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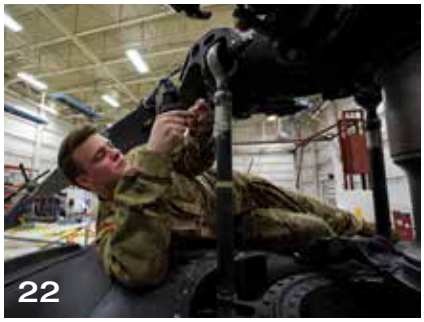

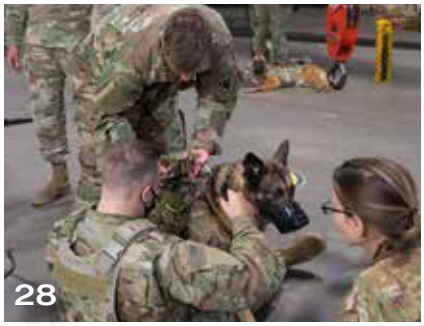

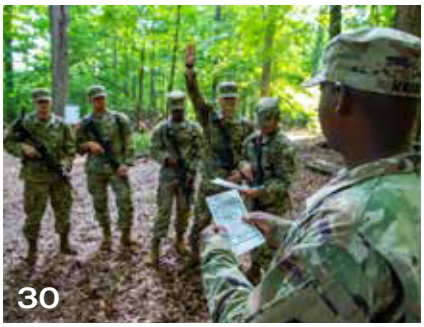

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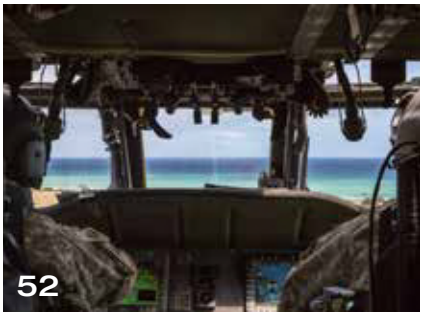
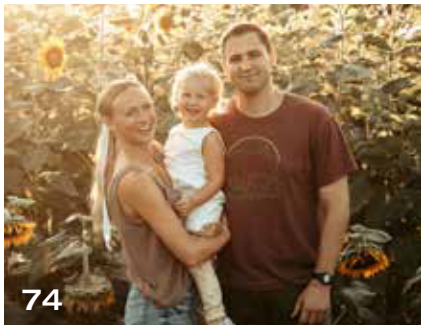
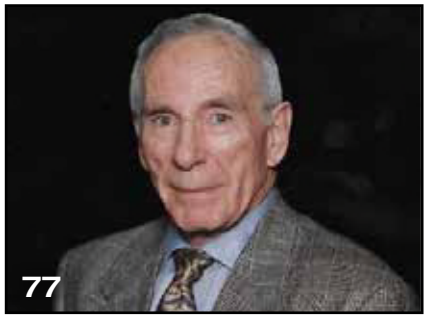
SPECIAL FOCUS — Aviation Soldier Support







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FROM THE FIELD

DEPARTMENTS

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On The Cover

Briefings

The War in Afghanistan Comes to an End

U.S. ARMY PHOTO BY MARINE CORPS SSGT. VICTOR

The last C-17 lifted off from Hamid Karzai International Airport on August 30 at 3:29 p.m., East Coast time, marking the completion of the U.S. withdrawal from Afghanistan, and the end of the military mission to evacuate American citizens, third country nationals and vulnerable Afghans according to U.S. Central Command commander, Marine Corps Gen. Frank McKenzie. More than 800,000 American service members and 25,000 civilians served in Afghanistan over the almost 20-year mission. A total of 2,461 U.S. service members and civilians were killed and more than 20,000 were injured.

Maier Sworn In As USD SOLIC

DOD PHOTO BY MARINE CORPS SGT TARYN SAMMET

Secretary of Defense Lloyd J. Austin III swore in Christopher Maier as the Defense Department's new assistant secretary for special operations and low-intensity conflict on Sept. 16, 2021. As a principal staff assistant reporting directly to the Secretary of Defense and Deputy Secretary of Defense, Maier will have civilian oversight of U.S. Special Operations Command in the administrative chain of command, but not in the operational chain of command. Wearing one hat, he will be the defense secretary's civilian advisor for special operations issues and will report directly to the secretary. Wearing the other hat, he will serve as a more traditional assistant secretary in the Office of the Undersecretary of Defense for Policy where he'll coordinate policies on special operations, counterterrorism, humanitarian issues and counternarcotics.

New Aviation Warrants Promotion Clock Starts After WOBC and Flight School

U.S. ARMY PHOTO

According to an Army news release, Army Directive 2021-31 was approved September 10 and takes effect October 1, 2021. It could add two years to the time required for aviator warrant officers to be promoted to chief warrant officer 2. Warrant officers are automatically promoted after two years serving as warrants, in accordance with Army Regulation 600-8-29. But many aviation branch warrant officers are promoted to CW2 within a few months of arriving at their units because of the lengthy time spent in flight school, according to the release. The directive means the two-year clock will start when the warrant officer completes flight school and Warrant Officer Basic Course. The move will give them, "more time to learn and grow." The directive is specific to aviation warrant officers and does not apply to other branches, according to the release.

Federal Contractors Must Show Proof of COVID-19 Vaccination by December 8

AAPS GRAPHIC

New guidance from the Biden administration on September 24, 2021 says that covered federal contractors and subcontractors must be vaccinated against COVID-19 and show proof of it by December 8, unless they are granted an exemption. Further, companies doing business with the federal government must name a person to coordinate implementation and compliance with the vaccine mandate for covered employees. The guidance applies to "subcontractors at all tiers, except for subcontracts solely for the provision of products." It also applies to all workplace locations as well as individuals on remote work or who work outside. However, it does not apply to those who work outside the United States. Check with your company for more information.

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Heading Into A Very Busy End of the Year

We are rapidly closing in on the end of the year and a lot is going on as we start the ramp up to our busiest few months culminating in the Spring with the AAAA Annual Summit in Nashville.

First, remember we have dramatically changed the Scholarship application schedule. The window for 2022 awards opened on September 1 and closes on December 15. We already have a couple hundred received so obviously the word is getting out to the field. Keep them coming! Note to Chapter Scholarship VPs – be prepared to respond to the national office with your 2022 program as soon as you receive your fund balances in January 2022. Remember, this shift in schedule was based on feedback from the chapters and is designed to allow you to present in time for high school graduation in the Spring.

Next, I am continuing my chapter visits, most recently through Arizona and Texas. I have to say it gets me pumped up to hear directly from your local leaders on current activities, plans for the future and how we at National can better support all of you. It helps me to understand the uniqueness and challenges of each chapter.

Looking forward to upcoming events, we are closely tracking progress against the Delta COVID variant with an eye towards the upcoming Joseph P. Cribbins Training, Equipping and Sustainment Symposium in Huntsville, AL November 15-17, and the Luther Jones Army Aviation Depot Forum in Corpus Christi, TX on December 7-8. As of this writing, things are looking a bit more positive, but the actual go/no go decision will be made after this issue goes to press. Frankly, a lot will depend on how the AUSA event goes in DC in October. Like AAAA, AUSA is also requiring full vaccination to attend which seems to be the emerging standard in the meetings industry nationwide. As a reminder, the Cribbins event is vastly expanded to include the Class of 2020 and 2021 Hall of Fame Inductions and the 2020 and 2021 National Awards like the Aviator of the Year, Crew Chief of the Year, and the units of the year. We expect it will end up drawing several thousand folks and evolve to be an AAAA Annual Summit (light), six months out from the big Annual event generally in Nashville each year.

With regard to the 2022 Summit, hotel reservations opened a couple weeks ago. Go online to the AAAA website, register for the Summit and then reserve a room soon. We expect that the Gaylord will sell out before too long as it did pre-COVID every year. Do it today!

In other news, the "AAAA Community" App is up and running and available. Download it today and stay up to the minute with all that is going on in our Army Aviation family.

U.S. ARMY PHOTO BY THOMAS COBURN

CSM G. Mike Dove, is inducted into the Gold Honorable Order of St. Michael by AAAA National President, MG Tim Crosby, Ret. and U.S. Army Aviation and Missile Command Commanding General, MG Todd Royar on Aug. 13, 2021 at Redstone Arsenal, AL. Dove was recognized for his more than 27 years of Aviation Service culminating as the AMCOM command sergeant major.

On a sad note, I do want to mention the passing of a number of folks over the last few weeks who have been key members of our family and will be greatly missed. First, COL Sid Achée, Ret., one of the very few remaining "Cub Club" members of original Liaison pilots upon whose shoulders we all stand today. Sid was the president of the Cub Club and a true gentleman.

I also offer our condolences to Past Presidents BG Rod Wolfe, Ret., and BG Howard Yellen, Ret., who both lost their wives recently. Elleen Wolfe and Susan Yellen were outstanding AAAA First Ladies who gave so much of their time, talent, and caring to AAAA and our Soldiers. Finally, LTG Jim Pillsbury, Ret., has also just lost his valiant Becky in the last few days. Our thoughts and prayers are with all these families.

Fall is upon us and the holiday season is just around the corner. As we close on the Holiday season, cherish your families and stay safe. Army Aviation is such a large and diverse family; take the time to continue to foster the relationships and engagements afforded in this professional organization.

Lastly, we at AAAA Headquarters exist to support you. I honestly welcome your input and your feedback on how we can maintain our position as the most revered professional organization. You the members are our foundation.

Above the Best

MG Tim Crosby, U.S. Army Retired
35th President, AAAA
tcrosby@quad-a.org

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Fully Integrated Army Aviation Sustainment and Maintenance Capability

By MG David J. Francis

SSG Odale Bell performs post-flight maintenance checks on a CH-47 during Defender Europe in Bulgaria, April 30, 2021.

Army Aviation remains an expeditionary force and a dynamic option for maneuver commanders at all echelons.

We organize, man, train, and equip our organizations to deploy anywhere in the world, at any time, in any environment, against any adversary, to accomplish its assigned mission. Essential to our expeditionary nature is sustainment and support that is suitable for the mission and the environment.

Shifting Focus

Over the past 20 years, our focus was on fighting and sustaining in a counterinsurgency (COIN) environment driven by Army and combatant command (COCOM) requirements. As we shift our training for Large Scale Combat Operations (LSCO), we must adjust institutional and operational training to prepare our units and maintainers for the future fight. In the future we will be required to sustain combat operations at a high OPTEMPO over an extended period of time, in isolated geographic locations. Conducting dispersed maintenance operations, in locations with a reduced logistical footprint, will directly impact our ability to fight and win in LSCO.

Our organizations and leaders have to prepare to move their organizations organically, repeatedly, and with all necessary support. Most importantly, we will have to sustain ourselves with the smallest footprint and logistical tail possible. For Large Scale Combat Operations we will develop a strategic depth in the supply chain to lower operational and sustainment costs throughout the

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life cycle, reduce Soldier burden, and increase operational availability while retaining our flexibility, agility and lethality. In the threat environment we anticipate in Large Scale Combat Operations, our deployments may be short notice employing our assets quickly over far distances. We envision designing, training, and equipping Aviation Units that will conduct combat operations upon arrival, and operate for several days with relatively limited external support in harsh/corrosive environments with longer maintenance-free operating periods.

The Army Aviation Maintenance Training Program

To meet these requirements, we are modernizing the way we train and develop our maintainers. The Army Aviation Maintenance Training Program is driving the way the Army trains and develops aviation maintainers and leaders. This program establishes a maintenance proficiency level system to complement aircrew training progression and add clarity in understanding the hierarchy of proficiency. This program enables leaders to ensure the right maintenance personnel, with the correct level of maintenance proficiency, are selected when we disperse our units for combat operations. We will better understand our capacity and arm our aviation leaders with the knowledge required to build the best maintenance capability.

Through innovative training and new maintenance techniques, our modernization effort in maintenance is designed to allow our aviation warfighters and support elements to project aviation combat power enabling faster movement and sustainment. Our maintenance leaders will have to develop common ASLs to reduce the known burden of dragging large "just in case" PLL's across the battlefield while retaining the necessary capacity to surge for LSCO. Gone is the day of the massive FOB. Instead, we anticipate tailoring the maintenance and logistical support to meet a dynamic mission requirement. It is more important than ever that we "train how we will fight" at all levels of logistics and maintenance.

Army Aviation must be capable of rapid deployment and immediate employment throughout the globe in the future operational environment described in the MDO concept. Aviation units must be capable of operating in austere environments, amidst complex terrain, with limited or lengthy lines of communication for extended periods of time. Our Army expects a fully Integrated Army Aviation sustainment and maintenance capability that supports Joint, Multinational, Large Scale Combat Operations across all domains – space, cyber, air, sea, and land. Modern Aviation sustainment will support future force capabilities delivering resilient, and flexible sustainment for future aviation forces and the fielding of Future Vertical Lift aircraft.

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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AMCOM Adopts Proactive Maintenance Management Approach

By MG K. Todd Royar

U.S. ARMY PHOTO BY SGT STEVEN LOPEZ

U.S. Army Soldiers assigned to Task Force Panther, 101st Combat Aviation Brigade, calibrate and balance the main rotor blades of an AH-64 Apache Helicopter at Kandahar Airfield, Afghanistan.

For the past two decades, Army Aviation led the Army in implementing Conditions Based Maintenance Plus (CBM +).

However, I do not believe we have realized the potential gains of the program in terms of improving safety or reducing maintenance requirements. Recognizing the need for renewed emphasis, the Army recently changed the name and goals of the program CBM+ to Prognostic and Predictive Maintenance (PPMx) in order to be more proactive in achieving those objectives. But, if we want to fully realize the goals of PPMx, I contend we must fundamentally change our maintenance management: from broad groups (National Item Identification Numbers (NIIN) and fleets) to specific items (serial numbers and tail numbers).

Our current system of maintenance management works; procedures and standards for determining component life and resulting maintenance schedules are solid. However, managing parts at the NIIN level, we over-maintain our airframes costing both maintenance manhours and precious financial resources. For example, if a particular part has five unique failure modes, we take the failure mode with the lowest time, add in the appropriate safety factor and then set the Time Between Overhaul (TBO) for that part. It works, but in the process of doing so we change out parts long before the vast majority approach a failure mode resulting in both an increase in cost and maintenance requirement. We operate this way to ensure safety, but also because we do not have a realistic better method.

Army Aviation leaned forward with CBM+ and today over 95% of our tactical systems are instrumented with health-monitoring systems to varying degrees. There are numerous examples of health-monitoring systems identifying an impending failure and, as a result, likely prevented class A accidents. Additionally, the data has enabled us to change some of our maintenance schedules. However, those examples are mostly anecdotal and limited in scope. While CBM+ enabled us to avert catastrophe in a few cases, it has yet to fundamentally alter our maintenance management system. We can do better.

Enter PPMx

The change from CBM+ to PPMx is more than just a name change. The intent is to be proactive vice reactive. A large percentage of our airframes are instrumented today, but that instrumentation is decades old and measures vibration that only detects some failure modes. Today's technology now gives us the ability to not only measure vibrations more precisely, but also identify more failure modes. These advancements will enable us to be more proactive in managing our maintenance schedules from broad groups to individual serial numbered items and tail numbers.

The potential advantages of managing maintenance at the component- and tail number-level are enormous. Instead of changing a transmission at the TBO time associated with the lowest-time failure mode for the entire NIIN, we can change it when the prognostics for that specific transmission indicate we need to. The fiscal savings in extending the life of components, even if just by an average of 10% reaches the hundreds of

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millions in savings annually. Knowing when to change systems out will not only reduce maintenance manhours, but also provide commanders more options.

Managing individual components will not be easy. Despite advances in technology, we do not have the ability to reliably detect or predict every failure mode with airworthiness assurance today. We also do not have the data-management system in place to measure and track to that level. Recognizing these current limitations, it is important to understand our capabilities. We certainly have more capability to detect impending failures today than yesterday, and we will assuredly have more capability tomorrow. Despite the challenges, there are specific incremental steps we can take today in working towards managing our maintenance at the serial-number level.

First, we must have a ***common-data framework for health-monitoring systems*** in order to reap the benefits of PPMx. Today, each of our airframes have unique, proprietary systems for health monitoring. There is no commonality to how the "ones and zeros" are produced, and the result is that our tactical units have multiple different systems. If you are like me, you may find it incredibly frustrating. Other industries have established comprehensive standards. Why can't we? Over a decade ago, the automotive industry established common standards for their health-monitoring systems with significant benefit. We need the same in the rotorcraft industry. I am convinced it is in their best interests to establish these standards. However, if industry is not willing to, we should develop and require them.

Second, we must ***write the requirements*** for new weapon systems that not only require the use of a common-data architecture, but also ***enables adjustment of future maintenance schedules by the government*** as we learn more about the system. Without a concerted effort, Original Equipment Manufacturers will develop maintenance schedules that may allow for adjustment, but only with the use of their proprietary data. There must be an incentive for the Original Equipment Manufacturers to design instrumentation into the airframes and provide sufficient intellectual property to allow for change without significant additional cost.

Third, we must ***update our Data Management Systems***. Simply put, our systems today are not designed to handle the volume of data needed to manage components at the serial-number level. Just as important, most of our data systems are stove-piped and do not easily integrate with one another, if at all. To make matters worse, we too often have multiple databases that capture the same metrics but are used by different organizations resulting in increased cost and inefficiencies. We need a single database for all users. Based on the size and complexities, we will also need to embrace Artificial Intelligence to analyze the data fully.

Finally, we must be willing to ***face the intellectual fear of changing***. Yes, our processes are tried and true, but we must be willing to develop new processes and testing procedures to reach the same level of assurance. The challenges are daunting. But if we do not start, the same challenges will never be overcome. Just from a fiscal stance alone, we cannot afford to do business as usual and maintain the status quo.

It will take time, but we can reap the benefits of PPMx. We can get ahead of potential component failures through improved health monitoring resulting in both decreased cost and maintenance requirements. Changing our maintenance management from fleets to individual aircraft and from NIINs to specific serial numbers is a key component in realizing the potential gains of PPMx.

MG K. Todd Royar is the commanding general of the U.S. Army Aviation and Missile Command at Redstone Arsenal, AL.

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PPMx Provides Maintenance Officers New Foresight Capabilities

By CW5 Patrick O'Neill

What is Prognostic and Predictive Maintenance (PPMx) and what capabilities will it provide leaders?

U.S. NAVY PHOTO BY CH. MASS COMM. SPEC. JOHN M. HAGEMAN

SPC Bethany Biryukova from the 25th Combat Aviation Brigade removes an antenna off an AH-64 Apache that landed at Joint Base Pearl Harbor-Hickam enroute to Wheeler Army Airfield.

PPMx is the application and integration of appropriate processes, technologies and knowledge-based capabilities that use authoritative and emerging data to achieve foresight in combat systems. This foresight will provide health management and response, enabling leaders to predict materiel failure and plan maintenance actions aligned to operational requirements, while improving readiness and affordability. But PPMx requires a large shift in our maintenance culture with two major changes.

First, with the help of industry partners, we need ***common data collection and transportation solutions at the platform/aircraft level, with common data output at the user level***. This will enable us to be proactive and predictable, in both supply and maintenance postures. We need a common system of data collection and diagnostics output at echelon that is prognostic and predictive, to provide maintenance managers options for meeting mission requirements. This system needs to be simple for the end-user to operate and interpret. The data needs to cover the total health of the platform's systems, not just some of the larger systems.

This allows all parts to be monitored and assess/decrement by flight regime at the NIIN and tail number level, eliminating the TBO or Flying Hour level for a system. This will also enable a higher degree of flexibility in aircraft usage, increased Bank Time, and higher readiness rates. PPMx provides maintenance managers more ability to plan maintenance, order parts, and schedule maintainers to accomplish the preplanned task.

Second, ***sensors need to monitor the entire platform***, not just the larger components, and sensors need to monitor ***more than just vibration***. We can use the data captured from the last two decades to assist in the prognostic and predictive process, and sensor technologies have made this much more achievable. How nice would it be to have a system that

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POWER TO PROTECT

predicts when the remaining useful life is up, orders the parts, makes the initial write-ups, pulls up the work packages, and transmits all this information without the crew chief interfacing with the platform? All transmitted in the background while the aircraft is operating before, during or after a mission. This has been proven in a virtual environment without maintainers prompting or initially being involved in the process. Maintainers will accept the information, pick up parts and schedule the maintenance before the failure.

How many precautionary landings will this prevent alone? The maintenance manager will have few unscheduled maintenance issues, and this eliminates the need for Phase schedules supporting the FHP. Theoretically, Bank time remains at 90-100%, as there are no or very few hourly requirements. The ASB would support maintenance in the battalions instead of being monopolized by a PHASE. Maintainers could be assigned tasks proactively, eliminating reactionary maintenance which consumes a majority of the time. Maintenance managers and maintainers need to embrace new technologies and other supportive infrastructures will have to adapt to the new reality. Supply systems will have to adjust to different demands and either increase or lessen outputs, delivery schedules will have to be more precise to allow these new predictive maintenance practices to flourish and all the other foreseen and unforeseen effects will have to adapt to the increased technology.

How will PPMx make life better and what is the ultimate goal? Perhaps one day we will alleviate the need for PHASE maintenance. Imagine a world with less intrusive maintenance that is done based on evidence of need, at the right time and place. I don't have the same cell phone or laptop I did 25 years ago; furthermore, those devices don't perform the same functions. I have adapted, and embraced new technology, to better use both the device and my time. CBM+ has a proven record, but we must always strive to do better without ever compromising safety.

CW5 Patrick O'Neill is the Aviation Branch Maintenance Officer, U.S. Army Aviation and Missile Command at Redstone Arsenal, AL.

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Prognostic/Predictive Maintenance (PPMx) Impact on the Soldier

By CSM Bradford L. Smith

Upon assuming the responsibility as the command sergeant major of the U.S. Army Aviation and Missile Command, Aug. 13, I realized what an honor and privilege it is to be on this amazing team.

SGT Samuel Loggins, aircraft mechanic and crew chief, Bravo Company, 1st Battalion, 207th Aviation Regiment, conducts maintenance on a UH-60 Black Hawk helicopter at Bryant Army Airfield on Joint Base Elmendorf-Richardson, Alaska. Soldiers with the Alaska National Guard from 1-207th conduct cross-country training flights during their final annual training as an air assault unit ahead of their pending transition to becoming a part of a larger general aviation support battalion.

One of my primary initiatives will be progressing the Prognostic/Predictive Maintenance (PPMx) effort for the Army Aviation and Missile community. MG Royar and CW5 O'Neill have written articles on the previous pages defining the vision of PPMx, laying out the evolution from Conditions Based Maintenance Plus (CBM+) to PPMx and the maintenance managers' role in the program.

The Noncommissioned Officers and Soldiers play a key role in progressing PPMx, reducing Soldier burden and increasing readiness. NCOs and Soldiers are responsible for maintaining our platforms to ensure mission accomplishment and the safety of the aircrews. The fact that each platform uses a different system for capturing our PPMx data increases the complexity of this process and places challenges on the maintenance managers.

Our platforms currently use the following systems and download intervals:

- The AH-64 D/E uses the Modernized Signal Processing Unit (MSPU) with a required download every 14 days or 25 flight hours.
- The UH-60 L/M uses the Integrated Vehicle Health Management System (IVHMS) with a required download after the last flight of the day.
- The CH-47F uses the Cargo Platform Health Environment (CPHE) with a download as required.

Each system then utilizes Joint Technical Data Integration (JTDI) to transmit this data to the enterprise where it is analyzed and used to make decisions improving maintenance actions. Having three distinct systems with different intervals and data structures increases the challenge of providing a common operating picture with actionable information to maintenance personnel.

In contrast, the 160th Special Operations Aviation Regiment (Airborne) elected a solution that utilizes common hardware and data structure across every platform. This has enabled a common operating picture for maintenance and Soldier utilization and establishes a model the enterprise needs to adapt across our traditional formations.

To overcome the current challenge of diverse data sets, NCOs and Soldiers

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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 2020 National winners were featured in the April/May AAAA Army Aviation State of the Union issue.

AAPI FILE PHOTO

SSG Kyle C. Perchinske

Company F, 6th Battalion,
101st Aviation Regiment
Task Force Eagle Assault
FOB Dahlke, Afghanistan

Air Traffic Controller of the Year, 2018

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SSG Kyle Perchinske's performance as Foxtrot Company's Shank Tower Facility Chief was exceptional. SSG Perchinske's relentless pursuit of excellence and superb knowledge of tower control directly influenced Shank Tower's ability to conduct operations 24 hours a day without accident or incident in support of Task Force Destiny and myriad coalition traffic to include Joint and Multinational rotary and fixed wing aircraft, civilian aviation assets, and unmanned aerial platforms during Operation Freedom's Sentinel XVIII-XIX. During his deployment, SSG Perchinske has successfully integrated multiple air traffic control systems to include the Mobile Tower System (MOTS), Tactical Terminal Control System (TTCS), and Tactical Airspace Integration System (TAIS) to support and enhance the combat effectiveness of Task Force Destiny with a goal of a 100 percent rating rate for all 15 controllers under his supervision. SSG Perchinske is a dedicated and passionate leader, subject matter expert, and a model air traffic controller for others in his unit and has earned recognition as the 2018 Army Aviation Association of America Air Traffic Controller of the Year.

must ensure downloads are accomplished following the intervals noted above and ensure that data is transmitted to the enterprise. The data captured by the aircraft and the monitoring systems are only part of the equation that will ensure the success of PPMx. The other part, and most important for our maintainers, is the accurate and timely completion of maintenance forms and records.

I know that most maintainers don't see the value in the work unit code (WUC) or man-hours on our 13-1s. Honestly, I didn't either until I gained a better understanding of how these codes are used by our reliability teams to help understand what issues are affecting our readiness. Most records we see have the WUC 02, which denotes the aircraft. We spend hundreds of hours and thousands of dollars combing every maintenance record to correct these WUCs to provide a more accurate representation. These WUCs are then used to help sort out faults and develop an index of primary reliability drivers for each platform. This list is what drives our enterprise efforts to either design a new, more reliable component or develop a maintenance procedure that eliminates/reduces unscheduled maintenance events. The more accurate your fault and corrective action entries are the better and more timely solutions the enterprise can provide.

The other key issue is correctly capturing the maintenance man hours required to complete a maintenance action. I know most Soldiers just type in .1, we see it in the data. The truth is this misrepresentation has a direct effect on our aviation manning. As the Army continues to operate with reduced budgets and calls for force reduction, we need to show and validate the required number of Soldiers to maintain safe, reliable, and ready aircraft. Additionally, as the Aviation Maintenance Training Program is fully implemented, accurate man-hour tracking will be used to calculate your training level, utilization, and ability for civilian maintenance licensing.

For PPMx to be successful I need each of you to help us capture clean, consistent data. Your efforts will allow the enterprise to move into the future with our maintenance procedures and ensure our success on the future battlefield.

Above the Best

CSM Bradford L. Smith is the command sergeant major of the Aviation and Missile Command at Redstone Arsenal, AL.

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Don't Let Your Guard Down

By LTC Randy P. James

In Army Aviation, we are known for our success when it comes to risk management and our outstanding systems in place to address the risks associated with Aviation operations.

MS NATIONAL GUARD PHOTO BY SGT SHAWN KEETON

Soldiers with 1st Battalion, 185th Aviation Brigade discuss details of an upcoming air assault mission during exercise Arctic Anvil at Camp Shelby Joint Forces Training Center. Arctic Anvil is a force-on-force exercise that tests the mental and physical toughness of the Soldiers involved.

However, one of the biggest challenges when it comes to Aviation risk management tends to be our reliance on objective numbers to address subjective risk. While this will work at addressing objective risks such as time of day, weather, lunar data, power considerations, etc., it is not so easy to address the crew selection aspect of Aviation risk management. The Army Risk Common Operational Picture (R-COP) attempts to address these numbers but could inadvertently lead a mission briefing officer (MBO) or final mission approval authority (FMAA) into a false sense of security.

In particular, the R-COP section entitled "See Yourself" addresses crew selection based solely on hours flown whether total hours, NVD hours, hours in the AOR, and hours flown in the previous 30 days. While this metric is an exceptional aid to assist in decision making, it should not be the end all be all when discussing crew selection. Unfortunately, the lore around the Army Aviation community further foments the belief that these hours are the best predictor of crew experience. How many times have we heard, "new PCs are the most dangerous between 500 and 1,000 hours."? While a large portion of our junior Aviators fall into this window, most of them also track in this window which increases the clout they have within the community as instructor pilots (IP) and maintenance test pilots (MTP). Does this new designation really lead to lower risk based on improved knowledge/experience?

Based on the Class A mishaps for the past two fiscal years, it does not. Of the last 13 human factors Class A mishaps, 12 of them had an IP or MTP as the pilot in command (PIC) for the flight. Additionally, 10 of the 13 PICs had over 1,200 hours total time. Five had dual PC crews and two additionally had standardization instructor pilots (SP) in the back seat. The Class A mishaps for the past two years were not piloted by junior Aviators, but by Aviators who would have been termed "low risk" by the R-COP for crew selection based on the number of hours alone.

How do we combat this mismatch with the R-COP numbers of where our highest risk is? First, we must ensure that we do not give excessive deference to position or rank. While not all IP/MTPs fit this category, remember that the minimum requirements to attend the IP course or MTP course are 500 hours total time, 250 hours in MTDS, and 50 hours PIC time. However, crossing over these milestones and completing the course do not equate to a large change in experience level, just a change in training level. Second, we must read what the Aviation Operations SOP specifically says about the R-COP; the R- COP "is designed to be a dialogue between the command, the mission briefing officer, and the crew." Section 4 of the R-COP provides a forum to address the subjective portion of the risk assessment by answering two questions: "What is the greatest risk to your flight and where will it occur? What have you done to mitigate that risk?". We must ensure that we use these blocks to address those risks that do not have a number or letter assigned to them. This is where the dialogue occurs.

While the R-COP is a tool, we must not be lured into a false sense of security by numbers. We must use Section 4 "Risk Questions" to continue the dialogue to ensure a holistic review of each crew, mission complexity, whether to apply the risk management process to the entire mission.

Readiness Through Safety!

LTC Randy P. James is the Aviation Division Chief, Directorate of Assessments and Prevention, US Army Combat Readiness Center, Fort Rucker, AL. He is retiring and has been mostly responsible for the content of this column for the last three years, he will be missed. Good luck Randy!

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GENERAL ATOMICS AERONAUTICAL

Army Reserve Aviation Is There, No Matter The Soldier

By SGT Alexander Morgan

There are moments when time is of the essence and a medical evacuation is necessary to save a Soldier's life, including our military working dog (MWD) teammates.

C/7-158th Aviation Regiment, 11th Expeditionary Combat Aviation Brigade, recently hosted MEDEVAC hoist training with military working dog handlers on Fort Carson, Colorado. Soldiers from the unit trained handlers with the 69th Military Police Detachment (MPD) to properly secure their MWD during a MEDEVAC hoist in the event one of the dogs is injured and needs immediate medical care.

For an MWD team that only consists of the handler and their dog, it's vital that flight paramedics and handlers are familiar with the aircraft and MEDEVAC hoist procedures. If not properly trained to execute a MEDEVAC hoist with an Aviation crew, the MWD team could risk injuring themselves or endangering the crew. "It's a very real expectation where the MWD teams will get into a situation where they will have to call a MEDEVAC and have to be hoisted out of the area," said Scott. "Partnering with the GSAB and having the MWD teams get that experience back home in a CONUS environment will better prepare them for the battlefield in the near future."

The training consisted of an academic portion where senior flight paramedic and standardization instructor, Staff Sgt. Juan Rodriguez, gave classroom instruction to prepare the handlers before they went through the hands-on familiarization exercise with HH-60 Black Hawk helicopters and a hoist crane that led into a real-world training scenario.

"Because it's not a typical thing that happens, we are going to make this a standard," said Rodriguez. "Between us and the 69th, there's a great deal of new standards that are going to be established, and all of our flight medics are going to be familiar with them."

There are various ways an MWD and its handler can be hoisted into the aircraft, added Rodriguez. The standard being formed through the training between C/7-158 and the 69th MPD is advantageous because it has identified safety concerns and mitigates risk to the crew and MWD teams. "We are able to ensure that the dogs and their handlers remain safe not just in the beginning, but all the way to the end when the dogs are able to receive the next level of care that tends to injuries that could be fatal to the canine," said Rodriguez.

Once the crew and handlers secure the dogs in the aircraft, flight medics immediately administer care and keep them stabilized until they arrive at a Role Three medical treatment facility where a veterinarian can perform surgery on the injured dog. "Military working dogs aren't just animals assisting military police, they are actual Soldiers, and they deserve the same treatment we would give any Soldier," said Rodriguez. "The 11th ECAB can feel confident that their flight paramedics are taking care of all personnel on the battlefield."

SPC Nicholas Tieszen (standing left) of the 11th ECAB instructs a military working dog team how to properly secure themselves to a hoist mechanism during a MEDEVAC hoist familiarization exercise at Butts Airfield on Ft. Carson, CO.

Flight paramedics not only assist the handlers hoisting MWD teams into the aircraft but also are capable of providing basic veterinary aid. "We'll provide everything from basic assessments, all the way to addressing major hemorrhaging, airway concerns, circulation problems, and administering medication," said Rodriguez. "We can even go so far as decompressing them just as we would any other Soldier." Training with MWD teams has been an ongoing effort by C/7-158 to ensure that flight paramedics, crew chiefs, and handlers, are ready to treat MWDs during real-world missions in a variety of theatres that could very well include combat zones.

"I can rest easy knowing that my soldiers, who very well could deploy in the next year, have this experience," said Scott. "So if they ever need to do something like this, they have this training and confidence in their toolkit."

SGT Alexander Morgan is the public affairs NCO for the 11th Expeditionary Combat Aviation Brigade.

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Training Soldier Skills at Aviation Maintenance AIT

By CPT Samuel Lowell

The 128th Aviation Brigade has always maintained a well-deserved reputation for excellence in Aviation maintenance training.

U.S. ARMY 128TH AVN. BDE. PHOTO

SSG John Mwangi from 1-210th teaches a group of Soldiers how to conduct a SALUTE (size, activity, location, unit, time, and equipment) report during an iteration of the 128th AVN BDE's AIT FTX.

When TRADOC and the Center for Initial Military Training (CIMT) identified the need for additional focus on basic Soldier skills, however, the 128th Aviation Brigade faced a new challenge in creating an AIT Field Training Exercise (FTX) with a focus on "Soldierization" while also appreciating the Aviation futures of the student population. With that initiative, the 128th AVN BDE began developing what is now colloquially known as "Rigor."

Implemented to address the atrophy of critical Soldier skills learned during Basic Combat Training (BCT), the FTX is an all-hands effort requiring support from each battalion within the Brigade. Every battalion is responsible for a 24-hour period of training, and the students, divided into three groups, ruck march between the sites during a morning transition period. Training objectives include marksmanship training, patrol base operations, a grenade assault course, and a cadre led Downed Aircraft Recovery Team (DART) mission and that is just one battalion's site! Highlights from adjacent units include land navigation, an obstacle course, and OPFOR encounters with the associated detainee searches and escalation of force scenarios.

This cross-installation training event utilizes six training areas and receives logistic support from other tenant units on the installation. However, the true key to the success of the AIT FTX is the dedication of the Aviation Non-Commissioned Officers who make up the training Cadre. While simultaneously managing the training of over 100 Soldiers per day, the NCO Cadre also gain exposure to the Command and Control and Sustainment portions of operating in a large-scale training event. As lane walkers during the DART mission, the Cadre receive an opportunity to coach students serving in leadership positions, often providing critical mentorship during what is these students' first exposure to a leadership role in a tactical environment. Additional NCOs support the feeding and equipping of the AIT FTX student population, providing the Brigade's supply sergeants with an opportunity to execute large scale sustainment across the FTX operational area. Finally, NCOs also coordinate movement between sites, communication with higher headquarters and adjacent units, and oversee the accountability of both the student population and the sensitive items present at the FTX site.

The flexibility to continuously develop and improve the AIT FTX proved critical during the Brigade's response to COVID-19. When the FTX restarted in June 2020, accommodations were made to mitigate the risk of COVID-19. These changes included adding an overnight phase to the FTX, where students established patrol bases to eliminate time spent indoors. Additionally, the Cadre adapted the specific day training events, including adding whitespace classes to the marksmanship training to adapt to a reduction in the Engagement Skills Trainer throughput, and eventually creating an entirely new, outdoor, marksmanship training event incorporating dime drills, stress shoots, and familiarization with the new marksmanship tables.

While the 128th Aviation Brigade AIT FTX has gone through many iterations since its conception, by no means is the product we train today the end state. Thanks to the Brigade's incredible NCO Cadre, and their diverse set of experiences, we can all count on an FTX that continues to adapt, providing finely tuned training and Rigor to thousands of Aviation AIT students annually.

"Born Under Fire!"

CPT Sam Lowell is the commander of Company C, 2-210th Aviation Regiment, 128th Aviation Brigade, Joint Base Langley-Eustis, VA.

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Building a HIRTA Message

By Karen Compton

If you're aircrew, you're familiar with High Intensity Radio Transmission Area (HIRTA) messages and what they mean with respect to safe operation of your aircraft. But what goes into making one?

The field of electromagnetic environmental effects (E3) involves many sub-disciplines, including electromagnetic interference (EMI), electromagnetic compatibility (EMC), and electromagnetic vulnerability (EMV). Each of these sub-disciplines impacts the safe operation of aircraft, and each is assessed during the airworthiness qualification process of new aircraft and for each modification thereafter as well as when new or modified electronic equipment is to be installed, or carried on, and operated aboard the aircraft. The sub-disciplines listed above are divided into tests conducted on the box and tests conducted on the aircraft.

A major test conducted on the box is EMI. This testing is where the piece of electronic equipment is laboratory tested in specialized facilities to assess not only its sensitivity to different frequencies and power levels that it might experience in operation, but also to assess any emissions it might produce that may impact other equipment on the aircraft. The results of EMI testing often result in design changes that limit the effects of the box's sensitivity and emissions, such as bonding, cable shielding, and connector filtering.

EMC and EMV tests are conducted when new or modified electronic equipment is first installed in the aircraft. It should be noted that EMC and EMV testing is specific to each platform type. EMC testing (often known as source-victim testing) is an aircraft-level assessment, where the electrical and electronic components of the aircraft are incrementally powered on and operated to determine any impact they may have on other installed equipment. Should adverse results occur, design changes such as re-location of components, bonding, or additional cable shielding may be required. If the equipment does not operate properly during EMC and EMV testing,

this information is provided to the crew in the Airworthiness Release (AWR) and may include warnings, cautions, or notes.

EMV is also an aircraft-level assessment, where the aircraft is placed in a very specialized facility capable of generating electromagnetic energy of varying frequencies and power levels. The aircraft is powered with all flight and mission systems ON, and external antennas subject the aircraft to a wide variety of frequencies and power levels while the aircrew assesses the operation of the aircraft for anomalies. Certain mission systems, such as Aircraft Survivability Equipment (ASE), may require the use of additional specialized equipment to allow it to operate properly and to be monitored for upset during the test.

Because it is impractical (and very expensive and time-consuming) to test all the total possible number of combinations of frequencies and power levels, EMV testing is tailored to address previously known areas of susceptibility of the aircraft and areas where component-level EMI test results indicated susceptibility. Testing also is done at frequencies characteristic of the anticipated operating environment, to include known friendly, threat, and civil emitters.

The results of EMV testing are then analyzed to calculate safe standoff distances from emitters that operate at frequencies shown to generate aircraft level vulnerabilities on both flight critical and safety critical systems. HIRTA messages are the results of this emitter stand-off analysis and are generated for each type of aircraft the Army operates. Due to the time and expense involved in testing an aircraft, typically taking several months, EMV testing is only conducted periodically, and usually only after a major upgrade, or multiple modifications have been installed. So, although a HIRTA message may be several years old, the data is still valid as it is based upon the last conducted EMV test.

U.S. ARMY PHOTO

CH-47F undergoing Electromagnetic Vulnerability (EMV) testing at Redstone Test Center.

Due to the rapid proliferation of electronic transmitters, both friendly and threat, note that the messages may not list all known transmitters that can cause interference. Therefore, a minimum standoff distance and caution should be taken around all transmitters and associated antennas.

Karen Compton is an electrical engineer in the Mission Equipment Branch of the Systems Readiness Directorate of the Combat Capabilities Development Command Aviation and Missile Center at Redstone Arsenal, AL.

Exercise Supplements in Aviation

By CPT Matthew R. Cooper, D.O.

Q: Hey doc, I am interested in taking some exercise supplements. I know we are supposed to adhere to AR 40-8, but it isn't very specific. What can I take and what can't I take?

FS: With the exercise community gaining traction and speed nowadays the supplement market has exploded in popularity and diversity of products. With many of these products being over the counter (OTC) you may wonder why so many of these products are not flight compatible. The answer, while being multifactorial, is quite simple. At the end of the day we want to mitigate risk in the flight environment. If our aircrew are taking supplements that are not regulated by the U.S. Food and Drug Administration (FDA), that have varying side effects for different people, may have adverse reactions with current medication profile, and may be taken to overcome some underlying medical issues (joint pain, weakness, etc.), unwanted risk enters the flight environment. This is why we have to strictly limit what aircrew can and can't take.

For a brief synopsis there are three classes of "herbal and dietary supplements" in the Army Aeromedical Policy Letters (APLs).

Class 1 – you can take these without any approval from your flight surgeon (FS) or aeromedical physician assistant (APA), but you MUST report this on your annual flight physical. The list includes: a single multivitamin daily, vitamins C, E, B6, B12 (oral not injectable), calcium, folate, protein supplements (shakes, capsules, nutrition bars) and sports drinks (run of the mill, without added supplements, i.e. Gatorade).

Class 2 – you may take these, but you must first get approval from your FS or APA and also list these on annual flight physical. The list includes: Vitamins A, K, D, Niacin, Riboflavin, Thiamine. Minerals – Magnesium, Zinc, Chromium, Selenium, Copper. Glucosamine with or without chondroitin. Echinacea, Saw Palmetto, Creatine, Ginseng (this is prohibited for 24 hours before flight).

Class 3 – All other preparations not specifically listed above are disqualifying without review by your FS/APA and with U.S. Army Aeromedical Activity (AAMA) approval.

Notice how all of these, even Class 1, are required to be documented on your flight physical and discussed with your FS/APA.

Now, let's also get the protein supplements a little more broken down since they are common in the exercise world and the most utilized worldwide. Any of the protein types are compatible with flight. This includes whey, vegetable, animal, casein, etc., if there are no other added supplements, they are acceptable. Even branch chain amino acids (BCAAs) that have become common are acceptable. These are just 3 amino acids out of about 20 that are needed to make a complete protein profile in the human body. Be sure not to overdo it with taking protein supplements, a majority of the daily intake should come from natural whole foods with only a little from supplements. A good goal is to aim to take in approximately 1 gram of protein per pound of body weight per day (total protein intake), if the goal is for muscle building and strength gains (170 pound person would aim for 170 grams of protein per day). As far as timing of protein supplements, whey protein is rapidly absorbed and best taken right before or after exercise. Casein protein is slower digesting and best before bed to maintain a higher metabolism and prevent muscle breakdown during sleep. Regarding BCAAs, these can be taken right before or after exercise to help with muscle rebuilding, the proper dose is about 5 grams before or after exercise.

Next on the list of most common supplements aside from our Class 1 supplements and one of the most studied in the exercise world is creatine. Creatine is a non-essential dietary protein-like compound found in meat. Our body makes it naturally, but taking it exogenously increases the amount our body stores in muscle cells. Once it enters the muscle cells the body attaches a high energy phosphate to it making creatine-phosphate. This can be used by the body to create adenosine triphosphate (ATP – the body's primary energy molecule) for rapid energy needs (weightlifting). That is the basics of how creatine works, it has been studied extensively and shown to be safe in most people as well as help with strength gains, athletic performance and increasing endurance. However, there is a rare possibility for issues with liver and kidney dysfunction and muscle cramping with creatine, making it a Class 2 supplement. Your FS/APA needs to discuss the risks and benefits from the use of this supplement in an attempt to prevent any side effects and recognize early if any occur. In addition, since this does help with athletic performance, we need to be sure there aren't any underlying issues that are covered up by taking this supplement (muscle wasting, fatigue, etc.). Lastly, it is possible to take too much creatine, this can cause gastrointestinal distress, so before you decide to run to your nearest supplement store, discuss proper dosing of creatine with your FS/APA, especially since you aren't authorized to start taking it without their consent.

Fly Safe!

Questions?

If you have a question, email it to *AskFS@quad-a.org;* we'll try to address it in the future. See your unit flight surgeon for your personal health issues.

The views and opinions offered are those of the author and researchers and should not be construed as an official Department of the Army position unless otherwise stated.

CPT (Dr.) Matthew Cooper is a flight surgeon at the U.S. Army School of Aviation Medicine, Fort Rucker, AL.

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Self-Propelled Crane, Aircraft Maintenance and Positioning, Increment II Expeditionary (SCAMP II)

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An Inflection Point

By COL Johnathan Frasier

Today's United States Army faces many challenges as our focus shifts to Large Scale Combat Operations. From uncertainties associated with the COVID-19 pandemic threat to the current fiscal reality, our operational environment continues to pose new and more challenging dilemmas. In the face of these challenges, PEO Aviation remains focused on building the Future Vertical Lift (FVL) ecosystem, ensuring readiness and relevance of the enduring fleet, and building partner nation capacity. As part of this mission, the Aviation Mission Systems and Architecture (AMSA) Project Office continues to deliver tremendous capability to ensure today's readiness while remaining steadfast in its mission to design, develop, and deliver advanced Aviation technologies that provide Army Aviation an overmatching operational advantage. Army Aviation achieves this decisive advantage by investing in game-changing capabilities that enable Joint All-Domain Command and Control (JADC2) across the future battlefield. AMSA stands ready to support today's fight while simultaneously developing capability for both the future and enduring Aviation fleets.

Ready and Relevant Today

Over the past year, AMSA adapted to the COVID-19 environment and continued to field capability to keep Army Aviation ready and relevant. The Aviation Ground Support Equipment (AGSE) Product Directorate led the way, going over the 90% fielded mark for the Self-Propelled Crane, Aircraft Maintenance and Positioning Increment II Expeditionary (SCAMP II) while also aggressively fielding the Pitot Static Test Set (PSTS), to be completed in FY23. In addition to these efforts, AGSE initiated a procurement effort to provide a new Aviation Ground Power Unit (AGPU 1.1) that meets all CH-47F requirements, as well as supporting enduring fleet aircraft. The new AGPU 1.1 offsets the burden experienced by today's maintainers during multiple CH-47F maintenance tasks as well as providing a more reliable and maintainable system to support flight operations. This much needed AGPU upgrade is breathing life back into this heavily used maintenance capability and bridge the gap to FVL as the requirements continue to mature.

In addition to these efforts, the Aerial Communications and Mission Command (ACMC) Product Office continued to field the Blue Force Tracker 2 (BFT2) to all platforms across Army Aviation. As we near the end of fielding this capability, ACMC is already working with Program Executive Office Command, Control, and Communication (PEO C3T) to define the future Mounted Mission Command Transport (BFT3) capability. Over the next year, ACMC is fielding a crypto modernized version of its current Air to Air radio (the ARC-231A) that includes the SATURN waveform. Finally, the Assured Airspace Access Systems (A3S) Product Office continued fielding the APX 123A, while successfully executing Transition to Sustainment (T2S) activities for the Mobile Tower System (MOTS) and the Tactical Terminal Control System (TTCS).

Overmatching Operational Advantage Tomorrow

Although we must continue to field capability to be ready to fight today, we must also develop the capabilities needed to win on the Joint All-Domain Battlefield of tomorrow. The Army's ability to achieve an overmatching operational advantage on the future battlefield is centered on its ability to communicate and enable JADC2. Army Aviation platforms inherently span the depth and breadth of the battlefield. Because of this, Army Aviation serves as a key enabler of JADC2 acting as critical communications nodes on the Joint All-Domain Battlefield. As this role is expanded by the increased speed and range of the FVL aircraft, AMSA continues to work across the Army Enterprise to develop capabilities to enable JADC2. ACMC coordinates directly with the Network CFT and other PEOs for all things Mission Command (MC), Common Operating Environment (COE), and communications. These efforts are essential to ensure seamless interoperability for Army Aviation on the Joint All-Domain Battlefield and remaining nested within the Army's network concept. The Air Ground Network Radio (AGNR) capability provides a multichannel, crypto-modernized, software-defined radio that allows for a more rapid introduction of emerging waveforms directly supporting Unified Network Operations, Air/Ground Communications, Interoperability, enhanced network waveform (TSM), Single Channel Ground and Airborne Radio System (SINCGARS) with modernized crypto

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Tactical Airspace Integration System (TAIS)

and the Mobile User Objective System (MUOS) waveform. This capability ensures that Army Aviation remains in synch with ground radio capabilities, ensuring Army Aviation can communicate with the Soldiers that it supports. The initial AGNR flight demo occurred in FY21, with integration activities continuing in FY22.

ACMC continues to migrate the Aviation Mission Planning System (AMPS) and Tactical Airspace Integration System (TAIS) capabilities into the Integrated Mission Planning and Airspace Control Tools (IMPACT). IMPACT serves as a software-only capability designed to enable convergence within the Common Operating Environment (COE) to meet future mission planning and airspace control capability needs. Additionally, IMPACT interfaces with future JADC2 enabling technologies that the Science and Technology portfolio are developing to support sensor to shooter fusion decreasing the time required to conduct targeting and clearance of fires.

The Army is pairing AGNR with the Aviation Mission Common Server (AMCS), which serves as the initial instantiation of an Open Systems Approach (OSA) digital backbone. AMCS meets future edge processing requirements and provides scalable hardware, software, and an operating environment to enable rapid onboarding of mission systems. AMCS provides the environment to correlate disparate information, host translation, and parsing software needed to generate a real time dynamic common operating picture (COP), and host software such as IMPACT to enable JADC2 across the Command Post, Mounted, and Dismounted Computing Environments. The Aviation Architecture and Environment Exploitation (A2E2) Product Office is developing the AMCS as a family of systems with a scalable, distributed architecture. This effort is approaching Critical Design Review (CDR) with the intent to field with AGNR in FY24.

As part of this family of systems, AMSA is working with other PEOs across the Army on the Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance/Electronic Warfare (C4ISR/EW) Modular Open Suite of Standards (CMOSS) Mounted Form Factor (CMFF) to include Aviation Mission Computing Environment (AMCE). This effort is seeking to develop common chassis that will host card-based solutions, utilizing common standards, to provide future capability. When de-

livered, this MOSA approach provides significant SWaP-C reductions while greatly reducing the time to field capability. These capabilities allow us to be more adaptive and agile, ensuring Army Aviation achieves the overmatch needed on the Joint All-Domain Battlefield.

Over the next year, A3S is delivering the MAGNA antennae to the Enduring Fleet. This capability, when paired with the EAGLE-M navigator, provides Army Aviation a layered APNT capability to improve lethality and survivability on the highly contested Joint All-Domain Battlefield. In addition to these efforts, A3S initiated efforts to design the Alternate PNT capability to ensure Army Aviation maintains its ability to execute its mission in a GPS denied environment.

Finally, in the past year, A2E2 competed fielding the Degraded Visual Environment (DVE) Directed Requirement (DR) on Medical Evacuation aircraft for near term deployment and an operational assessment. The current DVE DR capability creates 3D theoretical data utilizing Digital Terrain Elevation Data (DTED) Level 2, overlaying 2D Infrared (IR) camera sensor imagery and fusing with near real-time 3D Light Detection and Ranging (LiDAR) sensor data. The system also renders 3D conformal symbology to providing additional situational awareness during all phases of flight. This capability has already begun to inform the future DVE strategy to include a future MOSA integration utilizing the AMCS.

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Degraded Visual Environment (DVE) System.

Inflection Point

As the Army continues to experiment with new concepts at Project Convergence and refine how to achieve interoperability and convergence with the Joint Force, senior leaders are rapidly approaching an inflection point that will determine the successful enablement of Joint All Domain Command and Control (JADC2). This inflection point presents Army senior leaders with the age-old dilemma: where to invest its precious resources. To achieve an overmatching operational advantage, Army Aviation must embrace the MOSA concept and invest in the enabling capabilities such as AMCS, AGNR, IMPACT, APNT, and DVE. These capabilities ensure the future and enduring Army Aviation fleets are postured to enable JADC2, enabling the Army to fight and win on the Joint All-Domain Battlefield.

COL Johnathan Frasier is the Project Manager, Aviation Mission Systems and Architecture (AMSA,) Redstone Arsenal, Alabama.

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Special Focus ▶ Aviation Soldier Support

Product Manager Air Warrior 2021: Update to the Field

By Dr. Carlos Correia

The Product Manager Air Warrior (PdM AW), under the leadership of MG Anthony Potts, Program Executive Office Soldier (PEO Soldier), and COL Derek Bird, Project Manager Soldier Survivability, is chartered to improve Army air crewmember mission effectiveness, survivability, and situational awareness as the material developer for Aviation Life Support Equipment. PdM AW equipment effectively integrates the Soldier with the aircraft platform.

Noteworthy accomplishments by the Air Warrior team in Fiscal Year 2021 include demonstrating leap-ahead Situational awareness and air/ground/network capability convergence as PEO Soldier products made a significant contribution to the success of the Army's Experimental Demonstffration Gateway Exercise 2021 (EDGE 21), held at Dugway Proving Grounds, Utah in May 2021. This EDGE event served as a gateway event in preparation for Project Convergence 21, scheduled to occur in October and November of 2021.

Project Convergence

Project Convergence is a campaign of learning that began in 2020 and is held annually to bring together key technologies designed to fight across air, land, sea, space and cyberspace. These exercises apply space, aviation and network capabilities including high-fidelity modeling to assess how the Army, as part of the joint force, would fight in the Indo-Pacific Theater.

During EDGE 21, several PEO Soldier capabilities enabled three UH-60L Black Hawk aircraft belonging to the 82nd Combat Aviation Brigade to participate as surrogate Future Long Range Assault Aircraft, demonstrating advanced capabilities in tactical Situational awareness. These aircraft were equipped with the Product Manager Air Warrior (PdM AW) Aviation Information System (AIS), with the Soldiers onboard enroute to the object equipped with the Project Manager Integrated Visual Augmentation System (IVAS) Nett Warrior tablets and Integrated Visual Augmentation System (IVAS) head borne goggles.

Soldiers land during an air assault mission for Edge 21. They had greater situational awareness thanks to better communication systems that allow formations to talk and make changes to tactical plans enroute to the objective.

According to the article written by Jen Judson for Defense News, "Aircrew in the back of a Black Hawk helicopter performing an air assault mission typically have limited information on the status and layout of a landing zone. But a two-weeklong exercise in the Utah desert gave those aboard three UH-60L helos unprecedented intelligence as they raced to their objective. The crew at exercise Edge 21 received Integrated Visual Augmentation System, or IVAS, goggles as well as tablets that provided to-the-minute mission updates based on real-time intelligence collected from air-launched effects sensors."

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ACE flotation capability under evaluation during one of many developmental test events

Senior leaders also noted the PEO Soldier capabilities during the event. The 82nd Airborne Division Commander, MG Donahue, engaged with the PdM AW team supporting the event with questions regarding the AIS temporarily installed on his UH-60L aircraft at Dugway that enabled the crew and passenger secure Wi-Fi access to the digital tactical network being used in the exercise. In addition, the capability was noted by the Commanding General, Army Futures Command, GEN John M. "Mike" Murray: "[In the past] you got an update before you got on an aircraft and then flew for a half hour, 45 minutes, maybe an hour. Whatever it was, it was what it was when you got there… The ability to understand what has changed since you got on an aircraft and to communicate amongst aircraft, among that squad or platoon – it's an amazing change."

The End User Device (EUD) the Soldier on the AIS-equipped aircraft will use to view, send, and receive digital data via encrypted Wi-Fi is the tablet or phone-sized ***Nett Warrior-Aviation (NW-A)***, an adaptation of the Nett Warrior system currently used by Army ground forces. The enabling software is the Tactical Assault Kit, providing tactical maps, precision targeting, surrounding land formations information, and a SA moving map capabilities.

NW-A will provide a common mission planning and execution interface capability to aircrews and the Soldiers they carry into battle and will provide aircrews with a Common Operational Picture (COP) and enable digital communication with any entity depicted the hand-held EUD.

The PEO Soldier's Aviation Information System, including Nett Warrior-Aviation, begins qualification flight test at the Redstone Test Center in September 2021, with a production and fielding decision expected in late FY22.

Other key capabilities the AW team continued to move forward in FY21 are the updated ***Head Up Display system*** for UH-60M aviators and the ***Aircrew Combat Equipment (ACE)***. The new HUD system, consisting primarily of the Advanced Sight Display Computer (ASDC) and a new Common Helmet Mounted Display (CHMD), modernize the enduring rotary wing fleet HUD system while providing aviators with a wider field of view and standardized flight symbology. In FY21, the AW team completed the fielding of the new HUD system for the UH-60M aircraft belonging to the 2ID Combat Aviation Brigade.

The ACE will replace the currently fielded Primary Survival Gear Carrier and provide rotary wing aircrews with a survival vest system that incorporates an integrated Full Body Harness, ballistic protection, personal flotation, and a tailorable gear carriage system. ACE is modular and can be customized for regional climatic or over water missions. The ACE cummerbund flotation capability eliminates the flotation collar from the shoulder/neck area and relocates the capability to the torso area. Reception to this change has been positive during various risk reduction events and user focus groups.

The ACE also introduces the Aircrew Tether System (ATS), an integrated component of ACE which provides a rapid release of the nonrated crew member from the aircraft's safety tether in the event a of post-crash fire or water ditching.

ACE integrates with the currently fielded 72 hour personal survival equipment and select body armor components of the current Infantry Modular Scalable Vest. Breaking from the currently fielded "one size fits all" PSGC, the ACE will be available in five sizes: extra-small, small, medium, large, and extra-large, which will provide better fit options for crewmembers. Operational Evaluation of the ACE is planned for 3rd Quarter FY22, with a production and fielding decision to follow.

In summary, under the PEO Soldier, the PdM AW develops, fields, and sustains Army ALSE and provides enhanced aircrew SA and safety. Although the primary focus remains on integrating the aviation Soldier with the platform, emerging SA and communications capabilities are allowing unprecedented SA enhancements for both the aircrew and the Soldiers they carry into battle. The Air Warrior team will continue to seek and embrace convergence and interoperability opportunities whenever possible by working closely with other Product Offices, Program Executive Offices, and Services to ensure the organization fields the Aviation Soldier with equipment that enables their safety, survivability, and lethality on the battlefield. At PEO Soldier, Precision is the Standard, Every Ounce Matters, and Every Bullet Counts.

Dr. Carlos Correia is the product manager for Air Warrior located in Huntsville, AL.

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Project Manager Aircraft Survivability Equipment Update

By COL Kevin S. Chaney

A CH-47 Chinook helicopter, operated by Soldiers assigned to the 1st Combat Aviation Brigade, fires flares on Grafenwoehr Training Area, Germany, Aug. 4, 2021. Soldiers assigned to 1st CAB from Fort Riley, KS are currently on rotation in Germany for Saber Junction 2021.

Unfortunately, Geoffrey Chaucer's proverb, "all good things must come to an end" applies to my time here at the Project Management Office for Aircraft Survivability Equipment (PMO ASE). That said, the ASE mission will endure under new leadership and PMO ASE will continue to provide world-class systems to our Soldiers. This article provides a snapshot of the progress that PMO ASE has made since I received the charter in September 2018 and looks forward into the future.

Missile Warning

The Common Missile Warning System (CMWS) continues to provide mission critical missile warning and countermeasures cueing to protect all deployed Army aircraft and crews from MANPADS threats. The program completed development and testing of the next software build, Kilo-A, and will begin fielding Phase I capabilities in 1QFY22. Additionally, CMWS successfully completed an Operational Sustainment Review and Transition to Sustainment (T2S) for hardware.

PMO ASE is completing the final integration and testing of the Limited Interim Missile Warning System (LIMWS) Quick Reaction Capability (QRC), which is a 2-color Infrared (IR) sensor-based system that incorporates fiber optics digital backbone on Army helicopters and uses Machine Learning to handle new threats. Both CMWS and LIMWS provide the foundation for the next missile warning system, the Improved Threat Detection System (ITDS), which is progressing towards a Materiel Development Decision in the near future.

Infrared Countermeasure

The Army's Advanced Threat Infrared Countermeasures (ATIRCM) Program continues to amass flight hours and is now well over 280,000 hours flown in hostile environments. This is a monumental achievement as the system continues to demonstrate reliability and effectiveness numbers significantly above objectives. The Common Infrared Countermeasure (CIRCM) program is the replacement to ATIRCM. In April 2021, the program achieved approval for Full Rate Production (FRP). CIRCM completed First Unit Equipped (FUE) in 2020 and is on schedule to achieve Initial Operational Capability (IOC) in FY22 using the Block Modernization (Block Mod) process.


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Threat Warning

The AN/AVR-2B, Laser Detection System (LDS), continues fielding to the fleet with several platforms completed. PMO ASE entered into a collaborative air and ground effort to develop the next generation LDS with PM Vehicle Protection System (PM VPS) called the VVR-4/AVR-4. The VVR-4/AVR-4 will bring more capability than the current LDS and the processor will become a software application.

The latest version of the Radar Warning Receiver (RWR), the AN/APR-39D(V)2, completed development and testing and received Full Material Release in July 2020. Currently, the AN/APR-39D(V)2 is being fielded to the FUE. The fully digital Modern RWR (MRWR), AN/APR-39E(V)2, possesses increased capability and will be the enduring RWR program for Army Aviation. This system completed several design reviews including the Preliminary and Critical Design Reviews. Prototype test assets are in production with initial delivery expected 4QFY21.

Common System Integration

Over the past few years, the area that has seen the most growth is the Common Systems Integration Product Office (PM CSI). PM CSI is now responsible for the Joint Urgent Operational Needs Statement (JUONS) and QRC efforts that are deployed and supporting theater operations, the PM ASE FMS portfolio currently consisting of 35 cases, training device management, the Block Mod Program, and the coordination of Future Vertical Lift (FVL) integration and ASE modernization.

PM CSI's JUONS effort rapidly integrated advanced ASE onto specific deployed aircraft. This effort achieved its initial operational capability in fall of 2018 and Full Operational Capability in early spring 2019. To date, these aircraft have flown over 41,000 combat hours with no aircraft shot down by enemy missiles. The QRC will replace the JUONS aircraft with either CMWS or LIMWS and CIRCM, within the next few years.

PM ASE's most significant process improvement was the Block Mod initiative. PM ASE envisioned, created, and began execution of the Block Mod Aviation Fielding Process, which balances aircraft modernization with unit operational readiness for Army combat aviation brigades (CABs). The benefits of the Block Mod process are that products from multiple Program Executive Offices are installed at the same time, which lowers costs and minimizes the time that aircraft are in a non-operational status. The Aviation Block Mod process provides force generation commands, combat developers, material developers, and unit commanders with a process that is schedulable, measurable, repeatable and flexible. Since 2018, PM ASE has completed Block Mod of one CAB, is in process of modifying two CABs, and is planning for an additional three CABs. The process is so effective that the Aviation Enterprise is embracing the model and shifting Block Mod responsibility to PEO AVN.

The Future

Besides ITDS, the VVR/AVR-4, AN/APR-39E(V)2, and the numerous CSI activities, PMO ASE continues to align our modernization strategy with the Aviation Enterprise. We are working ways to reduce size, weight, power, and cooling capabilities; combining and digitizing our A-kits into one backbone; sharing our sensor information with other systems and users; and incorporating new technology to help maintain overmatch capabilities for the future. While most of these efforts are focused on the FVL platforms, PMO ASE will develop, test, and integrate them on the Enduring Fleet in preparation to expedite capability enhancements to the current warfighter.

I will not spend much time on the discussion of COVID-19 except to note that almost a third of my time in ASE was under the influence and impacts of COVID-19. On the positive side, the PM ASE organization made the necessary adjustments required to stay in compliance with ever-changing protocols while minimizing the impacts to their program's mission. Unfortunately, PM ASE did not avoid the direct impacts of the virus. Sadly, ASE lost a team member and family member to complications associated with the pandemic. Still, tremendous accomplishments were achieved by the Team under this challenging environment.

As I close my final ASE article, I would be remiss if I did not thank a few people. The Army Aviation Enterprise has continued to provide unwavering support to ASE and our mission. I also want to acknowledge and thank the Army Aviation Association of America (AAAA) organization for their continued support of the ASE community and mission. Unfortunately, COVID caused the cancellation of the last two AAAA ASE Symposiums. To our Industry Partners, thank you for developing a more collaborative working environment where we worked on problems together and delivered capabilities. Finally, to the PMO ASE workforce, thanks for being a world-class organization delivering world-class capabilities to protect our Soldiers. Our best measure of success is Soldiers and aircrew safely completing their mission and we have been doing an exceptional job at this for years.

COL Kevin S. Chaney is the Project Manager for Aircraft Survivability Equipment located in Huntsville, AL, under the Program Executive Office Intelligence, Electronic Warfare & Sensors.

Editor's Note: We at the ARMYAVIATION Magazine team thank COL Cheney for his support over the past three years and wish him all the best in the future.

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Susceptibility Reduction:
Understanding Ourselves in Large-Scale Combat Operations (LSCO)

By CW4 Christopher P. Crawford

An AH-64 in the test chamber at Eglin AFB, FL.

Proficimus More Irretenti is Latin for "We Make Progress Unhindered by Custom." This was the motto adopted by the Army Air Corp Tactical School, created in 1920. This school led an effort to radically change the core thinking, tactics, and doctrine of how Army aircraft were used on the battlefield. Today, we are faced with a similar paradigm shift that requires us to change the culture of how we plan, train, and fight to ensure we maintain a tactical edge over our opponents. We are working to change the culture in Army Aviation by means of the Aviation tactical transformation initiative, led by Major General David Francis, which infuses tactical knowledge into Army Aviation training and professional military education courses.

Culture Change

This transformation in tactical knowledge began in 2015 when the U.S. Army Aviation Center of Excellence (USAACE) created the first classified *Army Aviation Survivability Guide* produced by the Army Aviation Survivability Development and Tactics (ASDAT) team. This guide evolved into the classified Training Circular 3-04.2, *Aviation Combat Survivability and Tactics* and formed the doctrinal foundation to begin a tactics testing and validation process. The process, called a quick reaction test (QRT), is where we asked the question, "How do you take a technique and scientifically validate it to create a tactical procedure?". The QRT team from USAACE led and collaborated with the joint community to test and validate procedures for rotary-wing aircraft against radio frequency threats in two separate test events overseen by the Joint Test and Evaluation Program Office. These tests focused on the survivability chain following probability of detect (P_D) and probability of launch given detect (P_{LGD}) or simply stated, to solve the problem of surviving an engagement from the point of radar lock working backward. In Aviation combat survivability two pillars currently exist: susceptibility and vulnerability. Vulnerability speaks toward aircraft design and its ability to withstand an engagement event. We can account for design capabilities and limitations in our mission analysis, but we cannot influence it through the mission planning process.

Susceptibility Reduction

Susceptibility refers to the ability to avoid the threat and incorporates the events and conditions that occur prior to weapons impact. Our goal is to push our understanding and preparation as far left of the "bang" or the engagement as possible. As Army Aviation continues to shift from counterinsurgency to LSCO, we must continue to devote time and effort in understanding the complexity of the pending operational environment. The force has gained substantial information of opponent capabilities within an Integrated Air Defense System (IADS), and Aviation must continue to evolve its capabilities to outmatch our adversaries. Through this evolution, we will continue to analyze survivability

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holistically and refine our known influence within the electromagnetic spectrum. Defeating the IADS versus the traditional individual threat system means we must avoid detection and limit exposure. I'll relate this idea to an experience I had with my unit at the Joint Multinational Readiness Center during the Combined Resolve exercise. It has been said that what is old is new again, and many relate LSCO to Air Land Battle, calling it a 2.0 version of sorts. While many facets of this may be true, it lacks the complete impact that the Space and Cyber domains have made to our operating environment. Case in point, my unit set up its assembly area superbly, they pushed back into the wood line, maintained excellent noise and light discipline, and camouflage nets covered every tent. I ran a small red cell which utilized an electronic warfare non-commissioned officer to locate and probe the unit, testing its techniques at concealment. While the unit was not largely visible to the naked eye, it was a glaring hot spot of electromagnetic activity. We must understand that the enemy has a well-developed electronic warfare capability to exploit their adversaries. While Army Aviation tends to focus on limiting the enemy using terrain, we must continue to understand how our opponent recognizes our emissions and develop new methods to avoid detection beyond the visual spectrum.

The Road Ahead

For the purposes of this discussion, we will focus on three things required to mitigate tactical risk and reduce our susceptibility to threat detection. First, in order to increase survivability and retain our lethality, we must validate and re-baseline the emissions produced by our advanced airframes; emissions that an opponent could use to identify, locate, and exploit. This will provide us the opportunity to shape the battlefield through electronic means, or by utilizing fused mission planning tools to evade an opponent's detection. Second, the use of high-fidelity models and simulation will aid us greatly and should be used to continue our tactics development processes, as well as create better fused mission planning tools. Lastly, pre-mission planning is the primary tool to analyses the threat effects and achieve the reduction in susceptibility needed for mission success. There are many tools currently out there in the joint community, such as the Improved Many-on-Many (IMOM), designed by the U.S. Air Force's 453rd Electronic Warfare Squadron, which has a specific capability in mission planning. We must take these tools and add to them to build our fused mission planning capability. We must also look to the future as we develop new technology such as the NETT Warrior Aviation mobile hand-held tablet to ensure our aviators have these tools at their fingertips. The Survivability branch of the Directorate of Training and Doctrine is in the process of proposing USAACE's next QRT effort to focus on these areas. This will be a joint test like those before it. We understand that multi domain operations require cross leveling knowledge and capability across the Joint force. In this effort, we are not alone, we join the Joint Aircraft Survivability Program Office in its susceptibility reduction efforts. There are many more agencies and even more individuals involved, but it starts with you. I tell the aviators I train that every takeoff is an opportunity to refine your skill set, you choose whether to take the entire runway and use all of your power, or you limit yourself to improve your application, correlation, and finesse. No matter where you are in Army Aviation, you can be an agent of change helping your organization understand what holistic survivability is and how we can reduce or mitigate our susceptibility. Our legacy through the Army Air Corp Tactics School of progress unhindered by custom is no different than the disciplined initiative that our leaders encourage us to take today. Ask the tough questions, do not settle for the answer, "this is the way we have always done it.". Take the knowledge we have gleamed from our tactics transformation and apply it. If you do not know where to start, ask your Aviation mission survivability officer. We train the preservation of Aviation combat power and are leading the charge toward Army Aviation fighting, surviving, and winning against peer and near-peer adversaries.

Above the best!

CW4 Christopher P. Crawford is an AMS training developer with Survivability Branch, Directorate of Training and Doctrine, U.S. Army Aviation Center of Excellence at Fort Rucker, AL.

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Defragging the Cockpit – Simplification Makes Aircraft More Survivable

By CW4 Tyson C. Martin

PERSONAL PHOTO FROM CW4 A. MARK LEUNG

UH-60 Black Hawk cockpit in 2nd Bn., 25th Avn. Regt., 25th Cbt. Avn. Bde.

It has been over 7 years since the concept of "Defragging the Hard Drive" was spread throughout our community and most will agree that the changes that have been made are very beneficial. It has been a while since anyone was asked how many microns a transmission filter is. In that spirit, another area that can be defragged is cockpit gauges/displays.

In comparison to the aircraft that flew over Vietnam, our current fleet is vastly superior in almost every aspect of performance and overall survivability. These enhancements have come at a cost. Cockpits have become so complicated that much of aircrew training is devoted to learning to interpret and use systems, versus learning how to fly and maneuver the aircraft. Gauges/equipment that display too much or convoluted information should be rethought or reimagined.

Currently, each aircraft within our inventory possesses its own set of "decoder rings" that aircrews must master before they can effectively operate the aircraft. There are multiple examples of gauges/systems that could be reimagined. The ice rate meter on the UH-60M is difficult to read due to its size and location and it is not incorporated into the software of the aircraft to display as a "caution, warning or advisory." No aircraft in our fleet has a QWERTY keyboard. They are all A-Z and are incredibly frustratingly slow to use. The UH-60M is the only glass cockpit aircraft in our fleet that does not have a countdown timer for when they are in a limit. Most pilots will be able to find other areas in their cockpits that can and should be scrutinized.

While adjusting the ice rate meters' interface may appear minute in the larger scheme of issues that aviators face today, it is an example of the "defragging the cockpit" that could reduce pilot workload and training requirements.

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Information/Data Overload

The world of Aircraft Survivability Equipment (ASE) is incredibly complicated, and much care has been taken over the years to try to provide aircrews with as much information as possible. This has created another issue. Information/Data overload from certain systems.

Not all ASE is very complicated to operate or interpret. Our Common Missile Warning System (CMWS) is an example of ASE that, although complex, requires very little training to effectively operate.

In contrast to CMWS, our Radar Signal Detector Set (RSDS) represents a much steeper learning curve for pilots. The first being that there are multiple versions. The APR-39A(V)1 has a small, non-integrated display with very limited processing and symbol display capabilities. It represents another scenario where pilots had to decipher what the display was trying to tell them.

After upgrading to the APR-39C(V)1 some of the symbols are better aligned to the categories of radars and are displayed as such. The simplification of symbols aids crews in determining what their actions should be.

In the same way that it doesn't matter to a pilot what MANPADS is inbound, only that CMWS defeats it; the crew does not need to know the specific radar that is targeting them. Only what category it is. It is noteworthy that the APR-39A(V)4 displays through the glass but has the same symbology/processing limitations that an APR-39A(V)1 has.

Lessons to be Learned

There are lessons to be learned from this as we develop and field newer versions of the RSDS. The newer RSDS models are able to identify and/or differentiate between many different radars more effectively with a much larger symbol vocabulary. This comes at a cost though. Too many symbols will overload the pilots with information. Especially when the pilot must decipher what that symbol means. This is easy to do at a table, but when flying for your life it can be near impossible.

Since all new RSDSs interface with glass cockpits, it would not be out of the question for the computer to decipher that symbol for you. The aircraft computer can then color code and display in the corner of the ASE page in plain text what that threat symbol means. It might even be possible for the aircraft computer to show as a popup if the crew does not have that page up.

It is important to note that the average aircrew will be using the RSDS as a warning sensor, not for targeting. Being able to differentiate between "Radar A" and "Radar B" is irrelevant if both possess relatively the same capability. The aircrew need only to know that something with that capability is targeting them so they can employ the proper tactic and or countermeasure. Identifying a weapons category (e.g., S/M/L Surface-to-Air-Missile, radar guided gun, etc.) and what mode it is in may be better for the crew than knowing what the radar is.

Another significant challenge associated with ASE employment deals with the multitude of different ASE operating at once. This results in a crew that receives high volumes of information all at once. It may seem to most that the more information you can give a crew, the better prepared they are to deal with the situation. However, an overload of information may result in the aircrew disregarding indications when they need them the most.

Whether considering redesigning the ice rate meter or the latest piece of ASE, human factors must remain at the forefront of future development. A high-workload cockpit can be just as dangerous as an enemy weapon system. A small issue, when aggregated with all that is required of a pilot quickly becomes a distraction. Simplification may be the best way to preserve and improve our warfighting power. Systems that are intuitive, integrated, easy to learn/understand, and are difficult to ignore or misinterpret during the chaos of armed conflict are the keys to mission success.

Disclaimer: The views expressed in this article are those of the author and do not reflect the official policy or position of the Department of the Army, DOD, or the U.S. Government. (See AR 360-1, para. 6-8d).

CW4 Tyson C. Martin is an Army Combat Forensics Officer (ACFO) on the Aviation Survivability Development and Tactics (ASDAT) Team, headquartered at the U.S. Army Aviation Center of Excellence, Fort Rucker, AL.

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A Science & Technology Strategy for Future Survivability

By Mr. Mark Calafut and Mr. Joseph Oagaro

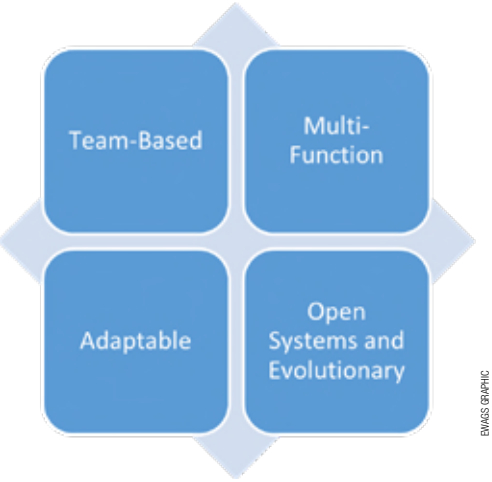


Figure 1. C5ISR Major Themes

The challenges of the modern Army Aviation battlespace are multi-faceted. Threat weapon systems are sophisticated and networked, incorporating advanced signal processing and wideband multi-spectral sensing. Further, the operating environment is itself dense, complex, and congested with both commercial and military technologies. Science and Technology (S&T) research is one important part of the solution to these challenges.

At the U.S. Army Combat Capabilities Development Command (DEVCOM), aircraft survivability S&T is a coordinated enterprise that holistically considers all aspects of the threat kill-chain. By working across the command, the aircraft survivability S&T roadmap is able to effectively leverage expertise across diverse technical domains and disciplines. This is represented in a multi-part DEVCOM-wide strategy that combines multiple solutions to the most challenging problems.

Within this roadmap, the C5ISR Center leads development in the areas of advanced sensors, aircraft survivability equipment (ASE), and electromagnetic warfare (EW). These are the critical electronics technologies that enable the detection, localization, and denial or defeat of threats. As part of the broader DEVCOM strategy, C5ISR S&T investments in this domain are organized around four major themes, which are displayed graphically in Figure 1. These themes represent a fundamentally new approach to aircraft survivability with significant benefits over the historical approach.

Team Based Survivability

The first of the themes is a move from own-ship focused investment to team-based survivability. Future Army Aviation platforms will work cooperatively across teams of manned and unmanned aircraft. Unmanned aircraft can serve as key enablers to mission effectiveness and also to survivability. One example of this revolves around advanced sensing. Active and passive sensor payloads can be deployed on unmanned platforms. This can create a distributed network of payloads capable of sensing threats. The key to the approach is the decentralized placement of the sensor payloads. This provides information on the environment across space and time and from different geometries. It also allows for coordinated signal processing across sensors and the use of multiple diverse sensors to examine high priority targets. Overall, this approach will result in new team-based employment concepts that jointly maximize mission effectiveness and survivability across distributed platforms.

Multi-Function Technologies

The second investment theme focuses on multi-function technologies. Multi-functionality is a longstanding objective for technology development across missions and domains. However, in practice, it can sometimes lead to compromises in system development that fail to meet key requirements. It can also lead to unnecessary cost growth. This often happens as functions are prioritized and conflicting or incompatible functions are selected. C5ISR is taking a different approach to this problem that actively avoids the pitfalls of classical multi-function development. This approach is based on analyzing multi-functionality through the lens of model-based systems engineering (MBSE) and resource management. It begins with an MBSE decomposition of key functions and an analysis of when these functions are required and at what level of utilization. This helps to identify what functions can effectively be employed simultaneously. In some cases, multiple functions can be employed together with little or no downside. Rather than grouping together functions based on priority, the analysis identifies the functions that are effective when coupled together. In other words, it establishes the points on the trade space that provide an efficient balance of multi-function capability, with reasonable limitations. It is driven by real-world technology constraints. It also avoids creating an overly complex and costly system capable of implementing all functions at the same time. By employing this new approach to multi-function development, it will be possible to develop a next-generation of efficient, flexible, and low-cost payloads. These payloads will then be integrated onto manned and unmanned aircraft to

provide key capabilities to the Army Aviation team. This approach to multifunction when paired with the distributive and decentralized team based sensing and effects will ensure the needed capability is available during the various parts of Army Aviation operations.

Adaptability

The third investment theme adds adaptability to future payloads. To be effective in the modern battlespace, it is critical for sensors, ASE, and EW systems to adjust their behaviors and signal processing to changes in the environment. For example, if a threat changes its behavior in real-time, it is essential for the survivability system to recognize this change and react accordingly. This is called cognitive processing and is driven by machine learning technologies. Changes in the threat environment may drive the payload to change its functions or cause other payloads to change their functions in a coordinated fashion. This dramatically opens up the adaption space for future systems, allowing for a far more effective response across the team. The challenge for S&T is to identify an optimized response at both the individual and team level, in a complex and dynamically changing real-world environment.

Open Systems and Evolutionary Technology Approach

The fourth investment theme focuses on an open systems and evolutionary technology approach. Fundamental research is being conducted at Army Research Laboratory (ARL) and other organizations across multiple key technology areas with the possibility to significantly enhance capability. As new technologies mature, they will be folded into the technology roadmap in an evolutionary fashion. By adopting an open and intentionally evolutionary strategy, it will be possible to rapidly benefit from these important technology advancements. It will also be possible to better correlate data across a variety of sensor sources, including other services and coalition partners.

Overall, the four investment themes are designed to work together as part of a cohesive S&T strategy for future survivability. Future survivability systems will operate in a distributed and decentralized network across teams of aircraft. These aircraft will employ technically-efficient payloads, many capable of performing multiple functions effectively. These payloads will be capable of adapting their response individually and adapting in a coordinated fashion across a broader team. Individual payloads will employ an open systems approach that enables continuous improvement as fundamental technologies improve. In total, this represents a fundamentally new approach to survivability that is oriented around improved mission effectiveness and a highly efficient use of technology.

Mr. Joseph Oagaro is the chief and Mr. Mark Calafut an engineer of the Electronic Warfare Air/Ground Survivability Division of the Intelligence and Information Warfare Directorate (I2WD), Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) Center, Combat Capabilities Development Command (DEVCOM) located at Aberdeen Proving Ground, MD.

Achieving Overmatch through Modernization

By John Sensing, Kris Knopp and Will Collier

Army Reprogramming Analysis Team Program Manager, Eric Bowes (4th from left) with other team members during an orientation of aircraft and missions at Weide Army Heliport, Edgewood Arsenal, MD.

Since being activated in 1992, the Army Reprogramming Analysis Team has continuously strived to reduce timelines associated with detecting threats to aviators, creating software solutions for aircraft survivability equipment (ASE), and distributing those solutions to a globally deployed Aviation community. To modernize ARAT's technology and processes, the U.S. Army G8 Force Development for Intelligence established an internal ARAT research, development, test, and engineering (RDT&E) program to enhance ASE capabilities, through software updates, to keep ASE ahead of enemy threats and technology.

ARAT's RDT&E program emphasizes low-cost, high-return enhancements that provide Army Aviation the ability to overmatch America's adversaries.

In 2021, ARAT began developing an Air Modernization Program plan to evaluate processes, procedures, and tools to enhance and speed up mission software development, test and distribution. This effort aims to create a cohesive software enterprise architecture to enable integrated applications, which all ARAT internal software development and test teams will use within the ARAT laboratories. This modernization will enhance automated data analysis and artifact generation, improve modeling and simulation of threat systems, and automate software testing and validation. The endeavor will bring much needed efficiencies throughout the process to aid in reducing time from threat detection to distribution of a mission software solution to forward deployed Aviation forces.

Strategic decisions have led to the departure of all U.S. military forces in Afghanistan and Iraq and a shift to emphasis on multi-domain operations (MDO). The focus on MDO also drives the need for modernization efforts across the Army. Over the past several decades, Army Aviation has focused primarily on combat operations against low technology non-nation state adversaries. Potential future engagements against nations who have made large investments in modernizing both kinetic and non-kinetic combat capabilities will drive the need for Army Aviation to adapt.

In support of the National Defense Strategy, ARAT has pivoted to modernizing its reprogramming infrastructure

to address sophisticated, higher lethality threat radars and munition delivery systems. To keep Soldiers safe and maintain Army Aviation dominance over peer and near-peer adversaries, ARAT is combining technical expertise, modern innovative technologies, and increased stakeholder involvement. According to retired COL Laurie Buckhout, member of the Defense Science Board and former director of Army Electronic Warfare, "ARAT consistently has done a great job of leveraging modern technologies and innovation to constantly accelerate enhancements to Army capabilities that focus on protecting Soldiers and combat platforms to ensure mission success."

Speeding Delivery of ASE Mission Software to the Fight

The ARAT Air Modernization Program is leveraging emerging agile technologies and automation to increase efficiencies in mission software development and testing while reducing the time needed to deliver the software to Aviation forces. ARAT is developing modernized enterprise platforms which incorporate commercial industry innovation standards. These standards shift from isolated tools performing independent functions to one of network-based functions combining applications across the entire development and test process.

The concept utilizes logic-based applications to reduce human error and automatically ensure validated threat system data is incorporated into the mission software. Removing errors early in software development process significantly reduces the need for rework when engineers discover further errors later in the process, thus reducing testing timelines and getting mission software to the field more quickly.

ARAT has always been a leader among the services in automated testing of mission data, and now it is taking that capability to the next level. ARAT engineers are designing and developing the new Modernized Common Air Test Stations (MCATS) state of the art hardware test station that replicates various aircraft and various ASE configurations. The MCATS allows ARAT engineers to digitally configure a test environment from a workstation representative of a specific aircraft and specific onboard ASE systems. Prior to MCATS, engineers manually configured test environments by removing and adding ASE components and cabling. The new capability reduces test setup from hours to minutes.

To complement the MCATS, ARAT has developed the Unified Test Automation Suite (UTAS) which accelerates testing by automating what was previously manually tested mission software. UTAS and banks of modernized radio frequency generators enable simultaneous testing of mission software for ASE systems. In future conflicts, Army Aviation will not have days or weeks to adapt to changing threats. ARAT is striving to implement tools and processes allowing detection of threat changes, development of mission software solutions, and distribution of software and associated products to forward deployed forces within hours. As stated by BG Dwayne Wilson, assistant adjutant general, Georgia Army National Guard, "The future engagements by Army Aviation

will require all aspects of mission support to rapidly adapt and respond to changing threat scenarios for this nation to successfully overmatch peer and near peer adversaries."

Monitoring Changes In Worldwide Threats

ARAT leverages continuous classified national level intelligence data streams via our Joint Threat Change Detection office in San Antonio. ARAT constantly monitors worldwide threats to ensure the most current threat characteristics are evaluated to determine any potential impact to Army Aviation platforms. ARAT then interfaces with the Army Aviation stakeholders to determine the response.

The tasks of detection and analysis have become increasingly more complex due to technological advancements in peer and near peer adversary threat capabilities. This complexity has rendered certain modeling and simulation techniques unsuitable to replicate threat systems in ARAT's current developmental laboratory. To pace the threat and the modeling of sophisticated threats, ARAT has created a tool known as Simulation Modelling Framework (SMF). The addition of SMF has provided the Army with the capability to rapidly ingest large volumes of enemy weapon system characteristics and mimic their performance. Understanding enemy weapon systems characteristics gives ARAT the ability to create detailed mission software that provides the aviator higher confidence in the ability of their ASE systems to detect and defeat the threat.

Getting the Message to Forward Deployed Forces

ARAT is also modernizing the ARAT Warfighter Sustainment Software Support Portal (AWSSSP). The modernization will incorporate a new look, improved functionality, and even a new name – and if you are reading this send ARAT a suggestion! The modernization effort is incorporating enhancements based on feedback from the user community. The improvements will provide modern applications and access to needed files while providing the user the ability to customize their own webpage. There will be minimal downtime of the portal and a seamless transition for the end user during the rollout of the new portal which ARAT plans for late Fall 2021.

Looking Back to Move Forward

Winston Churchill said, "The farther backward you can look, the farther forward you are likely to see." ARAT has been doing software reprogramming of ASE systems for the Army for almost 30 years, beginning with one system and now supporting multiple air and ground systems. With many lessons learned, ARAT has been able to build on things that worked and mitigate what didn't. Modernization though RDT&E is ARAT's ongoing approach to achieve overmatch based on its successes of the past and the Army's needs in MDO. It will remain a key force multiplier ready to give aviators what they need, when they need it as they face complex and sophisticated threats around the world.

John Sensing is the program lead, Kris Knopp the chief engineer and Will Collier is the senior system engineer for the ARAT RDT&E group at Aberdeen Proving Ground, MD.

Army Aviation at Oshkosh 2021

By Bill Harris, Executive Director, AAAA

Army Aviation was present and accounted for at the Experimental Aircraft Association (EAA) AirVenture, July 26 to August 1, 2021. The largest gathering of the overall aviation community in the country featured over 600,000 attendees many of whom who flew in over 10,000 of their own aircraft during the week.

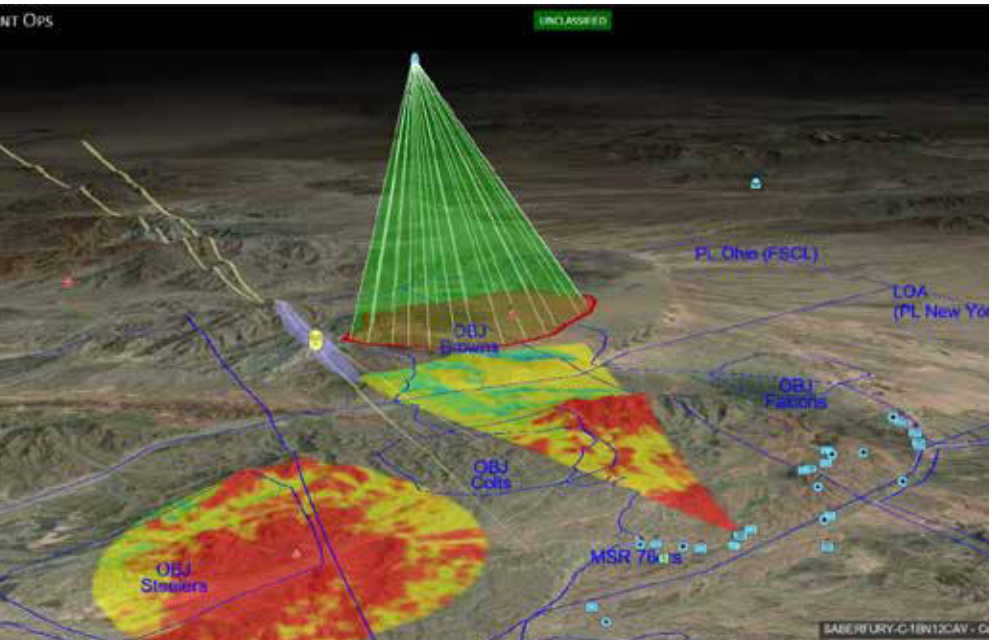
The Army was well represented with the Aviation Branch sending folks from the Organization & Personnel Force Development Directorate, along with U.S. Army Recruiting Command, the Wisconsin Army National Guard, and the 160th Special Operations Aviation Regiment, Airborne.

The lift, attack, utility, cargo, UAS, and SOF communities were all represented and very popular with the crowds to include numerous potential recruits who heard all about "High School to Flight School" and got to get some quality simulator time in the large Army recruiting tractor trailer that also goes to the AAAA Summit each year. Our sister services were there of course competing for talent and showcasing their flight demonstration teams but we in Army Aviation more than held our own.

Well-done Army Aviation!

Electronic Warfare in the Combat Aviation Brigade

By WO1 Yosef Y. Wolff



U.S. ARMY SCREENSHOT

3-dimensional representation of a notional Electromagnetic Operational Environment (EMOE) as depicted on the EWPMT system.

If we lose the war in the air, we lose the war and we lose it quickly…

Field Marshal Bernard Law Montgomery (Great Britain)

At the onset of the Gulf War, and the Multi-National-Force response to Iraq's invasion of Kuwait in 1991, the United States Military had developed an efficient Electronic Warfare (EW) model. Anecdotally, this undemonstrated method of incapacitating the enemy through electronic suppression of Integrated Air Defense Systems (IADS), had been perfected throughout decades of Cold War with the Soviets. As the Multi-National-Force began operations, the Iraqi IADS threat was implicit; and attacked both kinetically, and through Electronic Warfare. The combination of effects enabled Army vertical-lift a high degree of freedom-of-maneuver in the initial phases of the ground war; advancing virtually unopposed. In the years between the Gulf War and the Global War On Terrorism (GWOT), the Army neglected EW, relegating it to a relic of the past. Meanwhile Russia was astounded by the way Army (and Air Force) Aviation conducted electronic warfare during combat operations.[1] For perspective, during World War II the Allied forces had a loss-of-aircraft-to-sortie ratio of nearly 2 percent. Whereas during the Gulf War the ratio was significantly lower at 0.26 percent.[2] It is worth noting that there were other factors that contributed to this success, nonetheless EW stood out as the distinctly novel effect. In response, the Russians set out to redefine warfare doctrine, with the understanding that the competitor with information supremacy will likely prevail in any type of conflict. Furthermore, Information Warfare allows our competitors to advance their objectives, shy of the armed-conflict threshold. To underscore, the Russians view all components of cyber, EW, psychological operations (PSYOPS), and Information Operations under the umbrella of Information Warfare.

At about the same time the Russians began implementing these changes, the U.S. launched the GWOT. A conflict that shifted from large-scale combat operations to asymmetric (or guerilla) warfare. The Army was forced to adapt to counter-insurgency operations (COIN) leading to the development of Counter Radio-Controlled IED solutions. During the intervening decades of COIN operations, the tenets of EW have atrophied because the threats to our robust and sophisticated communications networks never quite materialized.

Our competitors observed, as we built multiple spectrum dependent systems, suitable only in the technologically-austere parts of the globe (where the risk of interference is minimal and adversary lethal targeting all but eliminated). The aforementioned, particularly Russia and China, continued to refine their tactics, techniques, and procedures (TTPs) in EW, with the belief that, if they could deny or manipulate U.S. access to the spectrum, then we would lose the advantage of technological superiority. Therefore, unless the Army prioritizes EW systems for the aviation community, the Army may face devastating losses to manpower and aircraft in any future large-scale combat operation (LSCO).

To further illustrate the challenge,

U.S. ARMY 2CAB PHOTO

Soldiers operating the Air-MAX system. The Air-MAX is an Electronic Warfare Support/Attack system in an aircraft configuration (UH-60/M).

Army aviators have enjoyed freedom of maneuver for many years. Army aviation has not contended with a peer, or near-peer threat likely since the Cold War (possibly even before that). This current state of unimpeded air-superiority will likely evaporate at the onset of the next major conflict. Army aviators will possibly face multiple dilemmas, such as integrated radar-equipped mobile anti-aircraft guns, small drones, electronic attack, electronic equipment failure, and information related capabilities (IRC) effects, all designed to destroy the airframe and infiltrate mission processor of our cockpits. Thus, inhibiting our pilot's ability to make timely and informed decisions; and deny our capacity to integrate and dominate in the Air and thus the ground.

In terms of addressing the issues above, the first and most effective accomplishment, was to consolidate EW professionals at the brigade. This consolidation was driven by LTG John B. Morrison, Jr. and his staff at the Cyber Center of Excellence, who have advocated for "thinking operators" as opposed to "button-pushers." Some of the smartest people in our Army spent countless hours adjusting the Force Design to better enable our commanders by providing another tool to employ multiple effects across multiple domains. Did we get it right? Partially. The EW section in a CAB is not prioritized over the BCT. With the recent Force Design Update and changes in doctrine from a BCT-centric fight to a division and corps centric fight, CABs are substituting a Major with two CPTs and a CW3. This substitution eliminates the field grade officer's capacity to better support the CAB commander through experience and understanding of the deeper fight. The division commander's most versatile and lethal assets in shaping the deep area is the CAB and putting this in the hands of (potentially) two junior CPTs could prove detrimental. We propose keeping and prioritizing the Major and augmenting them with a CPT to develop the junior officers through mentorship and exposure to division or corps level battle space.

Bottom line: if the Army is going to prioritize EW/Cyber at the serrated edge of the spear, it must focus efforts by putting its senior mid-level cyber officers, warrants and NCOs in the CAB.

Equipment

The Army (in response to the inundation of operational needs statements (ONS)) has purchased many single-purpose EW systems. These systems while similar in function, are produced by vendors endeavoring to meet the letter of the ONS – not necessarily addressing the underlying intent. The aviation community has the opportunity to alter the course by insisting on highly capable, durable, and modular Software Defined Radio (SDR) platforms, which have a single purpose – to execute code. These SDRs would operate on universal (brand agnostic) operating systems (OS). This necessitates interchangeable components as well for modernization in concert with the latest technology. The ability to glean data from the Aviation Mission Planning System (AMPS) would be beneficial too, providing real-time (or post flight) emitter data. These systems can be paired with an assortment of antennae, in relation to the mission. This capability must also have modular power amplification, to allow for mission tailoring and pass rigorous air worthiness release testing.

The bottom line is for CEWOs to best support the CAB; we need a system that is universal across the air frames, which gives the CEMA team, paired with the Aviation Mission Survivability Officer (AMSO), the flexibility to adapt

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to threats immediately. A repository of threat-loads available to CEMA technicians to utilize or modify is a necessity as well. This enhances planning, and increases the capacity for lethal and non-lethal effect delivery during sorties.

Future Training Opportunities

Russian incursions into Georgia and Ukraine make clear that the effective response to adversary electromagnetic emissions is to find it, plot it, kill it. This tactic narrows the response time to seconds, as opposed to hours. The second observation is a TTP unique to the Korean Theater of Operations. Namely the proliferation of integrated radar-equipped and mobile AA guns (11,000+)[3], which present a similar threat particularly to vertical-lift. The reason these are uniquely lethal to vertical-lift, is because the systems are layered with lethal and non-lethal effect delivery systems and are able to disconnect from those integrated systems, augment weak points and create additional dilemmas. If you are sensed by one, you are a target of all; and as we know, they only have to get it right once. Therefore, training for these potential scenarios is an absolute imperative.

On the Korean peninsula, there is a unique opportunity to train pilots on evasive maneuvers and response to a real ZPU-type platform. It is located at Pilsung, a fixed-wing (A-10) range, typically reserved for South Korean and U.S. Air Forces. However, it is available for use by Army aviation – except that 2nd CAB is lowest in priority. It is our opinion that this range could provide excellent training for both new and experienced pilots, and the availability of an actual ZPU connected to an MTC-style training center is not available anywhere else (outside of White Sands or equivalent). Another option is to integrate EW into the cockpit of the aircraft simulators, by replicating these conditions into digital training.

In closing, prioritizing CEMA support to the CAB is vital for the future first battle. We need the right people and suitable equipment now, and we must tighten the bond between the aviation and CEMA communities. The one capability that keeps our competitors up at night is ARMY vertical lift and bolstering this capability with cyber and EW will cause many sleepless nights in future LSCO and MDO.

Disclaimer: The views expressed in this article are those of the author and do not reflect the official policy or position of the Department of the Army, DOD, or the U.S. Government. (See AR 360-1).

End Notes:

1 – M. C. Fitzgerald, *Russian Views on IW, EW, and Command and Control: Implications for the 21st Century*, 1999. Retrieved from: *http://www.dodccrp.org/events/1999_CCRTS/pdf_files/track_5/089fitzg.pdf.* Accessed 28 December 2020.

2 – Ibid.

3 – Headquarters, Department of the Army. ATP 7-100.2 - North Korean Tactics. Washington, DC: Army Publishing Directorate, 2020.

WO1 Joe Wolff served as the electronic warfare technician in Cyber Electromagnetic Activities at 2nd Combat Aviation Brigade, Camp Humphreys, South Korea. He is currently assigned to the 2nd Brigade Combat Team, 82nd Airborne Division at Ft. Bragg, NC and a senior at the Liberty University Helms School of Government. MAJ Herbert Norton and the 2nd Combat Aviation Brigade Staff contributed to this article.

First Army Air Service* Pilots

By Mark Albertson

As to the history of WHO were the first Army pilots, it depends on your understanding of WHO DID WHAT.

For instance, some may point to the aeronauts of the Balloon Corps. But Thaddeus Lowe and his balloonists were considered Private Contractors and not Army personnel. And, of course, in 1863, the Army chose to disband the Balloon Corps as reactionary thinking and the expanding mobility of Lincoln's host ended the Army's first sojourn into airpower.

1887, Brigadier General Adolphus Greely was named commander of the Signal Corps. As a fan of the Balloon Corps, General Greely authorized a balloon section in the Signal Corps. For the first time in American history, the armed forces had a military air service, as humble as it was.[1]

February 10, 1906, Adolphus Greely was transferred to the War Department. His replacement was Brigadier General James Allen who, like his predecessor, was a firm believer in aeronautics. On August 1, 1907, with Office Memorandum Number Six, Allen established the Aeronautical Division: "This division will have charge of all matters pertaining to military ballooning, air machines and all kindred subjects."[2] Allen's initiative was decisive. For the Aeronautical Division would be the forerunner of an independent air service. Hence the reason James Allen is considered the "Father of the United States Air Force." The establishment of the Aeronautical Division fit in with the Army's shift towards professionalism; which, in turn, fostered the trend towards the specialization of tasks commensurate with the aims of the Root Reforms.

1901, Secretary of War, Elihu Root, outlined the reforms that would result in the creation of an armed forces required for that military fulfillment for America's rise to become a Global Power. At the same time, the Army was making a concerted effort to better blend the Signal Corps into overall operations. The evolution in modern communications made it imperative that the latest intelligence be gleaned and shared with the infantry, cavalry, and artillery. The rudiments that would comprise the core of the doctrine of modern combined arms warfare were beginning to take shape. And that included aviation.

Both James Allen and Captain Charles de Forrest Chandler, commander of the Aeronautical Division, placed a greater faith in lighter-than-aircraft over heavier-than-aircraft. They believed the former fielded an advantage in terms of range and payload over the latter. Bids were solicited for dirigibles and airships.

In 1908, Thomas Baldwin's airship fended off all comers to garner the bid. At the same time, the Wright Brothers' Flyer was accepted for evaluation. Baldwin trained three Army fliers for his dirigible: Lieutenants Frank Lahm, Thomas Selfridge and Benjamin Foulois.

Lahm was a world renowned balloonist having triumphed in the 1906 International Balloon Race from Paris to Yorkshire, England.

Selfridge came out of the Aerial Experiment Association, having soloed in an airplane on May 19, 1908. Selfridge was the first Army pilot to fly an airplane.

Benjamin Foulois, meanwhile, was not a West Point graduate like Lahm and Selfridge. This Connecticut Yankee came up the hard way, battling Moro tribesmen in the steaming Philippine jungles. Yet it was Foulois who soloed first in Signal Corps Dirigible Number One in August 1908, making him the first Army pilot to solo in an Army aircraft.[3]

In September, tests began towards the acceptance of the Wright Brothers' Flyer. During one of the tests, on September 17, Orville Wright (pilot) and Thomas Selfridge (observer) crashed. Wright was injured; but Selfridge died of a fractured skull. Lieutenant Selfridge was not only the first Army pilot to fly an airplane, but the first to die in one.

The Army accepted the Wright Flyer "A" as its first airplane.

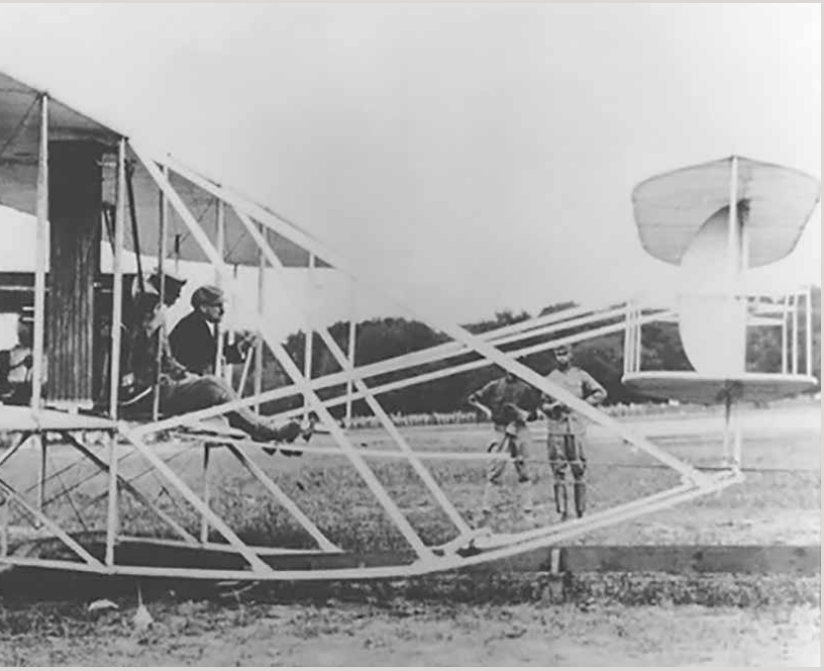
On October 26, 1909, Lieutenants Frederick Humphreys and Frank Lahm became the first Army pilots to solo in an Army airplane. Benjamin Foulois followed suit at Fort Sam Houston, Texas, March 2, 1910.

For a time, Ben Foulois and a weary Wright Flyer was all there was to the Army's air force. A lickpenny Congress was of little help and Foulois met some of the expenses associated with keeping the plane aloft out of his own pocket.

ENDNOTES:

1 - General Greely's balloon section is not to be confused with the Balloon Corps. The former was considered part of the Signal Corps and financed as such, staffed by Army officers and personnel; as opposed to the latter, to which the aeronauts had been hired as contractors. Therefore, Lowe and his aeronauts were not officers, rather civilians in the pay of the Army. Hence,

** Publisher's Note: On July 2, 1926 the Air Service was redesignated as the Air Corps. Although the Army Air Force took the lead from the Army Air Corps in 1941, the Army Air Corps played a combat role in the Army and was not dissolved until 1947 with the creation of the Air Force.*



ALL WIKIPEDIA COMMONS PHOTOS

Greely's balloon section is considered the first official military air service, of a sort; and as such, formed the basis for the 1907 Aeronautical Division, considered by the Air Force as the official beginning of that arm of the American military.

2 - For entire text, see page 111, Appendix A, Autonomy of the Air Arm, by R. Earl McClendon, Ph.D.

3 - "His first brush with flying machines came when he flew the airship, Signal Corps Dirigible No. 1, after its August 1908 acceptance tests at Ft. Meyer, Va. Once the dirigible had passed its flight tests, Foulois was checked out to pilot the craft after just a few takeoffs and landings, gaining the distinction as the Army's first pilot." See page 1, "Foulois," airforce-magazine.com, Vol. 86, No. 2, by Walter J. Boyne.

Benjamin Foulois was an early Army pilot with many "firsts": "First flight as a dirigible pilot; first observer on an aircraft cross-country; first military pilot to teach himself to fly; first to fly more than 100 miles nonstop; first to test use of radio in flight. . ." See pages 2 and 3, "Major General Benjamin Delahauf Foulois," Biography: United States Air Force, *www.af.mil/information/bios/bio_print.asp?bioID=5445&page=1*

With all Foulois' contributions to aviation in the United States Army, he could be quick-tempered and even caustic of tongue, as related by Air Force historian, John F. Shiner, with Makers of the US Air Force:

In 1964, President Lyndon Johnson, during the Presidential campaign, presided over a ceremony in the East Room of the White House, commemorating the achievements of the 85-year old aviation pioneer with a special medal, "complete with distinguished guests, speeches honoring Foulois and presentation of the medal by President Johnson. Foulois responded with a few remarks on the state of the nation and the world." Then Foulois pointed to the paneled entrance and observed, "I hope to see President Barry Goldwater walk through that door next year." See page 51, "The First of the Force," Air Force Magazine, by John T. Correll. Needless to say, Benjamin Foulois was never invited back to the Johnson White House.

Mark Albertson is the award-winning Army Aviation Publications Historian and a contributing editor to ARMY AVIATION magazine.

Above left: Lieutenant Thomas Selfridge soloed in an airplane known as, "White Wing," with the Aerial Experiment Association, May 19, 1908, becoming the first Army pilot to solo in an airplane.

Above middle: At the controls of a Wright Flyer is Orville Wright, and to his left, hand on one of the plane's struts, is Lieutenant Frank Lahm, July 1908.

Above right: Army pilot, Benjamin Foulois (left), with Orville Wright, circa, 1909.

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Wreaths Across America Supports the AAAA Scholarship Program

By MG Jessica Garfola Wright, U.S. Army Retired

Each December, on National Wreaths Across America Day, the mission is to Remember, Honor and Teach. We do this by coordinating wreath-laying ceremonies at Arlington National Cemetery, as well as at more than 2,100 additional locations in all 50 U.S. states, at sea and abroad.

This year's Wreaths Across America theme, "**Live Up to Their Legacy**" is based on statements by the Chief of Staff of the Army, General James C. McConville.

The AAAA Scholarship Foundation participates every year, ensuring that our interred veterans are honored and remembered. Five of the fifteen dollars contributed will go back to the AAAA Scholarship Fund to directly benefit those awarded a scholarship.

As a member of the AAAA Scholarship Foundation I am blessed to be a part of the Army Aviation family, with kindred spirits across the world. I humbly ask our AAAA members to support this worthy cause by sponsoring a wreath in memory of a loved one or veteran interred at a National Cemetery.

Each National Cemetery through Wreaths Across America, honors our veterans. Each wreath is handmade, a red bow trimming this labor of love and respect. On 18 December 2021 one volunteer will take that wreath, recite the veteran's name, and place it at their headstone. **However, we need YOU to sponsor a wreath for $15.00 to start the process.**

I ask each of you to support the AAAA Scholarship Foundation in the Wreaths Across America Program, and by your sponsorship you will both honor a veteran and support our future leaders through scholarships.

Sponsor your AAAA wreath today at *https://wreathsacrossamerica.org/pages/160022*

MG (Ret.) Jessica Garfola Wright is a subcommittee member of the AAAA Scholarship Foundation, Inc. Fundraising Committee.

Thank You to Our Scholarship Fund Donors

*AAAA recognizes the generosity of the following individuals, chapters and organizations that have donated to the Scholarship Foundation from September 2019 through September 2020. The list includes donations received for all scholarships, as well as the General Fund which provides funding to enable the chapter, corporate, heritage and individual matching fund programs as well as national grants and loans. Donors marked with an * are partially or totally donating to the newly established Families of the Fallen Scholarship. Every penny donated to the Scholarship Foundation goes directly to a grant or loan as a result of the Army Aviation Association of America subsidizing ALL administrative costs!*

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

AAAA Chapter Affairs By LTC (Ret.) Jan Drabczuk

I appreciate the support from COL Scott A. Myers, the Pikes Peak Chapter President and 1SG Becky Haynes, the Chapter Treasurer for authoring and sharing this information to our membership.

Chapter Membership

The Pike's Peak AAAA Chapter is comprised of Army Aviation units from Fort Carson and the surrounding areas to include the Colorado Army National Guard and Army Reserves.

The Chapter represents AAAA to local communities through annual events and partnerships with local businesses, leaders, and members of the local community, and Chapter military members. Pikes Peak Chapter history stretches back to the beginning of Army Aviation in the Pikes Peak region of CO, and includes Aviation elements of the 4th Infantry Division, 3rd Armored Cavalry Regiment, 10th Mountain Division, and 7th Infantry Division.

The Pikes Peak Chapter was established in 2013 in line with the constitution of the 4th Combat Aviation Brigade at Fort Carson, CO. The Chapter has quickly grown, as it is primarily the main AAAA Chapter for the 4th Combat Aviation Brigade and supported Battalions. The Chapter has a solid membership base with 327 members, 82 of which are lifetime members. Pikes Peak has a vast experience of leadership on the team that begins with COL Scott A. Myers (President), CSM James L. Etheridge (Senior VP), MAJ Elizabeth Verardo (Secretary), 1SG Becky Haynes (Treasurer), CSM Greg Turpin (VP Awards), and SFC Keith Lovely (VP Membership and Enrollment).

Events

The Chapter holds at least two functions each year to drive membership and is actively looking to expand activities as it continues to grow and gain momentum. This year, the Chapter along with the support from AAAA National, hosted a golf scramble at the Cheyenne Shadows Golf Club to boost membership and raise awareness and money for scholarships. The Scholarship fundraiser was a success, and the Chapter was able to provide for one $3000 scholarship.

The Chapter also hosted the inaugural Casino Night at the Pinery at the Hill in Colorado Springs, CO. The Casino Night brought together aviators, past and present to enjoy food, games and to present awards to deserving Aviation members. The Casino Night included a silent auction, and 3 raffles for fundraising. In addition, the Chapter hosts quarterly meetings, providing lunch and fellowship for members.

CHAPTER COURTESY PHOTO

CW5 (Ret.) Josh Kinnee was inducted into the Bronze Honorable Order of St. Michael during the golf scramble by COL Scott Myers (left) and CW5 Mike Corsaro, the 4th CAB Commander and Chief Warrant Officer, respectively.

Awards and Charities

The Chapter has an active awards program that awarded three Order of St. Michael Bronze, eleven Order of St. Michael Silver, five Lady of Loreto, and three Knight Order of St. Michael awards during their casino night. They are planning another scholarship fundraiser in the coming year. Fundraising events have allowed the Chapter to establish a scholarship program and look to increase over the next few years as it continues to grow.

Summary

The Pikes Peak Chapter has and continues to support local active and retired Army aviators in the Colorado area. Through events and charities, they support AAAA members while promoting the history of Army Aviation and keeping AAAA relevant. The Pikes Peak Chapter supports events to further the AAAA's goals to Voice, Network, Recognize, and Support our fellow Army Aviators. For more Pikes Peak Chapter information, please contact Becky Haynes at *becky.l.haynes.mil@mail.mil* or Greg Turpin at *gregory.a.turpin.mil@mail.mil.*

Feel free to 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.drabczuk@quad-a.org

AAAA Chapter News

So. Cal. Chapter Tours Northrup Grumman

NORTHROP GRUMMAN PUBLIC AFFAIRS PHOTO

Southern California Chapter members experienced an up close unique tour of the F-18 assembly line at the Northrop Grumman El Segundo California facility during their 2d quarter meeting on June 25, 2021. The facility originated in 1942 where 5,000 Douglas Dauntless dive bomber aircraft were built during WWII. The hallway museum wall features 105 mini F-18 vertical fins displaying the various unit insignias from the Blue Angels to foreign countries proudly flying an incredible aircraft.

TN Valley Chapter Annual Fishing Tourney

CHAPTER COURTESY PHOTOS

The Chapter held its 2021 Vlasics' Classic Bass Fishing Tournament at Jackson County Park, Scottsboro, AL on September 18, 2021. Although COVID, rain and multiple tournaments made for challenging conditions on Lake Guntersville, over 50 people attended the event. The tournament consisted of a two man boater division team and kayak division team. For the fifth year the event was expanded to include members of "Heroes on the Water" (HOW) wounded warriors program to fish the event. The event was sponsored by Axient, Boeing, Big Oh's, Defense Enterprise Solutions, Radiance, Pacific Architects & Engineers, Parker, Peduzzi, Screaming Eagle Aviation Association, Tackle Trap and Yulista. Pictured are Mitch Delk (right) Kayak first place winner and Kayak Big Fish 21.75, receiving his prize from Brett Bonnell, kayak division director.

Order of St. Michael Indutees

Aloha Chapter

CHAPTER PHOTO BY MSGT ANDREW L. JACKSON

COL (Ret.) Roger T. Pukahi is inducted into the Silver Honorable Order of St. Michael by MG Kenneth S. Hara, The Adjutant General, State of Hawaii on Aug. 13, 2021 at Hawaii National Guard Headquarters, Honolulu, HI. Pukahi was recognized for more than 33 years of service to Army Aviation culminating as the Hawaii National Guard State Army Aviation Officer.

Colonial Virginia Chapter

CHAPTER PHOTO BY CWO SAMUEL J. PUENTES

LTC Margaret G. Stick was inducted into the Silver Honorable Order of St. Michael by her classmates at the Joint Advanced Warfare School in Norfolk, VA on Aug. 28, 2021. Stick was recognized for her accomplishments as the former commander of 1st Squadron, 17th Cavalry, 82nd Airborne Division and commander of Task Force Sabre Multi-Functional Aviation Task Force (MFATF) Arabian Gulf. 1-17th Cav was selected as the AAAA 2020 Active Aviation Unit of the Year. Pictured are Stick with daughter, Katherine and son, Fitch.

Jack Dibrell/Alamo Chapter

U.S. ARMY NORTH PUBLIC AFFAIRS PHOTO

MG Daniel J. Dire is inducted into the Gold Honorable Order of St. Michael by AAAA National President, MG (Ret.) Tim Crosby, during a ceremony at Ft. Sam Houston, TX on July 17, 2021. Dire was recognized for his 41 years of commissioned service and 28 years of support to Army Aviators and their families as an Army Flight Surgeon culminating as the Joint Force Land Component Command Surgeon supporting the U.S. Northern Command and Army North DoD COVID response. Pictured with Dire are his wife, Cynthia, and LTG James Richardson, Deputy Commanding General, U.S. Army Futures Command, representing LTG(P) Laura Richardson, Commanding General, U.S. Army North.

Mount Rainier Chapter

U.S. ARMY PHOTO BY SGT SHATYRA REED

CW5 Thomas Oroho, outgoing 16th Combat Aviation Brigade Command Chief Warrant Officer and chapter brigade liaison, is inducted into the Silver Honorable Order of St. Michael by 16th CAB Commander, COL Shane Finison during a ceremony on July 21, 2021 at Joint Base Lewis-McChord, WA. Oroho was recognized for his accomplishments and long-standing support of Army Aviation.

Southern California Chapter

CHAPTER COURTESY PHOTO

CW4 Alejandro Argota is inducted into the Bronze Honorable Order of St. Michael by chapter VP Enlisted Affairs, CSM (Ret.) Ron Cabrera on behalf of chapter president, LTC (Ret.) John Hendrickson, in July 2021. Argota was recognized for his decades of Army Aviation contributions. His company commander, CPT Scott Giles (right) and Soldiers from the 1-40th Aviation Battalion were on hand to congratulate him as well.

Tennessee Valley Chapter

CHAPTER PHOTO BY COLLIN MAGONIGAL

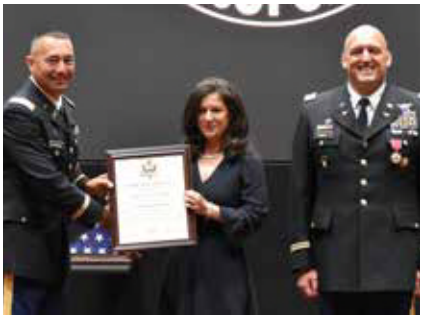
MAJ Simon Beattie is inducted into the Bronze Honorable Order of St. Michael by chapter president, Mr. Gary Nenninger, during a June 21, 2021 ceremony at U.S. Army Redstone Test Center, Redstone Arsenal, AL. Beattie was recognized for having made a significant impact while serving as the U.S. Army Flight Test Directorate Attack Division Chief and Experimental Test Pilot, influencing not only the Test Center but also the U.S. and United Kingdom Army Aviation community. He is moving to the UK where he will lead the fielding of the first UK AH-64E V6 unit (663rd Army Air Corp.).

CHAPTER PHOTOS BY NATHAN LETSON

LTC David J. Benjamin III and his wife, **Tammy Benjamin,** were inducted as a Knight of the Honorable Order of St. Michael and into the Honerable Order of Our Lady of Loreto, respectively, by Mr. Darryl Covin, deputy program executive officer, Missiles and Space, during an Aug. 20, 2021 ceremony at Redstone Arsenal, AL. LTC Benjamin was recognized for his significant contributions to Army Aviation while serving as the product manager for Endurance Unmanned Aircraft Systems. Tammy Benjamin was recognized for her work as a registered nurse providing low cost/no cost healthcare to community members in need.

CHAPTER PHOTO BY MR. DAVID HYLTON

Ms. Michelle Lee is inducted as a Knight of the Honorable Order of St. Michael by Mr. Charles Strowbridge, logistics chief of the Utility Helicopters Project Office during a July 29, 2021 ceremony at Redstone Arsenal, AL. Lee was recognized for her support of Army Aviation while serving as the deputy logistics chief of the Utility Helicopters PO. She will next serve as the Logistics Chief for the Future Long-Range Assault Aircraft Project Office at Redstone Arsenal.



CHAPTER PHOTOS BY SAMANTHA BEDWELL

Mrs. Leslie Harris was inducted into the Honorable Order of Our Lady of Loreto by COL Roger Kuykendall, project manager Aviation Turbine Engines, during her husband, LTC Travis Harris's change of charter and retirement ceremony on June 14, 2021 at Redstone Arsenal, AL. Harris was recognized for her dedicated support of Army Aviation families over the course of her husband's career.

CHAPTER PHOTO BY SHERRY DORNER

LTC (Ret.) James T. (JT) Naylor is inducted into the Silver Honorable Order of St. Michael during a ceremony in Huntsville, AL on Aug. 6, 2021, by COL Kevin Chaney (right), project manager for Aircraft Survivability Equipment and LTC Bradley Bruce, chapter

VP Community Relations. Due to COVID, this award presentation was delayed for over a year; and should have been presented to him during his retirement ceremony while still in uniform after just departing his position as the product director for Common Systems Integration in the ASE PMO.

CHAPTER PHOTO BY JASON AMADI

LTC Bryan M. Bogardus is inducted into the Silver Honorable Order of St. Michael by chapter president, Mr. Gary Nenninger, during a July 16, 2021, ceremony at Redstone Arsenal, AL. Bogardus was recognized for his service to Army Aviation as the product manager for Air Warrior in Huntsville, AL.

Washington-Potomac Chapter

CHAPTER PHOTO BY MRS. JAMIE BLUM

LTC Dustin Blum is inducted as a Knight of the Honorable Order of Saint Michael by COL Matt Braman, deputy director of Army Aviation at Headquarters, Department of the Army (DAMO-AV), during an Aug. 13, 2021, ceremony at Fort Polk, LA. Blum was recognized for his service and impact to Army Aviation while serving as the Brigade Fire Support Officer for the 16th Combat Aviation Brigade.

Want to change your AAAA Chapter Affiliation? EASY! Contact us at quad-a.org

CHAPTER COURTESY PHOTO

LTC Ryan Forshee and his wife, **Tasha Forshee**, are inducted into the Silver Honorable Order of St. Michael and Honorable Order of Our Lady of Loreto, respectively, by COL Win Adkins, Commander of The Army Aviation Brigade (TAAB) on July 15th, 2021, at Fort Belvoir, VA. The Forshees distinguished themselves with over two decades of faithful service and long lasting impacts to the Army Aviation Enterprise, communities, Soldiers and their families over multiple combat deployments, assignments to the Army Human Resources Command and Army Headquarters G-3/5/7 Aviation and culminating as the command team of the 12th Aviation Battalion.

AAAA **Membership Update** By CW4 Becki Chambers

The Membership Corner

In a previous issue, I introduced you to a dual military couple that are both Army aviators serving on active duty. This month, I would like to introduce you to a dual military couple that are in different branches, and different components, 1LTs Joe & Celine Matteoni.

Joey and Celine both attended Georgia Military College (GMC), where they met. The college is a two-year program, so they commissioned as officers in two years, but both needed to complete their undergraduate degree.

Joey graduated from GMC and commissioned in 2014. He then joined the Vermont National Guard while completing his degree at Norwich University. After graduating with his undergraduate degree, Joe completed Infantry Basic Officer Leadership Course (IBOLC) and is currently assigned to an Infantry unit at Fort Bragg serving as a company executive officer.

Celine had enlisted in the Reserves in 2011 as a geospatial intelligence analyst. She mobilized to Fort Bragg, NC for a full year doing intel work and then left for Georgia Military College where she commissioned in 2015 and then went to flight school in 2017.

Celine is a UH-60 Black Hawk pilot assigned to a Reserve Aviation unit at Ft. Bragg as a troop program unit (TPU) Soldier. TPU Soldiers typically train on selected weekends and annual training. However, because flight hour requirements and minimums are the same for Reservists as Active Duty, a TPU aviator uses an Additional Flight Training Period (AFTP) to maintain flight status.

Celine joined the military because she always envisioned an Army career would offer more resilience and strength training than any other career field. She told me that while some things compel people to want to become a veterinarian, or a lawyer, or an electrician, for whatever reason, serving the nation in this capacity seemed always fitting for her, even at the tender age of 13.

Joe made this statement about joining: “Growing up in a small town in Michigan, the concept of military service was always present. There were monuments in the town square and up and down Main Street. It wasn’t until I was about 8 years old when I learned that my family has fought in every major American War, and countless small ones since the 1740s. Coincidently that was right before 9-11. All of these factors motivated me to join the Army when I was of age.”

MATTEONI FAMILY PHOTO

Celine and Joe Matteoni, with their daughter, Carmella.

Celine and Joe have been married for a little over 3 years and have one daughter, Carmella.

I asked about any mentors in their lives. Celine said that while her older sister Lauren is, of course like a sister to her, she is the closest thing she has to a mentor. Lauren is really an incredible example of Jesus and embodies the love that Christ has, which is something that Celine looks up to and seeks a lot of guidance and wisdom from.

Joe also made this statement about mentors in his life: “I was lucky that in a rough patch in my career I met a Captain who gave me a chance and believed in me when no one else did. To this end I have one mentor, whether he knows it or not, that I go to for nearly anything. Through this relationship I have improved as a Military professional and as an Officer. He taught me first hand that there is a difference in leading Soldiers and Leading your OER, and your Soldiers know the difference. Finding a mentor is critical in the success of young Soldiers at any level.”

They said this about why it is important to join a professional organization like AAAA: "AAAA is a unique organization that keeps veterans from different eras connected through their passion for Aviation. Above all else, it provides great opportunities to give back to the community. "

Please do not hesitate to reach out to me if you have a story to share about one of our members.

CW4 Becki Chambers
AAAA Vice President for Membership

New AAAA Life Members

CW4 John P. Dickensheets, Ret.
Aviation Center Chapter
CW4 David A. Kenny, Ret.
Bavarian Chapter
MAJ Sean E. Boniface
Delaware Valley Chapter
CW4 Dominick Petro
Iron Mike Chapter
SGT Seth Andrews
Lonestar Chapter
BG Donald M. MacWillie III Ret.
Rising Sun Chapter
MAJ James Stuart Lawson
Tennessee Valley Chapter
Ramon Flores
1SG Jeffery A. Marlow, Ret.
Thunderbird Chapter
COL Paul K. Tanguay, Ret.
Voodoo Chapter
MAJ William Brooks

New AAAA Members

Air Assault Chapter
SSG John Cox
PV2 Chase A. Moore
SSG Matthew Solbach
Aloha Chapter
SFC Holly Dozier
CW2 Patrick M. Dzialek
CPT Shawn Frazzini
CW2 Terrill Hassell
Arizona Chapter
PFC Chad A. Leeper Jr
Aviation Center Chapter
2LT Joshua T. Abitz
WO1 Jonah W. Baumm
2LT Nathan D. Baxley
WO1 Jacob H. Bearden
2LT Cody L. Bullard
2LT Zachary E. Bullard
CW2 Micah Cattell
1LT Derek J. Claridge
WO1 Aaron Clote
WO1 Sara C. Connor
2LT Anthony J. Davis
2LT Garrett Davis
WO1 Christopher L. Deal
2LT Jude Eguia
1LT Alexandra Elison
2LT Alec Farrell
2LT Andrew W. Gildersleeve
2LT Benjamin Gochee
2LT Trey A. Guitteau
1LT Philippe G. Hilaire
Ella Hogan
CW4 Roger Hogan
2LT Andrew C. Hostetter
2LT Nicole L. Huntsman
WO1 Zachary J. Hurst
CPT Mason R. Kelley
CW4 David A. Kenny, Ret.
2LT Jacob M. Lamar
2LT Brittany Lau
2LT Alexander W. Laundree
2LT Jayden C. Libby
2LT William I. Lux
CW3 Darick Majka
WO1 Katherine Malave
WO1 Anthony J. Maldini
WO1 Jacob A. Maze
2LT Ally Catherine McFadyen
WO1 Jefferson Moore
CPT James P. Phillips
2LT Ethan D. Scott
1LT Otis A. Smith
1LT Zachary J. Smith
2LT Louis L. Sonnier
WO1 Katherine M. Spessa
WO1 Zachary T. Spiker
2LT James R. Springer
2LT Christian S. Stavig
WO1 Nicholas J. Strnad
2LT Ian B. Thomas
WO1 Kim Tran
WO1 Caleb A. Traylor
WO1 Cacey N. Vavra
2LT Nicholas P. Vinberg
1LT Andrew C. Westfall
2LT Elijah A. Zaiger
Badger Chapter
CPT Christopher Hall
PFC Mathew T. Kearney
Bavarian Chapter
MAJ Sean E. Boniface
SSG Blaine Ikaika Fritz
Black Knights Chapter
PV2 Ronan D. Joyce
Bluegrass Chapter
PFC Austin Bland
Cedar Rapids Chapter
Alexander Lindsay
WO1 Johnathan N. White
Central Florida Chapter
LTC Steven Beltson
John Hayward
Rob Howard
Jesse Hyman
Brandon Myers
Terrance Newsome
COL Edward Ward, Ret.
Colonial Virginia Chapter
CW4 Robert Tasse
Connecticut Chapter
Michael Aeschlimann
Connor Gembecki
Frank Greco
Vincent Guarino
Andrew Hill
Matthew Infantino
Jay King
Len Lapinta
Steve Leong
George McGovern
Joseph Ruotolo
Alex Soter
Colleen Stone
Jason Su
Alexander Wasz
Phillip Whitt
Desert Oasis Chapter
CW4 Steven A. Drysdale
Justin LaFountain
Empire Chapter
Bret Almoney
Daniel Crimmins
Flint Hills Chapter
CW2 Shawn Dale Crabb
William Dionne
Erin Ingraham
Erik Ritzman
SSgt Brett Wadsworth
Follow Me Chapter
WO1 Antonio Esparza
Great Lakes Chapter
CW2 Dale Throneberry
Greater Atlanta Chapter
Terence Haran
PV2 Joshua P. Laursen
Grizzly Chapter
Dr. Lanh Tran-Tu
SSG Liliana D. Yanez
High Desert Chapter
CPT Daniel Zajac
Iron Mike Chapter
SGT Seth Andrews
PFC Christopher D. Mastalski
MAJ Lloyd Morgan
Jack H. Dibrell/Alamo Chapter
SSG Elliott Gottschalk
Kenneth Larsen
PFC Caesar D. Llantada
Jimmy Doolittle Chapter
PFC Jacob Pete Hawthorne
CW5 Jarrett Hon
CPT Franklin G. Shuler
Johnny O Cluster Chapter
SGT Bryce R. Jessup
Keystone Chapter
CW3 Matthew Cassidy
CW2 Jeffrey Troch
Lindbergh Chapter
PFC Isabella Marie Grizard
Gilmore Stone
Lonestar Chapter
PFC Jonathon N. Tolbirt
PV2 Brett R.Vonseggern
MacArthur Chapter
PFCRichardC.Augustin-Lawson
PV2 Michael Winston Hicks
Mid-Atlantic Chapter
PFC James Andrew Elvey
Minuteman Chapter
PV2 Jose Castrorivera
Morning Calm Chapter
CPT Donald Apelo
CPT Matthew Johnson
CPT Charles Kade
SFC Cameron Kenning
SSG Guillermo Magana
1LT Joseph H.Melanson
1SG Chris Kevin Minson
1SG Matthew Wells
SGT Jacob Whitley
Mount Rainier Chapter
CW2 John P. Bearth
SGT Reginald T. Chumley
CW4 Thomas Hirschler
PV2 Branson L. Rogers
CW2 John Shafer
SSG William R. Skoch
SPC Alexander T. West
Narragansett Bay Chapter
SGT Donald Davis
North Country Chapter
David Luschen
Max Pelifian
North Star Chapter
CPT Daniel Caron
Shaun Meling
2LT Grace Wegleitner
North Texas Chapter
Evelyn Teichner
Northern Lights Chapter
CPL Marley Ngwa
Old Tucson Chapter
SFC Elizabeth Frechou
Stephen Simi
Oregon Trail Chapter
CPT Austin J. Parr
Phantom Corps Chapter
MAJ James Hickey
Pikes Peak Chapter
PV2 Briana N. Carlos
CW2 Brett Sharp
Rio Grande Chapter
SSG Jason Hook
Savannah Chapter
CW4 Thomas Cloran
SPC Connor Gruel
SPC Kyungsoo Kim
PV2 James C. Owen
ShowMe Chapter
CW3 Dusty Hodges
Stonewall Jackson Chapter
Jason Burkholder
Brady Jackson
Tarheel Chapter
MAJ Kevin Doo
Richard Huff
Tennessee Valley Chapter
Ephraim Befecadu
Robert Bonello
COL Richard Bowyer
Trish Carr
Brian Chatham
Stacy Dowling
Jennifer Hare
Ross Hickey
CW4 George Kunkle
CPT Joshua Pcsolyar
Brian Raymond
Kristen Rogers
1SG Matthew Shattuck
Nick Simpson
Casey Still
Barry Suciu
1LT Brian Tachias Jr
SFC Timothy Whitley
Cindy Williams
SFC Jason Wilson
Harley Winkleblack
Thunder Mountain Chapter
SSG Matthew Anderson
SSG Devan Baugh
SSG Andrew Wilcox
Thunderbird Chapter
PV2 Samuel C. Luckowski
SSgt Michael Waller
Voodoo Chapter
MAJ Wayne Albert
MAJ William Brooks
Spencer Mills
James Morris
Randy Sadler
PV2 Nathan Schlotfeldt
Jason Sterling
Washington-Potomac Chapter
Avi Abasov
Philip Dewire
Julia Leache
Dean Nohe
William Ostrowski
John D. Parkes
Brian Russell
Wright Brothers Chapter
PVT Jonathan M. Bradshaw
SSG Tim Gilligan
Yellowhammer Chapter
COL Jack Washburne, Jr.
No Chapter Affiliation
1SG Brett Babin
SSG Christopher J. Carney
SFC Brian Egesdahl
Wade Ewing
PV2 Derik A. Untalan Mead
Mark Moran
MAJ Kyle Murray
Caroline Taing

Lost Members

Help AAAA locate a lost member on this list and receive FREE one month extension to your membership.
2LT Edwardo S. Alviso
CPT Robert S. Boham
Harold V. Bowie, Jr.
COL Fred E. Brown, Ret.
LTC Jeffery D. Brown
Rickey J. Brown
MAJ James E. Bruckart
E. W. Cavanaugh
LTC Richard G. Cercone, Jr.
LTC Tzu-Shan Chang
COL James A. Coar, Ret.
MAJ Harry L. Connors Jr. Ret.
Bruno Cussigh
SGT Travis Bonham Darnell
Tyler Falconbury
SPC Nicholas C. Ford
2LT Arthur W. Galloway
William H. Gillispie
Michael F. Glass
MAJ Gregory W. Glover
LTC William T. Goforth
Mary H. Gorman
COL Gerhard Granz, Ret.
Dexter Henson
Stephen Hill
COL Jose L. Hinojosa, Ret.
CW4 Delbert Jackson, Ret.
LTC Randy K. Jackson
Allen E. Jants
CW3 Jeffrey J. Jelonek
MAJ Gregory R. Jenkins
MAJ David A. Jobe
LTC Peter D. Kowal
CW3 Vladimir Kultschizky
CW3 Timothy J. Larz
WO1 Joshua Link
MSG David W. Little, Ret.
2LT Alex Mcdonald
MSG Joe Moreira, Ret.
SGM Ivonne M. Morrison, Ret.
CSM Vernie Nance, Ret.
MAJ Darrel B. Nerove
Fred A. Newcomb
CDT Dion Perinon
SFC Henry R. Rathbone, Ret.
1LT James Salters
Tony Sanchez
LTC Martin Scheld
Thomas R. Schiltz
Wesley Schroeder
LTC Jerry D. Scott
LTC Jay Q. Smith
MAJ James F. Speelman
LTC Friedrich Stern
Jean K. Tinsley
WO1 Armando B. Torres
MAJ L.D. Walker
Rose Weast
2LT Erich Zwelke

AAAA Family Forum

By Judy Konitzer

Life during COVID had a profound impact on our youth, and some have willingly shared their experiences with reflections, along with those in last month's Family Forum. Hopefully the joy arising from lifting the restrictions is not short lived, and our youth will be able to look back on how they successfully stepped up to their challenges.

Our Youth Share Their COVID Challenges

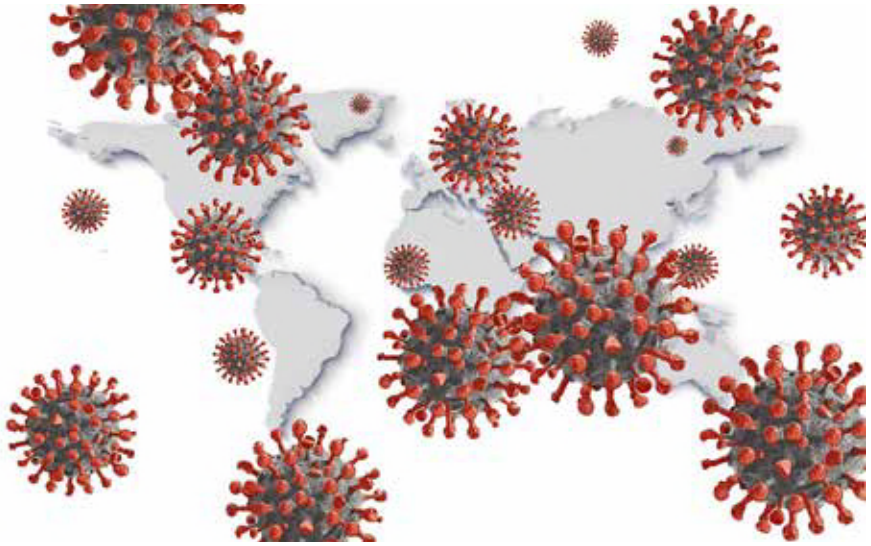


IMAGE BY GERD ALTMANN FROM PIXABAY

Bennett Solomon (19)
Presidio of Monterey:
"I had only lived in Monterey for 9 months when lock down began. We were quarantined off/on for over a year with the last day of in person school March 15, 2020. I was just hitting my stride, but after quarantine started, I lost touch with new friends and never recovered socially. Virtual classes were easy, but I felt like I was being put at a disadvantage and unprepared for my upcoming college courses. We had a regular daily schedule of classes, and attendance was required via Zoom, but the quality of the classes depended on the teacher. A few were good at making it work, while others did not even bother trying. You could tell they had given up. Sports were canceled completely for a year, but during late winter small cohorts were able to do conditioning outside while being masked. It was good to see people, but it was not challenging. In April we were able to have a short swim season, which was a highlight for my senior year, although the bar was very low. I'm old enough to be on my own, and my Mom already worked from home. I really missed being around people with time in the classroom, as I love learning, however, I didn't learn much this past year. When Monterey and California fully opened on June 15, we unfortunately moved on June 18."

Bethany Conley (14)
Fort Bragg: "
COVID affected my school experience in a negative way by having to do school online utilizing three to five tabs to do my schoolwork. For example, I had to log into the school website, then open another tab to view my class, open a new tab to view assignments, and then login into a new website to submit school assignments. I had to do this process for all six classes, which included my electives. Once school started, the A/B program that I did attend made turning in assignments easier for at least two days. I did fail a few classes during COVID, so I am now in summer school. I was in soccer and track prior to COVID, but they were not available last year and only three weeks this year before school break. I was old enough to stay home along with my older brother, so my parents did not have to stop working. I was not isolated too much from some friends, because going to church once a week helped me to stay connected with my church friends. However, I was completely isolated from my school friends, because some of my friend's parents did not want them going to school during A/B days. I did manage to stay positive during COVID through playing the violin and piano."

Tristan Covington (10)
Fort Bliss:
(Interview with Mom Danielle), "Tristan played football for the 9-10 Youth group's El Paso City League. He loved playing until COVID shut it down. He began to play video games with the rest of the kids throughout the neighborhood, and social media was another platform or addictive device he took on. When I was home teleworking with him doing virtual school, I'd plan gym hour and outside time where we would ride our bikes. The neighborhood kids didn't start going outside together until after fall/winter of 2020. And even still, the small group of kids were diligent in wearing their masks. Virtual school was hard as he missed his friends, and he didn't like that he had three different teachers over the course of his 4th grade school year. He also missed being outside and going to his favorite restaurants. When he got to go back to school towards the end of the school year, he was very happy because he was able to see his friends again."

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

AAAA Salutes the Following Departed...

COL James E. Enault, Ret.
Deceased 7/13/2021

COL George W. Sibert, Ret.
Deceased 7/18/2021

CW4 David L. Delahoy, Ret.
Deceased 7/29/21

SFC John E. Clemo, Ret.
Deceased 7/22/21

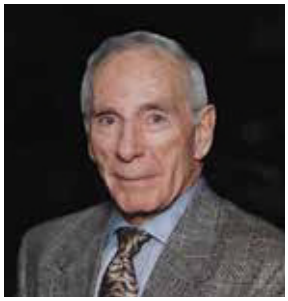
Mrs. Becky Pillsbury
Deceased 9/19/2021

Mrs. Elleen Wolfe
Deceased 8/11/2021

Mrs. Susan Yellen
Deceased 9/06/2021

IN MEMORIAM

It is with great sadness that AAAA reports the passing of a member of the Army Aviation Association of America's "The Originals," otherwise known as the Cub Club.



ACHÉE FAMILY PHOTO

Colonel Sidney "Sid" William Achée,
U.S. Army Retired

Colonel Sidney "Sid" William Achée, U.S. Army Retired, passed peacefully due to complications from COVID-19 at his home in Fort Worth, TX on August 21, 2021. He was 98. Born in New York City, and a Louisiana State University College of Engineering alumnus, he was commissioned in the Army Corps of Engineers in April 1943. He was a veteran of three wars, having served in WWII, Korea and Vietnam. He participated in the Battle of the Bulge in Europe and was assigned after the war to Connally AFB at Waco, TX in 1950 where he graduated in December as a Liaison Pilot. He subsequently graduated from the USAF Helicopter Pilot Course in March 1951 as an Army Aviator. He flew MEDEVAC missions in Korea through January 1952 and was reassigned to the US Army Aviation School at Ft. Sill, OK where he served in numerous positions. He activated the 9th Aviation Battalion and deployed with the unit to Vietnam in 1966 remaining as the G-3 Air in the Delta until Jan. 1968. He was next assigned as Director of Instruction at the US Army Aviation Center, Ft. Rucker until his retirement on March 31, 1972. A Master Army Aviator, his awards include the Legion of Merit w/Oak Leaf Cluster, Distinguished Flying Cross, Bronze Star Medal, Meritorious Service Medal, and Air Medal w/6 OLCs and V Device.

He worked for Bell Helicopter International in Iran with the primary mission to build the facilities and train personnel on how to manufacture helicopters in Isfahan, Iran. He was later assigned at Bell Helicopter as Program Manager 214 ST production, retiring on 31 January 1983. A charter member of AAAA, he was the president of the Cub Club/Originals. Memorial services will be at a future date, and burial will be in Arlington National Cemetery, VA.

May he rest in peace.

AAAA **Legislative** Report

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

FY22 DoD Budget Update

We reported that the Biden administration moved their budget request to Congressional lawmakers very late this year setting the conditions for a very quick markup process by which all four defense committees must review the budget request, make necessary adjustments to it, then pass it out of their defense committees and then pass it on the floor of the House of Representatives and the Senate in order to complete the two pieces of legislation by end of September (i.e., end of the fiscal year). One thing we can agree on is that nothing on Capitol Hill works per the process it should follow and this year will not be any different. First let's cover where we sit with the FY22 National Defense Authorization Act (NDAA) which authorizes DoD to spend funding within the constraints of defined budget lines which we also call "programs of record."

At the time of this writing, the House and Senate have both passed their version of the NDAA out of their respective defense committees. Both committees are targeting a top line authorization of $778 Billion, just modestly above what the Biden administration requested. The authorization is heavily slanted toward research and development (R&D) as we've reported in the past and appears to send signals that smart/standoff weapon systems is where their priorities lie. Since both the House and Senate are generally aligned this year, it's likely that the authorization act will pass by end of year. The House Armed Services Committee (HASC) and Senate Armed Services Committee (SASC) are responsible for and generally pass the NDAA by the end of each calendar year. It's not the HASC, SASC, and NDAA that trigger the dreaded Continuing Resolutions situation which is also known as stop gap funding when September 31st comes and goes each year without a passed defense appropriations act.

While the NDAA authorizes us to spend money on aviation R&D, new aircraft, and modernization programs, the appropriations legislation is the law that actually sends the funding to DoD to pay for programs. The FY22 defense appropriations bill is one of several appropriations bills that fund the U.S. government. Defense appropriations is written by the House and Senate Appropriations committees and specifically sub-committees geared toward defense spending (i.e., the HAC-D and SAC-D). This is where things get particularly sticky in a year following an election. The appropriations funding for the U.S. government is what triggers a continuing resolution situation. Appropriations funding is what threatens a government shutdown when law makers fail to pass a continuing resolution "stop gap" funding measure. When we look at the urgency of passing defense appropriations funding, we must consider all the other political dynamics in play. Of course, our Army Aviation enterprise feels we are the most essential element of the annual budget of the whole U.S. government, but the reality is that our funding/DoD funding falls much lower on the priority list for many law makers, staffers, and influencers.

That said, for us to get what we want, others will have to get what they want. We get our defense appropriations one of two ways. Either by passage of the standalone defense appropriations bill which the HAC-D and SAC-D author or we get full defense appropriations when Congress packages multiple spending bills (appropriations) together into one piece of legislation. This is what you often hear referred to as "Omnibus spending packages." At the time of this writing just a week before the end of the fiscal year, only the House Appropriations Committee – Defense (HAC-D) had passed their version of the defense appropriations bill providing funding of $706B for the DoD at large. Congress now facing a government shutdown, debate on the necessity to raise the national debt ceiling and competing legislative priorities such as multitrillion-dollar infrastructure and reconciliation bills all present risk to passing a FY22 defense appropriation. It's safe to say that best case scenario, we are facing some sort of limited continuing resolution situation as law makers get their act together now that they are returned from their August recess periods. It's hard to predict but due to the delay in staff work on defense legislation coupled with many competing agendas, it's likely that in the coming months, many things will be cobbled together into an omnibus package that results in full year FY22 funding for DoD and our Army Aviation family; the big question will be how much funding!

The Military Coalition Update

AAAA, a member on The Military Coalition (TMC) along with 35 other military, veteran and uniformed services organizations, continues to support various TMC efforts to influence congressional action on a variety of issues. In an effort to support not just Army Aviation interests, AAAA signed onto two letters of support that focus on our military families. The Military Moms Matter Act contributes to a more inclusive force and demonstrates a service-level commitment to valuing the contributions of female servicemembers, by providing increased leave for primary and secondary caregivers and ensuring the medical needs of new moms who serve are met. The Servicemember Parental Leave Equity Act brings parental leave offered to servicemembers in line with federal benefits and those options provided by many private, large employers.

Industry News

Announcements Related to Army Aviation Matters

Bell Changes FARA Design

BELL PHOTO

An artist rendering of the Bell 360 Invictus. Bell initially unveiled a ducted tail rotor design for its 360 Invictus but has now opted to switch to an open tail rotor on the aircraft, which is part of a prototyping competition to supply the U.S. Army with a Future Attack Reconnaissance Aircraft (FARA). According to Bell's Invictus program manager, Jayme Gonzalez, while Bell could have operated "perfectly well" with the ducted tail rotor, the company decided for consistency of the airframe that they would go ahead and change the competitive prototype tail rotor design. Gonzalez said it is a better fit for the requirements package and holistic weight approaches that Bell has for the aircraft, allowing them to make weight and performance trades to meet the Army mission.

Sikorsky-Boeing Delivers FLRAA Proposal

AIRBUS PHOTO

In a statement by Sikorsky president, Paul Lemmo and Boeing Vertical Lift vice president and general manager, Mark Cherry, the Sikorsky-Boeing team announced the early submission of their proposal for DEFIANT X™ for the U.S. Army's Future Long-Range Assault Aircraft (FLRAA) on September 8, 2021.

Airbus Delivers 1st LUH-72B to ARNG

SIKORSKY-BOEING PHOTO

Airbus Helicopters, Inc. has delivered the first UH-72B, the latest variant of its Lakota helicopter, to the U.S. Army National Guard from its production facility in Columbus, MS. This delivery is the first of 18 UH-72B Lakota helicopters currently on order to support the National Guard. The UH-72B incorporates a five-bladed main rotor, the Fenestron shrouded tail rotor, Safran Arriel 2E engines, and the Airbus-designed Helionix avionics suite.

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

Collins Aerospace, Cedar Rapids, IA, has been awarded a maximum $15,000,000 firm-fixed-price, indefinite-delivery/indefinite-quantity contract for production of radio receivers and radio sets to support Army helicopter tactical navigation and landing systems; this is a one-year contract and no option periods; work will be performed in Iowa, with a Aug. 30, 2022, performance completion date.

Qayaq Government Solutions LLC,* Anchorage, AK, was awarded an $11,264,297 firm-fixed-price contract to alter an aircraft hangar; work will be performed in Madison, WI, with an estimated completion date of Sept. 5, 2022.

Northrop Grumman Systems Corp., McClellan, CA, was awarded a $20,745,607 hybrid (cost-no-fee, cost-plus-fixed-fee and firm-fixed-price) contract to procure depot level maintenance in support of the Guardrail Common Sensors program; work locations and funding will be determined with each order, with an estimated completion date of Sept. 16, 2026.

Parker Hannifin, Irvine, CA, was awarded a $10,500,167 firm-fixed-price contract for maintenance and overhaul of the AH-64 Apache servocylinder; work locations and funding will be determined with each order, with an estimated completion date of Sept. 17, 2026.

Advertisers Index

AAAA **Awards**

Order of St. Michael Inductees

GOLD

Lindbergh Chapter
Michael J. Scimone

SILVER

Air Assault Chapter
CW5 Stefen E. Kadur
Aviation Center Chapter
CW5 David J. Stock II
Colonial Virginia Chapter
CW4 Rushton D. White, Ret.
Iron Mike Chapter
CW5 David F. Greenwood
Tennessee Valley Chapter
MSG Michael Underwood, Ret.

Bronze

Air Assault Chapter
SFC Timothy W. Whitley
SSG Kenneth G. Williams
Aviation Center Chapter
MAJ Nicole M. Collins
CW5 Debra J. Harlow-Aldecoa
CPT Travis B. Holland
CPT Kyle R. Hopkins
CW4 Donald K. Procter
CW3 Jesus Ramirez Espinoza
Joseph A. Rea
Colonial Virginia Chapter
CW4 Jeremiah C. Bradley
Gary Butler
SFC Ronald A. Smith
Cowboy Chapter
CW5 Richard Larsen, Ret.
Desert Oasis Chapter
SFC Timothy J. Bichsel
CW4 Benjamin Boyd
SFC John E. Lawless
Empire Chapter
1SG Hal Fellows
CW5 Thomas Grove
Lonestar Chapter
SSG Scott Aaron
Minuteman Chapter
SFC Mark Pearson
Morning Calm Chapter
1SG Adam D. Albini
1SG Shilo Barker
SSG Symon Melo Bowen
CW3 Rachel E. Chiles
SFC Edward J. Delacruz
SFC Vance James DeShane
SFC Earle C. Heusinger III
CSM Brooke Houppert
SFC Aaron J. Jones
SSG David A. Linscott
SFC Jose A. Martinez
1SG Stanley Revell
CPT Paul Richards
CW3 Tracy R. White
Mount Rainier Chapter
SFC Preston W. Cockrell
Phantom Corps Chapter
CPT Westin R. Barber
SFC Damon Harris
MAJ Nathan Wayne Houston
CPT Joshua W. Julian
LTC Richard Stravitsch
CPT Sean V. Toal
CPT Guy B. White
Pikes Peak Chapter
MAJ Kerney M Perlik
Rio Grande Chapter
CPT Karyn Clark
Savannah Chapter
CW3 Patrick W. Fleming
MAJ David W. Marck
CPT Jacob R. Marck
CPT Daniel E. Prior
1SG Francisco Rodriquez Jr.
Southern California Chapter
CW4 Alejandro Argota
Tennessee Valley Chapter
LTC Patrick J. Baker
MAJ John N. Holcomb
LTC Jennifer L. Newsome
Washington-Potomac Chapter
CW4 Daniel T. Archer
SFC Christopher Cox
SFC James P. Harrison
CW4 Abraham Jacquot
CW3 Rudy Mendez
1SG Wilfredo Piris
CW5 Clarence W. Shockley

Knight of the Order of St. Michael

Air Assault Chapter
SFC Christopher Cunningham
MAJ Natalie L. Meng
SFC Jose L. Santiago Jr.
SFC Michael Santiago
Aviation Center Chapter
COL Mark K. McPherson
CPT Thomas E. Pell
CW5 John D. Ryan Jr.
Colonial Virginia Chapter
CPT Carmelo P. Morabito
Empire Chapter
SFC Joann Duclos
Griffin Chapter
Kimberly A. Summers
Iron Mike Chapter
MSG Manuel Lozano
Morning Calm Chapter
Matthew J. Pennison
Phantom Corps Chapter
SSG Jeneane E. Foster
Savannah Chapter
CPT Kelly M. Casey
Tennessee Valley Chapter
LTC David J. Benjamin III
Fatetra Michelle Lee
LTC William Reker
COL Robert J. Wolfe
Washington-Potomac Chapter
LTC Dustin Blum
Priscilla Byars
MAJ Jason Park
CPT Shevelle D. Washington

Our Lady of Loreto

Air Assault Chapter
Jennifer S. Fisher
DeShawn L. Kadur
Iron Mike Chapter
Tiffany Greenwood
Land of Lincoln Chapter
Michelle A. Hammon
Lindbergh Chapter
Diane Kell Scimone
Tam Stone
Morning Calm Chapter
Mandy McNutt
Mount Rainier Chapter
Hyun J. Kim
Camay B. Megerdoomian
Phantom Corps Chapter
Candice Lane
Adrienne Stravitsch
Savannah Chapter
CW3 Ancilla Murphy
Tennessee Valley Chapter
Tammara Sorocko Benjamin
Sarah Proffitt Bogardus
Kimberly-Lynn Jablonski
Washington-Potomac Chapter
Aileen DeForest
Tasha Forshee

AAAA Award Nominations Are Open NOW!

Recognize Our Soldiers!

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

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

Nominations Due: January 1, 2022

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People On The Move

Aviation General Officer Promotions/ Assignments

The chief of staff of the Army announced the following Aviation general officer assignments:

U.S. ARMY PHOTO

MG Lonnie G. Hibbard, commanding general, U.S. Army Center for Initial Military Training, U.S. Army Training and Doctrine Command, Joint Base Langley-Eustis, Virginia, to director of operations, United Nations Command/Combined Forces Command/U.S. Forces Korea, Republic of Korea.

U.S. ARMY PHOTO

BG John D. Kline, senior advisor to the Ministry of Defense, U.S. Forces-Afghanistan, Operation Freedom's Sentinel, Qatar, to commanding general, U.S. Army Center for Initial Military Training, U.S. Army Training and Doctrine Command, Joint Base Langley-Eustis, Virginia.

Gayler Retires

U.S. ARMY PHOTO

MG William K. Gayler retired from the U.S. Army after more than 33 years of active duty service, during a virtual ceremony held at the U.S. Army Aviation Museum, Fort Rucker, AL, on Aug. 26. A former Aviation Branch Chief, he most recently served as chief of staff, U.S. Africa Command. GEN Stephen J. Townsend, commander, AFRICOM, joined the ceremony virtually and provided remarks. Gayler was joined by his wife Michele as he was presented the certificate of retirement by former Army Aviation Branch Chief and Chief of Staff, U.S. European Command, LTG Dan Petrosky, Retired.

Changes of Command/Responsibility

Channels Assumes Command of 12th Avn. Bn.

U.S. ARMY PHOTO BY MICHELLE MILLER

LTC Benjamin T. Channels returns the colors to CSM Alex Collins as he assumes command of the 12th Aviation Battalion during a change of command ceremony at Davison Army Airfield, Fort Belvoir, Virginia, July 15th, 2021. The ceremony was hosted by COL Win A. Adkins (right), Commander, The Army Aviation Brigade (TAAB). Channels succeeds LTC Ryan H. Forshee (partially hidden by colors) who served as the 12th Aviation Battalion Commander since June 2019.

Change of Charter

AMSA Welcomes Miller

U.S. ARMY PHOTO BY MICHELLE MILLER

COL Burr Miller (right) accepts the Aviation Mission Systems and Architecture project office charter from the Program Executive Officer for Aviation, BG Rob Barrie, during a change of charter ceremony held September 8, 2021, in Bob Jones Auditorium, Redstone Arsenal, AL. Miller assumed responsibility as Project Manager from COL Johnathan Frasier during the ceremony.

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.*

Class 21-017
62 Officers July 1, 2021
Commissioned Officers
2LT Juan Garcia, Alexander -DG
1LT McColly, John W. -HG
2LT Nahornick, Thomas A. -HG
1LT Ravenberg, Erik B. -HG
2LT Adams, Avery R.
1LT Ashworth, Calvin P.
2LT Austin, Krystal J.
2LT Bahr, Preston M.
2LT Blankenship, Hayden H.
2LT Castellano, Ryan M.
1LT Gutierrez, Dezarae D.
2LT Hoffman, Justin R.
2LT Jaradat, Salem G. H.
1LT Johnson, Tristan J.
2LT Jonas, Aaron P.
2LT Khalil, Mickel
1LT LePla, Hunter W.
1LT Miller, Caleb J.
CPT Mills, Stephen J.
1LT Norman, Samuel E.
2LT Pelletier, Matthew E.
2LT Rast, Brandt K.
1LT Shively, Brandon G.
1LT Speck, James A.
1LT Velasquez, Chelsea R.
1LT Woodard, Matthew P.
1LT Zimmermann, Nicholas J.
Warrant Officers
WO1 Mason, Henry D. -DG
WO1 Easter, Thomas A. -HG
WO1 Seymore, Leonard, III -HG
WO1 Skaarup, Adam P. -HG
WO1 Wiesman, Benjamin M. -HG
WO1 Atwell, Austin R.
WO1 Barajas Cortez, Juan D.
WO1 Been, Caden D.
WO1 Bennefield, Jacob W.
WO1 Bickel, Dorian J.
WO1 Blocker, Alan R.
WO1 Boydstun, Justin B.
WO1 Burnside, Colin T.
WO1 Carleton, Bradley I.
WO1 Carrigg, Colleen G.
WO1 Casement, David J.
WO1 Cibart, Justin B.
WO1 Espino, Zachariah C.
WO1 Faller, Casey J.
WO1 Fredricks, Luke W.
WO1 Hinshaw, Jacob W.
WO1 Hughes, Robert E., III
WO1 Kaplafka, Jessica G.
WO1 Ledesma, Lawrence L.
WO1 Lund, Garret K.
WO1 Mattraw, Kyle L.
WO1 May, Ryan R.
WO1 Pardee, Aaron S.
WO1 Ray, Christopher M.
WO1 Rivera Maldonado, Fernando X.
WO1 Ronne, Jacob T.
WO1 Teneyuque, Joe R.
WO1 Word, Clayton T.
WO1 Zevecke, Madelyn C.

Class 21-018
43 Officers July 15, 2021
Commissioned Officers
2LT Rauenhorst, Ryan D. -DG
1LT Holtestaul, John O. -HG
1LT Thagard, Eugene S. -HG
2LT Belcher, Matthew C.
2LT Conway, Michael R.
2LT Daum, Nicolas A.
1LT Jett, Anthony M.
1LT Landrum, Nathaniel T.
1LT Lobach, Rebecca M.
2LT Payne, Sarah-Anne M.
2LT Puleo, Matthew K.
2LT Smith, Trevor S.
2LT Vaughn, Jacob A
Warrant Officers
WO1 Cross, Darius A. -DG
WO1 Griffin, Michael W. -HG
WO1 Leibenguth, Adam P. -HG
WO1 Lorenzen, Henry R. -HG
WO1 Wajler, Nathaniel E. -HG
WO1 Albano, Daniel K.
WO1 Barnhart, Brandon D.
WO1 Beck, Kevin J.
WO1 Blahut, Frank M.
WO1 Brasfield, James D.
WO1 Bridgewater, Tyler L.
WO1 Chacon, Leonardo A.
WO1 Deppe, Richard A.
WO1 Emelyanov, Aleksandr
WO1 Evans, Gaidj A.
WO1 Ferdinand, Emmanuel J.
WO1 Floyd, Emanuel, III
WO1 Fowle, Samuel J.
WO1 Frankoski, Casey N.
WO1 Gelaw, Hayu M.
WO1 Giles, Brent W.
WO1 Jones, Grant R.
WO1 Male, Israel
WO1 McCarthy, Amber M.
WO1 Melcher, Jacob H.
WO1 Ochoa, Elizabeth
WO1 Oglesby, Nathan V.
WO1 Perkins, Chad M.
WO1 Sherwood, Mathew J.
WO1 VanCleaf, Dwayne S.

Class 21-019
41 Officers July 29, 2021
Commissioned Officers
1LT Hoopes, Casey R. -DG
1LT Caswell, Chad L. -HG
2LT Cooper, Douglas R. -HG
2LT Trout, Mahlon J. -HG
1LT Amason, Jeremy L.
1LT Golschneider, Daniel K.
CPT Highley, Jason R.
1LT Litman, Logan D.
2LT McGuire, Claire A.
2LT Moomey, Mark T.
1LT Moore, Joshua I.
2LT Northrop, William C.

FSXXI Class 21-017

FSXXI Class 21-018

FSXXI Class 21-020

FSXXI Class 21-021

People On The Move

Flight School Graduates *Continued*

1LT Thomas, Cortez D.
2LT Thomas, Patrick G.
2LT Timana, Luis E.
2LT Vela, Joel A.
Warrant Officers
WO1 Breithaupt, Ryan C. -DG
WO1 Krauel, Travis J. -HG
WO1 Meek, Denver L.-HG
WO1 Nelson, Sid A., Jr. -HG
WO1 Addy, Dale G.
WO1 Brooks, Daniel L.
WO1 Busby, Christopher L.
WO1 Daws, James T.
WO1 Eder, Samuel A.
WO1 Gottsch, Lee M.
WO1 Haubeck, Joseph J. Jr.
WO1 Julien, Tatiana A.
WO1 Lane, Darius C.
WO1 Lindly, Justin R.
WO1 Meahl, Timothy J.
WO1 Meier, Megan E.
WO1 Miller, Mikel S.
WO1 Nobore, Oghosa C.
WO1 Perry, Joseph E.
WO1 Price, Gregory M.
WO1 Strickland, Michael A.
WO1 Wise, Gregory K.

Class 21-020
31 Officers August 12, 2021
Commissioned Officers
2LT Allen, Shea T. -DG
2LT Carns, Riley B.
1LT Hodges, William M.
2LT Killen, Matthew J.
2LT Magallanes, Christian A.
2LT Pence, Morgan P.
1LT Stubbs, Quentin J.
Warrant Officers
WO1 Potts, Zachary L. -DG
WO1 Clifford, Joseph M. -HG
WO1 Garnett, Charles W. -HG
WO1 Golly, Laura A. -HG
WO1 Whipple, Brian J. -HG
WO1 Boulet, Logan M.
WO1 Colón, Cody C.
WO1 Gregory, Ian M.
WO1 Ireland, Michael J.
WO1 Kauffman, Kirby E.
WO1 Knight, Cody A.
WO1 La, Tony
WO1 Lopez, Jessica
WO1 Quadra, Sheri Lou D.
WO1 Regan, Jacob D.
WO1 Rich, Cameron A.
WO1 Rojas, Helen
WO1 Rutherford, Wyatt D.
WO1 Saint-Felix, Louis R., Jr.
WO1 Schmidt, Zachary J.
WO1 Stamback, Scott A.
WO1 Stilwell, Nicholas S.
WO1 Williams, Bradley C.
WO1 Worley, Clayton N.

Class 21-021
35 Officers August 26, 2021
Commissioned Officers
1LT Jorstad, Justin P. -DG
2LT Welsh, Braden J. -HG
2LT Wright, Melody N. -HG
2LT Bailey, Levi C.
2LT Blye, Thomas W.
1LT Brown, Elaine K.
1LT Brzozowski, Alex C.
2LT Bunting, Eric D.
2LT Chassen, Anthony B.
1LT Denzine, Victor A.
2LT Evans, Jonathan P.
1LT Fernandes, Sherwyn E.
1LT Hayward, Ryan C.
1LT Hillard, Trey H.
2LT Neal, Austin L.
2LT Nicholas, Donald J., Jr.
1LT Vogler, Nathaniel W.
Warrant Officers
WO1 Dinwiddie, Lee A. -DG
WO1 Gamboa, Christopher M. -HG
WO1 Masson, Jonathan E. -HG
WO1 Ensle, John R.
WO1 Green, Dominiquie R.
WO1 Jobe, Tyler N.
WO1 Kelch, Kelly D.
WO1 Lopez, John D.
WO1 Maldonado, Christopher J.
WO1 McCullough, Timothy K.
WO1 Miller, Justin A.
WO1 Olson, Matthew D.
WO1 Singh, Andrew T.
WO1 Sobus, Sean M.
WO1 Trujillo, Timothy R.
WO1 Urbina, Carlos A.
WO1 Warren, Jason C.
WO1 Zhou, Betty R.
-DG: Distinguished Graduate
-HG: Honor Graduate

Non-Rated Warrant Officer Graduates

AAAA congratulates the following officers graduating from the Aviation Maintenance Warrant Officer Basic course at the U.S. Army Aviation Logistics School, Joint Base Langley-Eustis, VA.

8 Officers August 27, 2021
Class 005-21
WO1 David A. Brocado - DG
WO1 Chris C. Arterburn - HG
WO1 Jeremy L. Broxson
SFC Juan Carlos Caravajal-Mancilla
Class 006-21
WO1 Todd M. Facello
WO1 Cameron B. Warren - DG
WO1 Shane M. Townes - HG
SGT Christian C. Hermida-Manchola


WOBC Class 005-006-21
US ARMY PHOTO

ADVANCED INDIVIDUAL TRAINING (AIT) GRADUATIONS

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

AH-64 Attack Helicopter Repairer (15R)
Class 027-21
PV2 Victor Gonzalezarias
CPL Andre Jones
PV2 Malcolm Wheeler
SGT Khalifa Ashkanani
Class 028-21
PV2 Jonathon Daniel Horton-DG
PV1 Brayam Arboledadiaz
PV1 Dandre Oneil Bartley
SPC Bryan Glenn Birchmore
PV2 Elisha Marcus Glasco
PV1 Glendaliz Guzmanperez
Class 029-21
SPC The Quang Nguyen-DG
PV2 Colin Jake Baker
PV1 Joseph Chase Dlouhy
PFC Nathen Harley House
PV1 Connor Reid Kindred
PFC Zachary William Krugman
PFC Justin Michael Majewski
PV2 Samuel Isaac Mejiasfebres
PV1 Thanh Trung Nguyen
PV1 Jorge Gerardo Ordazamezcua
PV1 Dimitri Isiah Starks
PFC Joexys Suarez
Class 030-21
PV1 Ryan Joseph Peters-DG
PV1 Brandon Ryan Figueredo
PV2 Christopher Gonzalezrepollet
PV1 Miguel Hernandez
PFC Elijah Chineang Lac
PV1 Thomas John Paluszak
PV2 Colton Allyn Perrin
SPC Jerrod Bryan Roberts
PV1 Lazaro Jesus Rodriguez
PV1 Joseph Edmond Roll
PFC Brandon Paul Stockdill
PV2 Izaac Zonta Wilcox

CH-47 Medium Helicopter Repairer (15U)
Class 020-21
PFC London Kaleolani Malone-DG
PV2 Taylor Shay Mallwitz
PV2 Joshua Douglas Sisco
PFC Robert Matthew Wiggins
PFC Jackson James Wilkinson
PV2 Eufemia Ysabel Bilbao
PFC Ian Gallagher
PFC Hailey Goins
SGT Brian Henman
Class 021-21
PFC Kenton Isaiah Noel - DG
PV2 Juan Anton Castillo Martinez
PV2 Kasey Bryan Gano
PV2 Gage Jacob Liebrock
PFC Rigby Allen Peterson
PV2 Spencer Eugene Phelps
PV2 Cole Michael Portwood
PFC Cody Michael Thompson
PV2 Bryan Efrain Velazquez
Class 022-21
PFC Hayden Lee Miller – DG
PV2 Alexander Frank Allison
PV2 Juan Anton Castillo Martinez
PV2 Maressa Ramona Olmedo
SPC David Paul Pecorilli
PV2 Joseph Michael Reneau, II
PFC Jacob Christopher Sartor
PV2 Jacob R. Wilkinson Lanphar
Class 023-21
PFC Andrew N. Schumacher -DG
PV2 Emmanuel Feliciano
PV2 Juan Anton Castillo Martinez
PV2 Kasey Bryan Gano
SPC Heric A Nelson
SPC Kyle Daniel Robinson
PFC Joseph Turneranderson Schley
PFC Jerad Michael Shipman
PV2 Kristain Lee Taylor
PFC Shawn David Zimmerman

UH-60 Helicopter Repairer (15T)
Class 049-21
A1C Ryan Andrzej Brandon
AB Joshua Ray Hargis
A1C Kevin Trevohn Henry
SRA Fideiucio Adam Herrera
A1C Johnny Huynh
AB Tanner Benjamin Lamb
AMN Austin Mitchell McBride
A1C Brenden William Wassmer
AB James Curtis Dean Wilson
AB Justin Daniel Youngman
Class 050-21
PV2 Nickolas K. Steinbrecher - DG
SPC Omar Alonzo
PV2 Andrew N Awad
SPC Morgan Joseph Berenson
SPC Caleb Michael Cochran
SPC Cole Allan Cochran
PFC Calvin Case Conerly
PFC Austin Joel Copper
SGT Zachary Semuel Fewox
PFC Colin Richard Kosubinsky
CPL Jeremiah Caleb Rankins
Class 051-21
PV2 Sebastian Orion Elwood - DG
PV2 Brian Scott Faust, Jr
SPC Aaliyah Reann Fitzke
PV2 Mason Robert Furney
PV2 Stephen Richard Hill
PV2 Steven Lim
SPC Jason Hoyuen Lo
SGT Adrianne Marie Maniscalco
PV2 Benjamin Michael Quinones
PFC Algaci Ormario Tulio, Jr
PV2 Trace Andrew Tuma
SGT Emily Emerson

AIT Graduations Continued on next page

People On The Move

AIT Graduations Continued

Class 052-21
PFC Gunnar Evan Wells - DG
SPC Shawn Kenneth Armstrong
SGT Chase Tyler Bratton
PV2 Kaiseem Amar Brockington Jr
PFC Walker James Coulter
SPC Andrew Joseph Flack
SPC Dejion Blake Garcia
SGT Joseph Ross Kocik
SPC Joshua Andrew Tippett
PV2 Max Edmund Wilhelm

Class 053-21
PFC Caleb Jamerson Tuttle-DG
PV2 Steven John Abraham, III
PFC Garrett Edward Borini
PV2 Daniel Xavier Garcia, II
PFC Paxton Daniel Hunt
PFC Jacob Michael Knight
PV2 Ethen Robert Massengill
PV2 Jacob Nicholas Michaud
PV2 Cole Thomas Salvail
SPC Dallis Jordan Trego
PV2 Garrison Kane Williams
PFC Nicholas Niles Willingham

Class 054-21
SPC Josue L.I Riveraramos -DG
SPC Kyle Steven Baum
SSGDylan Keeth Dancer
SGT Nicolas Felipe Giglio
PV2 Michael Paul Gowerburke, Jr
PFC Tristan Paul Hendrickson
PFC Anthony Kyle Loconte
SPC Carlos Michael Morales
PFC Tristen Britt Parker
SGT Kevin Michael Roe
SGT Austin Jerath Wright

Class 055-21
PFC Michael A. Barberini-DG
PV2 Elijah Bolden
PV2 Gabriel Bryant
PV2 Hunter Dryden
SPC Brooke Gentry
PV2 Fiacre Ishimwe
PV2 Liam Marsden
PFC Allison Miller
SPC Janya Moolthongsuk
SPC Phoebe Riddle
PV2 Devon Weatherly

Aircraft Powerplant Repairer (15B)
Class 011-21
PFC Anan Rayd- DG
PV2 Terrin Jaiden Garcia
PFC Ezra Thomas Mobley
SPC Adetiloye Samuel Ojobo
PV2 Matthew David Romeo
PV2 Ethan Luke Tucker

Aircraft Powertrain Repairer (15D)
Class 007-21
PFC Connor Lee Woodman-DG
PV2 Jomel Randy Amulong
PV2 Theodore William Bacalis, Jr
PV2 Justin Kyle Brawley
SSG Samuel Paul Crawford
SPC Ashley Nicole Hanafin
PV2 Garrett Patrick Joyce
PV2 Dylan Edwin Miller
PV2 Leonardo Ha Montanezsanchez
PV2 Garrett Liammark Moore
PV2 Christina Desirea Murders
PV2 Joshua Adam Pongratz
2LT Emils Henrijs Taube
SPC Zachary Johnson Theirl
PV2 Justin Scott Vance
PFC Jerry Brandon Wade

Aircraft Electrician (15F)
Class 009-21
PFC Madilyn Grace Cowart- DG
PV2 Christian Rush Alexander
PFC Trevor Daniell Ballard, Jr
PVT Mateo Diaz
PFC Richard Francisc Espinallee
PFC Gage Michael Knott
PFC Kayli Alexis Strain

Class 010-21
PFC Christopher A. Stupar- DG
SGT William Spencer K. Ellis
SSG Michael Roger Ketchum
SPC Tyler Wayne Langham
SPC Thomas Daniel Obryant
SPC Taylor Nathaniel Shell
PVT Tamaran Deandre White
PVT Keegan Earl Williamson
PV2 Brodie Quentin Wiseley

Aircraft Structural Repairer (15G)
Class 008-21
PV2 Shawn Aaron Conner-DG
PV2 Kevin Darnell Butler, Jr
PVT Nicholas Edwin Campion
PV2 Thayne Owen Crompton
PFC Anthony Denell Edwards
PV2 Samuel Adrian Gerenarivera
PV2 Christian Dieterfran Gerthe
PV2 Alexander William Hazelton
PV2 Cody Robert Henderson
PV2 Joshua Allen Huff
PV2 Richard Anthony Lopez, Jr
PFC Marlon Martinez
PV2 Justin Tiger Mondor
PV2 Zachery Ryan Perdue
SPC Christine Punnoosegeorge
PV2 Tyler Yi Schroeder
PV2 Dat Vuthanh Tran

Aircraft Pnedraulics (15H)
Class 012-21
PVT Sevrin J. Brown- HG
SPC Phuc Hanh Hoang
SPC Danny Chance Whittler

Avionic Repairer (15N)
Class 010-21
PFC Sky Sunny Kim- DG
PV2 Odjian N Maldonadocolon
PFC Luis Javier Mendez
PV2 Austin Patrick Mercer
PFC Liz Diana Ruiz
SPC Miguel Angel Valencia
PFC Matthew Michael Waters

Class 011-21
SPC Nathaniel K. Mefford-DG
SPC Carlos Alberto Abrego, Jr
PV2 Rosty J Acostavelez
PVT Demiko Anthony Blincoe
PFC Julius Alexi Gonzalezroldan
PV2 Sonny Gutierrez
SGT Joseph William Jensen
SGT James Lee Pyle

Class 012-21
PFC Cameron Michael Altland
PV2 Dennis Raymond Andrade
SPC John Norman Files
SPC Sheldon Christopher Kibby
PFC Justin Martinez
PFC Brandon Terry Rea

AH-64 Armament/ Electrical/Avionic Systems Repairer (15Y)
Class 010-21
SPC Weston Pearson-DG
PV1Mason Bradberry
SPC Jacob Cote
PV2 Jimmy Honshell
PV2 Jude Hutton
PV2 Jack Jerram
PV2 Lukas Martinez
PFC Quinn Miller
PFC Carson Paulsen
SGT Stephan Rentz
SPC Elvin Rodriguezvalentin
PV2 Lance Wiggins

- DG: Distinguished Graduate
- HG: Honor Graduate

Unmanned Aircraft Systems (UAS) Graduations

Warrant Officer
AAAA congratulates the following Army Graduates of the Tactical Unmanned Aircraft Systems Operations Warrant Officer Technician Course, MOS 150U, at Fort Huachuca, Az.

Tactical Unmanned Aircraft Systems Operations Warrant Officer Technician Course

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

Shadow UAS Repairer Course
8 Graduates, 28 July 2021
SPC Kaitlin Christiansen -HG
SSG Jerry Ratliff
SGT Adam Lou
SPC Donnaven Blue
SPC Richard Delfin
PFC Jason Glenn
PV2 Jonah Burks
PVT Andrew Pate
5 Graduates, 16 August 2021
PFC John Gerace -HG
PFC Anthony Baars
PV2 Drake Cross
PV2 Holten Hughes
PV2 Tajaye Murray

Grey Eagle UAS Repairer Course
15 Graduates, 21 July 2021
PFC Dorien Mueck -DG
PFC Ethan Bryan
PV2 Caleb Peel
PVT Reginald Bullock
PVT Kyler Carter Hg
PVT Patrick Donlin
PVT Richard Fulton
PVT James Haman
PVT Caleb Hendon
PVT Thomas Jacobs
PVT Nicholas Ngo
PVT Joseph O'brien
PVT Samuel Pelton
PVT Roscoe Sanders
PVT Cole Silveous

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

Shadow UAS Operator Course
22 Graduates, 16 April 2021
PV2 Logan Franks -DG
PFC Justin Moore -HG
SPC Cedric Hill
PFC Dakota Howell
PFC Samantha Chapple
PFC David Fallon
PFC Dorians Flueridor
PFC Patrick Hayes
PFC Austin Hodson
PFC Dion James
PFC Alanna Ledvina
PFC Eric Newman
PFC Robert Sutton
PFC Ryan Williams
PV2 Jacob Davis
PV2 Eva Desoi
PV2 Addam Flores
PV2 Devon Garner
PV2 Marcus Groves
PV2 Robert Leibold
PV2 Isaiah Peltonen
PV2 Dakota Perry

23 Graduates, 28 July 2021
PV2 Paul Null -DG
SPC Wesley Womack -HG
SPC Warren Smith
PFC Joshua Davis
PFC Ferdinand Defelice
PFC Sierra Nessel
PFC David Ortega
PFC John Strazza
PFC Anthony Williams
PV2 Mahlon Barnett
PV2 Joshua Currier
PV2 Joseph Hernandez
PV2 Roman Rodgers
PVT Steven Alexander
PVT William Bateman
PVT Jeremy Burch
PVT Thomas Doyle
PVT Octavio Galicia
PVT Jacob Grauer
PVT Matthew Henderson
PVT Alexander Liscio
PVT Jordan Mcgee
PVT Wade Weaver

Grey Eagle UAS Operator Course
22 Graduates, 18 August 2021
SPC Joan Sancheznava -DG
SPC Gene Hart -HG
SGT Michael Walker
CPL Glen Carroll
SPC Brent Clute
SPC Jason Foell
SPC Montel Martin
SPC James Smith
SPC Hanna Thorsen
SPC Scott Williams
PFC Kolton Graves
PFC Nicholas Jensen
PFC Alfredo Ledezma
PV2 Dominick Bianchini
PV2 Hunter Blazevic
PV2 Griffin Butler
PV2 Blake Clark
PV2 Gabiel Garcia
PV2 Corinna Hogan
PV2 Issac Horton
PV2 Julian Jung
PVT Aidan Lidgard

DG - Distinguished Graduate
HG - Honor Graduate

UPCOMING EVENTS

NOVEMBER 2021

15-17	AAAA Joseph P. Cribbins Training, Equipping, and Sustainment Symposium, Huntsville, AL
30-2 Dec	Association of Old Crows, 57th Annual Intnl Symposium & Convention, Washington, DC

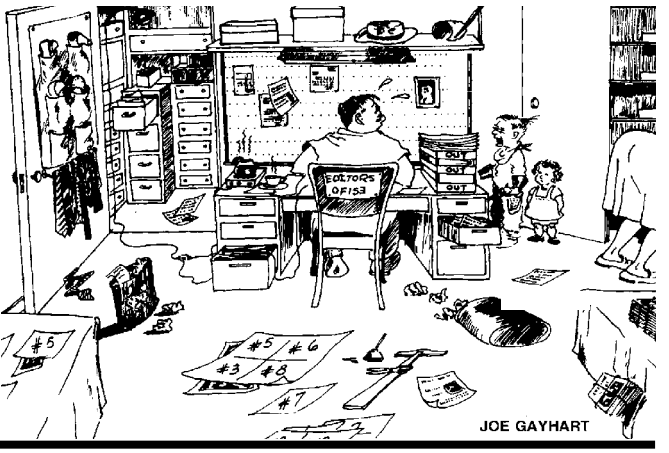
DECEMBER 2021

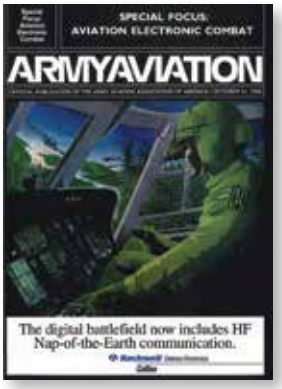
7-8	AAAA Luther G. Jones Army Aviation Depot Forum, Corpus Christi, TX
11	The 122nd Army-Navy Game, MetLife Stadium, East Rutherford, NJ

Art's Attic

By Mark Albertson

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





25 Years Ago,
October 31, 1996

Briefings

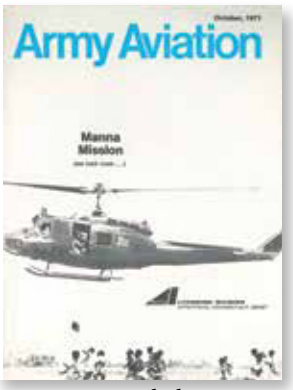
On September 17, 1996, General Johnnie Wilson, C.G. Army Material Command, announced that he has approved naming the command created by merging the aviation and missile areas as the United States Army Aviation and Missile Command (AMCOM). AMCOM will be headquartered at Huntsville, Alabama.

Command Change at Fort Rucker

September 12, 1996, Major General Ronald E. Adams relinquished command of the Army Aviation branch. He had assumed command on July 28, 1994, having been Director of Requirements, Office of the Deputy Chief of Staff for Operations and Plans, the Army Staff, prior. He is now on his way to assume the duties, Assistant Deputy Chief of Staff for Operations and Plans for Force Development, U.S. Army Staff, Washington, D.C. Major General Daniel J. Petrosky, has assumed command of the U.S. Army Aviation Branch and C.G. U.S. Army Aviation Center and Fort Rucker, Alabama and Commandant, U.S. Army Aviation Logistics. Previously Major General Petrosky was Deputy Chief of Staff, Operations, Headquarters, U.S. Army Europe and Seventh Army, Heidelberg, Germany.

First Annual Army Aviation Simulation Symposium

General John M. Shalikashvili (center left), Chairman of the Joint Chiefs of Staff, listens to a presentation by Colonel William W. Powell (center right), Director, Directorate of Training, Doctrine, and Simulation (DOTDS), Fort Rucker, Alabama, as Major General Richard E. Stephenson, (Ret.), (left), AAAA President, Major General Ronald E. Adams (center), Aviation Branch Chief and, Mr. Michael Edwards, Fort Rucker, Alabama, look on.



50 Years Ago,
October 1971

Cash Award

CW2 Russell L. Yarbrough, an armament technician assigned to the 34th General Support Group, USARV, received a $1,265 cash incentive award from Brigadier General Robert N. MacKinnon, USARV Aviation Officer, for his recommended improvement of the drive assembly on the XM-35 armament system used on AH-1G Cobra gunships. His suggestion is expected to save the Army $161,135 in the first year of utilization.

Cartoon

"Three cargo choppers were supposed to get us out. One hit a radar tower and crashed into a truck. Another tripped and crashed on a revetment. The other got its blades caught in trees. Can't you guys do better than that?"

A Worldwide Commitment

One of the responsibilities of the Army Aviation Directorate is to monitor the executive helicopter service provided to the White House by the U.S. Army Executive Flight Detachment (USAEFD) located at Davison Army Airfield, Fort Belvoir, Virginia. The White House helicopter service was formed, December 1, 1957. The original USAEFD was organized at Davison Army Airfield and provided this service until March 1966. During the Johnson Administration, an element of this detachment was located at Randolph Air Force Base, Texas, becoming part of the Fourth U.S. Army Flight Detachment, September 1965. In June 1969, this element became a separate unit and relocated at Homestead Air Force Base, Florida. In July 1970, the USAEFD returned to Davison Army Airfield and is presently assigned to the Military District of Washington.

TOP: A Detachment VH-3A approaches the Jefferson Memorial on its "final" to a landing at the White House. BOTTOM: A time for sightseeing! The Presidential party views a major monument under construction.

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 2023 induction is June 1, 2022

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

Colonel Van T. Barfoot, Retired

Army Aviation Hall of Fame
2014 Induction – Nashville, TN

COL Van T. Barfoot received the Medal of Honor, Silver Star, three awards of Purple Heart and a battlefield commission to Second Lieutenant during WWII for the single handed capture of 17 German soldiers and the killing of eight others on May 23, 1944.

He completed flight training as a Major at the age of 40 in 1960 and was assigned to the legendary Howze Board which established Air Mobility and modern Army Aviation. During Vietnam, he again answered the Nation's call as the Deputy Aviation Officer, 1967-68, and flew 177 combat hours earning an Air Medal with two clusters and Legion of Merit.

He was a Senior Army Aviator in both fixed and rotary wing aircraft with just 14 years of aviation service. In retirement and among the last surviving Medal of Honor recipients of WWII, he faithfully raised and lowered "Old Glory" daily on the lawn of his modest Henrico, Virginia home. When ordered to take down his flagpole or face court action by the local homeowners association citing "curb appeal and aesthetics," he adamantly refused. Support poured in from across the nation, he stood his ground, the homeowners relented, dropped their case and his flag flew until he could raise it no more.

COL Barfoot passed away March 2, 2012, at the age of 92 – a true patriot to the end.

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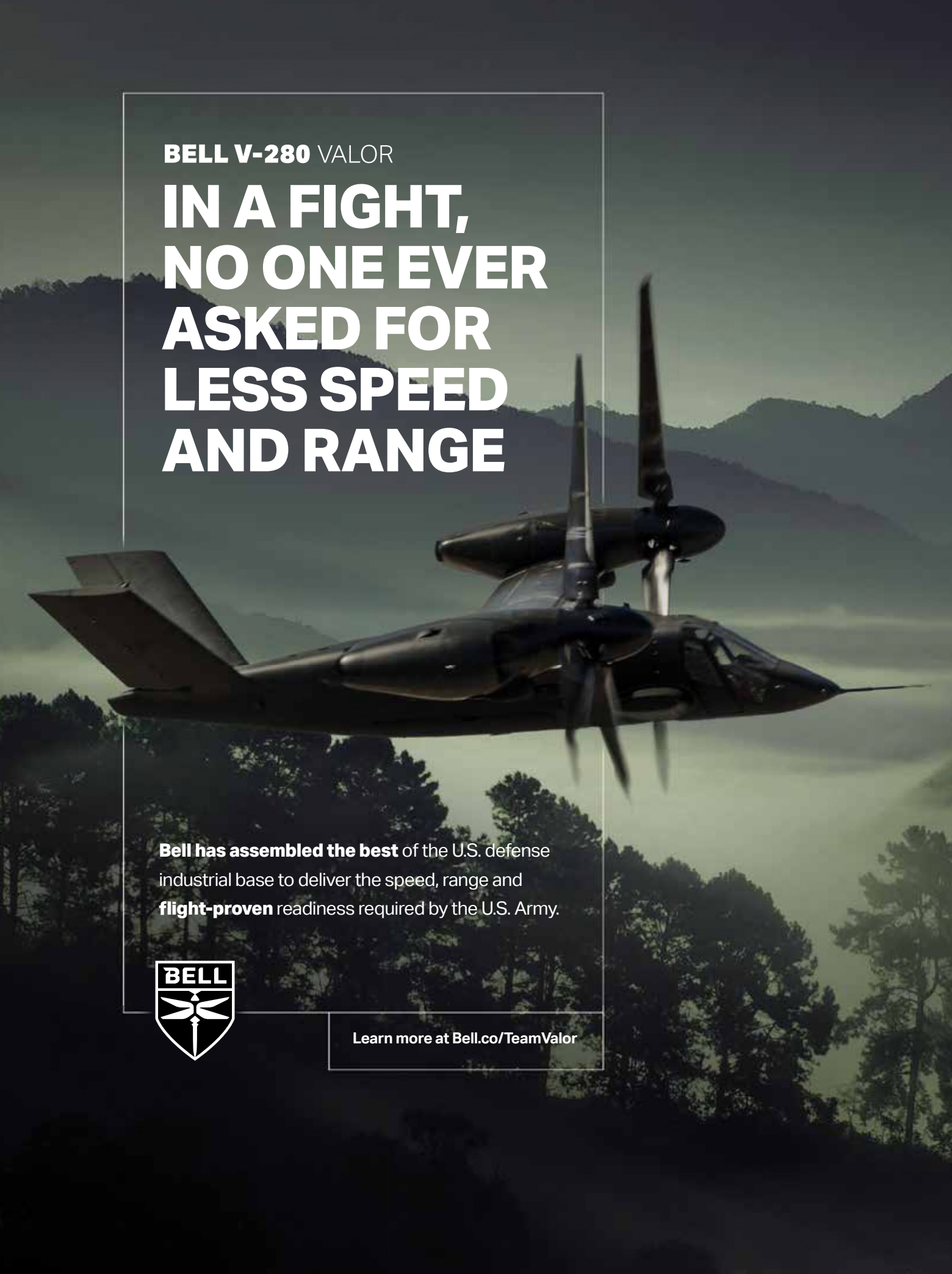
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