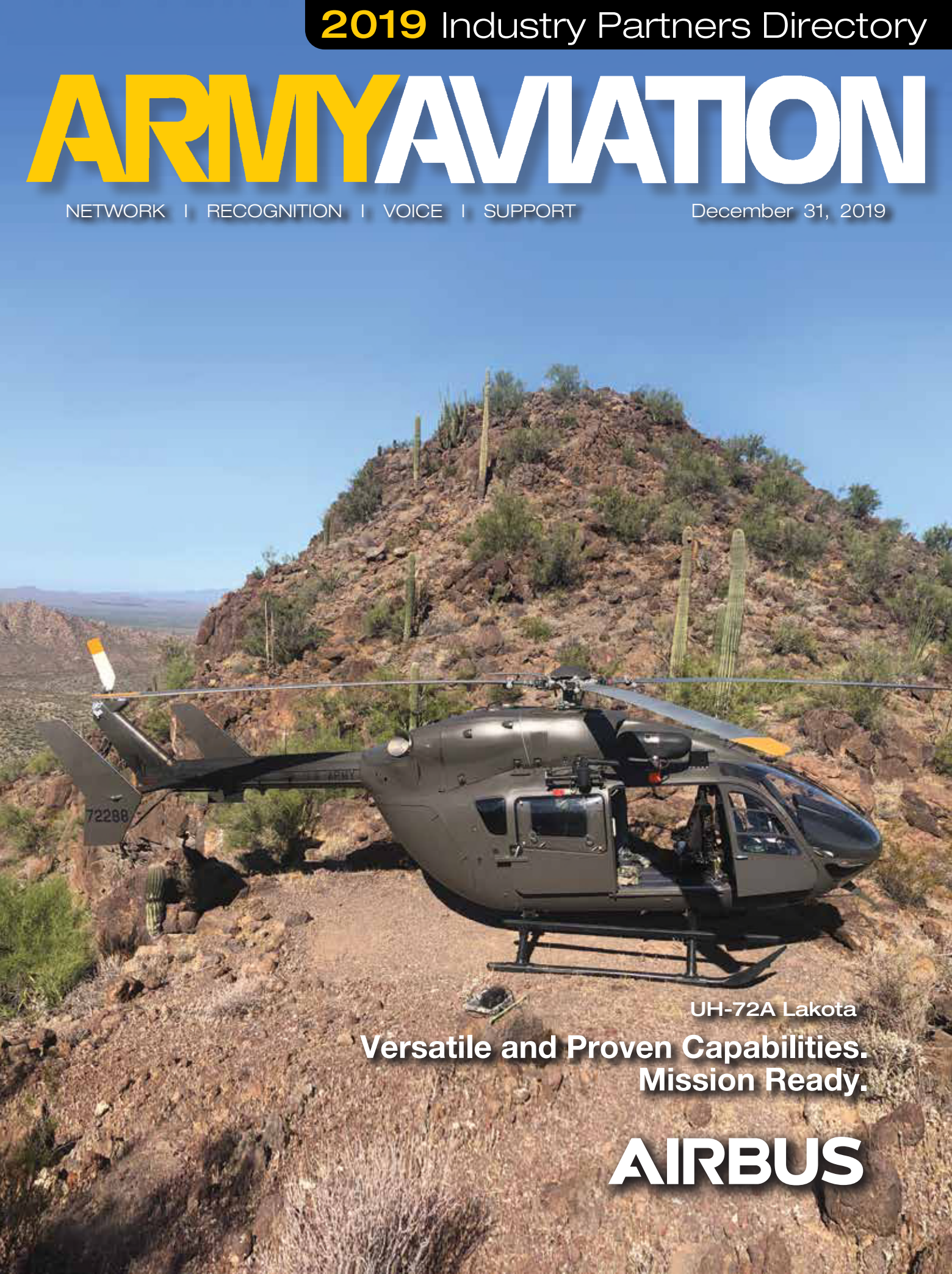
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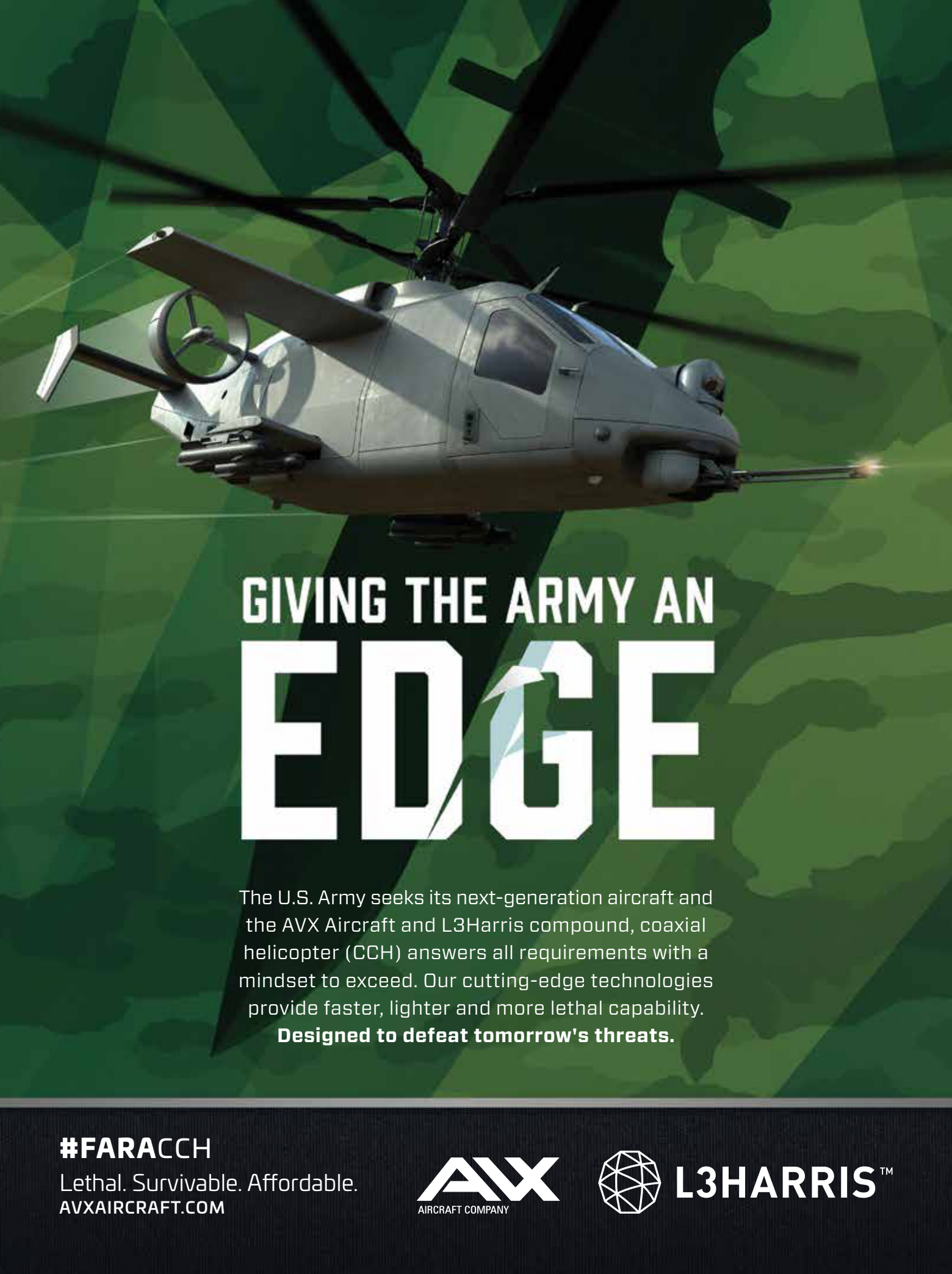
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Briefings ▶ *Late Breaking News - Announcements*

SECDEF Appeals to Governors on Spouse Employment



DOD PHOTO BY LINDA FERNANDO

Secretary of Defense Mark Esper has asked for Council of Governors' help in easing the burden of thousands of military spouses when they're trying to transfer occupational licenses from state to state. The Council's agenda already supports National Defense Strategy's three lines of effort; Esper would like the governors to add a fourth – assistance in supporting family members as much as possible, especially on issues that are primary responsibility of states, such as license portability for military spouses. Spouses often face burdensome and expensive requirements when they move to a new state, because of different local and state licensing regulations. Several states have taken steps to ease the process in some occupations, such as allowing temporary licensing, and expediting the application processes. Esper asked the Governors to approve occupational interstate compacts that allow license reciprocity for military spouses.

Battalion Commander Assessment Program (BCAP)



U.S. ARMY PHOTO BY RACHEL DEHM

Army Chief of Staff GEN James C. McConville called it a different way of picking leaders as the Army announced a new program for officers on the lieutenant colonel centralized selection list to attend a five-day assessment program at Fort Knox, KY in January. Those selected by the board process will attend the Battalion Commander Assessment Program (BCAP) where they will undergo a series of assessments aimed at determining their fitness for command and potential. In recent years, battalion commanders and officers identified to fill critical billets on division-level staffs were selected by a board that met to review all eligible officers' personnel files, determine if they make the cut for battalion command, and produce an order of merit list of those selected. The BCAP consists of physical, cognitive, and non-cognitive assessments during which participants will test on written and verbal communication, interview with behavioral psychologists, and take part in a panel interview with senior Army officers. According to MG J.P. McGee, director of the Army Talent Management Task Force, two pilot BCAPs were run this past summer. McConville mentioned the Army will potentially expand the BCAP to sergeants major and brigade-level commands in the future, based on what the Army learns in January.

HSM Authorized for Recent Natural Disasters



IMAGE FROM WIKIPEDIA.ORG

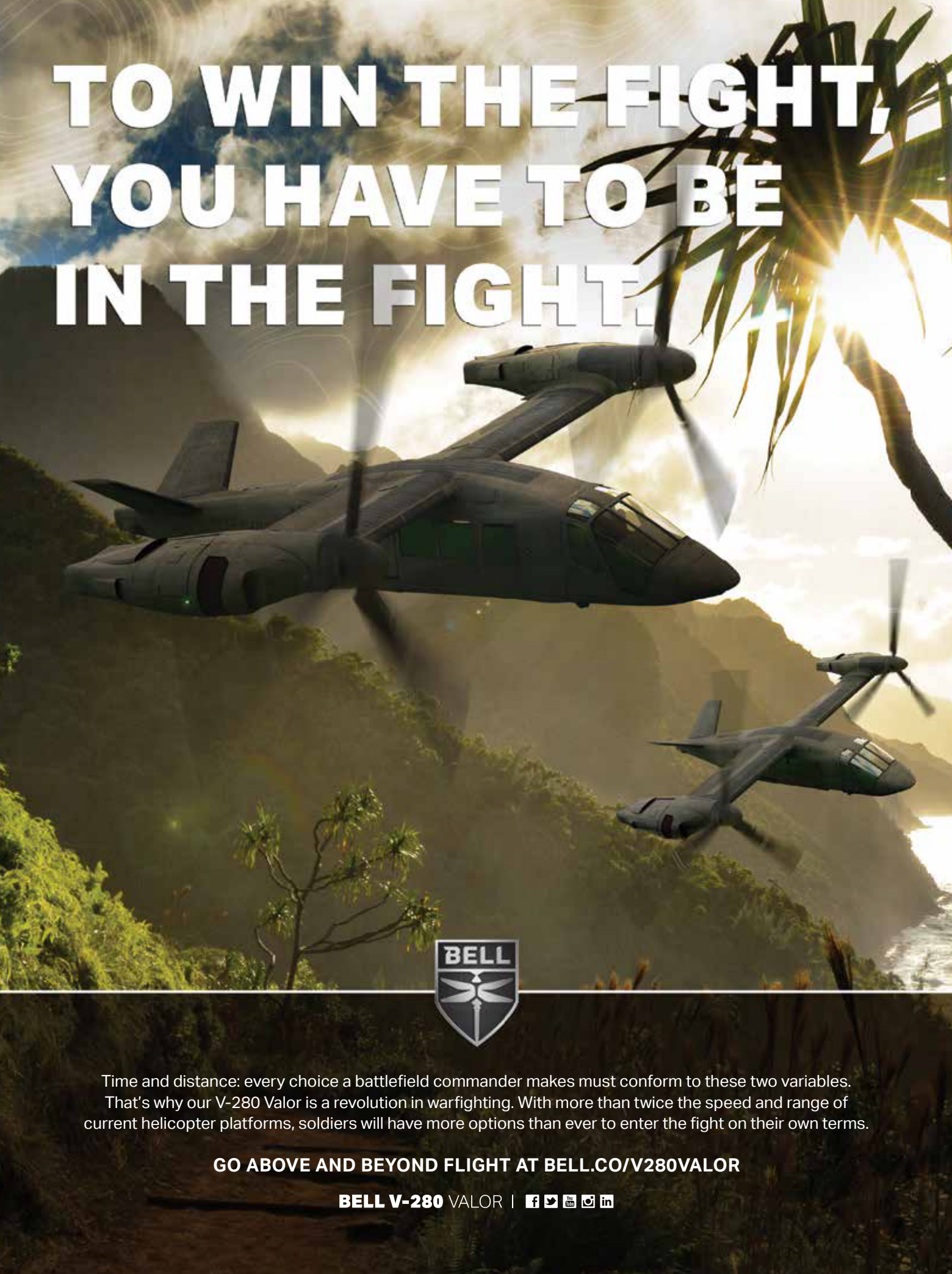
The chairman of the Joint Chiefs of Staff has signed off on authorization of the Humanitarian Service Medal for U.S. service members who deployed for and otherwise supported disaster relief and assistance for Typhoons Mangkhut and Yutu, which struck Guam, the Philippines and surrounding islands in late 2018; for Hurricane Harvey, which struck southeastern Texas, and for Hurricanes Irma and Maria, which devastated the Caribbean, all in late 2017. Check with your personnel office to confirm eligibility.

Spouses/Vets – Census Bureau Temp Jobs Nationwide



CENSUS BUREAU PHOTO/MARIANNE LEE PHOTOGRAPHY

Hundreds of thousands of temporary workers are being hired for the 2020 census, and officials want military spouses and veterans to know about the opportunities. Applicants can apply for a variety of temporary jobs, including census takers, recruiting assistants, office staff and supervisory staff. The U.S. Census Bureau is in the process of opening 248 offices around the country. Applicants must be at least 18, have a valid Social Security number, be a U.S. citizen, have a valid email address, complete an application and answer assessment questions. To apply, visit *https://2020census.gov/en/jobs/how-to-apply.html* or call 855-JOB-2020 and select option 3 for more information.



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Army Aviation Moving Out!



AAPI PHOTO BY CHEALSEA JARVIS

Deployed AAAA Aviation Mission Survivability Officer of the year CW4 William Roth's wife and daughters accept the award and congratulations on his behalf during the ASE Symposium on Nov. 18, 2019 in Huntsville, AL.

The holidays are almost upon us, and so it's a great time to reflect back over the year, and what a great year it's been for Army Aviation!

Army Aviation leaders at all levels have settled into their jobs, and are pushing our entire enterprise forward, working hand in hand with OSD, Congress, and Industry. Significant strides have been made in ensuring current fleet readiness and modernization, while setting the stage for 2020 to be a year of real progress in Future Vertical Lift, in both the Future Long-Range Assault Aircraft (FLRAA) and the Future Attack Reconnaissance Aircraft. Our Army Aviation leaders are telling the story on the WHY and HOW of Multi Domain Operations (MDO), and explaining in detail and through live experimentation how Army Aviation can and will penetrate, disintegrate, and exploit our foes on a complex, Large Scale Combat Operation (LSCO).

In this issue, our Branch Chief MG Dave Francis provides the context for Army Aviation success in LSCO and MDO, highlighting the critical role of terrain flight and aircraft control in our training. His article reminded me of my own early days in Army Aviation, where more experienced fellow aviators ensured we operated no higher than 100-200 ft above the ground or water, at speed, and where flying the aircraft was always most important when encountering a potential emergency procedure.

Our Army Aviation PEO, MG Thomas Todd, is about to end three exceptional years as Program Executive Officer of the Army's PEO portfolio, and his heartfelt farewell message reminds me of all he and his team have accomplished these past three years. We wish him the best as he prepares to deploy to his next position as a senior Army leader in Afghanistan.

We have devoted much of the remainder of this issue to our Industry partners - I hope you find this Industry Partners Directory useful and on point.

I do want to mention the superb AAAA Aircraft Survivability Equipment (ASE) Symposium and Joseph P. Cribbins Product Sustainment Symposium held last month in Huntsville. We had excellent participation in both, including our Army Aviation Six-Pack leaders as well as many of our Aviation Mission Support Officers (AMSO). A special recognition goes to BG Robert Collins, PEO IEWS, and COL Kevin Chaney, PM ASE, for their strong support for the ASE forum – it could not have happened without them. At both forums, we presented a number of functional awards to very deserving individuals and units. Their accomplishments in 2019 were amazing. Finally, a shout out to our very own AAAA Tennessee Valley Chapter and our AAAA National staff: without Chapter President Garry Nenninger and teammate Jerry Davis, as well as Bill Harris and Janis Arena and staff, events like these could not happen.

As we look forward to 2020, we are focused on growing our membership through our Vice President for Membership, CW4 Becki Chambers' "20K by 2020 Summit" initiative. At our current 18,500 members, we have some work to do, but we can get there if each and every one of us regard ourselves as an AAAA spokesperson and recruiter, and inform a friend or colleague about what AAAA does for Army Aviation. We are the only organization outside of the Army itself solely devoted to Army Aviation Soldiers, their families, and the Army Aviation enterprise.

Army Aviation is moving out to achieve a lethal, decisive and sustainable Multi Domain Operations maneuver and fires capability by 2028, and 2020 will be critical to achieving that goal. Let's all do our part to make it happen! Happy Holidays from Patty and I and the entire AAAA National Executive Board and staff!

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

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Training to Fight in Large Scale Combat Operations

By MG David J. Francis



U.S. ARMY PHOTO BY 1LT ERIC JUNGELS

The Kentucky National Guard's Company B, 2nd (Assault Helicopter) Battalion, 147th Aviation Regiment conducts an air assault May 29, 2019, at Udairi Range near Camp Beuhring, Kuwait.

It was 0320 hours and the lead troop of the squadron had just made it through their passage point across a low saddle with heavily wooded hilltops on either side.

It added a couple of extra minutes to the route, but it avoided a built up area and more importantly this saddle gave them a gap they could exploit where the threat systems could not "see" them, either visually or with their advanced tech. Sure, their cutting-edge Aircraft Survivability Equipment could acquire and defeat almost anything on the battlefield…almost anything. But in any fight, being seen at all is not a good thing and just like the ground forces, using the cover and concealment provided by the surrounding environment is your best bet. For helicopters that translates into – terrain flight.

Flying and fighting rotary wing aircraft in any kind of combat is a complex endeavor, but the profile we fly in combat is always based on one thing: the threats we face. The peer and near-peer threats we face today have had the time and luxury of watching us fight and have developed systems and tactics with the intent of countering the asymmetric advantage Army Aviation brings to the fight. It's safe to say that in order to remain asymmetric, we have to adapt to future threat capabilities. A significant part of process entails regaining our ability to fly against high-end threat systems. To accomplish this, we have to return to a mode of flight that presents the enemy with the least likely probability of "seeing" us – terrain flight.

As we start to come back down from altitude to avoid the known threats, we need to focus on the known and sometimes forgotten threats that we encounter in terrain flight. Like everything else we do, the focus is all about the way we train. We know that in order to have the enemy lose us in the clutter, we have to be in the clutter – both manmade and natural. This places considerable emphasis on terrain flight mission planning. And while the steps to this planning process are numerous, the three that jump out at me are the enemy, the terrain and the rehearsals.

Understanding the enemy we face, how they array their systems, and what those systems are capable of drives everything. With that understanding, we can evaluate the terrain and begin looking for any gaps, seams or dead space we can use to execute our mission and get to and from our objective. En route to our objective, the higher the threat level gets, the lower our mode of flight gets, and the lower we fly the less time we have to react.

And while we will always have to react to unexpected situations, the intent of rehearsing is to discover, think through, and eliminate as many of these situations

as possible before launch on the mission. Rehearsals and crew coordination for terrain flight start with each aircrew at the basic level of - who's flying with eyes outside the entire time, and who is inside monitoring systems and navigation. With the progression from crew briefs to sand tables, and ideally digital simulation rehearsals, the level of detail involved accelerates significantly. By the time you get done with the Combined Arms Rehearsal (CAR), you are sometimes surprised at how many unexpected situations you had to react to.

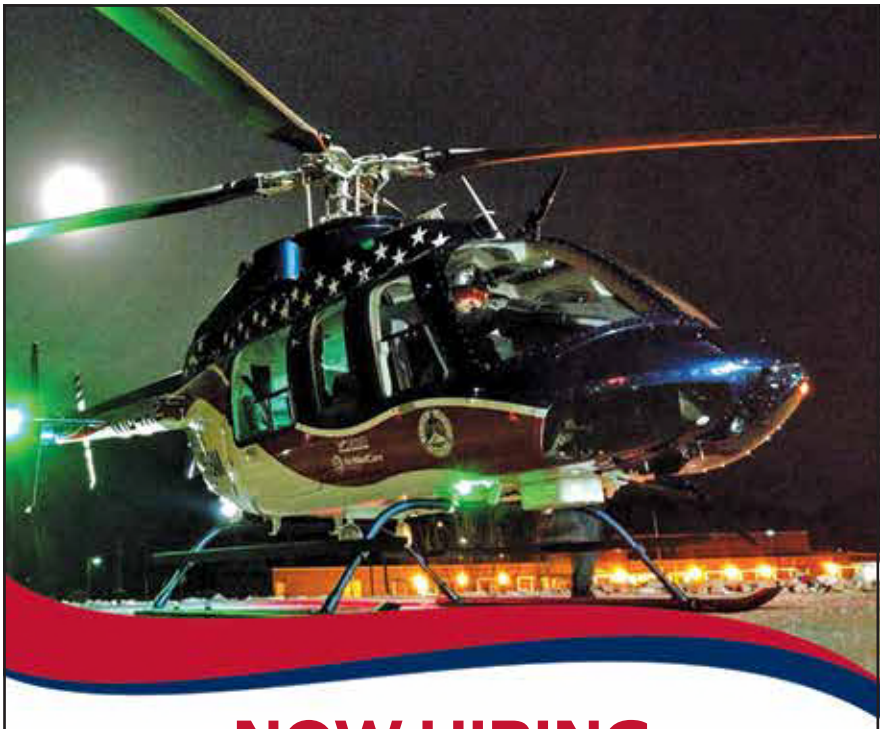
When you're flying low and fast in the dark, not only does reaction time to external threats become significantly reduced, reaction time for internal threats are drastically reduced. Everyone knows that when something goes wrong onboard your aircraft the first thing you do is continue to fly the aircraft. There are a handful of emergencies that require immediate action, but you still must fly the aircraft. We are currently looking closely at all the emergency procedures for every aircraft to determine what needs to be changed with an eye on how we recognize and react, especially in the terrain flight environment. Another project that we recently completed is the development of a Training Support Package (TSP) that specifically addresses low level flight in Large Scale Combat Operations (LSCO).

The transition from training for COIN to training for LSCO does not happen overnight. Aircrews and planners must learn, or refresh their knowledge, through a deliberate gated training strategy. Accidental and tactical risk must be balanced through proper training techniques in order to safely, but fully, unlock the capabilities of our Soldiers and our technologies.

It is crucial to understand what the operational environment looks and feels like in order to shape our application of combat power and how we train to meet these challenges. We have proven time and time again that our aircraft are survivable on the battlefield and that is largely because of the men and women who fly them. And as we remain focused on training and refining our terrain flight skills and capabilities, we will continue to increase our ability to dominate across the battlefield as part of an ever more complex Combined Arms Team.

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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Career Decisions

By CW5 Jonathan Koziol



U.S. ARMY PHOTO BY PIERRE-ETIENNE COURTEJOIE

U.S. Army Chief Warrant Officer 3 John Marsh and Capt. Nicholas Bruno, assigned to the 3rd Combat Aviation Brigade, 3rd Infantry Division, taxi their UH-60 Black Hawk helicopter, on Chièvres Air Base, Belgium, Oct. 23, 2019.

Being a Soldier in the United States Army is a demanding profession. Long days training, weeks away from home, and deployments.

Now, let's add a family to the mix and the management of time gets far more difficult. The demand for aviation assets to support training and deployment rotations has not slowed, which strains our Soldiers and their families.

Aviation branch continues to work on solutions to better manage each aviation warrant officer's career. One small step is attempting to slow moves. Human Resources Command is developing a plan to stabilize how often we move Soldiers. As a professional, I hope you understand there are requirements that need to be filled throughout the branch and your skills will be needed elsewhere. Certain schooling may drive a move, so we can ensure we manage your career successfully. To help with career management, USAACE is adding two additional career coaches to the aviation warrant officer assignment team. This will help to ensure your needs are met.

To make a 20+ year career in the military, there are a lot of decisions and tradeoffs to best manage your career and family. Sometimes you can't get everything you want, and sacrifices will need to be made. Personal balance is even harder to manage with a growing family. Meaning, some Soldiers will decide a 20 year career will not work for them. Some of you may leave the service without fully knowing the pitfalls of transitioning to civilian life and what key benefits you had while on active duty.

One thing is to understand the Active Duty Service Obligations (ADSO) that are incurred, which can help you decide what is best for you and your family. One contentious example is the GI Bill ADSO incurred if you transfer benefits to your spouse or children. With the short term aviation bonus available, some officers are unable to sign the bonus due to the GI Bill transfer ADSO. Or worse, they elect to take the bonus and not transfer benefits not knowing the GI Bill transfer was worth a lot more in the long run. Did you know there is a VA website that will tell you the annual net worth of the GI Bill for your child at certain locations?

Another aspect lost on younger Soldiers is the health care benefits we sometimes take for granted while on active duty. Health benefits of your future civilian employer can be a large cost on your family that you were not necessarily planning for. Major medical caps and copays are sometimes misunderstood until it is too late.

Lastly, the new blended retirement option for our younger Soldiers. Viewing the Defense Finance and Accounting Services (DFAS) website and reviewing the program is key. Being disciplined to take advantage of the Thrift Savings Plan (TSP) share matching early in your career will help with financial decisions in your future. For the pilots, investing your flight pay is a great way to help with future financial decisions. Investing early can mean you could have a substantial nest egg that meets or exceeds the legacy "high three" retirement. The size of a 401k required to match a Soldier's benefits who retires at 20 years active federal service and is only 45 years old would be in the millions of dollars to pay them for the rest of their life. That is sometimes not grasped when making career decisions.

We will continue to work solutions to better our aviation fighting force. All of this being said, you are your best advocate for yourself. We want you to be successful and prepared for whatever your career brings you. I hope it is Chief Warrant Officer Five.

I wish you all the best this holiday season. Keep in mind those deployed and away from home.

Above the Best!

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.

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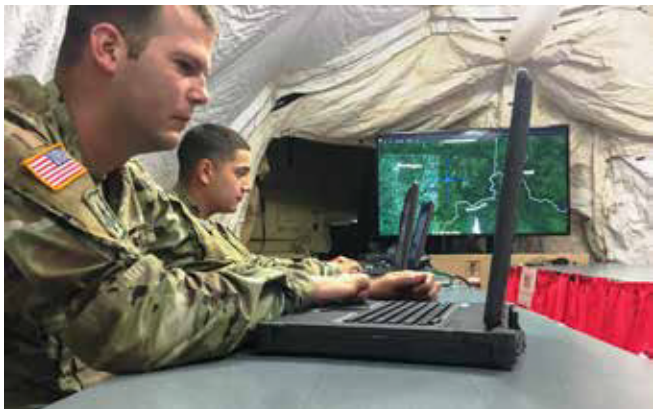
For this issue, I have asked SFC Eric Drabenstot, who serves as the Senior NCO to the Product Manager for Assured Airspace Access Systems, to provide an NCO perspective into airspace management in a UAS contested environment. SGM Sullivan

Complex Terrain Airspace Control

Effective Airspace Management in a UAS Contested Environment

By SFC Eric K. Drabenstot

Unmanned aircraft systems have a multitude of applications and they have become available around the world at relatively low cost and are used for a wide variety of tasks and recreation. Unfortunately, UASs are also used in criminal and adversarial roles and pose a growing threat at home and abroad.



U.S. ARMY PHOTO BY SGT. SARVESH REGMI

Soldiers from the 94th Army Air and Missile Defense Command, track an unmanned aircraft systems (UAS) threat during a scenario as part of Black Dart 18 on Muscatatuck Urban Training Center, Indiana, Sept. 17.

To address these concerns, the Department of Defense established a counter-UAS (C-UAS) experiment named Black Dart.

Black Dart is an annual DOD live, multi-domain C-UAS experiment that assesses capabilities and technologies from a variety of sources. It examines programs of record and near-term capabilities in response to emergent and urgent operational needs associated with the proliferation and adversarial use of UASs in current and future conflicts.

With drone proliferation, airspace has become more complex. The U.S. Army is progressing in airspace management and synchronization through the use of tools such as the Tactical Airspace Integration System (TAIS). TAIS is a mobile air traffic control system that provides dynamic airspace integration and synchronization. It is required to be interoperable with U.S., international and allied air traffic control requirements.

Product Manager (PdM) for Assured Airspace Access Systems (A3S) and a team of air traffic and airspace management subject matter experts entered the 2018 iteration of the Black Dart C-UAS experiment at Muscatatuck Urban Training Complex near Butler, Indiana. The team sought to demonstrate the system's role in enhanced airspace control and its relevance in support of UAS and C-UAS operations in a complex environment.

BD18 was conducted in two separate assessments; tactical and technical. TAIS was utilized in the tactical assessment portion of the event. The tactical assessment was a free-play, force-on-force C-UAS and UAS event. The compound was split between two opposing teams with each team supplemented with a variety of platforms and a battle staff for sensor management and airspace coordination. The teams simultaneously conducted offensive operations to identify opposition ground targets without being detected and negated while defending friendly assets against the opposing force.

TAIS used data feeds by integrating Cursor on Target data on an unclassified network, and All-Purpose Structured Eurocontrol Surveillance Information Exchange data on a classified network to create air tracks. The data was fused using a software program embedded in the TAIS software. Air tracks displayed on the TAIS Airspace Workstation (AWS) enabled air traffic controllers to provide timely input to battle captains within their respective command posts.

At the start of the experiment, the participants were provided with objectives and rules of engagement. Through trial and error, each team developed and refined their own TTPs. Both teams applied large-scale airspace control concepts to a small, complex terrain environment by generating sectored airspace which was depicted on the AWS. One team employed a ground reference grid overlay to rapidly identify and relay reports, while the other relied upon structures and geographical features proved to be effective. The issuance of traffic advisories to friendly UAS operators over radio voice communications and swivel-chair coordination with defensive forces allowed the teams to fluidly reposition and dynamically re-task in-flight UAS teams.

In the final report published by Joint Integrated Air and Missile Defense Organization and the Fires Center of Excellence, the effectiveness of integrating airspace management in simultaneous offense and defensive operations was essential to the success of the experiment and for each team to achieve their objectives. The effectiveness of the teams' management mitigated the risk of fratricide. The report also highlighted the situational awareness provided by TAIS to the teams and noted that it directly impacted the overall success of the experiment and recommend its continued use in future iterations of Black Dart and the development of DoD-wide TTPs for C-UAS efforts.

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 2018 National winners were featured in the April/May AAAA Annual Summit issue.

Aviation Soldier of the Year, 2014 *Sponsored by Bell Helicopter Textron*

SPC Luis D. Marino

Company B, 4th Battalion,
101st Aviation Regiment, 159th Combat Aviation Brigade
Fort Campbell, Kentucky



AAPF FILE PHOTO

SPC Luis D. Marino is an exemplary role model, door gunner, and leader. Performing with excellence as a UH-60M Black Hawk door gunner for Task Force Wings, he not only completed his tasks as a gunner, but also took on the challenge of learning other positions, to include non-rated crew member and a UH-60M maintainer.

During deployment, he consistently performed as the most reliable Soldier to accomplish a given task, regardless of whether or not the task fell under his primary specialty. He could be counted on to lead and complete any assignment above the standard while maintaining a positive attitude and motivating others to do the same. He flew over 500 hours in a high operational tempo environment completing gunnery ranges, and 40 hour and 120 hour scheduled inspections. His actions instilled a sense of confidence in his fellow door gunners and crew chiefs.

SPC Marino's hard work and selflessness throughout the year enabled Bravo Company to achieve and sustain outstanding operational support to Task Force Wings and identify him as most deserving of recognition as the 2014 Army Aviation Association of America Soldier of the Year.

Despite the successful execution of Black Dart 18, there is still room for improvement. The solidification of TTPs through participation in similar events along with future materiel and technological development will support effective offensive and defensive air operations against our adversaries, whoever and wherever they may be.

SGM R. Woody Sullivan is the sergeant major of the Program Executive Office, Aviation at Redstone Arsenal, AL;

SFC Eric Drabenstot is the senior enlisted advisor to the Product Manager for Assured Airspace Access Systems, under the Project Manager for Aviation Mission Systems & Architecture.



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PEO Aviation – One Final Challenge

By MG Thomas H. Todd III

First and foremost, I am grateful for my partners across the collective Army Aviation enterprise; our combined efforts enable the Army to prevent, shape, and win armed conflict globally.



U.S. ARMY PHOTO BY DAVID HYLTON, PEO AVN PAO

MG Thomas H. Todd III talks with military and industry members on the exhibit hall floor at the AAAA 47th Joseph P. Cribbins Aviation Product Support Symposium in Huntsville, AL, Nov. 20-21, 2019.

As a career Army Aviator, I have seen firsthand the tremendous impact Army Aviation has on the battlefield, and we within PEO Aviation will continue to work tirelessly to generate combat power worldwide and deliver the necessary capabilities our Soldiers require and deserve. Moving forward, we must look at how to most efficiently utilize resources within both government and industry as we set the stage for a Multi-Domain Operational (MDO) capable force in 2028, and an MDO ready force in 2035.

I expect my Project Managers to deliver capability while working horizontally and vertically to create integrated solutions that enable an MDO force – the first time. Capabilities that are suitable for our Soldiers – the first time. We absolutely cannot put combat aviation brigade commanders in a position where they are the first to integrate newly delivered capability sets, in real time, on the battlefield. To this end, Industry must also break historical paradigms and communicate horizontally in order to provide fully integrated solutions and ensure we stay ahead of our pacing threats to win.

My challenge to industry: Look at the Army Aviation fleet through a new lens. The military industrial base has its own perspectives and interests that are often limited to advancing a company's proprietary solution. Instead, shift focus to the Soldier on the battlefield, and make every effort to avoid stovepipes that limit the capability of that Soldier or what we deliver in the future. This must be a team effort, and maintaining rigid proprietary practices impedes our progress. What we're working hard to do within the PEO, and what I'm asking industry to do, is to integrate horizontally and vertically. Our Soldiers, and their families expect and deserve our most integrated solutions.

The force characteristics required to achieve MDO should be the guidepost for industry to propose mature, ready capabilities that can be rapidly taken to test and integrated into the enduring and future fleet. To be clear, we are not interested in industry bringing the PEO immature ideas; don't bring the bill to the Project Managers expecting them to develop 80% of the solution. We're willing to entertain opportunities to partner and share costs, but we need you to invest and develop capabilities further than ever before. To the point where we can take them to test and field to our Soldiers.

Let's turn good into great – don't be satisfied with meeting the minimum requirements in a set of acquisition documents. Meet the expectations of our Soldiers!

We have a rare opportunity with MDO 2028 to integrate capability that ensures the Army's success on the future battlefield – let's strike while the iron is hot as a team. A team-of-teams, unmatched, just as our Army is unmatched.

It's been an honor to serve as the PEO – the ability to take care of Soldiers and deliver superior capability through good design and development has been the highlight of my professional career. Here forward, I challenge you to think differently. Stop thinking linearly and just about your platform; and think in the context of how to integrate across platforms with each other and bring about force characteristics that these great Soldiers and our nation deserve. Bring the Army solutions to our most pressing problems and I know our Soldiers will secure our future!

Again, it's been an honor to be your PEO for Army Aviation. Godspeed, and I look forward to what the future holds.

"One Team"

T^2

Editor's Note: We at ARMYAVIATION Magazine thank MG Todd for his support over the past three years and wish him well in his new assignment as the deputy commander of Combined Security Transition Command-Afghanistan.



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Army National Guard (ARNG) Aviation Support Facility (AASF) – The Center of Gravity

By COL Joseph Bishop

In my previous article I focused on how the ARNG utilizes its Theater Aviation Sustainment Maintenance Groups as one element within a holistic aviation sustainment maintenance architecture.



U.S. ARMY ILLINOIS NATIONAL GUARD PHOTO

Kankakee ARNG Aviation Support Facility ILARNG is the ARNG's newest aviation support facility. The Kankakee ASF is home to 1-106 Assault Helicopter Battalion; B Company, 935th Aviation Support Battalion; and Detachment 2 (MEDEVAC), G Company, 1-111th General Support Aviation Support Battalion.

The second element within that maintenance architecture and where the rubber meets the road are the 97 Aviation Support Facilities across the United States. The AASFs are the center of gravity for unit level aviation maintenance and the hub for aircrews that operate Army aircraft.

The heart and soul of ARNG Aviation lies within the AASF and associated unit activities. The AASFs are the lynchpin to supporting unit commanders in the aircrew training programs and meeting readiness objectives. The preponderance of a National Guard aviator's flight time is flown during the week under control of the AASFs. Well run AASFs result in mission ready units. The AASFs with their operational aviation units epitomize the true nature of the ARNG.

The location of the ARNG's AASFs range from a large city setting to remotely located small towns across the fifty states, District of Columbia and the three U.S. Territories. Similar to the Active Army, the ARNG AASFs are normally a single purpose fixed base facility or other structure that can house unit aircraft and accommodate the functions and activities that support aviation operations. The actual AASF structures today vary from legacy ARNG hangars, to facilities gained from other Services that were deemed excess, or recently constructed AASFs.

In the last ten years, the ARNG constructed ten new AASFs, built ten new Tactical Unmanned Aircraft Systems facilities, nine new Aviation Unit Readiness Centers, and implemented various upgrades or additions to nine existing AASFs. On the horizon we have five projects in the early stages of development and efforts to bring several more AASFs up to current construction standards.

A critical component to each ARNG AASF is the cadre of full-time support (FTS) personnel. Each ARNG AASF possesses an Army approved unit identification code that is used to collate the annual workload driven aviation FTS requirements. The ARNG annually develops FTS requirements for Aviation units assigned to the AASFs utilizing United States Army Manpower Analysis Agency approved manning models. A misconception is that these FTS models mirror the unit authorization documents, but they do not. FTS is intended to improve Reserve Component readiness and mobilization / deployment by providing a day to day unit presence and fulfilling operational and aviation maintenance functions.

All AASFs earn a standardized FTS requirement to fulfill common facility functions to include the command element and embodies a wide range of skill sets drawn from Active Guard Reserve soldiers, Federal Military Technicians and Title 5 federally funded National Guard Employees. The military technicians, as a condition of their civilian employment, maintain dual status as members of the ARNG and remain qualified in both their civilian and military position. The level of aviation specific FTS provides a capability for each AASF to train aircrew members, achieve Army regulated aircrew requirements and meet aircraft maintenance standards.

The Defense appropriation bill prescribes FTS end strength for both Reserve Components. Each fiscal year the ARNG FTS required workload (requirements) are validated but it's the funding levels (authorizations) in line with the congressionally mandated end strength that directs the application of FTS. The Director of the ARNG has latitude to prioritize the funding (authorizations) across the entire ARNG as do the Adjutants General across their respective state, territory or district. A cause for concern in the future is that the gap between requirements and authorizations continues to widen.

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

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Low Altitude Training

By COL Jason L. Miller

Army units are moving rapidly to fully implement the training required to prepare for large-scale combat operations (LSCO) against a peer or near-peer competitor.



U.S. ARMY PHOTO BY SGT THOMAS CALVERT

Soldiers with the 25th Combat Aviation Brigade and 2nd Squadron, 14th Cavalry Regiment, 2nd Infantry Brigade Combat Team, 25th Infantry Division conduct hoist MEDEVAC training during a fire support coordination exercise Nov. 19, 2019 at Pohakuloa Training Area on the Island of Hawaii.

This training will focus on the tactics necessary to rapidly deploy, execute combined arms maneuver, and succeed in a complex, multi-domain environment. One of the primary challenges is training Soldiers who have been fighting counterinsurgency (COIN) for over a decade to refocus their efforts to fight against a threat which requires them to fly at terrain flight and nap-of-the-earth altitudes. As our branch chief put it, "We are now driving closer to the curb at 100 mph." While this flight envelope may be new for many, aviation's fundamental principles of risk management, crew coordination, and "fly the aircraft" are critical to the success of this mission.

R-COP

Army aviation's Risk-Common Operational Picture (R-COP) has been designed and integrated into the force in order to standardize processes and reduce risk. The R-COP is a contract between leadership and aircrews that confirms how they will execute the mission and mitigate risk to the force. Approval of the R-COP is not the end of the risk management process, but rather the point where mitigation measures are put into practical application. These mitigation measures must be incorporated into aircrew briefings and constantly discussed and reassessed with dynamic risk management throughout the mission. As the terrain, environment, and mission complexity changes, it is incumbent on aircrews to also reevaluate their mitigation measures to ensure they are within the intent of mission command and the R-COP contract.

Crew Coordination

As our flight altitude decreases and we focus on fighting against a threat which relies on radio frequency and infrared (IR) thick area of operations, our crew coordination efforts must increase. It's no surprise that flying closer to the curb brings new hazards, whether natural or man-made, into our mission profile. Furthermore, our closure and time for reaction are reduced. To mitigate this risk, aircrews must increase their crew coordination, more specifically their effective communication in the cockpit. For aircrews that might not have the experience to understand what this means, if you want to see an excellent example of crew coordination, look at the in-car footage for rally car racers. The speeds and proximity to hazards in which they operate requires constant and effective communication between the driver and navigator to stay ahead of the car and the race. It is a practiced and choreographed example of effective communications. Aircrews, too, must utilize this same type of crew coordination mentality for effective communication. Aviators all remember Bernoulli's principle. Well, this is the Bernoulli's principle of crew coordination and as altitude decreases, crew coordination/effective communication must increase to stay ahead of the aircraft and the mission.

Fly the Aircraft

As aviation continues to execute tough, realistic training, and aircrews utilize terrain altitudes and methods beyond just technology to evade threats, contingencies play a critical role in this environment. Knowing EPs and limits is a vital part of proficiency; but if there is one thing that aircrews should have ingrained into their DNA, and reinforce through daily training, it is to always "fly the aircraft." A thorough understanding of what is truly important, the implementation of hasty dynamic risk analysis, and the practice of sound judgment at terrain flight altitudes is essential. These must be practiced, both in simulated and live realistic mission training, to build competence in the force and allow aircrews to know what it truly means to "fly the aircraft."

Conclusion

Aviation is driving closer to the curb at 100 mph. However, if Army aviation vigorously applies the fundamentals of risk management, crew coordination, and to "fly the aircraft," we will be successful. The mission and our most precious assets, our Soldiers, depend on it.

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





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Modern Instructional Technology Opportunities in Army Aviation Maintenance Training

By CPT Jacob D. Terlizzi

As we move to the future, how can Army Aviation exploit modern instruction technology to maintain relevancy to 2028 and beyond?



U.S. ARMY PHOTO BY CPT. JAMES C. KING

SSG Stephen Schwander, 1-210th Avn. Regt., uses a Virtual Interactive Environment (VIE) training device to facilitate training for AIT Soldiers.

The 128th Aviation Brigade, home of Army Aviation Maintenance Advanced Individual Training (AIT), is confronting this question to help improve Aviation maintenance training for the future. The mission of the 128th Aviation Brigade is to generate disciplined, physically fit, and technically proficient Aviation maintenance Soldiers and leaders who embody the Army Values and embrace the Army as a profession. Encompassed by this mission is the priority to maintain relevance with the operational force to ensure training is realistic, rigorous, and responsive to Combat Aviation Brigade (CAB) requirements.

Maintaining relevance is a constant effort. Relevancy is not only tied to the latest tools and techniques used in the field but also available instructional methods to ensure training value is maximized. The goal is to provide the most proficient graduates possible. To do this, the 128th Aviation Brigade will assess how we have taught Aviation maintainers in the past and what our possibilities are for the future.

A factor in realizing the future of Aviation maintenance training is understanding the capabilities that already exist. It is modern instructional technologies; a broad category including virtual reality and augmented reality (VR/AR).

While the idea of virtualized maintenance training may be foreign or uncomfortable for some, it appears more natural to the current generation of Initial Entry Training (IET) Soldier. This is evident by the popularity of the Virtual Interactive Environment (VIE) trainer amongst AIT Students, which is a basic-level virtual touch screen procedural trainer that allows students to manipulate the aircraft and components in order to walk through procedures outlined in their manuals.

Couple this observation and the charge to maintain relevancy, the result is an environment with potential for modern instructional capabilities to make a huge impact on the quality of training of our Aviation maintainers. A key byproduct of blending new training capabilities on a cloud-based architecture is the ability to exploit instructional content outside the boundaries of 128th and providing an enhanced training support tool for Soldiers in the field. However, implementation of new instructional technology should be deliberate, driven from the bottom up, based on the training requirement, and firmly assess the applicability and feasibility of implementing such technologies.

In October 2019, the 128th Aviation Brigade hosted an initial planning conference to do just that and begin what is currently known as the Aviation VR/AR Maintenance Training Initiative. The meeting brought together Aviation Maintenance instructors, course managers, training developers and systems integrators, and USAACE's Directorate of Simulation (DOS) to form the initial working group and kick start the effort.

The group focused on how modern instructional technologies such as VR/AR could be specifically implemented to improve training quality. This focus was inspired by a brigade training priority aimed at reducing multi-shift training requirements for all courses. Using the Army Design Methodology as framework (and countless pages of butcher paper), the group built a shared understanding of current conditions, problem sets, and capabilities.

While the implementation of new instructional technologies will be an enterprise effort, the 128th Aviation Brigade gained significant value and insight that will be applied as it continues to generate momentum for this initiative and will continue to focus on the next generation of Combat Aviation Leader, using our knowledge, skills, and abilities to enhance the way we train and prepare our Aviation Maintainers in 2028 and beyond.

CPT Jacob D. Terlizzi is the commander of Company C, 1st Battalion, 210th Aviation Regiment, 128th Aviation Brigade at Joint Base Langley-Eustis, VA.


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Contracting for Aircraft Services under Experimental Certificate

By Mr. Brad Mason

In recent years, the U.S. Army Combat Capabilities Development Command Aviation & Missile Center's Aviation Engineering Directorate (CCDC AvMC AED) has seen an increase in requests to provide airworthiness support for Contracted Air Services (CAS).


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When flight operations are deemed Public Aircraft Operations (PAO), the contracting agency, not the Federal Aviation Administration (FAA), is responsible for assuring the airworthiness of the aircraft. Thus, for PAO CAS under an Army contract, AvMC AED is the airworthiness authority. In several CAS cases, the contracted aircraft were operating under an FAA special airworthiness certificate in the experimental category (also known as an x-ticket). For cases involving aircraft operating under an x-ticket, the Army's airworthiness effort becomes much more challenging. Procuring organizations should consider these challenges prior to awarding a contract in order to avoid unexpected cost increases and schedule delays.

Per the FAA website, "A special airworthiness certificate in the experimental category is issued to operate an aircraft that does not have a Type Certificate (TC) or does not conform to its TC and is in a condition for safe operation". The FAA issues an x-ticket for one of the following purposes: research and development, exhibition, market surveys, air racing, crew training, or for flight testing to demonstrate regulatory compliance. An aircraft that does not have a TC or does not conform to a TC cannot be fully certified because compliance has not been shown with all of the applicable Federal Aviation Regulation (FAR) requirements. As a result of these airworthiness deficiencies, the aircraft is not eligible to receive a standard airworthiness certificate. Additionally, aircraft operating on an x-ticket must be accompanied by a set of special operating limitations that provide additional restrictions regarding how and where the aircraft can be safely operated. The limitations will typically prohibit operations including passengers or cargo for hire and often restrict flight to a limited geographic area. The intent of these limitations is to provide mitigations to ensure the safety of the aircrew while simultaneously minimizing the risk to the general public by limiting exposure in the event of an accident.

When a new CAS case arises, the first step is to determine if there is an existing certification basis that may be leveraged for the Army's airworthiness assessment. Ideally, the contracted aircraft will have an FAA TC with a Standard Airworthiness Certificate. The Army can leverage that Standard Certificate to issue an airworthiness release (AWR). However, if the aircraft is operating under an x-ticket, the certificate cannot be accepted because the aircraft does not conform to any existing FAA TC. In these instances, an Army AWR cannot be issued until the airworthiness requirements gaps are identified and addressed. This may not be practical from a cost and schedule perspective, as in some cases it would require the Army to undertake a complete aircraft type design approval effort. If the airworthiness gaps cannot be resolved in a timely and cost-efficient manner, a risk assessment and acceptance by an appropriate authority will be required. Typically, these risks are substantial, requiring risk acceptance at the General Officer level. In some cases where risks levels were high, contracts have been canceled because a willing risk acceptance authority could not be identified.

When considering a contract for air services, it is recommended that you assess the type of airworthiness certificate that will be utilized. Ensure that you dig deep and determine whether the FAA certificate, category, and purpose are applicable to your contract requirements. If possible, avoid the use of aircraft operating under an experimental certificate. No matter the scenario, it is highly recommended that the effort be coordinated with the AvMC AED so that any unique airworthiness challenges can be assessed prior to awarding a contract. AvMC AED may be contacted via the following email: *usarmy.redstone.ccdc-avmc.mbx.airworthiness@mail.mil.*

Mr. Brad Mason is the AED fixed-wing branch chief at Redstone Arsenal, AL.



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Corneal Refractive Surgery for Applicants

By MAJ (Dr.) Eric Abdul

The popularity and success of corneal refractive surgery (such as LASIK, LASEK or PRK) has prompted questions from those applying for Aviation duty. Here is an introduction to the topic for initial applicants.

FS: Light enters the eye through the clear portion of its front known as the cornea. The cornea refracts, or bends, incoming light through the lens and directs it onto the retina at the back of the eye. Most of the refractive power of the eye resides in the spherical shape of the cornea, with the lens acting to adjust focus for near and far vision. A uniform and appropriately shaped cornea produces a clear image. But a refractive error of the cornea can cause the image to focus in front or behind the retina, making you near or far-sighted, respectively. If the refractive power of the cornea varies across its surface and is not uniform, it may produce a distorted image (i.e. astigmatism). Glasses or contact lenses may be able to improve your vision to meet Aviation standards. However, it is understandable why a future aviator might want to avoid the requirement to wear them during flight and carry a spare in their flight bag, especially in an austere environment. Surgery to correct your corneal refraction is an attractive option, but as with any medical procedure, the decision should not be taken lightly. Discuss with your Ophthalmologist the risks, benefits, and alternatives to these procedures, as well as which type of surgery they recommend. Complications are a risk for any surgery, and in this case include the need for more treatments, corneal haze, decrease in contrast, halos, or glare at night. Please note that for those already in the service, Commander's approval is required before undertaking corneal refractive surgery.

Surgical Options

LASIK, LASEK, and PRK are all types of corneal refractive surgery and can be approved for Aviation duty in the Army. These procedures are slightly different from one another, but all use a laser to reshape the cornea. Speaking generally, outcomes and recovery times are very similar for all three procedures. In LASIK the top layer of the cornea is cut and pulled back to expose the middle of the cornea for reshaping, after which the outer flap is returned to its original position. It may be a good choice for those with severe near-sightedness. LASEK is somewhat like LASIK but is done with a thinner flap and is performed closer to the surface. There are fewer complications related to the flap itself, but it may have more short-term discomfort immediately after the procedure and may be less appropriate for very near-sighted individuals. PRK also treats the outer surface of the cornea. But instead of creating a flap, the protective skin-cell covering (epithelium) is gently removed. The laser then sculpts the functional part of the cornea beneath. The protective skin layer grows back in a matter of days, but there is often discomfort and protective lenses and antibiotic drops must be used during the healing time. That's a very basic review of the procedures, and again it's best to discuss your preference with your Ophthalmologist who can help you choose a procedure, if any, that is right for you. Regardless of technique, the earliest your post-operative outcome can be evaluated for an Army flight physical is three months after the surgery.

Do Your Research

I encourage you to also discuss your case before surgery with an Army Flight Surgeon and/or an Optometrist with Army aeromedical experience. Your recruiter, ROTC or cadet command, or non-flight qualified military medical provider should be able to assist in locating and contacting an appropriate aeromedical provider. You may wish to obtain your optometry records beforehand, which will assist that aeromedical provider in assessing your case. Some visual defects are not amenable to corneal refractive surgery or an individuals' astigmatism or near/far sightedness may be too severe to be corrected within the limits of the Army's aeromedical policy. Under these circumstances, they may need to consult your waiver approval authority on your behalf (Human Resource Command for Active Duty and Reserves and the National Guard Bureau for Guardsmen) to determine aeromedical appropriateness of a procedure. The aeromedical provider or approval authority can also give you and your medical team the Army's criteria for postoperative outcomes that meet the eligibility criteria. If refractive surgery is the right choice, be sure to bring your preoperative, treatment, and postoperative records with you to your flight physical. Be aware that some individuals who undergo refractive surgery improve their vision but are still required to wear corrective lenses to raise their visual acuity to qualifying levels.

When To Act

Another consideration for some applicants interested in refractive surgery may be timing. For instance, if you currently qualify for Aviation duty with corrective lenses you may opt to complete initial flight training before seeking refractive surgery. Bear in mind that aside from the need to obtain command permission you will also need to find a period in your career where you will be ineligible to fly for six to twelve weeks, or potentially longer if there are complications during your surgical recovery. Finding that right time for interested individuals may require a year or two of planning in advance to determine the right window.

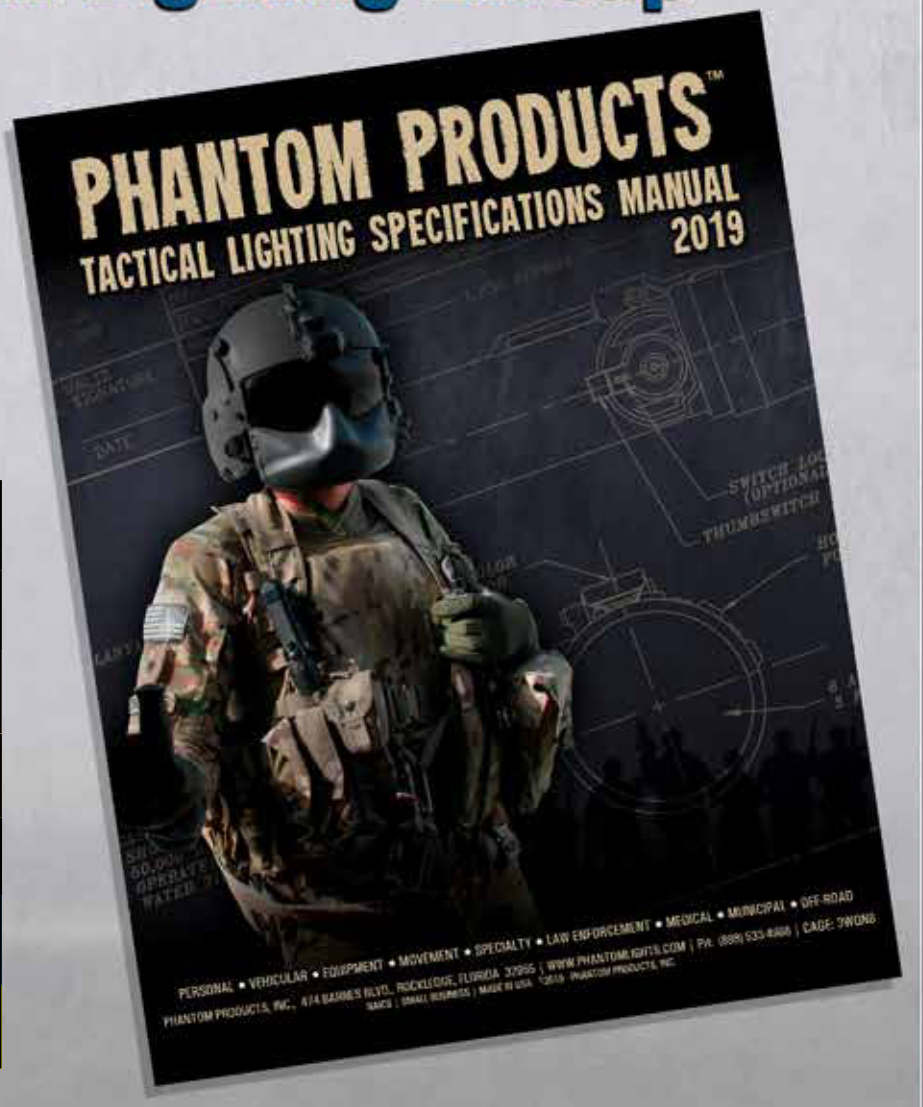
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MAJ Eric Abdul, M.D. is a flight surgeon at the U.S. Army School of Aviation Medicine, Fort Rucker, AL.

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Army Aviation Modernization …

GE Aviation's Support for Building the Future

By Bill Bohman, Tom Climer, and Jason Jundt



ALL GRAPHICS COURTESY GE

These are exciting times for Army Aviation. Aviation units expertly field a wide range of warfighting capabilities in high demand across the force. Aviators provide our Soldiers decisive battlefield advantages helping to ensure their success. To sustain and improve these advantages, the Army is embarked on an ambitious Aviation modernization program centered on Future Vertical Lift (FVL) and the Improved Turbine Engine Program (ITEP). These programs define capabilities for the next generation of Warfighters. GE Aviation is proud to be the Army's premier engine and systems provider today and looks forward to continuing this service in the future.

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These are not theoretical results; the T901 is not a paper engine. The Army required ITEP competitors to run two demonstrator engines before making an engine selection. GE Aviation took the initiative to build and test a third engine, a full T901 prototype, at GE expense, to ensure meeting Army requirements. GE invested over $300M of company money in turboshaft engine technologies including design and testing of the T901 prototype. The prototype engine not only proves the full capability of the T901's design and technologies, it significantly reduces overall Army program risk.



GE invested over $300M of company money in turboshaft engine technologies including design and testing of the T901 prototype

GE invested confidently based on our deep experience with the Army's demanding mission sets. GE's advanced technologies are already in commercial airline service and will have millions of flight hours proving their efficacy and reliability long before the first T901 enters service. Some of these technologies, such as ceramic matrix composites, were developed solely by GE, differentiating GE as a true technology leader. For others, such as additive manufacturing, GE is the clear industry leader having made significant investments over the last decade to mature the technology. GE's proven technologies are very low risk for the Army and are ready for the T901 today.

Benefits

The T901 has a lot to offer pilots, maintainers and fleet managers.

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- Power to accomplish the mission, to include Hot & High (6K/95)
- Range/station time to reach objective/engage targets
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- Fully modular like T700 – full fix forward capability
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Designing the future requires a thorough understanding of the past. The T700's combat proven, fully modular single spool architecture was carried forward to the T901. This design avoids the complexity, reliability challenges, increased cost and weight penalties of a dual spool design while delivering the same or better performance. The T901's fully modular design supports Warfighter readiness through better reliability and the ability to fix the engine in austere forward areas. The last forty years of operational experience proves full modularity is the single best way to reduce engine shop visits and thus minimize lifecycle costs.

Future Vertical Lift … powering the future

The T901 is not just for Black Hawks and Apaches. It was designed with FVL in mind. It will power the Future Attack Reconnaissance Aircraft (FARA) and can be grown to power capability set two aircraft and potentially even some capability set three designs. The T901's demonstrated capabilities meet today's challenges while its simple design, proven technologies and overall growth potential stand ready to power the next generation of Army aircraft.

GE's new T408 engine powers the Marine Corps new CH-53K "King Stallion" heavy lift helicopter. The Army and GE are cooperating to demonstrate the T408's ability to be a future powerplant for the CH-47. A flight test demonstration is progressing and when the Army needs more power for the CH-47, the T408 will be ready to answer the call. The T408 is also a potential answer for FVL capability set three aircraft. This rugged engine provides up to 7,500 shp, easily enough power for today's envisioned designs.

Modular Open Systems Approach (MOSA) … supporting truly open systems

GE has two decades experience developing open standards systems. Our system computing and networking heritage is strongly rooted in DO-297 Integrated Modular Avionics and ARINC 653 Avionics Application Standard Software Interface standards. With the advent of the US Government's MOSA requirement, GE took further steps to offer open mission system solutions for the Army.

GE focuses on the basic principles of MOSA to promote the Army's business and acquisition model and supports the following Army efforts to define and mature MOSA principles:

- Joint Multi-Role Technology Demonstrator (JMR-TD) Joint Common Architecture Demo
- JMR-TD Architecture Implementation Process Demonstration program
- JMR-TD Mission Systems Architecture Demonstration Capstone program
- Synergistic Unmanned Manned Intelligent Teaming Simulation program
- FARA Competitive Prototype program
- Advanced Teaming Mission Systems Development and Integration program
- Vertical Lift Consortium Air Vehicle/Mission System Architecture Interface and Comprehensive Architecture Strategy tasks.

GE's efforts to mature MOSA principles will allow the Army to maintain capability overmatch with peer adversaries, get new capabilities to the field faster, lower life cycle costs, and ensure future competition by eliminating vendor lock.

The hard-won lessons of the Army's past, captured in the design of the T700, are paid forward into the T901. The T901 delivers revolutionary capability for today's aircraft and will bring Future Vertical Lift to life. GE's large technology investments and development of the only ITEP prototype engine make the T901 a proven design. The T408 is already serving the Marine Corps and will be ready to power the Chinook when needed. The T408 along with the T901, are viable power solutions for FVL. To support Army Aviation modernization, GE Aviation is deploying the full weight of its technologies and experience to help ensure the Army's future success.

Bill Bohman is the director of Marketing Strategy and Tom Climer is the director of Rotorcraft Marketing for Military Systems; and Jason Jundt is a senior product manager, in Military Open Systems – all with GE Aviation.

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Private Sector SATCOM and Tactical Networking Advantages Key to Success of Army Aircraft Modernization Efforts

By Ken Peterman

The U.S. Army is currently building an Aviation Mission Common Server (AMCS) to enhance storage, data processing and transport capabilities across every aircraft in order to ensure the current fleet is ready to fight and win in multi-domain operations. Viasat commends the Army for implementing AMCS and other initiatives to enhance communications technology across airborne platforms and speed up the introduction of new capabilities. In order to maintain a tactical edge and deter near-peer adversaries, it will be critical for the U.S. military to deliver enhanced communications and cloud-enabled technologies across all domains.

As a technology leader in the private sector, Viasat believes it's increasingly becoming our responsibility to deliver the same level of connectivity and cloud-empowerment to our men and women in uniform as they have grown to depend upon in the civilian world. In fact, according to a recent survey, 68% of active duty military and Department of Defense (DoD) respondents say they expect the same level of connectivity and access to trusted and timely information on the battlefield as they get in the civilian world.

To empower our military forces with cloud-enabled technologies, much like what AMCS will provide to aircraft, the U.S. Army must have access to the latest advancements in satellite communications (SATCOM) and terrestrial networks. Of note, 81% of respondents to the same survey agree it's critical for U.S. military forces to have access to a modernized end-to-end satellite and terrestrial networks to make cloud-enabled technologies and the Internet of Battlefield Things a reality across the battlespace.

As Major General Thomas Todd recently pointed out, "there are several cross-cutting initiatives for the current fleet to make aircraft more agile, interoperable, survivable and integrated in multi-domain operations, and the network will play an integral role." The U.S. Army has an enormous, yet un-



A U.S. Army Task Force Brawler CH-47F Chinook releases flares while conducting a training exercise.

U.S. AIR FORCE PHOTO BY TSGT. GREGORY BROOK

tapped opportunity to leverage today's private sector capabilities that will help ensure current modernization efforts for airborne platforms are successful.

Delivering Connectivity

By deploying secure, resilient, hybrid, multi-networking SATCOM and Line-of-Sight architectures offered by private sector leaders like Viasat and others, the U.S. Army can deliver the connectivity needed to significantly enhance in-flight mission effectiveness and power artificial intelligence, machine learning and cloud-enabled technology applications needed for initiatives like AMCS. But this is only one of advantages private sector technology can offer U.S. Army airborne platforms.

Expanding tactical networking capabilities will also be key to helping ensure rotary and fixed wing platforms maintain the advantage needed to succeed across today's data-driven battlespace. With near-peer adversaries demonstrating substantial capabilities to conduct electronic warfare, it will be critical for the U.S. Army to adjust acquisition processes in order to rapidly acquire and deploy effective new technologies that can be continuously updated and enhanced—helping ensure the U.S. maintains its dominance across the multi-domain battlespace.

Viasat's agile development model, proactive approach and expansive line of non-developmental item (NDI) offerings have realized great success enhancing capabilities for several rotary and fixed wing platforms ahead of traditional programs of record. A great example of the success of our NDI offerings include Viasat's KOR-24A Small Tactical Terminal (STT). The STT was developed ahead of official requirements and is currently the world's only multi-channel radio capable of performing Link 16 communications in a small form factor. The STT includes interoperable functionality to improve communications between U.S. and international coalition partners' military agencies requiring critical information from multiple networks and is continually updated to support evolving mission needs. The STT will continue to see new capabilities infused into the platform, including the roll-out of a software-only upgrade to address cryptographic modernization in early 2020 and the ability to receive multiple messages simultaneously to follow.

Tactical Datalink

The U.S. Army chose Viasat's STT as its tactical datalink for the AH-64E Apache Helicopter, among numerous other platforms, including its special operations rotary wing assets. Because the STT has the capability to operate over two-channels, it allows its host platform to switch waveforms and network connections on the fly and merge disparate networks for a complete operational picture. The result is delivery of real-time situational awareness to the cockpit as the mission unfolds.

In addition to the originally fielded capabilities of the STT, it is now capable of Concurrent Multiple Reception (CMR), in which a radio can demodulate and decrypt multiple messages from multiple users simultaneously. This has the effect of reducing message latency and increasing the overall throughput of the network, which can also greatly enhance the Army's tactical networking capabilities.

Viasat implemented CMR capabilities across its expansive line of Next Generation Tactical Data Link products, including the STT, to fulfill urgent mission needs and improve communications ahead of future requirements. Viasat's CMR Link 16 capabilities will also enable the U.S. military to both expand the number of units with direct



VIASAT PHOTO

digital access to key tactical data while also addressing network congestion in order to adapt to emerging mission requirements and maintain a tactical edge. Soon, the product line will be incrementally enhanced with additional features to mitigate RF interference in a contested environment.

By taking a proactive approach, private sector leaders like Viasat are ready to deliver new technology capabilities today to help modernize our forces faster and more cost effectively than ever before. We applaud the U.S. Army's leadership by taking on new initiatives like AMCS and look forward to continuing to work closely with customers to deliver cutting-edge SATCOM and tactical networking capabilities that will enhance mission effectiveness for U.S. Army aircraft and bring cloud-enabled technologies to life across the battlespace.

Ken Peterman is the president for government systems at Viasat, located in Carlsbad, California.

FlightSafety International's Flight School XXI UH-72A Lakota Simulation Program

By Bert Sawyer







ALL PHOTOS COURTESY FLIGHTSAFETY INTERNATIONAL

Top left: Simulator Cockpit View (Including Chin Display)

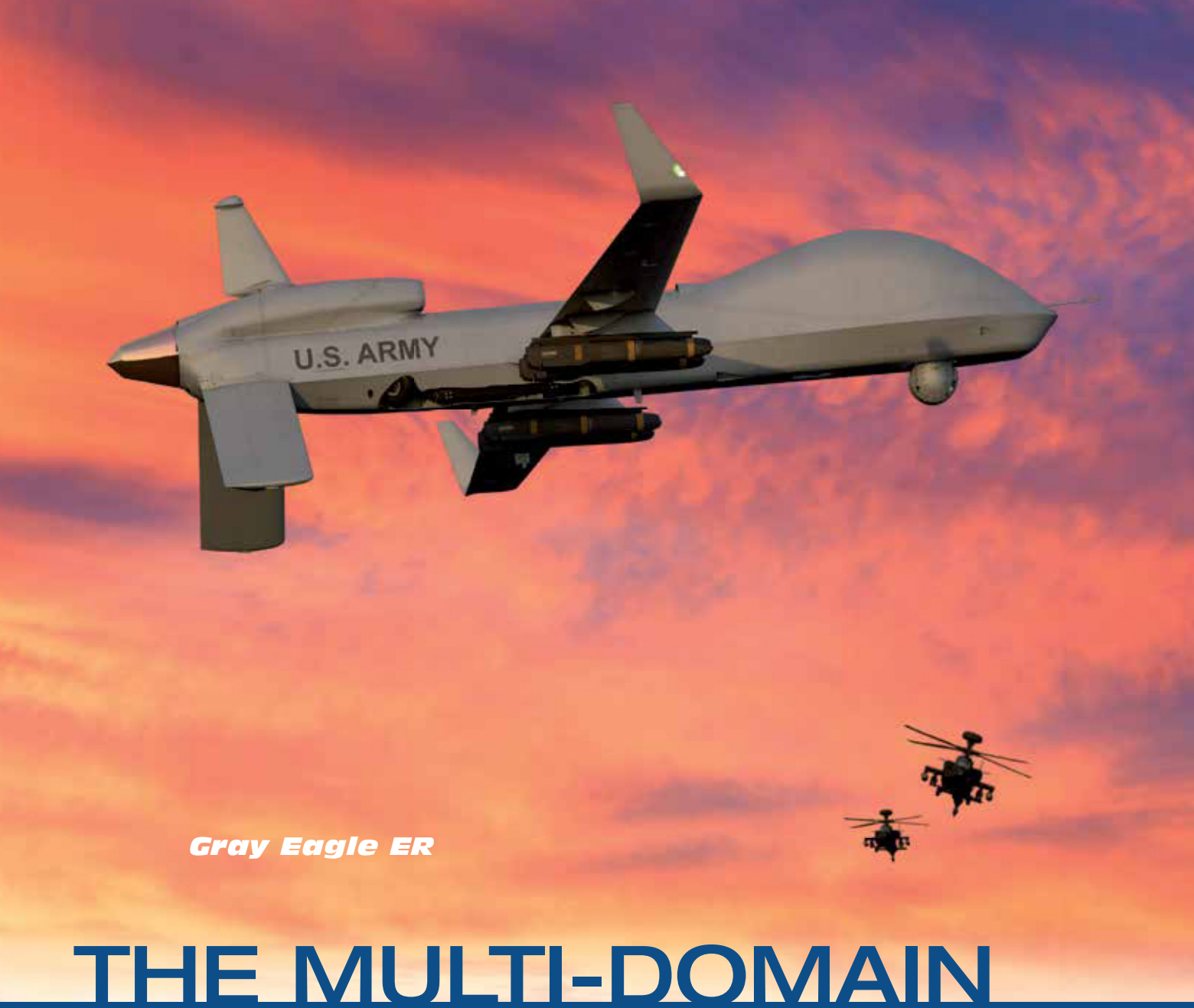
Top right: Simulator Cabin Area (Instructor Operators Station)

Bottom: Victory Hall Bay Remote Operator's Station

In 2014 the Army elected to replace the Bell TH-67 Common Core training aircraft with the Airbus UH-72A Lakota. Along with this change came the requirement for supporting simulation for both the Initial Entry Rotor Wing program and the Alabama National Guard.

A teaming effort lead by CSRA and in coordination with FlightSafety, Fort Rucker Directorate of Simulation (DoS), and the Program Executive Office Simulation, Training and Instrumentation (PEO-STRI) was put in place to determine the simulation requirements. Once completed, CSRA awarded a contract to FlightSafety to provide 22 UH-72A simulators and 10 cockpit procedural trainers (CPTs).

During the initial planning phases, it was determined the UH-72A simulators would require the capability of training all common core tasks in the current syllabus along with potential future training tasks. With this requirement the simulator must be capable of training to standard and without negative habit transfer, all primary tasks, all basic instrument tasks, all advanced instrument tasks, and all basic warfighting skills tasks to



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include all night vision goggle (NVG) tasks. In order for the new simulators to train the above tasks, it would also require an updated local training area visual database that would include local training area airports and enhanced terrain flight training areas that would allow NVG Nap of the Earth flight and map navigation.

Deliveries of the first 4 simulators began in May of 2016. They were installed, tested, and accepted by CSRA and determined to be ready for training by the Army in October.

Advanced Technology

To accomplish all the required training tasks FlightSafety chose the advanced technology systems that are incorporated into the FlightSafety FS1000™ simulators. They include a multifunction Instructor Operating Station, VITAL 1100™ visual system, and CrewView™ collimated glass mirror display which provides true collimated images that are free of visible distortions and artifacts out to mirror edge. The system offers 220 X 50 degrees of viewing with separate chin window displays replicating the actual aircraft viewing spectrum. VITAL 1100™ delivers highly detailed mission specific imagery with vastly improved screen content and exceptional environmental effects. The training benefits of this system also provides for a whole-earth environment and worldwide database that incorporates the latest terrain information with geo-specific satellite images.

Located aft of the pilot and co-pilot stations, the Instructor Operator Station features an intuitive interface, scalable graphics, and large multi touch displays. A remote laptop computer mounted at the co-pilot station allows for complete single screen control of the training period. The aft portion of the simulator also allows for the seating of two observer stations with fully integrated intercom systems.

The Operational Flight Trainers (OFT) feature a 6 degree of freedom electric motion system with a 60 inch stroke along with electric control loading for the flight controls. The flight crew station also provides for secondary motion cuing which replicates normal vibrations associated with the UH-72A helicopter flight. The Instrument Flight Trainers (IFT's) are pedestal mounted and provide both electric control loading and a secondary motion cuing system. The IFTs fully replicate the OFTs including the visuals with the only exception being the full motion system, however the motion system can be fully integrated with the IFTs should future requirements dictate.

Enhanced Tactical Training

For enhanced tactical training capabilities all simulators can be linked together providing interoperability capabilities for mission oriented operations. Training areas also incorporate moving ground vehicles that allow for threat identification and tactical reports training.

Training can also be monitored and or controlled off board the simulators with the Remote Operators Station (ROS). The ROS incorporates touch screen monitors that allows for an instructor to monitor and control the training if necessary. The instructor has a full complement of radio communications available, cockpit video, reposition capabilities, ability to change weather conditions, apply and remove malfunctions, monitor an assortment of maps with aircraft position, and several other features included with the simulator IOS.

The instructor is assisted with modernized debriefing capabilities; a SimView™ debriefing station is delivered with each simulator and placed in the respective briefing room. The system has the capability to record and then review any or all portions of the training period with the student. SimView™ provides actual crew video and voice, an assortment of map displays, virtual aircraft viewing, approach and enroute charts with aircraft tracking displayed, and aircraft instruments. Segments or points desired for review can be selected manually by the instructor for quick and easy replay along with the enhanced system capabilities of automatically marking for review any malfunctions that may be given while recording the training session.

An additional contract was awarded in September of 2015 for 10 UH-72 CPTs. The CPTs are a complex tactile trainer which replicates the actual aircraft cockpit. They provide the capabilities of performing a complete runup and shutdown per the operator's checklist while in a classroom environment. The training in this device adds a great deal of knowledge and proficiency to the student which significantly reduces time required for run-ups and shutdowns in the actual aircraft.

Comments and observations from instructor pilots, pilots, and management staff about the simulators include: "The simulator exceeded our expectations and will be the new state of the art for FSXXI."; "The glass mirror and enhanced database are impressive."; "The Instructor Operating Station has tremendous capability."; "The glass visuals coupled with the visual database are as good as they can get"; and the most common comment being "a truly awesome simulator" and the same comment referencing the CPTs.

FlightSafety has manufactured, installed, and maintained 24 Bell TH-67 simulators, 20 Airbus UH-72A simulators, 10 UH-72A CPTs, and for the Air Force 2 Bell TH-1H Weapon Systems Trainers for the Flight School XXI Common Core Program to date. Utilization time has exceeded 770,800 training hours with 100% availability. Included within this number is over 108,500 training hours in the UH-72A simulators.

FlightSafety International provides more than 1.4 million hours of training each year to pilots, technicians and other aviation professionals from 167 countries and independent territories. FlightSafety operates the world's largest fleet of advanced full-flight simulators at Learning Centers and training locations in the United States, Australia, Brazil, Canada, China, France, Japan, the Netherlands, Norway, South Africa and the United Kingdom.

Bert Sawyer is the director of Strategic Management for FlightSafety International.




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NORTH CAROLINA ARMY NATIONAL GUARD PHOTO

Big Ass Fans Case Study – Creating A Comfortable, Energy Efficient Hangar

By Alex Risen

BIG ASS FANS

A North Carolina Army National Guard tech works on an aircraft in the hangar at Morrisville, NC under Big Ass Fans Powerfoil X series HVLS fans and LED fixtures.

Located just beyond Raleigh's borders at Raleigh-Durham International Airport, the North Carolina National Guard's facility in Morrisville, North Carolina, performs critical maintenance and repairs on the state's fleet of military helicopters. But with metal-halide fixtures providing inadequate lighting and temperatures soaring into the 90s all summer long, North Carolina National Guard Energy Manager Matthew Dobson knew he had to upgrade the space.

Dim Lights And Hot Summers

Here's the problem: what happens when you combine legendary Carolina summers, a heat island created by the airport's tarmac, and a hangar with no air conditioning? A 25,000-sq-ft furnace. Small portable fans couldn't make a dent in the heat, and technicians often roasted as they worked, slowing them down and decreasing productivity — sweaty workers means dropped tools, impaired focus and potential water damage to sensitive electronic systems. The cavernous hangar was also poorly lit with inefficient metal-halide fixtures. The outdated halides produced dim light, had a lengthy warm-up period, and wasted energy compared to the latest LED technology. Technicians used task lights to supplement the fixtures, creating a cluttered mess of cords that presented a trip hazard. "I wanted to increase light levels and decrease energy consumption," said Dobson. "Our goal is to convert entirely to LED lighting in the North Carolina National Guard".

Working With Big Ass Fans

Dobson was familiar with Big Ass Fans through trade shows and reached out for a trial of Big Ass Fans High Bay LEDs. After seeing them side-by-side with the existing halide fixtures, Dobson knew he'd found the right lights for the job. "The Big Ass Lights were much brighter, and the light quality was bet-

ter," Dobson said, adding "they looked more robust and durable, too." With technicians frequently looking up at aircraft from below, Dobson also noted the importance of Big Ass Fans LED Bay Lights not creating a glare. As a government entity, Dobson was required to solicit other bids for lights and fans, but he still found Big Ass Fans' offer to be the most competitive. Once the bid had been accepted, Big Ass Fans designed a customized fan and light layout to maximize cooling power and light dispersion throughout the hangar.

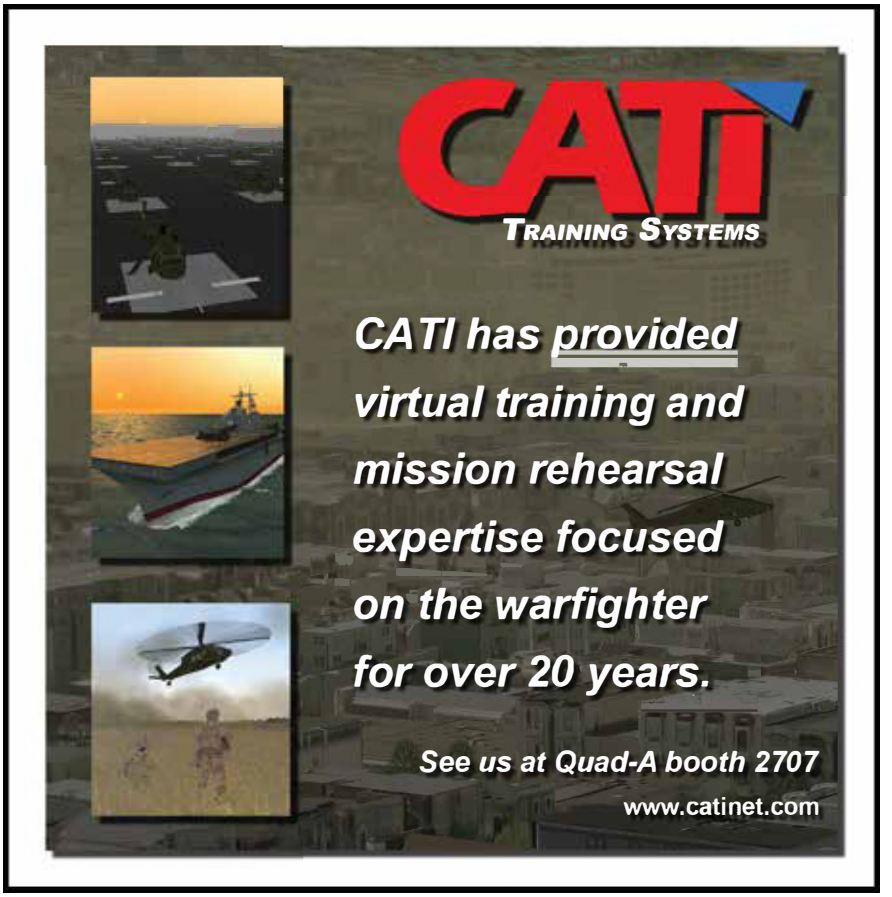
Top-To-Bottom Impact

Dobson used Big Ass Fans Factory Certified Installers for both the light fixtures and fans. He appreciated the minimal impact of the install crew. "It was seamless. We blocked off the area they were working for the day, and we kept working around them. They were able to accommodate us". Now 62 High Bay LED fixtures illuminate the facility from above, each producing 26,000 lumens of clear, bright light. For an exterior walkway at the facility, 15 High Bay LEDs were wall-mounted, providing a softer light — 10,500 lumens each — for those traveling through the passage. The installers hung four Powerfoil X series fans in the hangar to circulate air throughout the area. "The workers are happier and more comfortable, absolutely," said Dobson, "and that's tied into productivity". Even during the peak of summer, the overhead Big Ass Fans provide enough cooling to obviate portable fans, keeping technicians cool and sweat-free as they work on Apaches, Chinooks and more.

Year-Round Improvements

The fans and lights have made a big impact on the hangar, improving working conditions and morale and creating a cooler, brighter, cleaner facility. Dobson has seen a 30% reduction in energy usage and lowered the hangar's utility bills by $700 a month. In winter, Dobson plans to use the Powerfoil X fans to de-stratify the facility, whose 50-foot ceiling traps a significant amount of rising heat when heaters are turned on. In doing so, Dobson will see even more drastic energy savings during the colder months of the year.

Alex Risen is the public relations director for Big Ass Fans, headquartered in Lexington, KY.





The Avalex Cockpit Management Unit Family

Enabling Rapid Transition from Concepts to Doctrine Through Solutions that Synchronize Existing and Future Platforms

By Daniel Eckiss



AVALEX TECHNOLOGIES GRAPHIC

New concepts to enable multi-domain operations (MDO) are emerging from Government, industry and non-traditional sources at an ever-quickening pace. Likewise, innovative technology incubation and rapid acquisition contract vehicles implemented by the U.S. Army and Department of Defense are moving technology from concept to prototype faster than ever. Prototypes are great tools to gather user feedback and perfect concepts in a non-operational environment. However, the warfighter benefit of our nation's investment in leap-ahead technology research and development is not realized until enabling technology is integrated, trained and fielded. It is critical that the requirements for both new and legacy platform integration are understood and planned for early in a technology development program. This is particularly pertinent to the Army's future vertical lift programs and Avalex Technologies Corporation has stepped up with a well-received solution that assists the Army in addressing this challenge – the Avalex family of Cockpit Management Units.

Near Term and Future Synchronization

Current Army aviation platforms are projected to be in the fight for the next 20 years as future vertical lift is developed and tested. Therefore, MDO enabling solutions will first be fielded on UH-60s, CH-47s, AH-64s and other existing platforms. Avalex understands that an investment in technology should therefore fit both the near-term upgrade path and have enough lifecycle and expandability to synchronize into future platforms. Our cockpit management unit (CMU) product family has been selected to solve cross-platform technology insertion problems well into the future.

Future Requirements, Simplified

As MDO mission requirements expand, so do the number of communications, identification, navigation and survivability components that get bolted to existing platforms. Each new component comes with a list of integration and aircrew training requirements, and with this diversity and expansion comes the inherent complications of parts and software compatibility.

Platform operational flight programs (OFPs) were not written to respond to today's rapid technology insertion cycles. The Avalex CMU provides a federated hub for user interface



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and platform data sharing that enables new component integration in months or weeks versus years. The CMU model-based software and proven RTOS aligned with DO-178C provides assured access to mission critical components. Our full-featured CMU Software Developers' Kit (SDK) enables cooperative development with U.S. Army software teams. New components can be added to a CMU software defined control head through field-installable software configurations. Last minute ground force, coalition and other mission requirements for additional gear can be accommodated as easily as downloading a new app on a smart phone.

Train Experts Faster

Well designed and integrated technology solutions are useless until operators and maintainers achieve a professional level of proficiency in the new concept of operations (CONOPS). The Avalex CMU product line is architected to solve this problem through application of a common and industry-standard user interface. Avionics best practices are applied in a consistent method that extends across all brands of communication, identification, navigation and survivability components connected to the CMU. This application allows for accelerated first-time proficiency and prevents re-training when the next generation component makes its way through the R&D pipeline. Reduced training demands especially benefits our Army aviators in the ARNG and USAR communities who are expected to maintain proficiency with 1/30th the time in the seat.

Maintaining the Momentum

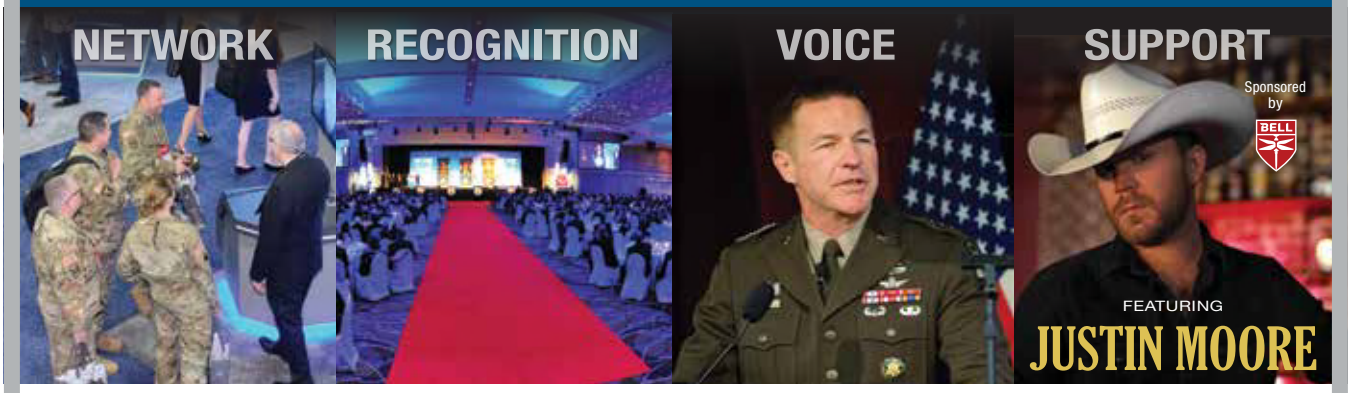
Avalex is dedicated to providing innovative products that empower our customers to achieve mission success. Since 1992, they have helped improve communication, facilitate exploration and save lives. For U. S. Army aviation in particular, the benefits of our innovative cockpit management offering are clear. Common controls and expandable, model-based software make the Avalex CMU product family an ideal solution to synchronize across current and future platforms as aircrew and maintainer proficiency will seamlessly transition.

Learn more about the capabilities of the Avalex Cockpit Management Unit family of products at *https://avalex.com/product-category/cmu/*

Daniel Eckiss is the director of Product Management for Avalex Technologies.



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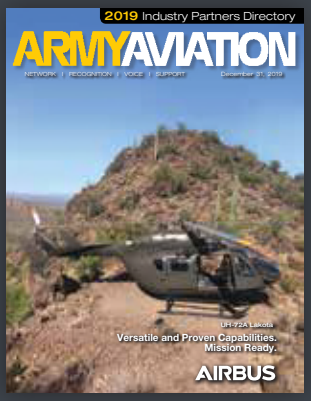
WHEN: Tuesday, April 21, 2020; Shotgun start 0730 (morning) and 1315 (afternoon)

FORMAT: 4 Person Scramble

COST: $115 per player, total 144 golfers for morning and 144 golfers for afternoon. Cost covers green fees, cart with GPS system, breakfast, lunch, hors d'oeuvres and all standard golf amenities including range balls, club cleaning and bag handling. Accepting team and individual registration (including handicap), first paid 288 responses accepted on a first come, first filled basis. Rental clubs available. Paid registration due by April 10, 2020. All cards accepted, except American Express.

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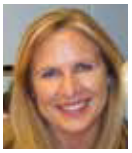


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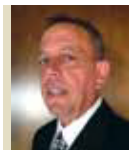
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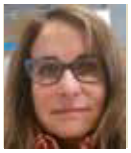
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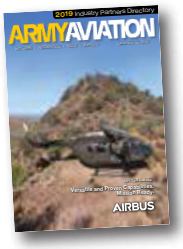
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An Inflection Point for Army Aviation Science & Technology

By Carvil E. T. Chalk



SIKORSKY-BOEING PHOTO

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Bell V-280 Valor

The conclusion of each calendar year brings opportunities for reflection on the past and anticipation for the future, and this is particularly notable for Army Aviation Science and Technology at the end of 2019 and the beginning of 2020, which forms an inflection point for our efforts. In fiscal year 2013, the Army Aviation community embarked on what has become a remarkably successful S&T endeavor called the ***Joint Multi-Role Technology Demonstrator*** (JMR-TD), a program that began with a vision to demonstrate transformational vertical lift capabilities intended to inform DoD decisions regarding the future of the vertical lift fleet. Across 2018 and 2019, our industry partners have demonstrated flight of the Bell Valor and the Sikorsky-Boeing Defiant, and during 2020 we are on track to conclude a successful capstone event for the Mission Systems Architecture Demonstration (MSAD), which will showcase the potential for truly open systems using the standards, processes, and tools developed within JMR. Similarly, our ***Degraded Visual Environment-Mitigation*** (DVE-M) program will also conclude in 2020 with a series of flight trials to exercise true sensor fusion within a variety of environments – rain, fog, dust – along with Mission Adaptive Autonomy, which will demonstrate hands-off flight using the same set of sensor data, not only accounting for degraded visual conditions but also assessing local terrain and selecting safe landing areas. Why then is 2020 the inflection point…the time period in which a shift occurs, and what does the future hold? As JMR-TD and DVE-M end, the CCDC AvMC Aviation Development Directorate is now engaged in two efforts to further the revolutionary transformation of Army Aviation – Advanced Teaming and Air Launched Effects – all while supporting the Future Attack Reconnaissance Aircraft Competitive Prototype (FARA-CP) program.

As a result of the JMR-TD vehicle development efforts, new air vehicle configurations have demonstrated feasible and affordable capabilities of higher speed, better lift efficiency, and lower drag. The Bell V-280 focused on affordable tilt rotor components and manufacturing processes, flight characteristics indicative of Level 1 handling qualities, and high-speed flight up to 300 kt. The Sikorsky-Boeing Defiant, currently undergoing envelope expansion, focused on a lift-offset, co-axial helicopter with a pusher prop designed to achieve high speed without sacrificing low-speed maneuverability. MSAD has developed standards, architectures, and tools that increase software reuse and reduce software costs, with results suggesting that upfront modeling and analysis can provide a 10x reduction in downstream test and integration resources. Our follow-on Integrated Mission Equipment program that began in FY19 will deliver the framework for a digital backbone structured to meet common architectural standards for aviation systems in Future Long Range Assault Aircraft (FLRAA) and FARA to enable timely and low-cost updates to hardware and software that invalidate our adversaries' investments, allowing us to beat them on the battlefield and at the bank.

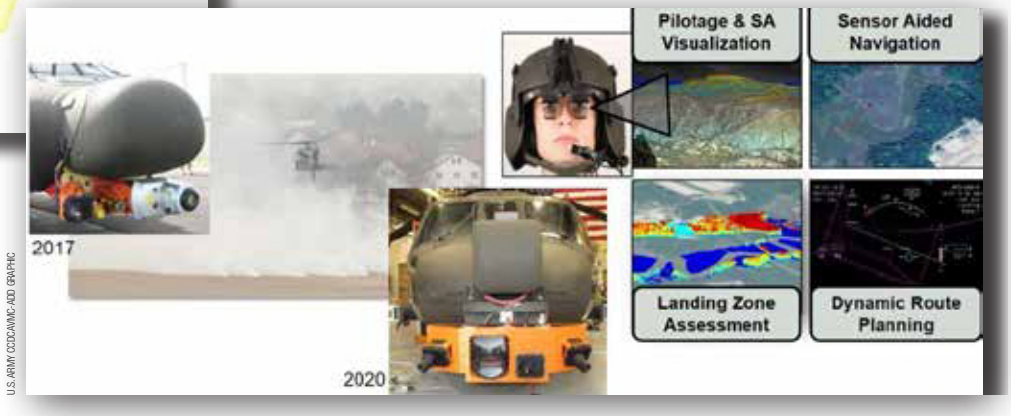
The ***Degraded Visual Environment-Mitigation*** multi-year demonstration program is evaluating key technologies to enable full spectrum Aviation operations in degraded environments. The three main components of a DVE solution are flight controls, sensors, and cueing. Success will be achieved this year as our team integrates and demonstrates an optimized solution comprising fused sensor data, comprehensive cueing, and advanced flight controls with autonomous, sensor-driven guidance. We are preparing for flights in 2020 throughout the range of degraded environments – rain, fog, and dust. The overall goal of the 2020 flight demonstrations is to demonstrate a fully-integrated rotorcraft pilotage capability at level 1 handling qualities for mission tasks, multi-modal fused sensor-driven guidance, and fully-coupled flight and landing while operating DVE.

What then are the next efforts that S&T will execute to continue the revolution of Army Aviation? Surprisingly they are not aviation platforms but rather aviation systems and ecosystems.

Advanced Teaming is the premier effort supporting the development of the FARA Ecosystem. While former activities have often focused on individual vehicles and subsystems, advanced teaming is designed to develop the interconnected relationship among a variety of vehicles and payloads that will enable autonomous aviation teams with the lethality and survivability to find, fix, and finish threats throughout an MDO campaign. Agile, resilient networks will enable intra-team communications in anti-access/anti-denial (A2AD) environments, while autonomous agents will lead these same teams to perform necessary detection, identification, location, and reporting (DILR) to support long range precision fires (LRPF) or local lethal attacks to neutralize threats using a combination of vehicles and payloads, all with minimal human intervention and while operat-



Advanced Teaming and Air Launched Effects



Degraded Visual Environment Mitigation (DVE-M) program

ing as part of a combined arms team in contested multi-domain battle space. The technical approach is structured to reach tactical readiness level (TRL)-6 on a parallel timeline with FARA-CP and the eventual FARA program of record.

While Advanced Teaming emphasizes autonomy and behaviors, the complementary effort, ***Air Launched Effects***, brings the air vehicles and payloads to execute these missions. Our S&T effort is focused on tactical-altitude launch of on-demand ALE to provide a range of effects. The air vehicles that support these autonomous engagements comprise ALE that operate as a morphing team to enhance lethality and survivability and enable dominance in the lower-tier aviation domain. ALE will be deployed from FARA and maneuver into the enemy integrated air defense systems (IADS) domain. Each team member will apply its unique payloads in a coordinated and collaborative fashion for mission success. AI engines will enable individual and team reconfiguration. And when manned systems move into the fight, ALE can provide layered survivability to ensure the lethality of our force and the protection of our greatest asset, the U.S. Army Soldier.

This burgeoning synthesis of air vehicle technologies, open systems, autonomy, and sensor fusion gives us teams of manned and unmanned platforms that engage the enemy more quickly and exhibit timely adaptability to neutralize threats and waste the investments of our adversaries bringing us victory on the battlefield while conserving our resources and protecting our greatest treasures – liberty and those who defend it.

Mr. Carvil E.T. Chalk is the acting director of the Aviation Development Directorate, CCDC Aviation & Missile Center, located at Redstone Arsenal, AL.



Airworthiness Readiness for Future Vertical Lift

By Mr. Keith R. Darrow

As you have likely observed many times, our Army strives to provide us with the best possible combat equipment available at the time of initial fielding, and then continues to improve upon each product's technical capabilities and materiel safety attributes throughout the system life cycle.

For example: Although I am not quite old enough to have flown with full-face 5-series night vision goggles, I am confident that the cutaway -5s I first used in the aeroscout course were better for Aviation use. A few years later, as a Cobra instructor pilot at Hanchey, I recall that I preferred the Night Two shift because the even better 6-series goggles were more likely to be available after midnight in the flight equipment issue shop.

Now, 30+ years later, having long ago exchanged the attack pilot's air conditioned mesh seats for the decidedly less tactical director's chair at the Combat Capabilities Development Command Aviation and Missile Center's Aviation Engineering Directorate (AED), I find myself leading our Army's airworthiness assurance organization into the Future Vertical Lift (FVL) era. Here, in a very aggressive "schedule is king" environment, an ongoing mission analysis topic is: What foundations must we build or reinforce now to facilitate the best possible airworthiness attributes for the "A" variants of the FVL platforms? And, after that, how might we enable ever better materiel safety attributes for the "B" series, and beyond?

Initiatives

In response, we have initiated several new activities to strengthen AED's airworthiness readiness for FVL. For example, in our last special focus article for *Army Aviation* magazine (see the January 31, 2019 issue), we invited industry partners to increase the frequency and technical depth of their advanced technology-related airworthiness collaborations with AED. That invitation has already led to many productive engagements, including over two dozen airworthiness discussions during the AAAA Missions Solutions Summit in April 2019. So far, last January's forecast for "an upturn in airworthiness-related, government-industry interactions" has proven correct. However, we still have ample capacity for additional engagements in this critical collaborative endeavor.

Also new since we drafted the previous focus article, the ***Rotorcraft Structural Integrity Program (RSIP)*** has now been published as MIL-STD-3063. The RSIP defines the requirements necessary to substantiate and maintain structural integrity in the FVL aircraft throughout their life cycle. Furthermore, the RSIP also includes provisions for new aircraft configurations unlike the conventional helicopters we have fielded in the past.

Additionally, last March we published the baseline version of the new ***Army Military Airworthiness Certification Criteria (AMACC)*** document. AMACC now serves as the consolidated source of airworthiness requirements for the FVL aircraft as well as future upgrades to legacy aircraft.

However, as advanced technologies continue to quickly mature toward their readiness for integration into Army aircraft, we anticipate the recurring need for evolutionary improvements and expansions to the baseline version of AMACC. Toward that end, AED leveraged the FirePoint Innovations Center at Wichita State University to solicit and assess industry suggestions for future AMACC revisions. So far, we have received over 1,600 technical comments from vertical lift aircraft manufacturers, suppliers, and research institutions. In September 2019, a key partner in this effort – the National Institute for Aviation Research – completed their review of the aggregated comments and delivered insightful recommendations for a forthcoming AMACC "Rev 1." The target for Rev 1's publication is April 2020. Attesting to AMACC's utility across the Army Aviation enterprise, Rev 1 will also populate airworthiness requirements into the Model Based Systems Engineering Framework developed by the Program Executive Office, Aviation.

Future Attack Reconnaissance Aircraft

Within the ongoing FARA competitive prototyping process, the baseline AMACC was utilized to update the airworthiness qualification requirements originally outlined in the 2018 program solicitation. In turn, the five FARA Performers used the government's airworthiness qualification plan – which addresses airworthiness criteria, standards, and methods of compliance across sixteen technical domains – to develop their airworthiness qualification specifications.

During the last quarter of calendar

year 2019, AED's five FARA airworthiness teams were engaged in intensive discussions with the five Performers to ensure the government fully understands each manufacturer's plans to substantiate flight safety/airworthiness within the constraints of the aggressive program schedule. In addition to the analytical predictions for aircraft flight performance, and many other attributes, the upcoming decision on which two FARA Performers will move beyond the preliminary design phase to build their aircraft will also depend upon the quality of the manufacturers' planning to build appropriately safe prototypes for first flights in November 2022 and, ultimately, to deliver fully qualified production aircraft. The FARA agreements stipulate that the Army will be the airworthiness authority.

Automation & AI

Another ongoing activity is AED's initiative to incorporate greater levels of automation and, perhaps, artificial intelligence into the engineering task management system that undergirds our implementation of the Army's airworthiness process. This effort is essential to our ability to support FVL program schedules with expeditious generation and technical reviews of system-tailored airworthiness qualification plans, airworthiness impact statements, airworthiness releases, airworthiness qualification substantiation records, and statements of airworthiness qualification. In addition to providing the increased administrative agility required to meet demanding schedule expectations, this initiative also establishes a solid foundation for the potential future implementation of military aircraft type certificates.

As you know, leaders of Army Aviation combat units are highly adept at managing operational risks. Likewise, our acquisition program and project leaders are experts at managing programmatic risks in the areas of cost, schedule, and system performance. However, in the airworthiness arena, our mission is oriented toward advising senior Army leaders regarding materiel risks that may affect the flight safety of our current and future aircraft. Particularly within a "schedule is king" environment, it is imperative that AED continues to work closely with the FVL cross-functional team, acquisition project office system safety managers, and aircraft manufacturers to identify potential materiel risks as early as possible and begin developing well-informed plans to mitigate, and ultimately retire, any associated hazards.

In the interim, we will leverage AED's considerable technical expertise to provide Army Aviation decision authorities with an accurate understanding of any unresolved potential flight safety issues. The AED initiatives described above are key enablers for our work to assure the airworthiness of the FVL aircraft, beginning with the competitive prototypes and continuing through the future variant alphabet from the "A" to the "Z."

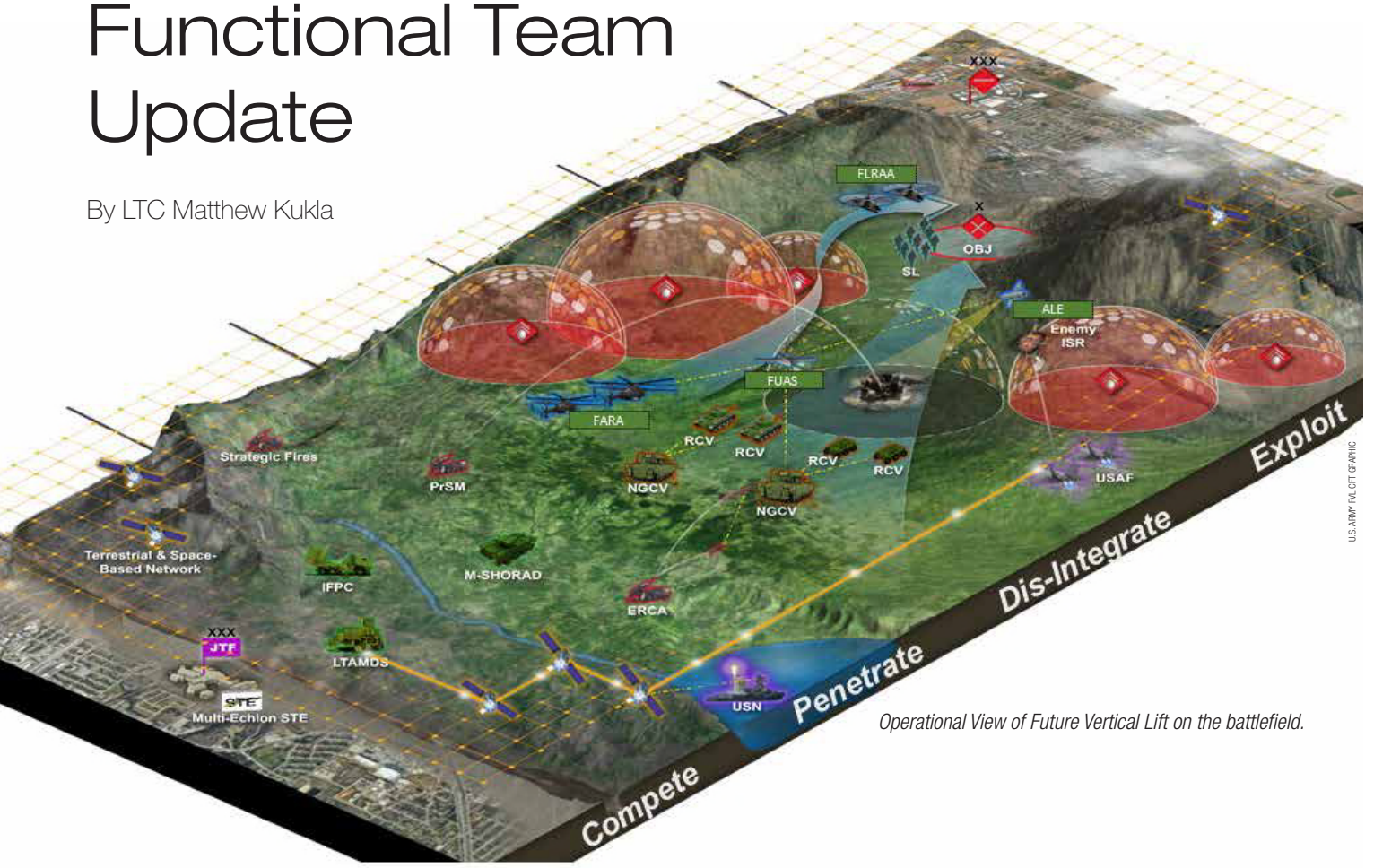
Above the Best!

Mr. Keith R. Darrow, a member of the Senior Executive Service, Master Army Aviator, and former experimental test pilot, is the director of the Aviation Engineering Directorate, Combat Capabilities Development Command Aviation and Missile Center, located at Redstone Arsenal, AL.



Future Vertical Lift Cross Functional Team Update

By LTC Matthew Kukla



U.S. ARMY PAL CFT GRAPHIC

Operational View of Future Vertical Lift on the battlefield.

A small cross-functional team (CFT) of Soldiers and civilians that number fewer than 30 people in total are working and collaborating with the team-of-teams throughout the Army and joint forces to address the next generation of Future Vertical Lift (FVL) systems and platforms. The FVL CFT is pursuing leap ahead technology and increased capabilities and posture FVL to move at the speed of relevance by iterating novel solutions into new designs. The FVL CFT is committed to ensuring Army Aviation maintains U.S. vertical lift dominance on the battlefield and is decisive in the lower tier of the air domain.

By now most people are aware of the FVL's four primary lines-of-effort (LOE): Future Attack Reconnaissance Aircraft (FARA), Future Long Range Assault Aircraft (FLRAA), Future Unmanned Aerial Systems ((FUAS) which includes Air Launched Effects (ALE) and Future Tactical UAS (FTUAS)), and the Modular Open Systems Approach (MOSA). MOSA cross cuts all the LOEs and will increase affordability by enabling high systematic reuse of components and permits rapid adaptability of our systems. The primary LOEs have been discussed in previous publications. However, there are additional tenets within the CFT that are not as well-known but serve as the connective tissue to the FVL systems and platforms.

This article is not meant to rehash the merits of the primary LOEs, but instead is intended to provide additional context to FVL capabilities by discussing our additional efforts. These supporting tenets are – reach, lethality, survivability, and affordability.

Reach and Lethality

Reach and lethality are both complementary and mutually supportive in the FARA ecosystem. Although these are two distinct tenets, they are discussed in the same section to illustrate their importance and contribution within the context of the Multi-Domain Operations (MDO) battlefield.

The Operational View (OV) illustrates FVL on the battlefield. In this scenario, FVL platforms deliver effects tailored to meet the ground commander's needs in order to produce specific results at a specific time to

penetrate and dis-integrate the enemy as well as rapidly exploit opportunities created. In conjunction with the increased speed, range and endurance of the FVL platforms (FARA, FLRAA, FUAS), the Long Range Precision Munitions (LRPM) and Air Launched Effects (ALE) further extend FVL's reach into the enemy's battle space and thereby lengthen the enemy's decision cycle and reduce the effect of enemy counteractions.

FARA delivers ALE that detect, identify, locate, and report (DILR) enemy high value targets and then share this information across the Army's network. Through this meshed network, reports from ALE flow back to FARA, Long Range Precision Fires (LRPF), or other kinetic capabilities to engage the enemy in depth and at great distances. Multiple ALE continue to produce kinetic and non-kinetic effects and give the enemy multiple problem sets simultaneously when and where we choose. When required, Long Range Precision Munitions (LRPM) are deployed from FVL platforms to engage high value targets that are either line-of-sight or non-line-of-sight and at ranges greater than 32 kilometers. Enabled through a meshed network – and used in concert with ALE and LRPM – FVL platforms continue to hit the enemy's integrated air defense system (IADS) across a de-aggregated battle space in order to dis-integrate enemy command and control (C2) as well as dis-integrate enemy control of key terrain. Increased ranges in FARA and FLRAA, in concert with ALE and LRPM, extends the operational reach and increases both survivability and lethality of Army Aviation. FVL, quite simply, allows the ground force commander to expand the battlefield in space and time and at echelon in order to defeat the enemy.

Survivability

In the context of this article, survivability will be in reference to avoiding, mitigating, and/or defeating the enemy's kinetic threats on the battlefield.

One aspect of survivability is to break the kill chain early. Giving the enemy few opportunities to acquire, track and engage our forces is principle to increasing our survivability. Simply put – if the enemy munition never leaves the weapon system – we increase the probability of survivability. This is why the increased speeds, high maneuverability, and agility for FARA and FLRAA platforms are so critical. High speeds coupled with low altitude tactics to hide in the clutter and use the terrain to our advantage are tantamount to survivability. This is not conjecture. High fidelity physics-based modeling against our pacing threat has proven that FVL is highly survivable on the current and future battle fields.

What about when the enemy does take the shot? Based on the speed of technology it is hard to imagine what systems will exist beyond 2028. For that reason, the CFT is capturing required capabilities that are informed by industry, academia, and government (USG) labs as well as deliberate science and technology (S&T) efforts for early prototyping. This flow of information is used to best inform the next generation of systems capable of detecting and defeating enemy threats in order to increase survivability.

Affordability

At the forefront of all of this is resourcing. There is a misconception that "new" is synonymous with "unaffordable." As we near the end of the 2020s, the current fleet will require recapitalization as the FVL systems begin production and fielding. The May 2019 Congressional Budget Office (CBO) report stated that fielding new platforms will negate the requirement and cost of recapping the current fleet. Additionally, the Army cannot afford to delay another decade to consider – and reconsider – the merits of FVL platforms that fly further, faster, and have greater capacity and endurance than the current fleet.

The CFT is working closely with the program management offices (PMOs) to ensure affordability goals are met. The intent is to establish a competitive program strategy that will afford favorable negotiated intellectual property (IP) license rights to contracted technical data deliveries. The technical data package supports the implementation of a Digital Enterprise, development of a weapons system Digital Clone, and support an optimized organic industrial base sustainment approach. This optimized organic life cycle support will use reliability centered maintenance bolstered by Reliability, Availability, and Maintainability (RAM) analysis to ensure the best system is available at an affordable and efficient operation and support cost.

How are we doing all this?

The FVL CFT and PMOs are taking advantage of Middle Tier Acquisition (MTA) and Other Transaction Authorities (OTAs) to find innovative ways to move faster. Army Futures Command (AFC) leverages the MTA/OTA approach when appropriate to accelerate development, production, and delivery of materiel capabilities. OTAs are used to foster innovation and encourage American small and medium enterprises to help meet current and future needs. To date, FARA is the major benefactor of OTAs as it has been used in the FARA Competitive Prototype (CP) Program, resulting in five competitive prototype designs. FARA has also leveraged the DoD Ordinance Technology Consortium (DOTC) for supporting capabilities. PM FLRAA is utilizing the Aviation Missile Technology Consortium (AMTC) OTA for its Competitive Demo and Risk Reduction (CDRR) effort and a handful of other supporting capabilities. FUAS has also leveraged the OTA process to inform requirements about the ALE effort. Currently, there are at least ten FVL modernization efforts that are leveraging a consortium OTA in addition to the FARA CP Program.

Schedule is King for FVL CFT

The CFT is driven by time and tasks and the team has become well versed in judiciously reviewing processes, identifying the crucial steps, and understanding what steps must be done vice what steps can be done later. Reach, lethality, survivability and affordability are the tenets that must be baked in to the primary LOEs at inception in order to maximize the effects of FVL systems and platforms ensuring Army Aviation remains decisive in the lower tier of the air domain.

LTC Matthew Kukla is the operations deputy and MOSA lead integrator for the U.S. Army Futures Command Future Vertical Lift Cross Functional Team located at Redstone Arsenal, AL.

AAAA Symposia in Huntsville

By CW4 Joe Pisano, U.S. Army Retired



More than 1,000 attended the 2019 AAAA Aircraft Survivability Equipment and Joseph P. Cribbins Aviation Product Support Symposia in Huntsville, AL, Nov. 18-21.

The Army Aviation Association of America sponsored the Aircraft Survivability Equipment Symposium (ASES) and the 47th Annual Joseph P. Cribbins Aviation Product Support Symposium during the week of November 18 at the Von Braun Center in Huntsville, AL. These back to back events provided the opportunity for government and industry to discuss the ever-changing environment in Army Aviation, the current status of Army Aviation's programs, and future requirements necessary to support the Aviation warfighter and combatant commander as the Army remains ready to fight and win today while preparing to do so in future multi-domain operations.

The first two days were focused on the ASES theme of "Enhancing Aviation Survivability in Multi-Domain Operations." MG David Francis, commanding general of the U.S. Army Aviation Center of Excellence and Army Aviation Branch Chief provided the keynote and addressed transitioning from training for counterinsurgency (COIN) to training for large scale combat operations (LSCO). BG Brian Collins, the Program Executive Officer for Intelligence, Electronic Warfare and Sensors also provided his perspective on the move to MDO and, once again this year, provided funding for aviation mission survivability officers (AMSO) from around the world to attend the event, including two days of follow-on government sponsored classified sessions.

The ASES was filled with panels that focused on warfighter leaders, industry/operational support, future work, and foreign military sales. Other speakers included BG Allan Pepin, commanding general of the U.S. Army Special Operations Aviation Command, BG Walter Rugen, Director of the Future Vertical Lift Cross-Functional Team, and Mr. Patrick Mason, the Deputy Program Executive Officer for Aviation, with a wrap up by the aviation branch survivability branch chief, CW5 James VanMeter.

The numerous aviation mission survivability officers (AMSOs) from all compos and locations around the world also participated in two additional days of government classified sessions.

On Wednesday and Thursday, the focus shifted to the Cribbins Symposium, where this year's theme was "Army Aviation Systems in Multi-Domain Operations – from Cradle to Grave." The two days included key leadership discussing the requirements needed to remain on the cutting edge for the current fight while preparing for future multi-domain operations.

MG Thomas H. Todd, III, PEO Aviation, provided the keynote the first day and MG K. Todd Royar, commanding general of the U.S. Army Aviation and Missile Command (AMCOM), keynoting the second day. The remainder of the Cribbins symposium included three combat systems panels that included various project managers (PMs) and industry leaders associated with them, three AMCOM panels, as well as several speakers including, BG Rugen from the FVL CFT, and COL Paul Weizer, the SOCOM Acquisition Executive Military Deputy. There was also a Long-term Affordability for Army Aviation panel, chaired by former Aviation Branch Chief and 8th Army commanding general, LTG (Ret.) Dan Petrosky.

AWARDS

The **National AAAA Functional Awards** that were presented during each symposium to recognize outstanding achievement in several areas of Army Aviation are on the following three pages.

Additionally, the local AAAA Tennessee Valley Chapter also presented eight Mission Area awards. The following were recognized for their accomplishments in the area indicated:

Test & Evaluation–Mr. Craig Lanphere, PM Joint Air-to-Ground Missile
Technical–Mr. Matthew Lawrence, PM Utility
Rising Professional – Mr. Brian Sullivan, PdM Future Tactical Unmanned Aircraft Systems
Programmatics–MAJ Brian Ehrenheim, APdD Scout Attack
Logistics/Sustainment–Mr. Oswald Ingraham, Jr., PM Apache
Business–Ms. April East, PM Aviation Mission Systems & Architecture
Administrative – Ms. Aimee Ghee, PEO AVN HQ
Acquisition/Contracting–Mr. Vince Dickens, PM Aviation Turbine Engines.

The week's events included an exhibit hall with more than 70 vendors and a mix of over 1,000 military, civilian and industry attendees.

CW4 (Ret.) Joe Pisano is the editor of ARMY AVIATION Magazine.

2019 AAAA National Functional Awards

Aircraft Survivability Equipment Award

Sponsored by BAE Systems



SPC Gary K. Acton

Company D, 4th Battalion, 160th Special Operations Aviation Regiment (Airborne) Joint Base Lewis-McChord, WA

Deployed

SPC Gary Acton serves 4th Battalion, 160th Special Operations Aviation Regiment (Airborne) as a Fully Mission Qualified Aircraft Survivability Equipment Technician. His technical knowledge of Army and Special Operations Aviation specific ASE coupled with his determination to succeed have been pivotal to the success of himself and his unit. Over the past year, he has assisted in all maintenance tasks, training programs, and maintenance operations required to support the Battalion's 17 MH-47G and 9 MH-60M SOA helicopters. He was instrumental in developing 4 other 94Rs into BMQ and FMQ ASE technicians. His training has directly enabled the ASE support of simultaneous battalion missions and exercises across the PACOM, AFRICOM and CENTCOM Unified Combatant Commands. He led 16 Suite of Integrated RF Countermeasures (SIRFC) tests dedicating more than 400 hours to the testing and troubleshooting of this incredibly complex, SOA specific, ASE system valued at $129 million across the unit's fleet of aircraft. He has also worked to cross-train with the 15Fs and 15Ns of Avionics, performing over 1,400 hours of on-aircraft ASE and Avionics maintenance enabling the deployment of 12 aircraft to support missions across multiple AORs. SPC Acton's accomplishments clearly identify him as the winner of the 2019 AAAA Aircraft Survivability Equipment Award.

Aviation Mission Survivability Officer Award

Sponsored by VT Miltope



CW4 William S. Roth

Headquarters and Headquarters Company, 1st Battalion, 160th Special Operations Aviation Regiment (Airborne) Fort Campbell, KY

Denise Roth (l) and daughters accept on behalf of deployed CW4 Roth

CW4 Roth is an unequivocally strong example of an Aviation professional who performed exceptionally as the 1st Battalion Aviation Mission Survivability Officer (AMSO), a Regimental Flight Lead, Instructor Pilot, and Fully Mission Qualified Pilot. As the Battalion AMSO he diligently equipped the largest and most rapidly deployable Task Force to remain competitive with newly emerging threats and survivability problem sets. He implemented a robust training plan to solidify aviator preparedness, integrated new equipment, and spearheaded the largest survivability training exercise to date. As a Regimental Flight Lead, he served as a combat multiplier and role model for junior aviators. He deployed twice in support of Operation Inherent Resolve, participating in some of the most critical targeting missions of the year. His impacts were prevalent in both the operational achievements and training advances experienced by the 160th Special Operations Aviation Regiment (Airborne) over what was an extremely multi-dimensional year of growth and the Aviation branch. He answered the call numerous times throughout the year, on several fronts, tirelessly and without hesitation regardless of the task. CW4 Roth's selfless nature, positive attitude, and unmatched competency will have lasting impacts for years to come and clearly earned him the AAAA's Mission Survivability Officer Award for 2019.

Avionics Award

Sponsored by Cubic Defense Systems, Inc.



SSG Jacob E. Hurley

Company D, 1st Battalion, 52nd Aviation Regiment Task Force Apocalypse Operation Freedom's Sentinel, Afghanistan

Deployed

SSG Hurley has been an indispensable subject matter expert during his time as an Avionics Supervisor for TF Apocalypse in support of Operations Freedom's Sentinel and Resolute Support. A "go-to" resource for military and civilian avionics professionals, he encountered several battle damage repairs consistently leading the theater in repair time and quality. After a CH-47F received enemy fire that destroyed almost 100 wires, his expertise and leadership ensured that all wires were spliced resulting in no subsequent faults or issues with the aircraft. His actions directly affected the outcome of multiple mission sets across southeast Afghanistan and his maintenance expertise contributed to an average Task Force operational readiness rate of over 90%. His technical prowess proved to be invaluable to his section during the repair of four battle-damaged aircraft which required over 480 maintenance man hours dedicated to testing avionic systems and splicing or replacing hundreds of electrical wires, ensuring minimal downtime, and positively affecting the operational readiness of the fleet by 18%. He managed in excess of 9,450 maintenance man hours of avionic work, which enabled the unit to fly over 16,000 combat hours. SSG Hurley's actions clearly identify him as the winner of the 2019 AAAA Avionics Award.

2019 AAAA National Functional Awards

Outstanding Aviation Logistics Support Unit of the Year

Sponsored by AAAA



Company E, 2nd Battalion

25th Combat Aviation Brigade
Wheeler Army Airfield,
Hawaii

Commander: CPT J. Alex Williamson
Senior NCO: 1SG Gilbert Solano

Over the last year, the Echo Forward Support Company, 2-25 Aviation Regiment excelled through a gamut of challenging operations from JRTC 19-02 to Pacific Pathways 19-01 and its support to Task Force Diamond Head was exceptional. Whether serving 50,000 meals and pumping over 70,000 gallons of fuel in Thailand and the Philippines during Pacific Pathways, or conducting home station individual and collective training, to include unit movement operations for 11 battalion-level movements via sea and air, the "Road Runners" set the bar high for other Aviation logistics units. In addition to hot refueling on Wheeler Army Airfield, the Road Runners successfully executed deliberate training exercises, even though a third of the unit was deployed to Pacific Pathways. They developed the ability to conduct organic sling-load operations by training and certifying their own personnel and subsequently slinging a jump Forward Arming and Refueling Point with 25 Hellfire Missiles and 2,000 gallons of fuel over 35km to enable an AH-64D deliberate attack during JRTC 19-02. At home, they planned and executed a battalion-level service program that achieved above a 90% on the safety portion of the FORSCOM ARMS inspection. The outstanding performance by Soldiers of E/2-25 clearly identifies them as the 2019 AAAA Outstanding Logistics Support Unit of the Year.

Materiel Readiness Award For Contribution By An Individual Member of Industry

Sponsored by AAAA



Kenneth Questiaux

Bolt Byte Tools/KenJer Industries
Butler, Pennsylvania

Ken Questiaux of KenJer Industries is recognized for a product his company has designed and manufactured, one of the most unique products for completing helicopter maintenance requirements. The family owned company's product is called "Bolt Byte." Their patented maintenance boards are hard-core plastic, reusable and bio-degradable (green), which complies with Army standards. The key task required of maintainers during a phase maintenance inspection 1 or 2, is to put the bolt in the correct patented laser cut hole on the board as it is removed from the helicopter. Each board contains a picture and bolt pattern of the object to be removed. Use of these boards improves both team and individual efficiency. A work order form is included on each board for personal accountability and is signed off upon removal and re-installation. Bolt Byte secures hardware on boards in Pelican boxes, eliminating plastic bags and cardboard and enhancing a solid FOD reduction program for the unit. New maintainers can accomplish their task faster with the Bolt Byte maintenance boards without sacrificing quality or standards. This impactful achievement was a direct result of the hard work and determination of Ken Questiaux and identifies him as the winner of the 2019 AAAA Materiel Readiness Award for a Contribution by an Individual.

Materiel Readiness Award For Contribution By A Major Contractor

Sponsored by AAAA



DynCorp International

Huntsville,
Alabama

Accepted by Mr. Joe Ford

The Army Aviation maintenance professionals of DynCorp International (DI) are uniquely focused on one task – ensuring the readiness of Army Aviation. This commitment, combined with a veteran-based workforce, who are willing to deploy globally alongside Army Aviation units, is what sets DI apart. DI supports Army Aviation rotary wing and fixed wing fleets worldwide. Working together with soldiers, often in remote, austere and/or hostile environments, more than 1,500 dedicated DI professionals – 62% of whom are veterans – have effectively and efficiently supported approximately 70% of the Army's operational helicopter fleet, and 100% of the Army's Fixed Wing Transport fleet during the past year. Over the past year, this contracted logistical support activity for the U.S. Army Aviation and Missile Command (AMCOM), and Program Executive Office Aviation (PEO Avn), has produced readiness contributions which include RESET of 16 aircraft, 185 aircraft phase maintenance inspections, 280 maintenance work orders, and a 90% mission capable rate for the Army Transport fleet. DI's unique and singular achievements have directly and positively contributed to the Army's number 1 priority – Readiness; and identify them as the 2019 AAAA Materiel Readiness Award for a Contribution by a Major Contractor.

2019 AAAA National Functional Awards

Unmanned Aircraft Systems Soldier of the Year Award

Sponsored by General Atomics Aeronautical Systems, Inc.



SFC Brandon B. Vilt

Company D, 326th Brigade Engineer Battalion, 1st Brigade Combat Team, 101st Airborne Division (Air Assault) Fort Campbell, KY

Sponsor Rep: Don Cattell

SFC Brandon Vilt is a true example of consummate, selfless professionalism. He was entitled to medical retirement in 2007 after he lost his left leg in the line of duty but fought to continue serving. Again, in October 2018, eight months after his third combat deployment, SFC Vilt was entitled to remain in garrison with 2-17 CAV. Instead, when he learned that D Co., 326 BEB needed a Senior Maintenance Chief for deployment to Iraq, he immediately volunteered. He found the company's UAS platoon had an incredibly young maintenance section that had recently failed an ARMS inspection. He enforced his "by the book" standard and turned that section into the best in the 101st Airborne Division achieving more than 3,000 incident-free combat flight hours and over a 95% Operational Readiness rate in seven months of operations targeting the Islamic State of Iraq and Syria. He was instrumental to the platoon's fully mission capable communications relay system, which provided extended communications for ground forces in Kirkuk, Iraq. Every Soldier in his section is a certified crew chief, he mentored multiple soldiers as technical inspectors, and he sets the standard for fitness. SFC Vilt's professionalism and achievements clearly identify him as the AAAA's 2019 Unmanned Aircraft Systems Soldier of the Year.

Unmanned Aircraft Systems Unit of the Year Award

Sponsored by Textron Systems



Company B, 101st Aviation Regiment

101st Combat Aviation Brigade 101st Airborne Division (Air Assault) Fort Campbell, KY

Commander: CPT Mark Hull
Senior NCO: 1SG Guy Weaver
Sponsor Rep: Dave Phillips

Over the past year Bravo Company, 101st Aviation Regiment assembled an undisputable record of achievement in both garrison and combat while supporting Operations Freedom's Sentinel and Resolute Support. The Soldiers of Bravo Company flew 1,112 combat sorties over an astonishing 16,577 flight hours in direct support of both conventional and Special Operations Forces. The unit's 12,583 maintenance hours supported this projection of combat power that resulted in the most hours flown by any single MQ-1C unit during the previous year. During their deployment Bravo Company conducted intelligence, surveillance, reconnaissance, and close air support missions. Operating out of two locations, they conducted 111 engagements and were directly responsible for 153 enemy killed in action, 20 enemy wounded in action, and over 30 pieces of tactical equipment destroyed. The unit achieved these superior results with zero incidents or accidents. They continually developed and implemented multiple initiatives to improve combat operations and increase battlefield effects for the ground force commander, enabling the strategic aims of both American and partner forces in Afghanistan. For their superior results and continual advancement of the Army UAS enterprise, Bravo Company, 101st Aviation Regiment proved that they are truly deserving of the 2019 AAAA Outstanding Unmanned Aircraft Systems Unit of the Year Award.

Fixed Wing Unit of the Year Award

Sponsored by CAE USA Defense & Security Systems



Task Force ODIN

Bagram Airfield, Afghanistan

Commander: LTC Joseph Swindle
Senior NCO: CSM Charles Walden
Sponsor Rep: Michael Weigart

Task Force Observe, Detect, Identify, and Neutralize (ODIN) leads at the forefront of the Global War on Terrorism, conducting operations in support of America's Warfighters daily. Task Force ODIN, the Army's largest aerial intelligence, surveillance, and reconnaissance (A-ISR) organization is continuously forward deployed in the Combined Joint Operations Area–Afghanistan (CJOA-A). Accomplishments for last year included: operational control and government oversight of more than 1,200 Soldiers, Department of the Army Civilians, and defense industry partners; 55 manned and unmanned aircraft platforms spanning 12 programs of record and Quick Reaction Capabilities from both U.S. Army Forces Command and the U.S Army Intelligence and Security Command geographically dispersed across five locations; the conduct of more than 10,000 combat missions and safe execution of over 77,000 combat flight hours supporting over 50 named operations with no loss of life. Task Force ODIN enabled the identification and neutralization of over 313 enemy combatants; detection and removal of over 5,700 homemade explosives and 36 improvised explosive devices (IEDs) – all accomplished while enduring regular enemy indirect fire attacks at all locations including Bagram, Kandahar, and Jalalabad airfields. The extraordinary accomplishments of the Soldiers, Civilians and Defense Industry partners of Task Force ODIN clearly identify them as the 2019 AAAA's Fixed Wing Unit of the Year.

Historical Perspective

Reprinted from the August, 1954 Issue of ARMY AVIATION Magazine



RANDOMS FROM THE EDITOR

The difference in the size of the type in the front pages of this issue is NOT for emphasis or to feature certain articles..On the 12th of the month, we looked at the bins & started with a 6-inch column before reduction...By the 18th, we had rec'd far more copy than we had space and we knew we'd never make it unless we started with an 8-inch column before reduction. The squibs at the bottom were added later in the month....We're not anxious to ruin your eyesight, but neither do we wish to have "disgruntled correspondents."

We've reached the homestretch of the '90 DAY PLUNDER' — our last gasp in 1954. Many pitched in like gladiators while other Romans just sat in the stands with 'thumbs down'.... To the victor go the spoils and barring a last minute deluge — highly unlikely — it appears that our FIRST PRIZE will return to Europe from where it was imported....Our top man at present, BOB LESSARD, has been doing it the hard way....His last airmail letter enclosed 45 new ENLISTED members of Army aviation....If we are to succeed in our effort to carry this publication to the Maintenance Personnel in AA, a lion's share of the credit should go to BOB LESSARD and the USFA EM for supporting the publication as is. Ditto for MAJ RAYMOND MURPHY at 7th Army and CAPT M. D. LORD of the 10th Infantry Division, both of whom having taken "ARMY AVIATION" out of the main office and hand-carried it to crewmen....We can't ascertain how he came across the publication, but ADMIRAL J. P. W. VEST (USN, Ret.) recently joined us as a subscriber...It will seem odd to carry a Navy man at the top of our masthead listings in future issues but ADMIRAL VEST is the ranking officer to receive this ARMY publication.....

This issue represents an experiment with an IBM Executive typewriter...We use the word, "experiment," for the IBM rents at an Executive figure....We'll chafe when we have to return it and revert to our old portable....However, it does represent what can be done if the "kitty" builds up a little....As our girl Friday keeps saying, 'If you'd stop giving out a Certificate to every Flyboy who does a wingover, you could cook with electricity.' At any rate, we're sold on an electric typewriter as a '54 project and we hope that you will enjoy the legibility of this issue.....

Our NG and USAR coverage could be enhanced considerably by brief monthly contributions from the NGB and OCAFF....We'd like the readers to know that we are aware of this fact and have made inquiries for this information....In the meantime, we invite NG and USAR AA's to contribute whatever personal or unit news they have or desire to see printed..... Our ONLY source of news from ALL components is the individual correspondent who takes the time to sit down at his typewriter and send us a few lines....If you haven't read any news on your unit, don't "put the pox on us." We print everything newsworthy that we receive and the over-all format of the publication represents the components of the correspondents.....

We try not to "go off half-cocked" but last month we pulled a "rock." In print, we promoted MAJ DAVID BISSET to Lieutenant Colonel....Our source: A DA special order listing the promotion....When MAJ BISSET's Change of Address card was received later in the month, it was still signed MAJOR and we knew apologies were in order....We now find that there are TWO BISSETS in the Army, both Majors, and both named David....TWO Ed Johnsons, Pete Browns, Tom Johnsons, and Jim Blacks are understable, but we hardly thought there'd be TWO Bissets and both Majors....We understand the Major had his own difficulties explaining the difference to the people in EUCOM prior to the promotion we gave him....We had to come along and magnify his explanations....We sincerely apologize to him for any embarrasment we may have caused him....There is one way to resolve this solution but it will have to come from the DA.....

Your editor,
Art Kesten

-30-

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, Inc. from January through November 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. ***Every penny donated to the Scholarship Foundation goes directly to a grant as a result of the Army Aviation Association of America subsidizing all administrative costs (minus investment brokerage fees).***

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New Scholarship Awardee Announced



The AAAA Scholarship Foundation announced a new scholarship recipient for 2019. Brittany Wall, daughter of MAJ Michael Wall, Maryville, TN, has been selected to receive the Bluegrass Chapter Matching Scholarship in the amount of $2,000 for 1 year. Brittany is attending Pellissippi State Community College.

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 Chapter Affairs

By LTC (Ret.) Jan Drabczuk

I greatly appreciate the support from COL (Ret) Anthony "Antman" Bolante, the Mount Rainier Chapter President for authoring and sharing this information with our membership.



CHAPTER COURTESY PHOTO

Medal of Honor recipient COL (Ret.) Bruce Crandall addresses the Mount Rainier Chapter.

Gray Army Airfield is a thriving and busy airfield with a multi-COMPO, "One Army" Aviation community feel with historic presence from . . .

. . . the Washington Army National Guard's current 96th Aviation Troop Command (formerly the 66th Theater Aviation Command and 66th Aviation Brigade – Corps), the 16th Combat Aviation Brigade (CAB), 4-160th Special Operations Aviation Regiment (SOAR) and B-1-214th Heavy Helicopter (USAR) along with Aviation Elements like UAS detachments from I Corps and the 81st Stryker Brigade (WAARNG).

Storied History and Esteemed Chapter Members

Greetings from your Pacific Northwest Army Aviation Community! The Mount Rainier Chapter (MRC) is an AAAA Master Chapter of 350 plus AAAA members, and they serve the strong and rapidly growing Aviation Community in-around Gray Army Airfield on Joint Base Lewis-McChord (JBLM), WA.

The MRC has been a chapter rich in heritage spanning to the days of pre-WWII where Camp Murray was the home to the 41st Infantry Division that comprised ARNG units from Oregon, Washington and Idaho. As the Vietnam conflict ramped up in the 1960s, so did Fort Lewis as "the" power projection platform to that conflict in Southeast Asia. It was during that period that two of the chapter's esteemed members made their history in the pioneering days of the Army's golden age of rotary wing aviation. While the Mount Rainier Chapter may be a smaller chapter compared to Air Assault/Fort Campbell or Fort Rucker, they have members like Medal of Honor recipient COL (Ret) Bruce "Snake-6" Crandall and COL (Ret) Bill Reeder whose active membership only reminds their current chapter members of their gritty and proud roots and heritage in combat aviation.

Mount Rainier Chapter Annual "Summer Special Guest Speaker" Series

For the past three summers, the chapter has maintained an active "Chapter Member Professional Development" focus that included quarterly events like "Aviation Trivia Night" and their annual summer Army Aviation Special Guest Speaker event to both inspire and solidify their chapter members' oath to the profession. In September 2017, the chapter had COL (Ret) Bill Reeder, an acclaimed author ("Through the Valley: My Captivity in Vietnam") and POW/MIA survivor. In August 2018, Medal of Honor recipient COL (Ret) Bruce "Snake-6" Crandall of "We were Soldiers once, and young" fame and then recently in August 2019 when former Army Captain/MTP and current Senior Vice President of the fifth largest air carrier in the U.S. , Alaska Airlines, Constance von Muehlen spoke to inspire current members of the Mount Rainier Chapter.

On the Horizon for the Pacific Northwest

The Mount Rainier Chapter won the AAAA's 2018 Master Chapter Award for growth and the Chapter's Board and membership see no slowing in their community's depth. With ongoing contingency operations in Southeast Asia along with pivoting focus on the shift of world power influence in actors such as China and Russia, the U.S. Army's Aviation presence and strength in the PACOM AOR are more critical than ever. The members of the Mount Rainier Chapter, including assets from the 16th CAB who are practicing strong partnership-for-peace operations in countries such as Australia (Op Talisman Sabre), and the Washington Army National Guard who is preparing to deploy again to SE Asia, continue to serve, deploy, battle and reset for future operations to ensure peace and stability in our U.S. Army Aviation Area of Responsibility (AOR).

Summary

For the past two years since retiring as Chief of Staff of the 66th TAC, it's been an honor and pleasure serving as the president of the Mount Rainier Chapter (MRC). Special thanks to COL (Ret) Anthony "Antman" Bolante, the chapter president and the chapter's board members including CW5 (Ret) Teresa Burgess, LTC John King, COL (Ret) Michael Fleetwood, SSG (Ret) David Goodhue, CPT Alex Vinchinsky and SGM Dana Trakel for being the back bone of the Mount Rainier Chapter membership.

Contact me if you need help for your chapter, Executive Board support, would like your chapter featured in the AAAA magazine or to obtain clarification of National procedures.

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

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AAAA Chapter News

Bavarian Chapter Oktoberfest Trip



CHAPTER COURTESY PHOTO

The AAAA Bavarian Chapter sponsored a day at the Munich Oktoberfest for the Falcon Team, the aviation observer/controller/trainer (OC/T) element at the Joint Multinational Readiness Center (JMRC), at Hohenfels, Germany. They used the event as a membership drive and gained a total of eight new AAAA members.

Idaho Snake River Chapter Golf Tourney

On September 23rd, 2019, the Idaho Snake River Chapter held its Annual AAAA Golf Tournament. The event was held at The Club at Spurwing in Meridian, ID. 30 teams (120 players) participated in the event to include sponsors and it was a tremendous success for the chapter. The course provided amazing support for the event while the sponsors unselfishly donated to the chapter which allowed them to more than double the proceeds from previous years. Special thanks to everyone who participated in this event.



CHAPTER COURTESY PHOTO

Lindbergh Chapter Scholarship Fundraiser Golf

The Lindbergh Chapter held its 2019 Scholarship Fund Raiser Golf Tournament at the Falls Golf Club in O'Fallon, MO on Sept. 15, partially subsidized by AAAA National. 36 players had a good time, and were kept supplied with water, Gatorade, adult beverages from Anheuser-Busch, and plenty of healthy snacks. The day ended with an awards ceremony where prizes were awarded for first, second, and third place, as well as longest putt, longest drive, and three closer to the pin. There was a special award to Steve Snow from Donaldson Aerospace who scored a Hole-In-One. A raffle was held in conjunction with a buffet dinner where the prizes were awarded. The tournament raised $11,000.00 for the AAAA Scholarship Fund.



CHAPTER COURTESY PHOTO

So. Cal. Chapter Supports Archangels



CHAPTER PHOTO BY LOUIE THELENS

COL David Hall, 40th Combat Aviation Brigade commander and president of the Northern (Golden Bear) California Chapter, confers with LTC Tom Lasser (Ret.), Senior VP of the Southern California Chapter, regarding possible joint chapter undertakings to support the Army Aviation soldier state wide during the change of command ceremony for the 1-140 Assault Helicopter Battalion, CANG, held on the Los Alamitos Army Airfield, Los Alamitos, CA on October 20, 2019. The Southern California Chapter supported with a BBQ, held on the tarmac of the airfield. LTC Thomas L. Potter relinquished command to MAJ Daniel M. Goldsmith.



AAAA Membership Update

By CW4 Becki Chambers

There are many reasons why people join the Army under the Warrant Officer Flight Training Program. One common reason is that we are told the Army will teach us how to fly a helicopter and will pay us at the same time!



PHOTO BY MICHAEL ARDOIN, LAARNG

Left to right: Madeline Heath, Elizabeth Kruchek, Tarrissa Vincent

This reason is what motivated CW2 Elizabeth Kruchek to join.

Elizabeth grew up in Laingsburg, MI, a small town just northwest of Lansing. During her sophomore year of high school, Elizabeth had the opportunity to participate in a German exchange program. She says the experience changed her life and opened her eyes to the world that existed outside of her tiny hometown. She became hooked on travel, and has since lived in many states, and not all because of the Army.

When Elizabeth was a teenager, her mother started skydiving as a hobby. Her mother soon met Joni Dimond, a Certified Flight Instructor, who took her up for a flight. Elizabeth's mother knew right away Elizabeth would love flying, so she bought her an introductory flight as a gift upon graduation from college. Elizabeth was immediately hooked! She spent the next year waitressing and using all her spare cash on flying lessons. Because she only paid with cash, it took her a year to complete her private pilot's license.

Other than Joni, Elizabeth had never known anyone that flew for a living. Joni has a daughter in the Navy, and she suggested to Elizabeth that she look into it. One day, Elizabeth finally went to talk to a Navy recruiter who had her fill out a questionnaire. Upon a quick review, he told her she was "too short to be a pilot" and said he was not going to submit her application. Elizabeth was appalled because #1, she was already a pilot, and #2, she had never been told she was too short to do anything!

About a year after that happened, a friend called her from Fort Rucker who was in flight school and shared how much she loved it. Elizabeth replied that she couldn't afford to learn how to fly a helicopter and that she had barely scraped by paying for her fixed wing license. Her friend laughed and told her that the Army will teach her and pay her at the same time. Elizabeth was so impressed she basically signed up within the next month. As is too often the case, her recruiter refused to do the "high school to flight school" packet so she spent 2 years enlisted as a 68W. Elizabeth is currently in the Reserves as an H60M MEDEVAC pilot deployed to Iraq.

After completing military flight school, Elizabeth spent a summer working her way through the rest of her civilian flight ratings. She applied for and flew Lear 35s for an Air Ambulance company. Elizabeth had the opportunity to fly internationally as well as across oceanic territory (with horrible radios!) The Lear 35 was prone to maintenance problems, so she learned quickly to react calmly and analyze malfunctions. After the air ambulance job, she decided to give the airlines a try. She was hired on with PSA and has been flying the CRJ 200/700/900 throughout the eastern U.S. It has been a dream come true for her inner travel addict!

Elizabeth would like to give a special shout out to her husband Shaun. She says he has shown her that through her work ethic, paired with unwavering love and support, she really can have it all – an Army Aviation career, a civilian aviation career, and an amazing partner and family. He even supports her wild travel ideas!

When asked why she believes it's important to join a professional organization, Elizabeth replied: "In our many realms of life, it's hard to find those that understand our struggles and setbacks. Organizations like AAAA bring together people of similar interests to provide guidance, support, and even new opportunities we may not have known existed."

CW4 Becki Chambers
AAAA Vice President for Membership

New AAAA Life Members

Aloha Chapter
CPT Joshua G. Wilcox
Colonial Virginia Chapter
LTC Trey Williams
Iron Mike Chapter
CW4 George W. Williams, Sr. Ret.
Keystone Chapter
MAJ Jacob Orndorff
Mount Rainier Chapter
CW4 Bradley E. Palm
Pikes Peak Chapter
CPT Matthew DiBasilio
Tennessee Valley Chapter
Leigh Moore Jr.
Volunteer Chapter
William Lewis
Washington-Potomac Chapter
MAJ Morris Lewis
Yellowhammer Chapter
2LT Patrick Hammond

New AAAA Members

Air Assault Chapter
CW3 Michael Brown
1SG Alvarran Edwardo
SSG Timothy Hecker II
WO1 Ian B. Owings
Arizona Chapter
Lou Amadee
SGT Elijah A. Cabrera
SSG Thomas J. Callahan
Cole A. Jackson
David Laureanti
Christina C. Luna
Aviation Center Chapter
CPT Jacob Allen
2LT Edwardo S. Alviso
2LT Andrew Ashley
WO1 Timothy Ashworth
2LT Kenneth C. Balding
2LT Caleb Baldwin
WO1 Danielle Benedict
WO1 Corey m. Bigelow
WO1 Christian Blackman
2LT Thomas Brennan
WO1 Joshua S. Britten
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2LT Sarah G. Chamberlin
WO1 Matthew G. Clark
2LT Ryan Cristiano
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2LT Crystal DeLaRocha-Duarte
WO1 Danielle Diaz
WO1 Thomas Erb
CW2 Thomas Etchison-Flynn
2LT Joshua M. Fernquist
WO1 Austin C. Fierro
WO1 kasey w. goeken
CW2 Lindsey Greene
WO1 Ian Gurnee
2LT Hayden H. Hayner
WO1 Dylan T. Izbicki
WO1 Timothy c. Jackson
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WO1 Daniel N. Lasal
1LT Michael B. Leinen
2LT Andrew D. Lekowski
2LT Mikayla L. Leroy
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WO1 Cameron E. Olson
2LT Kenji R. Onaka
WO1 Jason Payne
2LT Mason Poythress
WO1 Reed M. Pringle
WO1 John Puchalsky
2LT Guilherme R.dos Santos
WO1 Adam Roszkowski
Ronald Wayne Skinner
WO1 Ryan Smedile
WO1 Zacory Spivey
2LT Jeremy T. Stanley
2LT Andy Wang
WO1 Aaron Weier
2LT Abigail M. Wingfield
WO1 Olin Wise
Battle Born Chapter
SGT Corey A. Cheatham
Big Sky Chapter
WO1 Patrick A. Rickard
Central Florida Chapter
LtCol Thomas Anderson
TJ Anderson
Jon C. Sutter
Connecticut Chapter
CW4 Robert L. Dotolo, Ret.
Abbey Letts
Delaware Valley Chapter
CW2 Bryan Barabas
Chris Ericksen
Jennifer Gruce
Jerome Lokken
Tim McMullen
Tom Sharp
Brian B. Tallman
Paul Warren
Jeff K. Woods
Frontier Army Chapter
Lee Johnson
Gold Standard Chapter
SFC Katheryn Beauchamp
CW4 James E. Kuipers, Ret.
SGT Nathan D. Verhey
Great Lakes Chapter
SSG Martin Anderson
1LT Emmanuel Ayala
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SGT Ashley Corey
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Matthew Laws
Wright Brothers Chapter
WO1 Alexander C. Taipale
Zia Chapter
PV2 Zackary Rio Cordova
No Chapter Affiliation
Margit Burnett
Jim Carothers
Kelley M. Cox
CW2 Brandon W. DeArmond
WO1 Paula B. Fonseca Rojas
2LT Dawnnie Fuentes
LT Barry L. Ruchty
Bob Savitsky
WO1 Zachary T. Scott
CPT Deborah Sherrick Lopez
Kevin Sprouse
CW3 Byron A. Todman

Lost Members

Help AAAA locate a lost member on this list and receive a FREE one month extension to your AAAA membership.
PFC Anthony Aleman
CPT Robert S. Boham
Mr. Harold V. Bowie Jr.
MAJ James E. Bruckart
SPC Brett Christopher Butler
E. W. Cavanaugh
LTC Richard G. Cercone Jr.
LTC Tzu-Shan Chang
COL James A. Coar, Ret.
SPC Derrell L. Coats
MAJ Harry L. Connors Jr. Ret.
Mr. Bruno Cussigh
SGT Travis Bonham Darnell
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LTC William T. Goforth
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COL Gerhard Granz, Ret.
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COL Jose L. Hinojosa, Ret.
SFC Carroll Elmo Hinson V
COL Eldon H. Ideus, Ret.
CW4 Delbert Jackson, Ret.
MAJ Gregory R. Jenkins
MAJ David A. Jobe
LTC Peter D. Kowal
Beth N. Kramer
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MAJ James F. Speelman
LTC Friedrich Stern
WO1 Armando B. Torres
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AAAA **Family Forum**

An Update from AUSA's Senior Leaders Town Hall

By Judy Konitzer



U.S. ARMY PHOTO BY SGT DIANA CLARKE

AUSA's 2019 Annual Meeting and Exposition was held in Washington D.C. from October 14-16, and thanks to technology I was able to view many of the live forums and events as can you at ausa.org/events/2019-annual-meeting/live-stream.

Army Secretary Ryan McCarthy, Army Chief of Staff Gen. James McConville, and Sgt. Maj. of the Army Michael Grinston participate in a family forum during the Association of the U.S. Army Annual Meeting and Exposition in Washington, D.C., Oct. 15, 2019.

During "The Family Forum Army Senior Leaders Town Hall," The Honorable Ryan D. McCarthy, Secretary of the Army; GEN James C. McConville, Chief of Staff of the Army; and SMA Michael A. Grinston, Sergeant Major of the Army, shared their philosophy and responded to questions from the audience, as well as from other venues. They collectively agreed that "our Army is people!" and "providing a quality of life that is commensurate with the quality of services our soldiers, families, civilians, retired, and veterans provide is what allows us to ensure readiness, modernization, and reform." 60 % of Active Duty Soldiers have families, and based on surveys, it was noted that spousal support is a good predictor of a Soldiers intention to stay in the military. So, five top priorities this year are housing, health care, childcare & youth services, spouse employment, and PCS moves.

GEN McConville acknowledged having challenges with ***Housing*** and made a determined promise to fix it. Although privatizing housing by outsourcing to contractors seemed like a great idea at its inception, what followed was some lessening of oversight and inspections from commanders at some installations. As an increasing number of families brought attention to problems with mold, lead, etc. in their military housing with no resolution at the local level, the Army Senior Staff had candid conversations with CEO's of privatized companies to discuss what they needed to do to honor their contracts and fix the problems.

He thanked families for bringing much needed attention to the housing problems and to continue feeling empowered to do so beginning at the local level. If there is no satisfaction there, then they should feel free to elevate their concerns up thru the complete chain of command until there is resolution. "You have a voice!" Continuous feedback thru Army Family Action Plans (AFAP), surveys, and chain of command is what brings about policy changes, and even then, exceptions can be made.

Military Treatment Facilities (MTF)

Give the Gift of a College Education



Cody L. (2013 Scholarship Recipient)

Mechanical Engineering Major at Tennessee Technological University (2018 graduate).

"... know that this scholarship had a direct impact on getting me to my goal: Receiving my Mechanical Engineering degree."

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CFC #10516

The 2020 AAAASFI Program will open January 6

AAAA Scholarship Foundation, Inc. - www.quad-a.org/scholarship

are undergoing the transition to the ***Defense Health Agency (DHA)*** and treatment for Soldiers and their families should not degrade during this process. It is envisioned that better care with less cost will be the outcome and Electronic Health Records can be shared during transfers. The military system will not change and senior Commanders at each facility will be responsible for oversight and working closely to remedy concerns if there are problems. The diagnosis of Autism has been a challenge for portability, but a new policy is being researched to make it easier for continuing treatment at new duty stations.

Childcare facilities are increasing their capacity and reducing the wait lists brought about by an increased demand and need for immediate availability, especially during transitions.

Spousal employment issues have gained increased attention with many spouses needing to supplement their family's income as well as professional spouses seeking the ability to use their skills. Currently there are more programs in place for portability of licenses and reimbursement for fees required. And cutting through bureaucracy and red tape to properly address resumes for federal and NAF jobs can be achieved at any ACS Employment Readiness Section. Additionally, there is also more flexibility in recognizing and validating home based businesses on post especially for childcare providers.

Summer is the peak season for ***PCS moves***, but many contractors have not been doing the job they are being paid for. More trained inspectors using standardized checklists have been hired to validate carrier services and rank order them based on surveys. If a servicemember is assigned a company from a lower tier they can refuse and request reassignment. Other initiatives being considered are allowing Soldiers to make career choices based on stabilizing in one location and simplifying reimbursements for DITY moves.

SGM Grinston ended with the fact that many junior spouses remain uninformed even with having social media. He recommended "be the sponsor we wish you had, and it doesn't have to be a GO (General Officer) to make things happen."

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

UPCOMING EVENTS

JANUARY 2020

1 Submission Deadline – National Awards
10 ARMY AVIATION Magazine 2019 Photo Contest Deadline
27-30 HAI Heli-Expo 2020, Anaheim, CA

MARCH 2020

5-7 31st Annual International Women in Aviation Conference, Lake Buena Vista, FL

Order of St, Michael and Our Lady of Loreto Inductees

Bavarian Chapter

Chapter president, LTC Phillip Lamb, inducted two observer, controller, trainers (OC/Ts) from the Joint Multinational Readiness Center (JMRC) Falcon Team into the Honorable Order of St. Michael on Thursday, Nov. 14, in Hohenfels, Germany.



CHAPTER COURTESY PHOTO

CW4 Brian Gaston was inducted into the Bronze HOSM in recognition of 16 years of service to Army Aviation as a UH-60 pilot-in-command, instructor pilot, instrument examiner, standardization pilot, and Aviation JMRC OC/T. He deployed twice to Iraq, once to Afghanistan, and flew as a MEDEVAC pilot-in-command out of Camp Humphreys in Korea.



CHAPTER COURTESY PHOTO

CPT Alex Bayer, commissioned from the University of New York at Brockport in December 2010 as an Army Signal Officer, was inducted as a Knight of the HOSM in recognition of his service for the past year and a half as the Aviation Signal OC/T where he has significantly contributed to the success of the Falcon Team and the readiness of Army Aviation units across the European theater.

Idaho Snake River Chapter



CHAPTER COURTESY PHOTO

On October 5, 2019, **MG Michael Garshak,** The Adjutant General Idaho National Guard, was inducted as a Knight of the Honorable Order of Saint Michael by COL Christopher Burt, president of the Idaho Snake River Chapter. MG Garshak is the first recipient of this award from the chapter. In addition to his many years of service within the aviation group, MG Garshak had the vision and fortitude to establish and develop the Idaho Snake River Chapter of AAAA. While he no longer flies, he continues to be a member of AAAA and is a champion for the Association.

Award Nominations Are Open NOW!

Recognize Our Soldiers !!!

Recognize your outstanding Soldiers through our AAAA Awards program! ***Check out the Awards section on quad-a.org***



AAAA National Awards

Presented at the Annual Army Aviation Mission Solutions Summit

Suspense: January 1

- Joseph P. Cribbins Department of the Army Civilian of the Year
- James H. McClellan Aviation Safety
- 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

AAAA Hall of Fame Inductions

Presented at the Annual Army Aviation Mission Solutions Summit

Suspense: June 1

All AAAA Nomination forms are available on the AAAA Website:

quad-a.org

Questions? Call the AAAA National Office: 203 268-2450

FALLEN HEROES

AAAA is saddened to announce the recent loss of the following Aviation Soldiers.

OCONUS

The Department of Defense announced the deaths of two soldiers who were supporting Operation Freedom's Sentinel. Both soldiers died Nov. 20, 2019, in Logar Province, Afghanistan, when their helicopter crashed while providing security for troops on the ground.



CW2 Knadle



CW2 Fuchigami

Killed were:

Chief Warrant Officer 2 David Charles Knadle, 33, from Tarrant, Texas; and,
Chief Warrant Officer 2 Kirk Takeshi Fuchigami, Jr., 25, from Keaau, Hawaii.

Both soldiers were assigned to 1st Battalion, 227th Aviation Regiment, 1st Air Cavalry Brigade, 1st Cavalry Division, Fort Hood, Texas.

The accident is presently under investigation.
May they rest in peace.

(Information from Defense Department news releases and other media sources.)

AAAA **Awards**



Order of St. Michael Inductees

Gold
COL Ellis W. Golson, Ret.

Silver
LTC Daniel S. Artino
LTC George W. Benter, Ret.
LTC Christopher M. Chung
CW5 Jon V. Corey
CW5 Ryan W. Dechent
CSM Archie S. Deese
CW5 Steve A. Donahue Jr.
CSM Geraldo Gonzalez
COL John Wilhelm Jones
LTC Michael Lanzafama
CW5 Stephaine Ostrowski
CSM Reginald Thomas-

Bronze
CPT Brian Alliston
CPT Scott Betancourt
SFC Brandon Burns
SFC Erik Burns
CW3 Janoi Cabrera
1SG Ronney E. Copes Jr.
CW3 Daniel P. Dahl
CW5 Michael C. Eger
1SG Justin J. Fajardo
SFC Palm L. Forward
CW3 Christopher K. Fyffe
1SG Joshua D. Gary
CPT Jared Grubbs
CPT Travis A. Haigler
CW2 Rebecca C. Harrison
CW4 (R) James D. Knight
Walter A. Lopez
SFC Trent Lyles
SSG Roberto Manzanares
COL (R) Ralph R. Myers Jr.
MAJ Christian M. O'Leary
CW3 Clifford R. Owens
CW2 Nicholas P. Peterson
MAJ Stephanie M. Price
CW4 Chad J. Queen
SFC Ronaldo A. Racoma
CW3 Joel Ramos
CPT Douglas Raymond
CW5 (R) Timothy W. Roberts
CW3 Joshua R. Robinson
1SG William D. Romanoff
CPT Christopher Rosel
MAJ Joseph A. Sinkiewicz
CPT Matthew Taylor
CPT Merritt W. Thomas
CPT Brent Vann
CW5 Michael D. Walsh
SFC Cameron Warren
1LT Thomas J. Westall
CPT Kenneth Willard

Our Lady of Loreto Inductees

Carmen M. Eicher
Sarah Frost
Stephanie Gannon
Janice Miller
Kathi Walrath
Lisa Wess

NCO of the Month

Grizzly Chapter
October 2019 -
SSG Vergia M Farrow

Solder of the Month

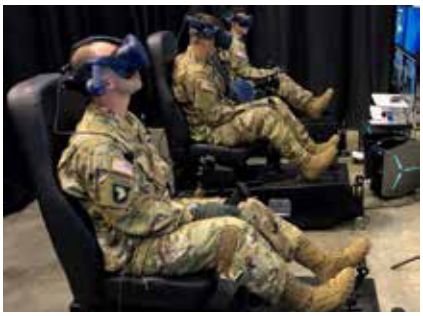
Grizzly Chapter
October 2019 -
SPC Jesse Gomez

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.

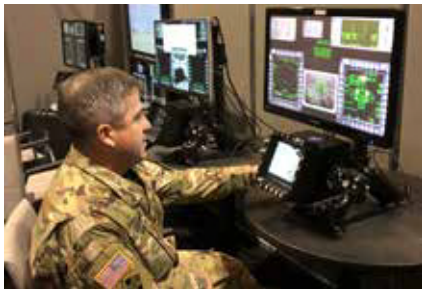
Army Chooses Ryan Aerospace To Provide Simulators



RYAN AEROSPACE COURTESY PHOTO

Army Aviators participated in the first Aviator Training Next (ATN) Pilot Training Program using the Ryan Aerospace (Australia) HELIMOD Mark III Helicopter simulators. The company was awarded a contract, delivered and installed 31 simulators for the U.S. Army at Fort Rucker, AL. The contract is part of the Army's ATN experimental, innovative, new way to provide helicopter pilot training during the primary phase using the latest in virtual reality (VR) technology and high-end, commercially available helicopter simulator equipment. Managing Director of Ryan Aerospace, Chris Ryan said he was "delighted to partner with the U.S. Army and prime contractor SAIC to work on this ground-breaking project.

AVT to Provide Apache Gunnery Trainer to USAACE



AVT COURTESY PHOTO

AVT Simulation was awarded a contract in October to provide three Apache Gunnery Trainers (AGT) to the U.S. Army Aviation Center of Excellence at Rucker, AL for validation. Developed from previous AH-64 collective trainers sold internationally, refined to support the Air Cav Leader's course and prototyped for the Synthetic Training Environment's (STE's) point of need requirement, the AGT is a front seat AH-64 desktop trainer that fits in an airline friendly case that is no more than 50lbs. Included features are: Switchology, Top Gun Scoring Gunnery, Free play scenarios that are linkable easily allowing for attack weapons team engagements, and courseware of selected Aircrew Training Manual tasks. Delivery is to be completed by April 2020.

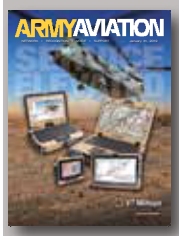
Bell Joins Army Partnership for Youth



BELL COURTESY PHOTO

MG Frank Muth, commander of U.S. Army Recruiting Command's Partnership for Youth Success (PaYS) Program and Mitch Snyder, president and CEO, Bell, sign an agreement on Nov. 11, 2019 during a Veterans Day ceremony at the Bell Fort Worth headquarters. PaYS helps prepare active-duty soldiers for careers outside the Army by connecting them with potential employers. Bell currently employees more than 1,300 veterans, and the partnership will help qualified veterans find careers at Bell.

ARMYAVIATION
Upcoming Special Focus



January 2020
Aviation Maintenance
Aviation & Missile Command Command Group
AMCOM Logistics Center
Aviation Center Logistics Command
128th Avn. Bde., Warrant/ Enlisted Avn. Maint. Tng.



February 2020
PEO Aviation
Rotary Wing Project Managers
TRADOC Capability Managers
Futures Command
FARA, FLRAA, future UAS, and MOSA

Contact:
Bob Lachowski or
Erika Burgess
AAAAindustry@quad-a.org
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Contracts –

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

Lockheed Martin Corp., Orlando, FL, was awarded a $7,563,160 modification to contract W52P1J-19-F-0533 for Modernized Target Acquisition Designation Sight Pilot Night Vision Sensor Systems, subcomponent production and technical services for the Apache Attack Helicopter; work locations and funding will be determined with each order, with an estimated completion date of Jan. 1, 2023.

The Boeing Co., Mesa, AZ, was awarded a $62,294,566 modification to contract W58RGZ-19-C-0024 for performance-based logistics support for the AH-64D/E Apache Attack helicopter; work will be performed in Mesa, with an estimated completion date of April 30, 2024.



AAAA **Legislative** Report

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

'Twas the Night before Christmas *with apologies to Clement Clarke Moore*

'Twas the night before Christmas, when throughout the U.S. House, not a Member of Congress was working the National Defense Authorization Act (NDAA), the bill not espoused. Impeachment concerns consumed all the Members' chatter, but we continued to hope lawmakers would get back to the matter.

The visions of spare parts, munitions, and technology danced in our Army Aviation aircrew and maintainers' heads. As BG McCurry toiled for hours in the Pentagon, awaiting the 2020 budget confirmation; our nation we must defend.

When out in the Pentagon courtyard there arose such a clatter; BG McCurry sprang from his chair to see what was the matter. Away to the window he flew like a flash; tore open the shutters and threw up the sash.

The moon over the Capitol illuminated the new-fallen snow, giving rise to hope for the Politicians below. When, what to his wondering eyes should appear, but BG Rugan, a memo, and six tasty beers.

With his aide-de-camp, so lively and capable, BG McCurry knew good news shouldn't be escapable. "Wally," he asked, "have you come from the Hill to report a solution?" To which BG Rugan sighed and replied, "No, I'm sad to say it's another Continuing Resolution!"

Coal or NDAA?

Last month we optimistically wrote about a stop gap funding measure signed by the President to give Congress more time to get their ducks in a row and pass a legislation to fully fund the government. The time ran out shortly before the time of this writing and thus, another stop gap funding measure was passed to provide more time. The detriment of a Continuing Resolution to our Army Aviation enterprise has been discussed at length and Congress has once again prolonged our uncertainty in funding and policy. When you read this at Christmas, we can only hope that Congress's heart grew two sizes bigger and our Christmas stockings are full of funding. Two staffers, one from the House Armed Services Committee and one from the Senate Armed Services Committee stated off the record that they are feeling more optimistic that they will get this legislation done by the end of the year. Additional signals from the press indicate the same thing, but the risk we face is the day to day political impasses on Capitol Hill that plague our enterprise.

What's the Hang Up?

Why is this year's defense legislation in jeopardy? The short answer is the Border Wall. The Chairman of the House Armed Services Committee, Adam Smith (WA) has made public statements regarding this "hold up," and moreover, he says that passing a "skinny'd" down version of the NDAA is a non-starter too. The "skinny'd" NDAA is the Republican held SASC's proposal due to concerns lawmakers will not reach a more robust compromise. Congressman Smith believes the border wall issue should be addressed within the Appropriations process, whereby Congress actually cuts the checks to DoD. Some in Smith's party want restrictive language in the NDAA to prevent use of defense funding for border wall projects while Republicans want the NDAA to provide the flexibility to utilize defense spending. As discussed in past articles, the NDAA is the legislation that gives Congress the authority to spend the money whereas the Appropriations legislation allocates the funds. Smith wants authorization language out of the NDAA, but the Republicans want it in there which will make it easier for the Administration to move money from programs such as MILCON to fund border wall segments.

Skinny NDAA?

What is meant by a "skinny'd" down version of the NDAA? It's hard to look at any legislation that authorizes $738B as "skinny". That's where we remind our reader base that the big difference between the NDAA and the Defense Appropriations legislation is the fact that the NDAA contains a tremendous amount of policy provisions that "authorize" the DoD to do certain things. As said, one of the major hang ups is the appetite to have policy provisions that authorize the DoD to fund portions of the border wall. Because there are highly contentious issues like this in the pending legislation, the Senate (SASC) is proposing a skinny'd down version of the NDAA that strips all contentious issues from the legislation so that lawmakers from both the House and Senate can agree to pass the legislation. Senator Inhofe (R-OK), Chairman of the SASC is proposing they prepare for this if they run out of time. HASC Chairman Smith opposes this measure and contends they should negotiate and come to a bi-partisan solution that includes policies that have been in work for this law for over a year. It's hard to say what will happen in the month of December, but the end of the year is quickly approaching, and Congress has passed an NDAA for 58 straight years. It's a high stakes game of chicken and no one really cares if the Democratic held House or the Republican held Senate wins the game. The loser already in the perpetual cycle of stop gap funding measures and Continuing Resolutions is our Army Aviation enterprise.

AAAA National Executive Board Nominations

In accordance with the AAAA By-Laws, notice is given that in addition to the nominations recommended by the Nominations Committee for those NEB offices in which vacancies occur at the time of the annual election, floor nominations may be made at the Annual Convention, provided that the name of the floor nominees appear on nomination petitions signed by 25 AAAA members and said petitions are provided to the Chairman of the Nominations Committee at the AAAA National Office at least 30 days prior to the conduct of the AAAA Annual Meeting.

People On The Move

Transfer of Authority





U.S. ARMY PHOTO BY SPC JOSEPH KNOCH

Demon Brigade Transfers Authority to Marne Air

COL Michael S. McFadden, Commander of the 3rd Combat Aviation Brigade (3rd CAB), greets a Polish Armed Forces Officer at the Combat Aviation Brigade, 1st Infantry Division (1st CAB) to 3rd Combat Aviation Brigade (3rd CAB) Transfer of Authority (TOA) ceremony, Nov. 1, 2019, Illesheim, Germany. 3rd CAB, from Hunter Army Airfield, GA will be working with NATO allies and partners such as Poland, during their nine-month rotation in support of Atlantic Resolve. The ceremony also marked the end of a nine-month rotation for 1st CAB Soldiers out of Fort Riley, KS.

FY 2019 Major Army Competitive Categories Selection Board

The fiscal year 2019 Major Army competitive category selection board results were released Oct. 29, 2019. This is the first officer promotion board that looked at merit-based considerations. Officers with the highest order of merit scores, denoted with 3 asterisks in place of a sequence number, will be promoted at the very beginning of list execution. AAAA congratulations the following 88 Aviation captains on their selection.

Seq #
0613 Adams, Jeremy M
*** Anderson, Brian C
0783 Bell, Elizabeth M
0527 Blair, Matthew L
0884 Brady, James R
0340 Bramel, Michael C
0369 Bremer, Charles C
0343 Bryan, Luke A
0702 Bujewski, Kurt M
0721 Caffery, William J
0709 Carlson, Steven J
0741 Cavallo, Mark E
0712 Cheben, Landon K
0211 Considine, Matthew
0457 Cormier, Stefan J
*** Daker, Zachary D
0703 Derosa, Alexander
0491 Dotson, Brandon N
*** Durham, Dallas T
*** Eadie, Alexander J
0234 Escalera, John A
0697 Fischer, Alan S
0782 Flett, Kevin G
0971 Fox, Richard R
*** Freyou, Robert K
0743 Gill, Andrew J
0701 Griffith, Gregory S
*** Hedgecock, Nathan C
0581 Heiner, Joshua S
*** Holcombe, Christen
0487 Hollowell, Michael
*** Hoyt, Evan D
0725 Hudson, Lewis C
0606 Hurst, Michael A
0873 Hutchinson, Samuel
*** Irwin, Jay P
0354 Klobucar, Jeffrey T
0383 Knef, Bryant P
*** Lanclos, Jacen P
*** Liesenfelt, Megan J
*** Lilja, David J
*** Lock, Marisa C
*** Mackenzie, Andrew M
0944 Macwillie, Donald M
0733 Maddy, Craig A
0490 Mainwaring, Jeffrey
0185 Marsh, Frank G
0732 Mason, Michael C
0764 Maughan, Braden D
0749 McDermott, Kyle C
*** Mize, Loren T
0720 Mobley, Edwin D
0251 Moncrief, Scott D
0430 Munera, Kathryn J
0347 Muneramolina, Juan
0704 Murphy, Arthur J II
0295 Murphy, Derek P
0866 Nguyen, Roddy S
0724 Nulk, Matthew P
*** Pearsall, Robert C
0592 Pruitt, Kimber L
*** Purser, Justin R
0740 Rangitsch, Phillip
*** Raymond, James D
0410 Risner, Joshua J
*** Roynon, Taylor J
0458 Schreckenbach, Mike
0797 Simpkins, Christopher
0460 Skilling, Ross M
0769 Small, William R
0689 Smith, Porter N
0349 Snyder, Charles D
0285 Talarico, David L
0929 Tauzer, Bryan J
0753 Thayer, Chad A
0351 Thompson, Cody R
0855 Tippens, Kevin J
*** Trussell, Shahn R
0614 Turns, Robert E
0631 Ulses, Ryan J
0309 Unrath, Austin
0314 Vann, Brent Lesley
0715 Vichinsky, Alexander
0236 Wellman, Gregory T
0494 Wheeler, Corey M
0483 Wiley, Joseph Brent
0538 Winter, Justin Gust
0700 Zapcic, Andrew M

*** Merit selection

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 032-19
PV2 Walley Howard King, III - DG
PVT Barkley Symone
PV2 Caraway Nathan
PVT Dickson Camaryn
PV2 Evans Logan
PV2 Harrison Parry
PV2 House Bobby Jr.
PV2 Jimenez Angel
PFC Omalin Jesus
PV2 Roginski Travis
PFC Uher Kimberly

Class 519-19
PVT Jake Six - DG
PVT Jordan Leckie
PV2 Allen Manley
PV2 Antonio Mosqueda
PFC Jeffrey Rodriguez
PV2 Christopher Segura
PV2 Christian Ward
SPC Cory Williams
SGT Caimen Willson
SPC Rojas Zafra

Continued next page

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.

33 Officers, October 24, 2019

Commissioned Officers

2LT Barth, Cameron J. - DG
2LT Hudson, Colton D. - HG
2LT Little, Trevor R. - HG
2LT Cosby, Cooper J.
2LT Desjardins, Brandon M.
2LT Fang, Xijun
2LT Matusz, Phylicia
2LT McAlister, Sean P.
2LT Mortensen, Jeremy J.
2LT Parker, Mitchell C.
2LT Rodriguez Candelario, Ian A.
2LT Scott, Jonathan A.
2LT Shepard, Mollie M. *

Warrant Officers

WO1 Cruz, Devend Michael P. - DG
WO1 Allen, Gavin R. - HG
WO1 Pezze, Philip A. - HG
WO1 Velin, Nathan C. - HG
WO1 Bomhard, Kevin S.
WO1 Carnley, Forrest C.
WO1 Cesmat, David J.
WO1 Daughtry, William J.
WO1 Gordon, Scott R.
WO1 Gragg, Raymon E. *
WO1 Hilton, James W.
WO1 Meadows, Zulu V. *
WO1 Mendoza, Julio
WO1 Meyer, Austin O.
WO1 Morris, Keith E.
WO1 Perry, Cyril C.
WO1 Powell, Christopher D.
WO1 Taipale, Alexander C. *
WO1 Wood, Randall L.
WO1 Zemer, Brian P.

58 Officers, November 7, 2019

Commissioned Officers

2LT Lara, Jonathan M. -DG
2LT Benagh, William E. - HG
2LT Cochran, Jacob A. - HG
2LT Orgeron, Michael J. - HG
2LT Voronovich, Alexander G. - HG
2LT Anderson-Kaapa, Drevan K.
2LT Barrett, Taylor R. *
2LT D'Alencon, Nicholas E.
2LT Frizzell, Karen J.
2LT Hall, Kevin N.
2LT Hansen, Blake A.
2LT Hesse, Matthew D.
2LT Johnson, Ellis H.
2LT Kaiser, Seth T.
2LT Longacre, Austin H.
2LT Maltz, Jake R.
2LT McClure, Christian A.
2LT McGuire, Patrick F.
2LT Millham, Brian S.
2LT Morrow, James R. *
2LT Prasad, Dipak R.
2LT Reist, Nicholas J.



FSXXI-OCT 24



FSXXI-NOV 7

2LT Sullivan, Colin D.
2LT Tavano, Tyler S.
2LT Valentine, Christian J.
2LT Winski, Kathryn A.

Warrant Officers

WO1 Aumen, Luke M. - DG
WO1 Dehn, Jeremy J. - HG
WO1 Gazdayka, Robert M. - HG
WO1 Humphrey, Scott J. Jr - HG
WO1 Lloyd, James L. - HG
WO1 Atha, Jordan L.
WO1 Barnard, Jung M.
WO1 Bartolo, Jonathan E.
WO1 Brunson, Dwayne D.
WO1 Capitanelli, Nicholas M.
WO1 Crocker, John R.
WO1 Desy, Bryce B. *
WO1 Durand, Josh D.
WO1 Gudroe, Devan C.
WO1 Ho, Ryan T. *
WO1 Hunter, Dean R. *
WO1 Johlfs, Brock J.
WO1 Karabatsos, Jeremy M.
WO1 Lockert, John B.
WO1 Morehart, Joshua J.
WO1 Petker, Nathanael P.
WO1 Potts, Alexander J.
WO1 Pronto, Brian J.
WO1 Quintana, Everett M.
WO1 Rebecca, Jacob M.
WO1 Riddick, Spencer D.
WO1 Rodriguez, Alberto L.
WO1 Shattuck, David M.
WO1 Tremblay, Tanner A.
WO1 Wagoner, Brittany M.

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

AIT Graduations

Contiued

Class 033-19
PV2 Sean Hulsen- DG
PV2 Muhammad Abdulqabid
PV2 Ujwal Basnet
PV2 Justin Dimaano
PV2 Justice Fowler
PV2 Bryce Graves
PV2 Justin Hall
PV2 Lemmerick Hooker
PV2 Mitchell Hurd
PV2 Matthew Mixon

Class 034-19
PFC Cesar Nievesperez - DG
SGT Jacob Agosto
SPC Chance Gaudin
PV2 Drake Newcomb
PV2 Sean Norfleet
PFC Cha Sepulveda
PV2 Joshuafa Serrano
PV2 Jermiah Snel
PV2 Owen Stones
PV2 Israel Velazco
PV2 Adrian Vidaurri
PV2 Carlos Walsh

Class 035-19
PV2 Rylan Merchen - DG
PV2 Calvin Avedi
PV2 Cory Carpenter
PV2 Cassidy Foley
PV2 Javier Galindoy
PV2 Jonpaul Harden
PFC Colin Hayes
PV2 Adam Keener
PV2 Christopher Manzano
PFC Sonatane Mau
PV2 Mashaud Mcclarin
PV2 Jonas Santaella

Class 520-19
PV2 Jared Joseph Price - DG
SPC Masami Masami
PV2 Tyler Newton
PV2 Dominic Rodriguez
PV2 Damian Sanyustic
PV2 Branden Seigl
PV2 Absalom Smith

Continued next page

People On The Move

AIT Graduations

Contiued

PV2 Dahlton Stack
PV2 Austin Stone
PV2 Kendell Stpeter
PV2 Joseph Stroup
PV2 Paul White
Class 036-19
PFC Jae Young Kim - DG
SGT Khalifa Al Ajmi
PV2 Richard Carranza
PV2 Alec Coopman
PV2 Joel Copeland
PV2 Steven Dalton
PFC William Epps
PV2 Jonathan Irizarry
PV2 Hunter Johnson
PV2 Kristopher Krumbiegel
Class 037-19
PV2 Elijah Rangel-DG
PV2 Gallage Lerronpeiris
PV2 Melvin Mendezcruz
PV2 Adrian Nieves
PV2 Le Schneider
PV2 Nicolas Swank
PVT Odane Terrylonge
PV2 Jordan Transou
PV2 Nicholas Yip

CH-47 Medium Helicopter Repairer (15U)

Class 028-19
PV2 Garrett R. Tester - DG
SPC Alex Emanue C. Gonzalez
SPC Shannon Kate Drzyzga
PV2 Sebastian N. Gonzalez
PV2 Jacob Thomas Gorman
SPC Lane Garrett Hanna
PV2 Alec Lee Henderson
PV2 Cody Herbert
PV2 Graham Stribling
Class 029-19
SPC Sky Borne Okimoto - DG
PFC Christopher Alan Cook
PFC Michael R. Escobosa
PFC Ricardo Moises M. Vargas
PV2 Zackery Alan Marshall
PV1 Jean Russell Mayola
SPC Christopher T. Morris
PV2 Bryan Patrick Richey
PV2 Joseph E. Santillan
PV2 Conner Lee Shuck
Class 030-19
PFC Francis-Scott P. Paras - DG
PV2 Vivianne Jade Atencio
SGT Isaac Anthony Cantu
SPC Brandon A. Caylor
SPC Larry Dwayne Gavlick
SPC Jordan Scott Hutchinson
PV2 Jace Michael Kendle
SPC Houston Adam Martin
SPC Jacob Allen Wadsworth
Class 031-19
PV2 Zacariah D. Hodgskiss - DG
SGT Omarie Bashar Burton
SPC Austin Kai Craig
PV2 Dashawn Antwone June
SPC Christopher J. Kurtz
PV2 Joseph K. Nwithukia
SPC Gregory Oversby
PV2 Miguel Romerofranco
SPC Michael Douglas Sparks

UH-60 Helicopter Repairer (15T)

Class 069-19
SPC Kelly Susan Funk - DG *
CPL Nicholas David Bernier
PV2 Cassandra Elaine Berner
SPC Keziaanne Downing
PFC Alexander Fleet
PFC Franky Marie Montijo
PV1 Joel Villa
PV1 Richard Allen Wait
PV1 Donte Williams, Jr
SPC Tylor Woodard
PV2 Terry Austin Wunker
Class 070-19
PV2 Mathew Scott Young – DG
PFC Blake Lee W. Arnold
SPC Joshua M. Bannister
SPC Conner Cheyn Cook
PV2 Dakota Glenn Fulton
PV2 Christopher E. Humphreys
SPC Rory Logan Kennedy
SPC Eduardo G. Martinez
SPC Cole Dyllon Mays
PV2 Laquavious D. Robinson
SPC Charles Andrew Wojcik
Class 071-19
PFC Ethan T. Carter - DG
SPC James Oluwatosin Ajala
PV2 Garret Michael Blanton
PV2 Arthur Raphael Ferreira
PV2 Angel Frias-Chavez
PV2 Jade-Lynn Marie Geedy
PV2 Aaron Todd Holliday
PV2 Timothy P. Hurley Jr
PFC Ryan James Newlands
PFC Stephen J. Rutherford
SPC Eric Larmont Barrett, Jr
Class 072-19
SPC Michael P. Mcginnis - DG
SPC Rowell Abenes Alcalde
SPC Jesus R. Bosquez III
SPC Alexander Grant Coldani
SPC Rodney Joseph Flom III
SPC Skyler Paul Ford
PFC Charles E. Gilbreath
SPC Jesse Hernandez
SPC Ian Patric Jones
SPC Christopher Gary Paine
PV2 Josiah S. Radakovich
SSG Mark Alan Weimar, Jr
Class 073-19
SPC Wesley R. Carrera - DG
PV2 Jomo Kenyatta Binns
PV2 Jeremy N. Cowan
PV2 Joshua Aaron Goetz
PFC Christian Mark Lewis
PV2 Rene Salvador Torres
PV2 Casandra Lee Nardo
PV2 Carrie Michelle Reid
PV2 Kylie Jean Riley
PV2 Dylan Michael Smeltzer
Class 074-19
PFC Levi Grant Scott - DG
SPC Travis Paul Bartels
SPC Keith Allen Bradley
SPC Ethan Jon Clarke
SPC Douglas Jacob Gaham
PV2 Richard Hernandez, Jr
SPC Tanner Thomas Kimball
PFC Andrew David Maresca
PV2 Brian Nyaberi Nyabuto
SGT Isaac Marsalis Ortega
PV2 Kyle James Phillips
SPC Thomas A. Porcaro
Class 075-19
AMN Benjamin Brown
AMN Brendon Connor
AMN Hunter Ford
AMN Sean Healy
A1C Devon Phillips
A1C Sean Purnell
A1C Derek Roth
A1C Nichles Slinker
AMN Christopher Tiller
AMN Dominic Vargas
A1C Henry Wade
Class 076-19
PFC Jace Ailor
PV2 Kevin Bannister - DG
PV2 Tyne Branum
PV2 Kaleb Brown
PV2 Johnathan Davis
PFC Ryan Keech
PV2 Aaron Lawson
PV2 Deronta Moore
SPC Readar Seoighe
PV2 Christian Williams

Aircraft Powerplant Repairer (15B)

Class 012-19
PFC Kyu Min Lee - DG
PV2 Robert Adams
PV2 Carlos Antonio Alvarez
PV2 Lawrence Amake
PV2 Travis Michael Ashe
PFC Emmanuel Jonas Appiah
PV2 Jeffery Devonne Bible
PV2 Jordan Chase Crosby
PV2 Christian F. Hubbard
PV2 Brendon Shae Long
PV2 Daniel Martinez
PV2 Jacob Austin Rorie
PV2 Christopher Lee Stearns
PV2 Andrew Micheal Waid

Aircraft Powertrain Repairer (15D)

Class 008-19
SPC Matthew A.Isbell - DG
SPC Kameron Alan Kalivoda

Aircraft Electrician (15F)

Class 015-19
PV2 Geoffrey C. Karr – DG
SPC Oluwasegun N. Fasuyi
PFC Shelby Montana Fitzer
PV2 Jordan Jagino Foster
PV2 Alexis Guerrero
Class 016-19
PFC Richard Kweku Adibefu
PV2 Zachary R. Kennedy Dg
PV2 Raekwon J. Maldonado
PV2 Carter Bradley Mckinney
PV2 Verne Guilliano Mullings
PV2 Drake Robert Noel
SPC Afzal Ataur Rahman
Class 017-19
PV2 Bradley Edward Rathbun
PV2 Nicholas Earl Roy
SPC Philip Paul Schlabach
Azandrea Kevin Swaby

Aircraft Pnedraulics Repairer (15H)

Class 012-19
PV2 Jacob Schwendeman - DG
PV2 Eduardo Aceves
PFC Estevez P. Alvarez
PV2 Logan Scott Caskey
PV2 Jesse M. Castellanos
PV2 David Wayne Henderson
PV2 John Alejandro Hurtado
PV2 Christopher M. Kearse
PV2 Dustin Michael Schafer

Aircraft Structural Repairer (15G)

Class 010-19
PFC Kyle E. Mitchell - DG
PV2 Thor Adam Castro
SPC Tyler Joseph Fortier
SSG Alvin Dalit Francisco
PV2 Wesley Matthew Harkey
PV2 Ruben MirAMNontes
PFC Omar M. M. Hassan
PV2 Andrew Ryan Mullins
PV2 Felix Osei Kwami
PV2 Raymond J. Sarmiento
PFC Shaina T. Schenecker
SPC Adam J. Schutzman
PFC Spencer Asher Stoff
SPC Wezley Wayne Zwirn

Avionic Repairer (15N)

Class Class 014-19
PV2 Andrew S. Lanier – DG
SPC Anthony P Archuleta
PFC Jeremy Padin Cardona
PV2 Christian F. Garcia
PFC Trey Alexander Hall
PV2 Yeilyn E. P. De La Rosa
SPC Jose Rene Santoscollazo
Class 015-19
PV2 Justin Cervantes
SPC Jason M. Espana
SPC Joel-David Hufstetter
PV2 Michael Calvin Neill
PV2 Junior Evan Renkert
PV2 Kenneth Mark Sjoberg

AH-64D Armament/ Electrical/Avionics Systems Repairer (15Y)

Class 013-19
SPC Kristiana Kenny - DG
PV1 Arndt Nicholas
PV2 Champaco Brian
PFC Corea Raul
PV2 Donnelly Aaron
PV2 Eugene Daniel
PV2 Leveque Wayne
PFC Trigo, Jr Antonio
Class 014-19
PFC Cody Mccullars -DG
PV2 Martinez, Ii Rosendo
SPC Johnson Jared
PV1 Klunk Austin
PV1 Mcfarland Matthew
PV2 Merkel Ryan
PV2 Ortega Michael
PV1 Rayamajhi Abhinav
SPC Reveron Avila
PV1 Richardson Hunter
SPC Richel Jason
Class 015-19
PVT Richard Aaron Shell-DG
PVT George Angel
PFC Earljosef Babauta
PVT Julia Byrne
PVT Juan Calvillo
PV2 Jorge Carmona
PV2 Nichlas Crowley
PVT Paige Gries
PVT Justin Smith
PV2 Silas Webb
SPC Caile Wells
Class 016-19
PVT Christian Mysak-DG
PFC Charles Edwards
PVT Jazael Favilahernandez
PVT Grant Hockley
SGT Ivan Lopouchanski
SPC Daniel Moreno
SPC Javier Nuno
PVT Brandon Pierremont
SPC Sean Seksinsky
PV2 Justin Wesson
PVT Christian Wilkins
PVT Austin Williams

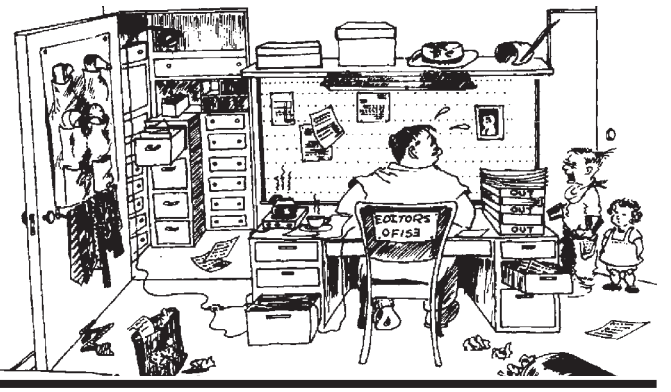
DG: Distinguished Graduate
HG: Honor Graduate

* = AAAA Member
\+ = Life Member

Art's Attic

By Mark Albertson

Art's Attic is a look back each month 25 years ago and 50 years ago to see what was going on in ARMY AVIATION Magazine. Art Kesten was our founder and first publisher from 1953 to 1987. He was also the founder of the AAAA in 1957 and served as its Executive Vice President. Each month contributing editor Mark Albertson selects a few key items from each historic issue. The cartoon, right, was done 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
December 31, 1994

Minuteman Chapter

On August 27, 1994, members of the Minuteman Chapter gathered at an airshow held at Westover, MA. Left to right are: CW3 John C. Healey, LTC William H. Smith, CW2 Tim L. Tompkins, Chapter President, CW2 Tom J. Nye, CW2 Terry R. Knight, Terry Coakley, AAAA Executive Director, Shannon Coakley and Lauren Coakley.



Sustaining the CH-47D Fleet.

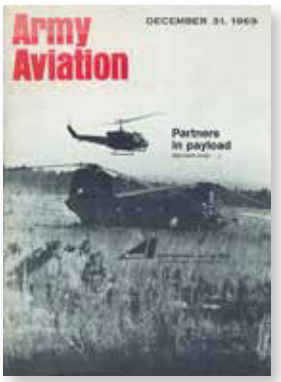
". . . Boeing is modernizing seven CH-47Cs for the National Guard which were purchased from Australia. "Delivery of these CH-47Ds will begin in May 1995. "The last unit has been fielded with the delivery of CH-47Ds to C Company, 193rd Aviation, Regiment Hawaii National Guard. This results in aircraft being fielded to 14 active and three reserve and eight National Guard units. *Source: Sustaining the CH-47D Fleet," by LTC Paul A. Dvorsky, page 14, Army Aviation, December 31, 1994 issue.*



Transitioning to the 21st Century

"Modernizing the ARNG aviation fleet is essential to providing a capabilities-based force in the 21st century. The current fleet of approximately 2,800 aircraft is 15.4% modernized. Upon completion, the modernized aviation force structure will result in approximately 1,400 aircraft with 45% modernized aircraft. Modernizing ARNG AH-64 attack battalions and ARNG medium lift CH-47D companies has been very successful. The ARNG has seven fully trained and validated AH-64 attack helicopter battalions." *Source: Page 12, "ARNG Aviation: Transitioning the Force into the 21st century," Army Aviation, by Colonel Gregory D. Parrish, December 31, 1994.*





50 Years Ago
December 31, 1969

Resolution

Whereas, Warrant Officers and Commissioned Officers in aviation units fly side by side and experience the same risks and face the same flight responsibilities, and Whereas, an area of flight pay inequity exists between Warrant Officers and Commissioned Officers of corresponding grade, and the equalization of flight pay would correct the inequity and improve the morale and the selective retention of Warrant Officers, BE IT RESOLVED that the Army Aviation Association of America, Inc. (AAAA) encourages and supports those actions undertaken by the Department of the Army to correct the current pay disparity between the Aviation Warrant Officer and the Commissioned Officer by equating the flight pay for a Warrant Officer to the corresponding Commissioned Officer for the grades W1/O1 through W4/O4. *(This Resolution was approved by the national Executive Board of the AAAA on 18 December 1969. A copy of the Resolution was forwarded to the Office of the Secretary of Defense in late December.)*



Customer Support

FY 69, according to COL Benjamin S. Silver, Deputy Support Commander, AVSCOM's Logistics Support Activity, processed upwards of 1,000,000 requisitions to move supplies. Such resulted in a monetary total of $2,400,000,000, in service of such supply requests for overseas requirements, as well as CONUS posts, camps, stations and the training bases at Fort Rucker and Fort Wolters. Source: *See page 12, "Supporting the Army's Aircraft Fleet," Army Aviation, December 31, 1969, by Colonel Benjamin S. Silver.*

Fort Rucker, Alabama

September 16, 1969, members of the AAAA National Executive Board met with 12 members of the Junior Officer/Warrant Officer Member Councils from Fort Rucker and Hunter-Stewart. Pictured left to right are COL Richard J, Long, Art Kesten and CW4 Donald R. Joyce. Discussions focused on reexamining AAAA objectives, programs and benefits for the member councils.



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

Colonel Nelson A. Mahone Jr.

Army Aviation Hall of Fame 1992 Induction - Atlanta, GA



One of the first Army-trained aeronautical engineers, Colonel Nelson A. Mahone Jr., completed his graduate study in Aeronautical Engineering at Princeton in 1950-1952 and then reported to the Army Aviation-Airborne R&D Office at Army Field Forces at Ft. Monroe in summer of 1952.

A Master Army Aviator with 5,800 flying hours (819 in combat) in a variety of aircraft types, Colonel Mahone held Rotary Wing and Fixed Wing instrument ratings and was jet-qualified. The 28-year Army Aviator was one of the first multi-engine instrument rated aviators in 1954 and one of the earliest Master Army Aviators in 1961.

While with the Air Mobility Division, OCRD, DA, during 1961 to 1964, he was responsible for coordinating and planning all aviation-related R&D, including aircraft, weapons, avionics, surveillance, and related systems. He was the DoD project officer on the tri-service, tripartite development and evaluation of the P.1127 aircraft (USMC Harrier) where the Army was executive agent for DoD in the British, German, and U.S. development/evaluation.

During 1964-1965, he organized and trained the Army's first Aerial Rocket Artillery Battalion and developed the unit's tactics and techniques of employment as a brand new and vital part of the 11th Air Assault Division. This unit was composed of UH-1B helicopters modified to take various developmental weapons systems. When this division became the 1st Cavalry Division in 1965, he took the 20th Aerial Rocket Artillery Battalion to Vietnam where its success was proven in combat. During this period, he commanded the 20th for seven months in combat (1965-1966).

Returning to CONUS, he became the LOH Project Manager during 1966-1969 during which time he had complete responsibility for the development, testing, procurement, and deployment to operational units of the OH-6 Cayuse helicopter and related programs. In 1969, he returned to Vietnam where he commanded the 17th Combat Aviation Group, consisting of seven Aviation Battalions with over 600 RW and FW aircraft. His decorations include the Silver Star, four LOMs, two DFCs, the Bronze Star with "V", and 18 Air Medals.



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