Jr	15P3
Cook Justin David	15T3
Cosico Perciben M	15H3
Cox Cody Lynn	15G3
Cox Justin Crozier	15T3
Crabtree Jermeny Ray	15P3
Crutcher John Michael	15W3
Cuevasmartinez Angel Antoni *	15E3
Cummings Steven Leslie Jr	15B3
Curry Amanda Michele	15T3
Cutwa Joseph Louis *	15R3
Daniels Joseph Scott	15T3
Dartt Daniel James	15Q3
Davis Cory Richard	15R3
Davis Matthew Leonard	15U3
Dejesusbones Jose Carlos	15Q3
Delacruz Frank	15R3
Deschinny Ronald Mattew Jr	15E3
Deshane Vance James	15T3
Diaz Jose Ramon	15W3
Diazmorales Emanuel	15N3
Dobson Daniel Joseph	15Q3
Dodds Corey Gene	15W3
Doss Mikel Annginette	15P3
Downey Carson Jeffrey	15W3
Draper Leah Marie	15P3
Dunbar Jon Harold	15T3
Dunn Kelly Louise	15G3
Ende Jeffrey Michael	15T3
Engel Jason Michael	15U3
Engelman Jacob Joseph	15U3
Engstad Donne Francis II	15U3
Erskine Benjamin William	15G3
Esquilinbaez Hector Elyn	15R3
Ferguson Michael Scott	15Q3
Finucane Patrick Stephen	15U3
Fish Gabriel Heman	15Q3
Forenski Jacob Michael	15T3
Foster Thomas Dewitt	15T3
Fowler Andrew Paul	15T3

People On The Move

Flight School Graduates

AAAA provides standard aviator wings to all graduates and sterling silver aviator wings to the distiguished graduates of each flight class ... *another example of AAAA's* ***SUPPORT*** *for the U.S. Army Aviation Soldier and Family.*

AAAA congratulates the following officers graduating from Flight School XXI at the U.S. Army Aviation Center of Excellence, Fort Rucker, AL.

38 Officers, September 26, 2019

Commissioned Officers

1LT Butler, Amanda M. -DG
2LT Kunze, Cole J. -HG
CPT Mason, Christian D. -HG
2LT Baker, Corey J.
2LT Chrzanowski, Nicole A.
2LT Dempsey, Kayla N.
2LT Farley, Calan M.
2LT Fitch, Robert L.
2LT Gero, Edward W.
2LT Gimbert, Catherine G.
2LT Greene, Michele C.
2LT Lockwood, Michael R.
2LT McVey, Nathaniel T. *
2LT Patzer, Mason D.
2LT Schacht, Brian A.
2LT Stepan, Adam J.
2LT Whitener, Colton B.

Warrant Officers

WO1 Rhine, Gregory A. -DG
WO1 Meinders, Jacob J. -HG
WO1 Richter, Kory O. -HG
WO1 Armstrong, Danielle R.
WO1 Balladares, Miguel A.
WO1 Balzer, Jacob J.
WO1 Bell, Colten R.
WO1 Bellon, Robert A.
WO1 Cabasag, Cliff
WO1 Cervantes, Johnny J.
WO1 Charsley, Royall D.
WO1 Council, Darren E.
WO1 Friang, Ashley B.
WO1 Funk, Frederick S. *
WO1 Haller, Joseph M.
WO1 Hobbs, Daniel J.
WO1 Jackson, Dallas C.
WO1 Jenkins, Darius T.
WO1 Neuhalfen, Zachary L.
WO1 Owings, Ian B.
WO1 Parker, Kyle N.
WO1 Pichardo Sanchez, Hector M.
WO1 Rebne, Spencer S.
WO1 Scott, Garey S.
WO1 Seymore, Spencer J.

49 Officers, October 10, 2019

Commissioned Officers

2LT Lopes, Olivia C. - DG
2LT Cho, Bradley P. * - HG
2LT Coleman, Benjamin C. - HG
2LT Pham, Tyler H. - HG
2LT Betts, Michael J.
2LT Brumfield, Nicholas G.
2LT Cha, Young M.
2LT Cox, Tyler A.
2LT Hamman, Derek A.
2LT Heilmann, Richard R.
2LT Kelley, Taylor C. *
2LT Kumar, Sai C.
2LT Lipp, Michelle E.
1LT Lloyd, Chelsea L.
2LT Meaders, Madison S.
2LT Nieberding, Matthew A.
2LT Pogue, Billingsley G., IV
2LT Roth, Blaise C.
2LT Schell, Andrew R.
2LT Tcharkovski, Sergii R.
2LT Yopp, Zachary T.

Warrant Officers

WO1 Cuthbert, Mark A. * - HG
WO1 Horning, Jedediah C. * - DG
WO1 Nixon, Philip A. - HG
WO1 Sands, Christopher T. - HG
WO1 Scott, Zachary T. - HG
WO1 Biehl, Joshua L.
CW2 DeArmond, Brandon W.
WO1 Ellers, Daniel J.
WO1 Griffin, Cody L.
WO1 Hansen, Paul A.

FSXXI-September 26, 2019

FSXXI-October 10, 2019

ALL PHOTOS: U.S. ARMY PHOTO, FORT RUCKER PUBLIC AFFAIRS

WO1 Hunt, Drew M.
WO1 Kanakis, Mason J.
WO1 Kimple, Kyle F.
WO1 Koel, Leighton J.
WO1 Kopp, Steven W.
WO1 Martin, Jonathan M. *
WO1 Mazon, Joshua M.
WO1 Morrison, Ian T.
WO1 Neglia, Daniel M.
WO1 Olson, Benjamin L.
WO1 Ortiz, Kenneth D.
WO1 Reilly, Patrick S.
WO1 Rickard, Patrick A.
WO1 Rigsby, Brian A.
WO1 Ryan, Richard P.
WO1 Shipp, Wyatt A.
WO1 Smith, Amanda I.
WO1 Valentin, Ashley A.

DG: Distinguished Graduate
HG: Honor Graduate
* = AAAA Member

FY 20 Army Sergeant First Class Selection Board Results *continued*

Francisco Daniel Lee	15T3	Hagler Nicholas Scott	15W3	Kay Dennis Scott *	15T3	Leno Syriah Janae	15Q3
Frasher Joshua Alan	15P3	Haines Jacob Alexan	15Q3	Kealy Thomas Jonathan	15T3	Lewis Rebecca Ann	15U3
Frazier Zachary Vern	15P3	Hammond Elton Foster IV	15R3	Keasler David Franklin	15E3	Lheureux Jordan Matthew	15W3
Fry Travis Channing	15T3	Hansen Shelby Lee	15U3	Keesee Korey Doff	15T3	Linscott David Allen	15U3
Gallardo Matthew David	15T3	Harper John Carl	15E3	Keith Andrew Ford	15T3	Lisbey Barbra Rahab	15P3
Gardner Kyle William	15N3	Hendrix Shane Allen	15W3	Kern Caleb Joseph	15B3	Londono Gustavo Adolfo	15P3
Gerohimos Vassilios Ioakim	15D3	Hicks William Ryan	15T3	Kessel Ian Christopher Stev *	15H3	Lopez Adrian Velazquez	15P3
Gomez Jorge Paul	15E3	Hodge Dedward Lamont	15N3	Kiesel Stephen Joseph	15R3	Lopez Michael Edward	15E3
Gonzales Elizabeth G *	15Q3	Hoskins Sandra Lee	15U3	Kim Hee Jun	15R3	Lyon Elizabeth Sarah	15E3
Gordley Andrew Charles	15E3	Houtz Brandon McNair	15T3	Kimmel Cody James	15R3	Macauley Stanley David	15T3
Gosney Coy Anthony	15P3	Howell Michael Lynn	15R3	King Samuel Wyatt *	15W3	Mafurirano Tapiwa Lovemore	15E3
Gravitt Cameron Bruce II	15U3	Huey Richard Clark III	15T3	Kiser Christopher Jo	15E3	Mahaffey Anthony Jonathan *	15P3
Gray Joshua Akeem	15W3	Hummel Bodie Jake	15T3	Klatt Jerry Dean	15D3	Marshall Joshua Matthew	15Q3
Greek Joshua Edward	15W3	Ibarra Ivan	15T3	Klinetobe Alex Theodore	15W3	Martinez Anthony Paul	15G3
Green Bernard Taylor	15Q3	Izquierdo Rolando Jr	15R3	Kohler Dwight Richard +	15T3	Marzolf Grant Nathaniel	15T3
Green John L Jr	15W3	Jackson Joshua Blake	15T3	Lang Matthias Charles	15W3	Mason Robert Nolan	15T3
Grieser Joshua Douglas	15T3	James Aaron Christopher	15Q3	Lawson Joshua James Ryan	15U3	Mays Matthew Aaron	15P3
Guzman Christopher Charles	15W3	Kakuse David Go	15N3	Lawson Methodia M	15P3	McCarthy David Andrew	15W3
Haase Nathan R	15R3	Karas Kyle Anthony	15W3	Le Brian Andrew	15W3	McComb Kiki Waters *	15P3

People On The Move

FY 20 Army Sergeant First Class Selection Board Results *continued*

McDonald Mark Christopher 15T3
McDonnell Michael Caleb 5R3
McDow Sean Adam 15W3
McGinnis James Paul 15Q3
McGuire Jesse Earl 15W3
McGuire Jordy Daniel 15T3
McMillan Andrew Glenn 15W3
Melendezcruz Angel Anibal 15F3
Mendoza Anthony Ramon 15T3
Mercer Derek Alan 15E3
Meza Michael Anthony * 15G3
Milburn Marvin Ray 15R3
Mitchell Corey Lamar 15T3
Moen Tyler Curtis 15P3
Montemayor Javier III 15R3
Moore Marcus Brandon 15T3
Moreno Bryan Adam 15H3
Morford Kevin Dean * 15G3
Morgan Joshua Stuart 15P3
Myers Dustin James 15U3
Nachbauer Edmond John 15W3
Nettles Phillip Rasheed 15T3
Nicholson Anthony Herman * 15B3
Nieveszayas Carlos Edgardo 15P3
Nissen Adam Seth 15U3
Nordin Hunter Simpson 15W3
Oldar Brian Andrew 15R3
Olivares Carlos Javier 15R3
Oneal Danny Sterling 15U3
Oyster Jacob Scott 15T3
Padilla Echo Brook 15Q3
Palacat Adam Keolanui 15R3
Parker Jeffrey Brian 15Q3
Parks Brandon Keith 15U3
Pease Ryan Michael 15T3
Penaflor Hesse Mendoza 15U3
Pennington Daniel Walter * 15U3
Pflieger Scott Michael 15U3
Phillips Joseph Anthony 15Q3
Podruchny Matthew Paul 15P3
Potts Jason Alan 15W3
Pugh Bryan Mitchell * 15R3
Pybas Cody Allen 15P3
Quinonescolom Michael Gabri 15P3
Raker John Glenn 15R3
Reavis James Stephen 15U3
Recker Samantha Marie * 15T3
Reed Alex Tsikalov 15P3
Rewerts Tyson Lynn 15U3
Riley Robert Charles 15U3
Rivord Matthew Robert 15T3
Roach Danny Lee 15Q3
Robinson Kendrick Deandre 15P3
Rocklein Johnhenry Delperci 15T3
Rodriguez John 15T3
Rodriguez Mario Frank 15Y3
Rogers Cameron Cordell 15N3
Rollins Eric Thomas 15P3
Rondon Freddy Alberto 15T3
Rondon Jose Torery 15P3
Roobol Patrick Ryan 15W3
Roscoe Ethan Cody 15E3
Rosipko Paul Jr 15T3
Rothman Jordan Keith 15T3
Russell Christopher Allen 15T3
Sadger Richard Earl 15T3
Salazar Eduardo Yanez III 15R3
Sallee Keith Arron 15T3
Salmon Travis Cameron 15T3
Sampson Gregory Leondias J 15P3
Santiago Julio Joseph 15R3
Santiagorios Abimelec * 15T3
Santillanes Sergio Odair 15T3
Saunders Christopher Alan 15T3
Scarbrough Brandon A N 15G3
Schuetz Adam Joseph 15G3
Scroggins Norman Richard 15N3
Simmons Jevan Mikhail 15P3
Sims Anthony Michael 15U3
Sims Nicholas Ray * 15W3
Smith Michael Ryan 15T3
Smith Raymond Paul Jr 15Q3
Snapp Tracy Ryan 15U3
Sneed Christian Pierre 15Q3
Soldat James Henry 15R3
Stancliff James Michael 15P3
Starks David Ryan * 15U3
Stevens Charles Ross V 15R3
Stretch Thomas Alton 15T3
Sullivan Jeff Rene 15W3
Surensvelazquez Edgar Alexi 15N3
Sweigart Kevin Michael 15U3
Tarbox Mark Eugene 15Q3
Thomas Jake Danilo 15T3
Thompson Adam Ryan 15T3
Thompson Christopher Wayne 5W3
Thompson Jesse Taylor 15D3
Thurnherr Eric J * 15R3
Tisdale Deshawn 15Q3
Tolbert Jonathan Matthew 15T3
Toliver Dylan James 15P3
Torres Adan Jonathan 15W3
Torres Lynette Chanell 15P3
Torres Mike 15T3
Tracy Gregory Arlo 15T3
Trejo Jesus Miguel 15G3
Trinidad Juan Luis Jr 15E3
Umanzor Roger Elmer Jr 15Y3
Uzhca Cristian Atilio 15N3
Velazquezmanana Johannes F 15W3
Vergantino Jason Thomas 15R3
Vick Michael Thomas 15P3
Vierk Kenneth Duane Jr 15W3
Villegas Benito III 15P3
Wallace Daniel Gregory 15H3
Warner Robert Richard 15T3
Warner Ronald Anthony II 15P3
Weber Christopher James 15Q3
Weeks Brandon Adam * 15R3
Wesley Deniz 15D3
Wilf David Leslie 15B3
Wilson Tillman Jr 15G3
Witherow Brandon Anthony 15W3
Yorgey Edward Joseph 15Q3
Young Jason Ty 15R3
Zarate Jose Luis 15U3

RESERVE COMPONENT

Mashaw Elizabeth Marie 15U3
Romero Javier A Jr. 15U3
Smith Job Nikolao 15U3
Whittaker Joshua Andrew 15U3

ADVANCED INDIVIDUAL TRAINING (AIT) GRADUATIONS

AAAA congratulates the following Army graduates of the indicated Advanced Individual Training (AIT) courses at the 128th Aviation Brigade, Joint Base Langley-Eustis, VA and the U.S. Army Aviation Center of Excellence, Ft. Rucker, AL.

AH-64 Attack Helicopter Repairer (15R)

Class 027-19
PVT Zayveon Williams - DG
PV2 Jeanclaude Abbot
PV2 Robert Anderson
PV2 Nathan Barnes
PV2 Ayisha Delrosario
PFC Ayelevikaka Kangnisoukpe
PVT William Vann
PFC Zachary Woodard
PV2 Edgar Solorio
PV2 Gabriel Villanueva
Class 028-19
PFC David Hayles – DG
SPC Jayson Dickens
SPC Tommy Eaton
SPC Denis Feaster
PFC Kenjoseph Hipolito
SPC William Hughes
PV2 Jephte Jeanlouis
SPC Josue Severinoawadallamusa
PV2 Daniel Valadez *
Class 521-19
PFC Chang Ohn-DG
PVT Jordy Palinoalmonte
PVT James Torres
PVT Brandon Kingery
PFC Zaujun Lahpai
PFC Charles Lanpher
PVT Darrin Oberschlake
Class 029-19
PFC Kish Charles – DG
PVT Jovane Barrett
PFC Matthew Cook
PVT Wonho Bang
PVT Edgar Basurtovalle
PVT Delfino Bellovega
PVT Joshua Brand
PVT Jose Carreraflores
Class 518-19
PV2 Glacius Misajon – DG
SPC Dylan Kopp
SPC Juan Melendez
PV2 Darrell Nelson
PV2 Cameron Pemberton
PV2 Arevalo Recinos
PV2 Joshua Rishel
PV2 Eugene Williams
Class 522-19
PVT David Gomez, Jr - DG
PVT Hector Gonzalezgarcia
PV2 Elizabeth Gossett
PVT Clayton Hamilton
PVT Zackary Hicks
PVT Shay Kardell
PVT Pedro Melendez
PFC Hernan Mendezflores
PVT Trevor Million
Class 030-19
PV2 Wilson Jonluke – DG
PVT Contreraszuniga Aldon
CPL Rodriguezgrenzow Heidi
PVT Dawood Ninos
PFC Flores Oswaldo *
PVT Harper Kaden
PVT Henderson Isaiah
PVT Kersey Trevor
PV2 Moreno Nikolas
PFC Nguyen Vu
SPC Oduro Kwabena
PVT Washer Stacey
Class 031-19
PV2 Nicholas Osborne - DG
PFC Josue Valentinrosa
SPC Michale Graham
SPC Nicholas Harris
SPC Brandon Newman
PFC Christopher Perezvillanueva
PVT Victor Rangel
PVT Austin Reichert
PVT Zachery Saterdal
PFC Maquan Simmons
PVT Jeremy Smith
PFC Coleman Stephens

CH-47 Medium Helicopter Repairer (15U)

Class 024-19
PV2 Russel L. B. Sanchez - DG
SPC Megan Marie Clary
PV2 Jacob James Derbin
PV2 Andrew Carl Johnson
PV2 Nathan Mckay Martin
PV2 Joel William Meyer
PV2 Joseph A. O. Moore
PFC Robert Hunter Polasek
PV2 Andrew Scott Rivers
PFC Tyler Preston Smith
PFC Ronald Thomas Soles Jr
Class 025-19
PV2 Joseph Hunter Elkins - DG
PV1 Aaron Elias Acosta
PFC Mark Anthony Hull
CPL Jeffrey Garrett Jones
PV1 Alexander M. Osburn
PV1 Sergio Garcia Osorio
PFC Cody Carlile Rants
PV1 Nino Lorenz Rodriguez
PV2 Dawson William Schopp
Class 026-19
PFC Garrett E. Janisch - DG
PV2 Zyon Noah Albiteruiz
PV2 Nicholas Patrick Cregan
SPC Justin Dale Dearman
SPC Eric D. Graham Jr
PFC Trajon Cole Hall
SPC Zacharia Hanners
PV2 Darien Luis Lopez
SGT David Alejandro Orellana
PFC Junkyung Park
SGT Michael Henry Purvis
PV2 Brennen M. Stephenson
Class 027-19
PFC Daniel E. Riveraromero-DG
SPC Emilio Clive Ebanez, III
PV2 Cabezas Juan Espinoza
PV2 Connor Lee Ferguson
SGT Brad Abarondo Ferreira
PFC Kelvin Gasper Kyariga
SPC Farias R. Mandujano
SGT Reyes Oscar Ortiz
SPC Michael David Outman
SPC Zachary Ryan Schaefer
PV2 Gavin Reid Stanley
PV2 Demetri N.Vorhees

UH-60 Helicopter Repairer (15T)

Class 061-19
PFC Lucas J. Fleishhacker - DG
CPL Khalid Ahmed A. Al Shehri
PV2 Dylan Van Dang
PFC Miranda Rae Davis
PV2 Edwin A. Duran Espiritu
PV2 Timothy James Gillis
PV2 Andrew James Gregory
PFC Nicholas B.Johnson
PV2 Joshua Adam Marshall
CPL Jaffrey S.Murankus
PFC Hector R. S.Navarro
SPC Matthew Devin Taylor
Class 062-19
SPC Isaac J. E. Gayo - DG
PV2 Joshua E. Black
PV2 Patrick Aaron Blair
PFC Ashton Kavan-Quinn Chastain
PV2 Nathaniel Lyle Davis
PV2 Bonventure O.Hayker

People On The Move

PFC Annande Kadanga
PV2 Cameron D. Leininger
PV2 Raul Dohran Lindo
SPC Emilio Maldonado
PV2 Christopher Gage Roth
Class 063-19
PFC Abhishek Kumar - DG
PV2 Bianca Jay Barnes
PV2 Tanner Maverick Branch
PV2 Gabreil Anthony Copes
PV2 Anthony Paule Garcia *
PV2 Stephanie M. Gerver
SPC Stephen Paul Kelley
PV2 Kristian L.Gonzalez
PV2 Lori Ruthsmith
SPC Zekun Zhang
Class 064-19
PV2 Tyrone C. Bennett - DG
PV2 Justen Joseph Allen
PFC Fernando D.Andrade
PFC Joseph Ginn Belcher
SGT Carl Glenn Boike
PV2 Christian N.Boodhoo
PV2 Rudsteven V.Burris
PV2 Jacob M. Delcastillomeyer
SPC Joseph A.Gamboa
SPC Mingeun Seo
PV2 Andrew Tyler Sullivan
PV2 Brandon M.Tomaselli
Class 526-19
PV1 Zachary J. Russell - DG
SPC Jonathon Mark Ellis
PV1 Darrell Mckinley Gainey
PV1 George C.Hutchison
PV1 Lee Klein
PV1 Jordan Michael Lamie
PV1 Giulio Magon
PV1 Christopher M.Obrien
PV2 Michael Tyler Rauch
PV1 William Eric Shockley Jr
PV1 Josue Ariel Sobrado
SPC Jared William Woodruff
Class 065-19
PV1 Davis Allen Gibson - DG
SPC Nicholas J.Arsenault
SPC Eric Larmont Barrett, Jr
PV2 Matthew Taylor Brannen
SPC Kristian Isiah Colon
PV1 Brandon R.Cunningham
PV1 Stephen Seth Eldridge
PV1 Kevin Christopher Flinn
PV1 Daniel Flores
PV2 Thomas W.Grieve IV
PV1 Alexander John Haag
Class 066-19
SPC Douglas A. Maguire Jr - DG
SPC Jeremiah Wayne Evans
SPC Craig Michael Firmin
PFC Brian Keith Lamont
SPC Harley Joe Morris
PFC James Bertram Payne IV
SPC Christian Gage Taylor
PFC James Douglas Terzigni
PFC Vu Tuan Tran
PFC Austin Robert White
PV2 Raaj Obrin Wright
PFC Isaiah Lrae Zimmerman
Class 527-19
PV1 Luke J. Shephard - DG
PV1 Justin Bryce Halbakken
PV2 Justin Charles Nelson
PV1 Rene Alvaro Orejel
SPC Garret M.Paddock
PV1 Derick Blake Pearsey
PV1 Nicholas J.Sammartino *
PV1 Brandon Nick Shandor
SPC Alexander Tyler Smith
PV1 Jordan Blake Taylor
PV1 Kyle Johnathan Tressler
Class 067-19
PFC Timothy J. Bote Sula - DG
PV2 Lucas Marc Adams
SPC Sheru Bhotia
PV2 Edgardo J. Bonet-Velazquez
PFC Georgiandanut Bozaidragos
PV2 Mykeillah Ren Dillon
PV2 Shawn Russell Giffin
PFC Kara Elizabeth Glasser
SPC Jasmin M.Greenstreet
PFC Jeremiah K.L. Guerrero
PV2 Zachary Wayne Merkins
PV2 Chloe Juaneta Temple
Class 068-19
PFC Sydney A.Davila - DG
CPL Nicholas David Bernier
SPC Samuel Edard Bilotti
PV2 Casey Michel Alan Brew
SPC Jerome Deluna
PV2 Mykeillah Ren Dillon
PV1 Cameron Ian Ford
PV2 Casey Joel Goluveia
PFC Giovanni Heredia
PV2 Walter Royer Jackson
SPC Brandon Francis King
SPC Glovanni J. Riveraramos
SPC Charles B.Sulwer
Class 528-19
PV2 Tucker L. Pickett - DG
PV1 Brishan H.Mccowan
PV1 Casey Clarke Orourke
PV1 Kyle Jacob Pritchett
PV2 Carlos A.Reyeschanales
PV1 Joshua Hunter Rich
PV1 Joseph Jr Richards
PV1 Zachary Z.Roberts
PV1 Jose Guadalupe Robles
PV1 Hunter Sean Smitha
PFC Jacop Ramsey Stewart
PV2 Trea Lee Travis

Aircraft Powerplant Repairer (15B)
Class 011-19
SPC Yoosung Park - DG
SPC Isaac Larbi Amoh
PV2 Joao P. Salinas Araujo
PV2 Lionel Omar Bernard
PV2 Shanard Miguel Brown
PV2 Austin Black Cook
SPC Nnabuike Kenneth Ezeh
PV2 Jared Anthony Flores
PV2 Pedro Jovany Jauregui
PV2 Janage Jamal Mason
PFC Xuan H. Tung Nguyen
PV2 David Joshua Peters

Aircraft Powertrain Repairer (15D)
Class 007-19
PV2 Caleb M. Carter - DG
SPC Elisei Ivanovich Cheban
PV2 Secretary M. Ekepde
SGT Aaron Joseph Keller
PV1 Aldon Aaron Sami
PV2 Raphael David Serrano
PV1 Lian S. Tung

Aircraft Pnedraulics Repairer (15H)
Class 011-19
PV1 Harley M. Gordon- DG
PV1 Caelan A.Ceregatti
PV1 Daniel D.Dingledine III
PV1 Trystin Allen Hart
PV1 Fabian Jonas Reina
PV1 Gavin E. Waldoch

Aircraft Structural Repairer (15G)
Class 009-19
SPC Daniyel Kim - DG
PV2 Taylor Jarrod Ayers
SSG Michael Kevin Bergin
SPC Trevor A. Clere
SGT Allen J. Fry
PV2 Oliva Payerry George
PV2 Cameron Isaiah Harrison
PFC Grant Gunter Mayfield
PV2 Miguel Angel Mendez
PV2 Habib M. V.M.Feizoui

Avionic Repairer (15N)
Class 011-19
PV2 José Alberto Barrera
PV2 Shontea Quiera Harrison
PV2 George Dylan Vazquez
Class 012-19
PV2 Austin M.Campbell
PV2 Ekevious Q.Chappell
SGT Ronald Turner Clark Jr.
SPC James Alan Martens
SGT Anthony Carl Partin
SGT Charles Stephen Weyer
Class 013-19
PV2 Sengarthit B. Xamonty - DG
PV1 Matthew S. Al-Rabadi
PFC Isaac C.Jule Ogden
PV2 Misael Rivera
PFC James A.Saunders
SPC Esiquio A.Zamora III

Aviation Operations Specialist (15P)
Class 19-038
PFC Denisha Diaz
PFC Jonathan Duke
PFC Tanner Lafollette
PFC Christopher Rodriguez
PFC Austin Singleterry
PFC Adrian White
PVT Mya Caratachea
PVT Manuel Trejo-Lopez
PVT Edward Turner
PVT Natividad Salvador
PVT Dejoure Walker
Class 19-039
SPC Charlotte Davis
PFC Ensley Breus
PFC Brittany Duncan
PFC Treyvon Foster
PFC Cody Moniz
PV2 Trace Hadley
PV2 Drake Hale
PV2 Ulises Resendiz-Martin
PVT Dexter Abney
PVT Nasir Terry

Air Traffic Control Operator (15Q)
Class 19-021
SPC German Bierd
SPC Mikael Britt
SPC John Burch
SPC Mark Faljean
SPC Jesse Pomales
SPC Terrance Shaw
SPC Brandon Spink
PV2 Abraham Ogwoka
PVT Nathan Johnson
PVT Kristopher Mason
Class 19-022
SPC Jonathan Dodson
PV2 Martin Hepburn
SPC Clayton Huddleston
SPC Matthew Mueller
PVT Oiziah Joyce
PV2 Megan Windle

DG: Distinguished Graduate
HG: Honor Graduate
* = AAAA Member

UNMANNED AIRCRAFT SYSTEMS (UAS) GRADUATIONS

UAS REPAIRER
AAAA congratulates the following Army graduates of the Unmanned Aircraft Systems Repairer Course, MOS 15E, at Fort Huachuca, AZ.

Shadow UAS Repairer Course
6 Graduates, 28 Aug 2019
SPC Mackenzie Martinez - DHG
SPC Drew H. Hoefer - HG
SSG Pedro J. Negron
SGT Zachory A. Barthelmas
SGT David J. Briscoe
SPC Tyler D. Keeling
5 Graduates, 16 Sep 2019
SGT Samuel H Butler
SPC Christopher C. Russell *
PFC Kirk K. B. Sy
PV2 Mitchell A. Birkenbuel
PVT Joshua E. Telling

Gray Eagle UAS Repairer Course
15 Graduates, 16 Sep 2019
PFC Avery Bingham - DHG
PVT Jacob S. Newhart - HG
PFC Osbaldo Robles
PV2 William H. Dickerson
PV2 Terrence Dieffenwierth-Beavers
PV2 Daniel E. Hull
PV2 Kory M. Phelps
PVT Devin C. Brown
PVT William A. Collins
PVT Luke E. Low
PVT Steven Mendoza
PVT Michael A. Nunez
PVT Nicholas A. Sharp
PVT Edward J. Wilkins
PVT Frank E. Wood

UAS OPERATOR
AAAA congratulates the following Army graduates of the Unmanned Aircraft Systems Operator Course, MOS 15W, at Fort Huachuca, AZ.

Shadow UAS Operator Course
31 Graduates, 04 Sep 2019
PFC Willow A. Stout - DHG
PV2 Jeremy J. Sanchez - HG
SGT Francisco Apolinar-Reyes
SGT Eugene K. Dzathor
SPC Kevin B. Jean-Jacques
SPC Ethan A. Larson
SPC Robert J. Nemetz
SPC Nicholas D. Tafuri
SPC Joshua B. Whiteside
PFC Briana M. King
PFC Diana K. Ridley
PFC Savannah V. Sheafe
PV2 Blaine E. Blair
PV2 William C. Bush
PV2 Nathaniel T. Daniels
PV2 Justin W. Easley
PV2 Luke S. Fardelmann
PV2 Aiden D. Fortner
PV2 Jamelarneshia C. Lindsey
PV2 Tanner E. Lippert
PV2 Sebastian A. Lum
PV2 Jonathan I. Parker
PV2 Ian T. Robbins
PV2 Henry K. Tran
PV2 Kaeller E. Trewin
PV2 Bradley R. Wood
PVT Athenia P. Bailey
PVT Alec L. Brandt
PVT Pedro A. Sarmiento
PVT Alejandro A. Trejo
PVT Samuel A. Wadford

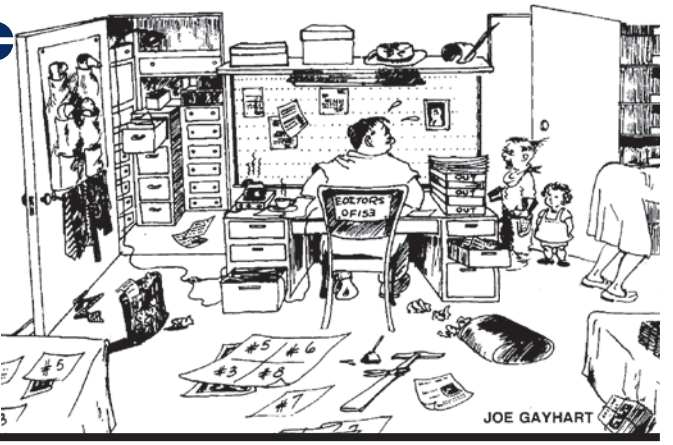
Gray Eagle UAS Operator Course
10 Graduates, 29 Aug 2019
SPC Patrick B. Ben - DHG
PV2 Tyler J. Ballard - HG
SPC Tuguldur Batsaikhan
SPC Connor E. Smith
PFC Kyli Carrillo
PV2 Chad C. Adams
PV2 Jackson A. Craven
PV2 Jacob J. Escobedo
PV2 Chase C. Levan
PV2 Elizabeth M. Reese

DHG = Distinguished Honor Graduate
HG = Honor Graduate
* = AAAA Member

Art's Attic

By Mark Albertson

Art's Attic is a look back each issue at 25 and 50 years ago to see what was going on in ARMY AVIATION Magazine. Contributing editor Mark Albertson has selected a few key items from each decade's issues. Art Kesten is our founder and first publisher from 1953 to 1987. He is also the founder of the AAAA in 1957 and served as its Executive Vice President. The cartoon, right, was created back in 1953 by LT Joe Gayhart, a friend of Art's and an Army Aviator, showing the chaos of his apartment-office in New York City where it all began.



25 Years Ago

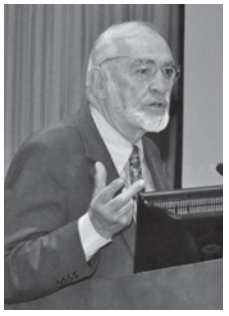
November 30,1994

Briefings

The Military Acquisition Management Branch, via a PERSCOM message, has announced it will be accepting applications for the Army Aviation Experimental Test Pilot Training Program. Deadline for submission is March 10, 1995. Any active duty Army aviator who meets the qualifications specified in the MAMB, PERSCOM petition, "Subject: Army Aviation Experimental Test Pilot Training Program Selection Board," can apply for attendance at the United States Naval Test Pilot School. The U.S. Army Aviation Technical Center (USAATTC) will be sending program briefing teams to several CONUS installations to provide such briefings. Contact USAATTC at DSN 527-4643 or MAMB at PERSCOM DSN 221-2800 after December 1, 1994.

Comanche: Critical to Force XXI

Assistant Secretary of the Army, for RD&A, the Honorable Gilbert F. Decker, wrote of the importance of Comanche for Army Aviation to perform its mission. His message focused on the necessity of technology in modern war and spending: "Some make the argument that good enough is good enough and that current dollars are better spent elsewhere. In the 1930s, visionaries in the armor community wanted to develop a new tank. Bean counters saw over 3,000 leftovers from WWI. The bean counters won that argument, and entered WWII being woefully overmatched by German tanks. In the 1930s, they did not know what the future would bring, and they chose the route that led to no improvement."*



* Refer to the *Looking Back* section in *ArmyAviationMagazine.com* for a much more in-depth analysis of Mr. Decker's remarks.

50 Years Ago

November 30, 1969

12 Tons!

Stratford, Connecticut: A U.S. Army CH-54B helicopter, built by Sikorsky Aircraft, lifts off in a recent test at a gross weight of 47,000 pounds. The CH-54B, able to hoist 12 tons compared to 10 tons by the previous CH-54A, made its maiden flight on June 30. Sikorsky has produced more than 65 heavy-lift CH-54As and CH-54Bs for the Army.

"Symbolic"

The insignia adorning the fuselage of this Soc Trang "Dustoff" medevac helicopter illustrates quite vividly a decisive function performed by U.S. Army Huey helicopters in Vietnam . . . that of the rapid retrieval and evacuation of wounded and injured soldiers. The chopper in question, having served its time in Vietnam, is now at the U.S. Army Aeronautical Depot Maintenance Center (ARADMAC), Corpus Christi, Texas, where it is awaiting repair and overhaul at the center.

Master A.A.

Receiving his Master Army Aviator wings is Lieutenant Colonel William C. Hampton, Director of Supply at the U.S. Army Aeronautical Depot Maintenance Center (ARADMAC). Lieutenant Colonel Hampton qualified for Master Aviator for flying aircraft for a minimum of fifteen years; and, for exceptional proficiency in instrument flying. Participating in the ceremony are Colonel Luther C. Jones, Jr., ARADMAC commander and Mrs. Hampton.

Army Aviation Hall of Fame

The Army Aviation Hall of Fame, sponsored by the Army Aviation Association of America, Inc., recognizes those individuals who have made an outstanding contribution to Army Aviation.

The actual Hall of Fame is located in the Army Aviation Museum, Fort Rucker, Ala.

The deadline for nominations for the 2021 induction is June 1, 2020

Contact the AAAA National Office for details and nomination forms at (203) 268-2450 or visit www.quad-a.org

Chief Warrant Officer Four Keith Yoakum

Army Aviation Hall of Fame 2009 Induction – Nashville, TN

CW4 Keith Yoakum was an extraordinary man who loved to fly and loved to lead. He earned his private pilot's license as a teenager in his native California by scraping together money from odd jobs.

During his 18 years of service, he rose from the rank of private to CW4, and became a skilled master aviator, an expert maintenance officer, a courageous leader with integrity, who left an indelible mark on all who served with him. Yoakum completed the initial rotary wing course in 1992 at Fort Rucker, Ala., and over the next 15 years amassed nearly 5,000 flight hours in rotary and fixed-wing aircraft during deployments to Korea, Germany, Bosnia, Albania, Egypt, Kosovo and Iraq. He earned ratings as an instructor and maintenance pilot in numerous aircraft, as a glider pilot and parachutist, and earned the air assault badge. Maxing every physical fitness test he ever took, Yoakum was twice selected below the zone for promotion to CW3 and CW4.

In April 2006, at the pinnacle of his career and as a testament to his skills and unblemished record, he was chosen to fly for the Army's "Golden Knights" Parachute Team at Fort Bragg, N.C. After a few months, however, Yoakum felt that he could better serve his country as an attack pilot and by leading Soldiers in combat. He selflessly elected to return to combat in Iraq as an AH-64 maintenance test pilot with Co. A, 1st Bn., 227th Avn. Regt., 1st Air Cav. Bde., 1st Cav. Div.

On Feb. 2, 2007, while on a combat reconnaissance patrol along the Tigris River near Taji, Yoakum's aircraft was seriously damaged by enemy heavy machine-gun fire, which by aviation standards required him to land immediately. Without regard for his own safety and to protect his comrades, Yoakum chose to remain with his wingman to destroy the enemy. With his main gun inoperable, his only option was to climb in altitude and then dive his Apache while firing rockets. Ultimately, the aircraft succumbed to its battle damage and crashed.

For his courage and gallantry, Yoakum became the first Army aviator since Vietnam to be awarded the Distinguished Service Cross, the nation's second highest award for extraordinary heroism.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