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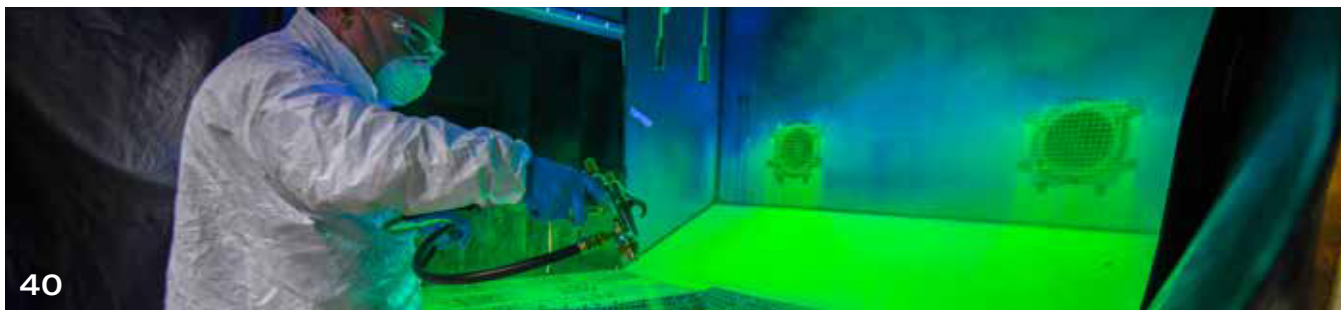
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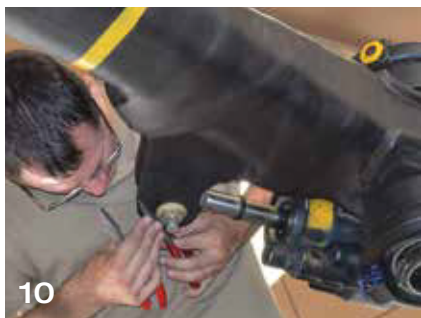
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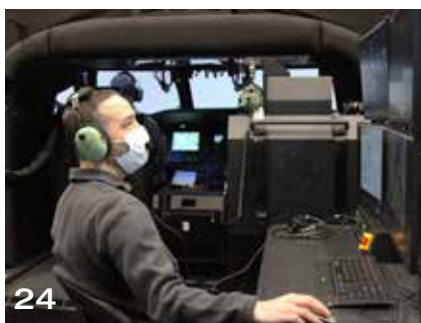
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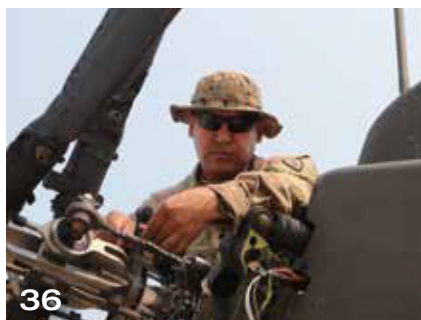
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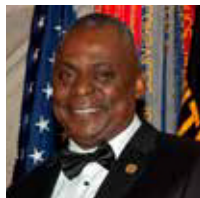
In November, Amentum acquired DynCorp International, a provider of sophisticated aviation, logistics, training, intelligence and operational solutions in more than 30 countries. The combined companies deliver enhanced capabilities for their customers, including a full suite of logistics/aviation services and solutions to support their needs anywhere, anytime.

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Briefings ▶ Late Breaking News - Announcements

Biden Taps Austin for SECDEF

President-elect Joe Biden has nominated retired GEN Lloyd James Austin III to head the Department of Defense. During his more than 41-year Army career, he was the last commanding general of the U.S. Forces in Iraq and served as the 33rd vice chief of staff of the Army. He is a U.S. Military Academy Class of 1975 graduate and holds a Master of Arts in counselor education and business management. He retired from the Army in 2016, and subsequently served on the boards of Raytheon Technologies, Nucor, and Tenet Healthcare. If confirmed by the Senate, Austin will become the 28th Secretary of Defense.



U.S. ARMY PHOTO BY JOHN FELLINO, WEST POINT, PA

15-0 – which has Navy leading that 121-game series 61-53-7. The Trophy is awarded to each season's winner of the American college football series among the teams of the three Service academies. Both games were played at Michie Stadium at West Point without fan attendance as a result of COVID-19 pandemic precautions.

Army Astronauts Named to NASA Artemis Team

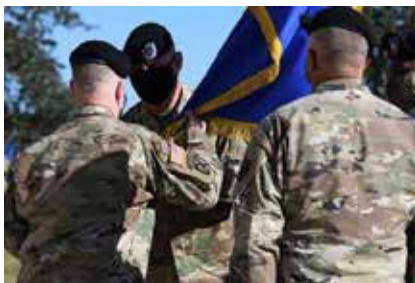


NASA PHOTOGRAPHICS

Army astronauts LTC Anne McClain and LTC (Dr.) Frank Rubio, both Senior Army Aviators and Rubio a flight surgeon, were announced by NASA on Dec. 9 as part of a group of 18 astronauts who form the Artemis Team and help pave the way for the next astronaut missions on and around the Moon as part of the Artemis program. NASA's Artemis program will land the first woman and next man on the Moon by 2024. In collaboration with their commercial and international partners NASA will establish sustainable exploration by the end of the decade and use what is learned on and around the Moon to take the next giant leap – sending astronauts to Mars.



Wilson Assumes Responsibility at USAACE



U.S. ARMY PHOTO BY KELLY MORRIS, USAACE PUBLIC AFFAIRS

CSM James D. Wilson, incoming command sergeant major of the Aviation Branch receives the Aviation Branch Colors from MG David J. Francis, commanding general of the U.S. Army Aviation Center of Excellence and Ft. Rucker, during a change of responsibility ceremony on Howze Field, Nov. 20. Wilson comes to Fort Rucker from his most recent assignment as the U.S. Army Special Operations Aviation Command (Airborne) CSM at Fort Bragg, NC. During the ceremony, outgoing CSM Brian N. Hauke (back to camera) and his wife, MAJ Christi Hauke (not pictured), also retired with a combined 56 years of service.

Army Wins Commander-In-Chief's Trophy



DEPARTMENT OF DEFENSE PHOTO

The Army West Point Black Knights beat Air Force 10-7 on Dec. 19 to win the Commander-in-Chief's Trophy for ninth time. The previous Saturday Army beat the Navy Midshipmen

CORRECTION:

On page 115 of the Aug/Sep 2020 issue, the zip code & phone numbers for 12th CAB have changed: APO AE 09117 / Commercial 49-611-143-587-xxxx / DSN 314-587-xxxx CO – 0701 / DCO – 0703 / XO – 0704 / CCWO – 0706 / CSM – 0705

And COL Broam's email is john.b.broam 3.mil@mail.mil.

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Taking Off Into 2021!



JOINT TASK FORCE BRAVO PHOTO BY AIR FORCE SSST ELLIOTT TIGGS

It is finally 2021! Like most of you, I have been looking forward to a new year for many months.

Army CH-47 Chinook crew members assigned to the 1st Battalion, 228th Aviation Regiment, Joint Task Force-Bravo, sanitize after transporting a pregnant COVID-positive patient in Guatemala City, Guatemala Nov. 27, 2020.

It is finally 2021! Like most of you, I have been looking forward to a new year for many months. Always an optimist, I hope that this new year brings all of us health, prosperity, and the ability to continue to support Army Aviation in the best possible manner.

That said, we have had to “deal” with the COVID situation in a forthright and transparent way: just as our Branch Chief determined that a face to face Army Aviation Senior Leaders Forum in late January 2021 would not be possible, Bill Harris and I determined that our annual Luther Jones ASE Forum, February 9-10, also could not be safely held. We will be announcing how we will honor the many AAAA Award winners that normally receive their awards during these two events – most likely we will have to combine them with 2021 winners at the next forums.

So now we focus on our Army Aviation Mission Solutions Summit, April 21-23, at Opryland, Nashville, TN! We at AAAA are exploring every means possible to hold the summit, and will be announcing measures we plan to take in the near future. Warning order: they could include taking a COVID test at or prior to the Summit, and clearly coming back negative. Certainly, please con-

sider receiving the vaccination when it is made available for you.

In this issue we focus on Army Aviation sustainment. As I have said before in my Cockpit articles, amateurs talk tactics, and professionals talk logistics.

Our lead article is authored by the senior Army leader responsible for Army sustainment, Army Material Command (AMC) Commander, General Edward Daly. He sets the stage for the rest of the articles as he discusses how his command is supporting Army Aviation modernization while also focusing on the enduring fleet. The Commander of U.S. Army Aviation and Missile Life Cycle Management Command (AMCOM) MG Todd Royar, noting that seventy percent of a program's total cost is generated in sustainment, delves into how AMC and AMCOM are developing PPMx, Predictive and Prognostic Maintenance, in order to address the sustainment resourcing issues.

Our Branch Chief, MG Dave Francis, dives deep into the impact of the newly released U.S. Army Concept for Aviation 2028, specifically in calling for a reduced logistics footprint, an increased organic Army Aviation maintenance capability, and an improved overall operational availability.

In keeping with our monthly “People” highlights, we congratulate MG Frank Tate on his command of First Army Division West and his retirement after so many decades of selfless service and send him and his family our very best wishes.

We also want to congratulate BG Dave Hall as he assumes his new role at the Army National Guard, replacing retiring BG Ray Davis, whom we farewelled last month.

Finally, we congratulate the twenty-nine aviators on the Colonel and Lieutenant Colonel Command lists!

We at AAAA are always trying to remain relevant to our membership and our branch despite the COVID pandemic restrictions. We are working on details for a virtual Army Aviation Congressional Caucus meeting with the Army Aviation senior leadership, as well as a virtual Army Aviation senior leader update to our AAAA Senior Executive Associates.

Stay healthy! As always, I pledge to ensure that AAAA does its part to help YOU: our Soldiers, families, and senior leaders!

MG Jeff Schloesser, U.S. Army Retired
34th President, AAAA
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Sustaining Army Aviation During LSCO

By MG David J. Francis



U.S. ARMY PHOTO BY SPC JEDIDIAH GADDIE

As a nation, we rely on our ability to project power from the Continental United States and globally integrate the Joint Force's actions.

U.S. Army SPC Jedidiah Gaddie, CH-47 helicopter repairer with Bravo Company, 628th Aviation Support Battalion, 28th Expeditionary Combat Aviation Brigade performs routine maintenance on a CH-47 Chinook helicopter at an airfield in the 28th ECAB's area of operations in the Middle East.

The Army requires that we establish and train as an expeditionary force capable of executing a series of rapidly and continuously integrated options across all warfare domains. For Army Aviation, this shapes the modernization effort for our core/enduring required capabilities (RCs), comprising three general categories: 1) Reconnaissance and security, 2) Air assault, air movement, and aeromedical evacuation, and 3) Attack, close support (to include interdiction, Electronic Warfare).

Accompanying our core capabilities are three enabling RCs: 1) Ensure aircraft and aircrew survivability, 2) Sustain and maintain aviation operations, and 3) Support of C2. While Aviation RCs will remain relatively constant over time, each RC's underlying tasks, conditions, and standards will not. Historically, as technology innovates and matures and as adversaries do the same, our approach to providing these fundamental capabilities to the Army changes as well. This results in an ever-developing

set of tasks, conditions, and standards required to maintain overmatch with our adversaries via improved reach, survivability, lethality, and sustainment.

The doctrinal context that defines the environment in which we must provide these capabilities is how we will execute our mission sets in a decentralized manner while dispersed for prolonged periods from austere locations with limited resupply and a reduced sustainment footprint. This is the approach we are taking with the Future Attack Re-

connaissance Aircraft (FARA), Future Long-Range Assault Aircraft (FLRAA), and Future Tactical Unmanned Aircraft Systems (FTUAS).

As we continue to refine the requirements for the fight we are expecting, we have to focus on both the ability to fight them and the ability to sustain them. This linkage between the two begins when a capability gap is recognized, and the requirements are defined. Building the system and sustaining the system must be aligned from the start; if it is not sustainable, it will always lag behind.

The Concept

As we move forward and build an expeditionary sustainment system for the current fleet and Future Vertical Lift (FVL), there must be an overarching approach that encompasses all fleets. Our newly released U.S. Army Concept for Aviation 2028 delves into these topics in-depth and covers: Reduced Logistics Footprint; Increased Organic Capability; Improved Operational Capability; and Decreased Life-Cycle Costs.

A **reduced logistics footprint** is essential for several reasons. First, a reduced logistics footprint will reduce the 'signature' of Aviation units, making them harder to detect (and target). Second, a

reduced logistics footprint will reduce the demand on transportation assets (in delivering the supplies/equipment/personnel to the unit and moving supplies/equipment/personnel with the unit). The reduction in transportation demand, in turn, returns a relative degree of mobility to the unit, thereby enhancing survivability and the ability to operate dispersed. Third, a reduced logistics footprint will preclude wastage and/or mal-positioning of supplies/equipment/personnel. Aviation sustainment will achieve a reduced logistics footprint through the aggregate effect of a number of initiatives.

Increased Organic Capability will drive Army Aviation towards commonality in maintenance procedures, tools, and parts among various missions, designs, and a series of enduring fleets and Future Vertical Lift aircraft. Aviation maintainers will also leverage advanced technology for cognitive aiding and virtual instruction on maintenance tasks at the point of need to broaden capability further and improve capacity. Aviation sustainment elements must have an improved degree of mobility on the future battlefield.

Improved Operational Availability addresses the ability to meet the de-

mands of the scale, scope, and tempo of large-scale multi-domain operations. Army Aviation must have improved operational and materiel availability in its aircraft and critical mission systems.

All the efforts outlined above will contribute to decreased life-cycle costs for Army Aviation systems. Getting the right 'balance' between up-front procurement costs and long-term sustainment costs requires careful analysis and decision making from the program outset.

AMCOM has done an exceptional job laying out the expeditionary sustainment roadmap for Army Aviation in 2028 and is the lead for the Aviation Enterprise. It is up to the rest of the Enterprise to embrace this concept as we provide more effective and integrated approaches to facilitate the employment of Army Aviation, the Army as a whole, and the Joint Force in order to win on the battlefield of tomorrow and 2028 because winning matters!

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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Aviation Sustainment Across the Strategic Support Area to Enable Persistent Modernization

By GEN Edward M. Daly

The U.S. Army Materiel Command must remain engaged in our Service's role in both competition and conflict, all while navigating through unpredictable crises and embracing change across our institution.



U.S. ARMY PHOTO BY SGT JUSTIN ASHAW

As a stakeholder in the Army Modernization Enterprise (AME), AMC's sustainment capabilities and global reach allow us to play a critical role in supporting our Army's modernizing and enduring aviation, missile, and missile defense capabilities.

As General Gus Perna wrote on these pages last year, "supply availability and equipment readiness are the foundation of materiel and aviation readiness, ensuring Soldiers and units have the right equipment, parts and materiel to achieve their mission – anytime, anywhere." Much work has been done during the past few years to successfully create that foundation resulting in an increase to readiness.

We are now facing a period of rapid modernization that requires a holistic approach in the sustainment warfighting function from the Strategic Support Area to the tactical points of contact. The pace and volume of change brought about by the fielding of Multi-Domain platform capabilities requires collabora-

Armament Platoon conducting re-arms with Shops and Maintenance platoon D Co/1-3rd Attack Reconnaissance Battalion, 12th Combat Aviation Brigade, on an AH-64D Apache at Range 301, Grafenwöhr Training Area on July 20.

tion with our strategic partners, harmonized by the Cross Functional Teams (CFTs). This requires addressing sustainment requirements in new systems, directing supply chain transformation, and modernizing our industrial base and infrastructure to keep pace with our nation's requirements.

We must channel our efforts and resources on driving key outputs to our force, ensuring sustained, ready, and lethal forces wherever and whenever we are called by our nation. AMC, through the U.S. Army Aviation and Missile Command (AMCOM), focuses our efforts to modernize while simultaneously sustaining enduring capabilities through two primary efforts. The first is Industrial Base Readiness which includes: OIB Workload and Repair Cycle Float, Advanced Manufactur-

ing (AM) / Digital Thread, and OIB Facilities Modernization. The second is Supply Availability and Equipment Readiness which includes increased supply availability (SA), readiness rates for tactical units, Prognostics/Predictive Maintenance (PPMx), strategic divestiture, and distribution of new equipment and displacement. Focusing on these efforts will ensure we adapt all systems to effective sustainment paradigms.

Modernizing Capabilities – Partnering to Ensure Sustainment

AMC applied a "whole of AMC" approach to modernization and sustainment of Army systems to support both WayPoint 2028 and AimPoint 2035 described in the Army Modernization Strategy executed through collabora-

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tion and unity of effort in the AME. AMC is a supporting command to the Army Futures Command (AFC) which is the supported command for Army Modernization Force Design and Force Development. AMC is the supporting command to U.S. Army Forces Command which is the supported command for the Force Employment to support the ready force. In the AME, AMC is the supported command for Force Sustainment and Strategic Divestiture. Our Life Cycle Management Commands (LCMCs) align to both the PEOs and CFTs, with AMCOM aligned to PEO Aviation, PEO Missiles and Space, and CFTs: Future Vertical Lift, Air and Missile Defense, and Long Range Precision Fires.

Close collaboration with PEOs and CFTs enables AMCOM to drive the sustainment requirements of materiel availability, reliability, and operational & sustainability (O&S) costs in capability development documents. This informs industrial base, infrastructure, and supply chain modernization requirements.

Specific to aviation and missile programs, AMCOM supports Future Vertical Lift (FVL) CFT programs with dedicated professional logisticians and sustainment experts to develop foundational program and system documentation. This includes the Life Cycle Sustainment Plan (LCSP) and capabilities development documents. These documents ensure key system attributes and planning factors create supportable and affordable platforms and weapons systems to meet the challenges of Large-Scale Combat Operations.

Key enablers to develop and maintain supportable and affordable weapons systems include:

- Modernized facilities, depots, arsenals, installations and power projection platforms.
- Embedded PPMx on platforms to build a smarter, more effective supply chain.
- Integrated artificial intelligence capabilities into enterprise-wide decision making.
- Advanced Manufacturing (AM) from SSA to the points of contact. In conjunction with the Army's new policy on intellectual property (IP), we are shaping smart IP arrangements with systems developers to ensure we can embrace new expeditionary parts generation capabilities.

The aviation force of the future re-

quires a supply chain that can identify and redistribute capabilities faster. To meet this challenge, AMC is developing enterprise-level technologies to increase the ability to make informed senior leader decisions across our supported platforms. To support supply chain and decision making processes, AMC recently spearheaded the roll out of the Strategic Support Area Business Reporting Environment (SABRE). This system captures and leverages unique and traditional systems reporting to build a strategic view of our supply chain execution. SABRE is a live workspace for systems-related data, leading to real-time insights and decisions to prevent readiness challenges.

Enduring Systems – Sustainment Focus

Critical to AMC's support to Army modernization is our ability to continue to develop and refine effective, affordable, and sustainable options for enduring fleet sustainment. When we apply targeted resources and sustainment ingenuity, we also free up resources for modernizing and fielding through the continued refinement of courses of action to sustain our current fleets. We are driving hard to develop a wide-range of sustainment options across our AH-64, UH-60, and CH-47 fleets to offer the Army options above phase maintenance, but below full overhaul / recapitalization, to ensure long-term fleet health.

We are also investing heavily in applying reliability-centered maintenance and related technologies across our maintenance data repositories to find targeted parts investments. This reduces maintenance costs and time burdens through early failure identification. Specifically within our organic industrial base, we are spearheading pilot programs to overhaul AH-64 and CH-47 aircraft, creating additional sustainment options to current fleets. We are also offering the Army more surge capabilities in support of LSCO. We continue to build UH-60V digitized platforms, affording our Army upgraded battlefield capabilities at reduced costs while the Army makes long-term decisions on Future Long-Range Assault Aircraft (FLRAA). Additionally, the Army's Improved Turbine Engine Program (ITEP) is an important portion of the aviation modernization strategy and a key component of the Future Attack Reconnaissance Aircraft (FARA) platform going forward. It is planned to be integrated into the

Black Hawk and Apache platforms and replace the 701D engines.

AMCOM will continue to refine our Logistics Readiness Centers – Aviation construct, ensuring that AMCOM-generated capabilities keep pace with the needs of our fighting force. We recently led intensive maintenance training for Soldiers of the 1st Air Cavalry Brigade at CCAD, training junior officers and maintainers on critical maintenance. We will continue to integrate our sustainers as these Soldiers grow and develop to maintain our FVL systems of the future. The ongoing partnerships between the user, acquisition, and support communities help ensure our legacy and future fleets are better postured for readiness and combat capability.

We are simultaneously developing AM capabilities across our existing organic industrial base to augment supplies in surge scenarios as well as to develop manufacturing-enabling tools at the points of contact. AMC invests in realizing AM outcomes across the Army, supporting both enduring and future systems. As part of this investment, we have established the Rock Island Arsenal - Center of Excellence for Advanced and Additive Manufacturing.

The Way Ahead

AMC maintains a critical role in developing the Army's future vertical lift capabilities while simultaneously sustaining enduring platforms and systems. We remain heavily engaged in the Army Modernization Enterprise and are investing early in new systems – documentation, planning, and fleet-wide decisions. This ensures our force has an effective mix of ready, reliable, and lethal aviation technologies.

We will continue to invest our time and energy to develop affordable fleet sustainment options in support of Army modernization. We see ourselves, the needs of our Army and nation; and are fully committed to our role in enabling modernization to meet WayPoint and AimPoint milestones while simultaneously sustaining our enduring fleet.

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GEN Edward M. Daly is the commanding general of U.S. Army Materiel Command headquartered at Redstone Arsenal, AL.



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► AMCOM Commander Update

Editor's Note: For this AMCOM – Aviation Maintenance special focus issue, the branch chief, MG David J. Francis, has coordinated having the Army Aviation Enterprise maintenance / sustainment leader, MG K. Todd Royar, his command sergeant major, and the Branch Aviation Maintenance Officer, provide the lead, "To the Field," command group articles.

Minimizing the Cost of Sustainment

By MG K. Todd Royar



Army Aviation has been, and will continue to be, critical to how we as an Army fight. The branch provides a fundamental advantage in the combined arms fight that adversaries cannot match.

In order to maintain that advantage, Future Vertical Lift programs, along with targeted modernization of enduring platforms, must come to fruition. However, as we all recognize, our programs are expensive to not only procure, but also sustain. In fact, historically nearly 70% of a program's cost is sustaining it after procurement. Consequently, if we want to ensure the realization of Future Vertical Lift platforms, it is incumbent upon us as an aviation enterprise to take action to minimize the cost of sustainment for both our enduring and future platforms while also achieving increased readiness.

Our sustainment systems have

worked well over the years. However, if left on auto-pilot, we will have those same systems over the next several decades. We cannot afford this. We must take decisive action now to change our sustainment paradigm in several areas including: Predictive and Prognostic Maintenance (PPMx); digital designs and advanced manufacturing techniques; adapting our training of Soldiers; and updating our organic industrial base.

Army Aviation led the way with the implementation of Condition Based Maintenance (CBM). Over 95% of our airframes are outfitted with sensors that have enabled some

SPC Coleton Clavijo, a 15T Black Hawk repairer assigned to 3rd Battalion, 25th Aviation Regiment, 25th Combat Aviation Brigade, is working daily to make sure maintenance gets done on the UH-60 Black Hawks. Every member of the team enables 25th Combat Aviation Brigade to remain ready at all times.

success in identifying components before they fail or changing the Time Between Overhaul. Unfortunately, I believe we have yet to realize the gains possible. Our systems are proprietary by airframe and we are slow to make changes to our maintenance schedules based on the data already collected. We can do better. Changing from CBM to PPMx is more than a difference in name; it is a shift from being reactive to proactive. If we want to save resources and enable readiness, then we need to conceptually embrace PPMx to only do the maintenance necessary.

Virtually all of our current platforms are based on two dimensional

architectural drawings. While these provide the necessary data to safely make spare parts, there are limitations. Too often we are faced with parts having exceptionally long lead times (i.e., two years or more) in order for a supplier to analyze the drawings, make the appropriate tooling and then qualify the part. Additionally, because this process is laborious and time consuming, there are hundreds of parts that we cannot get suppliers to bid on because the limited quantity we need does not meet their threshold for return on investment. Three dimensional Computer Aided Design files will help reduce both the time and cost to make these parts through both traditional and advanced manufacturing techniques. Future Vertical Lift competitors are incorporating digital designs now and we are likewise currently creating a digital twin for the UH-60L.

Our Soldiers and civilian artisans are well trained, but we will need to expand their skill sets to accommodate new systems. Everything from electrical to composites may have significant changes. If we want to have the option of repairing forward on the battlefield and being able to do the work organically at our depots, we will need to ensure our people are appropriately trained.

Finally, we will need to modernize our organic industrial base (i.e., depots). To take advantage of PPMx and advanced manufacturing, we must invest in the tooling and capability at Corpus Christi and our other depots. We are in the process of doing that now. For example, within the next year we will automate analysis and repair of UH-60L blades reducing the repair time from over three weeks to just several days. This however is just one specific component; we need the entire depot to be operating in the 21st Century for all repair programs on both enduring and future systems.

There is no single panacea answer in reducing the sustainment burden for our enduring and future systems. In order to make significant progress, it will take change across multiple fronts. Change of course is never easy. But if we fail to change how we sustain, we may price ourselves out of the very systems we need in the future.

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

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► Aviation Branch Maintenance Office Update

Commonality for Today and Tomorrow— Enhancing Maintenance Efficiency in the Future...and Now

By CW5 Michael D. Cavaco



SPC Hunter Irby, a 2nd Squadron 6th Cavalry Regiment, 25th Combat Aviation Brigade, 25th Infantry Division aircraft mechanic, conducts maintenance on a Boeing AH-64 Apache at Jack Brooks Regional Airport, Beaumont, TX, Sept. 29, 2020. All aircraft are staged here prior to departing for Fort Polk, Louisiana to commence Joint Readiness Training Center rotation.

than the T701 engine to find a great example of how commonality leads to decreased costs through increased purchasing power; increased readiness through ease of availability; and increased maintainer proficiency through decreased variants or configurations. The more we can incorporate these concepts into future weapon system designs, the better we'll be able to sustain our equipment. But we have to prioritize this across the entire enterprise effort.

Ground Support Equipment

One support commodity that gets overlooked all too often is Ground Support Equipment (GSE). GSE isn't sexy – no one joined the Army because of a cool looking nitrogen generator on a recruiting poster – but we maintainers know that without it, even the best maintenance program, and readiness, will suffer. There are two categories of GSE – Peculiar Ground Support Equipment (PGSE) is equipment whose use is specific to one M/D/S; and Aviation Ground Support Equipment (AGSE) that is usable on multiple types of aircraft. By its very definition, commonality of PGSE is very limited in nature, but still provides opportunities for commonality by way of elimination – finding ways to incorporate those “peculiar” functions into a common “aviation” AGSE solution.

The laundry list of AGSE equipment in an average CAB is pretty extensive and includes items such as Aviation Ground Power Units (AGPUs),

Future Vertical Lift is one of the Chief of Staff of the Army's top priorities for Army Modernization, and this capability leap will be critical to winning on the battlefield of Large Scale Combat Operations.

However, there are a lot of important details between today's fleet and the fleet of tomorrow that need to be worked out to ensure we get it right. As a maintainer, one of the most critical constructs we need to incorporate is commonality... of systems, tools, and tasks, to name a few. The leaner our maintenance formations are, the more efficient they will be – and the result will be faster generation of combat power and increased readiness.

It's easy to comprehend the benefits of using many of the same parts across multiple mission/design/series of aircraft. You don't have to look any further

U.S. ARMY PHOTO BY SGT VALENCIA MONTEZ, 25TH PUBLIC AFFAIRS DET

Generic Aircraft Nitrogen Generators (GANs), Turbine Engine Wash Systems (TEWS), Environmental Control System (ECS) servicing carts, Self-propelled Crane Aircraft Maintenance and Positioning (SCAMP), Pitot Static Test Sets (PSTS), and much more. To be sure, each of these items does the job we need it to across the current fleet, but many of them are also approaching obsolescence. To the credit of a great many people behind the scenes, these systems have scraped by over the years to provide us the capability we need in the field, despite ever decreasing funding for GSE efforts. More recently, a number of modernization efforts have taken hold to breathe new life into this equipment. The SCAMP-II will be fielded shortly to replace the legacy SCAMP, providing a reliable, air-mobile crane that can be rapidly moved to the point of need by CH-47. Efforts to increase the reliability of the AGPU are also underway with new repair contracts for both the starter and regulator. Simultaneously, new efforts are also in development to incorporate the latest technology and upgrades to the AGPU and PSTS. These are but a few examples, and all are good news, but, as an enterprise, we still struggle

with the overarching plan for AGSE as we continue to incrementally modernize the enduring fleet of aircraft. Yes, we're upgrading this equipment now, but what's next? Will a Soldier maintain it, or will it be sent to a depot (or OEM) for repair and return? Are there spare parts on contract with a manufacturer? Is it a reportable item? These are all questions that must be asked and answered – I'm sure they have been over time, but the answers have changed.

Keeping Up With the Fleet

Yet even as we are starting to catch up with AGSE modernization, the fleet that it supports is changing even faster. We risk falling behind right out of the gate. Regardless of the final design for the Future Armed Reconnaissance Aircraft (FARA) or the Future Long Range Assault Aircraft (FLRAA), they will undoubtedly require the use of some AGSE (but hopefully very little PGSE). As technology has advanced to provide us with potentially revolutionary aircraft, so too has it provided opportunity to revolutionize (or at least "evolutionize") AGSE. We must embrace what we maintainers already know – AGSE may not be a combat multiplier, but a lack

of the right AGSE can absolutely be a combat detractor.

It's relatively easy to make the case that modernizing AGSE is important. The difficulty lies in two critical decisions. The first is deciding when to go "all-in" on a redesign vs. incrementally improving 40 years old designs – do we keep upgrading the AGPU to support our incremental upgrades in the enduring aircraft fleet? Or do we hold our resources, knowing that FARA and FLARAA may bring a whole new problem set, requiring a brand new AGPU solution? The second question is all too familiar, and hinges on the first – if we decide we need common AGSE equipment that will support the full range of functions required for the enduring and future fleets – what are we willing to sacrifice to afford it?

These are difficult questions, but the added cost up front will pay huge dividends in readiness, affordability, and maintainability in the long run. In my opinion, we can't afford not to.

CW5 Michael D. Cavaco is the Aviation Branch Maintenance Officer, U.S. Army Aviation and Missile Life Cycle Management Command at Redstone Arsenal, AL.

Keep an eye on the cost of "repair or replace" decisions.



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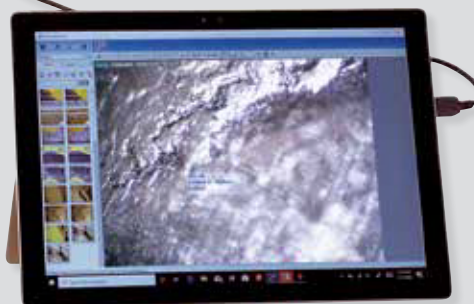
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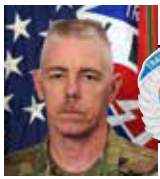


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Aviation Maintenance – Into the Future

By CSM G. Mike Dove



As I continue to the end of my military career, I often get the question “what have you done in the Army?” This is an interesting thing to consider, especially for someone who has spent more than two decades in Army Aviation.

The fact remains that there is very little the individual does by him or herself in the Army. Open almost any book and usually the first few pages are acknowledgements to those who helped publish the book or the family who supported the author while the book was written. There were quite a few people who helped me with this article who provided information or thoughts on where we are going in the future of Army Aviation. And once I finished the article, it still had to be edited, formatted and published in the magazine.

Thanks to Shawn, Tod, Jim, Joe and countless others who assisted me with this article. The “collective” principle applies for Army Aviation. There are many people and organizations involved in deciding the type of aircraft, its mission, how fast, far, what altitude it flies and how many people it can carry or ammunition it uses. But for this article I want to focus on the type(s) of material(s) used to create the airframe. For the future of Army Aviation, it is expected that composites such as carbon fiber, fiberglass, Kevlar, or some combination of each and possibly more will be fundamental in the construct of future air vehicles. Simply put, Future Tactical Unmanned Aircraft

Long after the pilots are done for the day, 12th Combat Aviation Brigade maintenance crews work tirelessly to ensure each aircraft is safe and ready to fly again the next day.

U.S. ARMY PHOTO BY MAJ ROBERT FELLINGHAM, 12TH CAB

► Enlisted Aviation Soldier Spotlight

Each issue 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 Annual State of the Union issue.



Henry Q. Dunn Crew Chief of the Year, 2018

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SGT Jack A. Brook

**4th Battalion, 160th Special Operations Aviation Regiment (Airborne)
Joint Base Lewis-McChord, Washington**

SGT Jack A. Brook excelled across a multitude of environments. While in combat he proved himself to be a warrior who eagerly met the enemy and unwaveringly defended his aircraft and fellow Soldiers. Without hesitation he placed himself in positions of danger in order to protect his ground force by engaging enemy forces. During numerous training events, including two months in the Republic of Korea, he demonstrated the ability to perform a wide variety of special operations aviation specific tasks with great precision and accuracy. These events directly

contributed to the increased readiness of hundreds of special operations forces from the United States and allied nations. Furthermore, as a fully mission qualified (FMQ) crew chief, he logged 498 flight hours. Within this limited amount of time he demonstrated natural leadership ability and the potential to serve as a Special Operations Flight Engineer. Finally, he showed his willingness to serve as a leader both on and off the aircraft. SGT Brook demanded excellence from himself and motivated all those with whom he served to do the same; he is an example for all to emulate and is most deserving of recognition as the 2018 Army Aviation Association of America Henry Q. Dunn Crew Chief of the Year.

System (FTUAS), Future Attack Reconnaissance Aircraft (FARA) and Future Long Range Assault Aircraft (FLRAA) will all have multiple composite parts and pieces. In fact, the airframe itself will most likely be completely made of a composite material.

Composites are not new to aviation and our airframe soldiers are trained and have completed many composite repairs over the years. A manual was even published in 2013 which provides procedures to conduct advanced composite material maintenance, TM 1-1500-204-23-11.

Some advances in composite repair techniques include the use of digital tools to inspect the composite materials, and previous composite repairs without ever physically touching the aircraft component. Gone are the days of using a quarter or small hammer to tap the structure and listen for a sound that indicates a deformity. Imagine using the camera and software on an iPad or tablet to scan the composite structure to look for cracks or improper repairs. With this new technology, the deformity is dis-

played similar to an X-ray image on the tablet. Imagine using an advanced tool to cut out the deformity with exact precision to make a more perfect, more reliable and stronger repair. These tools and capabilities are not from some science fiction movie, they are available now.

One such tool will be installed at Corpus Christi Army Depot soon for UH-60L main rotor blade repair. This tool will reduce blade repair time from 12 days to one day. The increase in efficiency will produce rotor blades for the soldiers at a significantly greater rate than is currently available and reduce the backorders for foreign partners that also operate the UH-60L.

Back to the original thought, it is never one soldier who repaired the helicopter and returned it back to a fully mission capable status. Within the unit, there are production control, quality control, maintenance platoon sergeants, maintenance test pilots, and flight crew who all work on the aircraft. Tech supply orders, receives, and issues the parts and components to repair the aircraft. Logistics Assistance

Representatives advise and assist maintainers through the process. At the enterprise level, there are engineers who approve the repair techniques, acquisition and contracting agencies who procure the individual parts and pieces needed for those repairs.

This is just the tip of the iceberg of what is required to maintain the Army's fleet of more than 4,000 helicopters. There are many more organizations and agencies that make up the Aviation Enterprise. As composite materials improve and become more prominent on Army aircraft, elements of the aviation enterprise and original equipment manufacturers must approve the development and repair techniques required for our Soldiers to keep the future fleet flying with the ultimate goal of providing support to the Soldiers on the ground.

Tradition of Excellence!

CSM G. Mike Dove is the command sergeant major of the Aviation and Missile Life Cycle Management Command at Redstone Arsenal, AL.



► Combat Readiness Center Update

Maintenance Test Flight: Task or Mission?

COL Ronald L. Ells



U.S. Army SPC Adam Litwinsky, a maintainer with Bravo Company, 628th Aviation Support Battalion, 28th Expeditionary Combat Aviation Brigade, performs routine maintenance on a UH-60 Black Hawk helicopter.

No, this isn't another article on how to "do maintenance by the book," but about what we do after the wrench turning is complete and the technical inspector signs the book.

A great flaw in Army Aviation maintenance programs is the lack of planning for the maintenance test flight (MTF). Oftentimes, the maintenance test pilot (MTP) conducts maintenance flights with the unit's most junior aviators. Additionally, the mission briefing officer (MBO) may not understand the risks of an MTF. Non-MTP aviators, with a little training, will become familiar with the MTF. As Army leaders, it is imperative that we address these shortcomings and set our crews up for success.

First, the Aviation MTF is not a training environment, but a mission environment to verify the airworthiness of an aircraft. By the very nature of an MTF, you are placing a crew into a position with higher potential of a mishap due to materiel or maintenance causes. Why then would you create a crew with one of the formation's most junior pilots to "get him/her some flight time" as opposed to providing a stronger crew in this challenging environment? Throughout one's career, an aviator develops air sense and understanding of systems in the event of an emergency. Junior aviators have not had time to hone these

skills and will defer to the MTP for all actions. As a result, the MTP could become almost a single pilot in this challenging environment; wouldn't it make sense to utilize more trained aviators on MTFs?

Next, just because someone is an MBO doesn't mean he/she is aware of the nuances of conducting an MTF. According to Army Regulation 95-1, Flight Regulations, the MBO is "the commander or their designated representative that interacts with the mission crew or air mission commander to identify, assess, and mitigate risk for the specific mission." MTPs are most suited to be the MBO for maintenance tasks. However, this doesn't mean leaving a clipboard in the production control office to sign just as a matter of procedure. This is a chance for MBOs to assess the risk of certain maneuvers based on the conditions and the experience of the MTP. This is also the time for the MBO to assess the crew to make recommendations for the final mission approval authority. MBOs need to be familiar with the MTF tasks being conducted to properly assess crew mix. As leaders, we cannot allow the culture that the MTF is just something to "get done so we can fly." The MTF deserves the same scrutiny as every other mission and should be briefed by someone familiar with the maintenance mission.

The argument is made that there is a shortage of aviators for completing MTFs. A risk mitigator is training all your aviators on the most dangerous MTF maneuvers. A few short classes on these procedures, with common failures incorporating the Emergency Response Methodology will pay huge dividends. Additionally, units can utilize the simulator to experience these actions, in a controlled environment. Taking this approach would benefit all aviators and briefing officers, not just the junior aviators. In turn, this training could help all aviators improve their overall understanding of how aircraft systems operate and become familiar with what right looks like. These small efforts in the training of your organization will vastly improve overall safety and combat effectiveness.

The Army Aviation community must examine our approach to risk management of MTFs. Crew selection and risk assessment by MBOs provides a more holistic approach to safely executing these challenging maneuvers. If you are short aviators and MBOs, make sure you provide the remaining ones the training to understand their role in MTF safety. The maintenance mission generates the combat power and should be treated equally instead of as an afterthought. Maintenance, training, and operational missions all complement one another in the overall safety and success of a unit.

Readiness Through Safety!

COL Ronald L. Ells is the deputy commander of the Combat Readiness Center at Fort Rucker, AL.

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When Winning Matters, BAT Makes it Possible.

By MAJ Eric W. Connor

Train like you fight! It's a mantra that could not be truer than in the world of Army Aviation.

Climbing into the cockpit of a Black Hawk to take to the sky is all in a day's work for an Army aviator. While most people who observe a UH-60 piercing through the sky may not think much of it, there's a lot more to it with the real work beginning before a pilot ever takes off.

"We're taking him through cloudy conditions."

On this day, an aviator is sharpening his skills in a new state-of-the-art simulator called the Black Hawk Aircrew Trainer or BAT. "This is a pretty new system here for Fort Knox. We've had the BAT here on site for three months. Army-wide we're the twelfth BAT in the system to be operational. We're actually the first BAT to be both mike model as well as lima model (UH-60M/UH-60L) configured so we can go back and we can support both mike model guys, lima model guys essentially more units throughout the Army Reserve," said Kevin Graham, Instructor Operator of the Fort Knox BAT system.

The BAT replaces the previous Transportable Black Hawk Operations System (T-BOS). It is inside the new trainer where helicopter pilots get more realistic refresher training and an opportunity to hone their skills. Inside the BAT, various scenarios are thrown at aviators to include changing terrain, night or bad weather conditions. It is an opportunity for them to go over instrument flight rules (IFR) flying for precision approaches for conditions that are not ideal.

"The nice thing is the ability here that



Kevin Graham, an instructor operator of the BAT system at Ft. Knox, Kentucky, monitors CW2 Paul Schroader's progress as he presents the helicopter pilot with various scenarios inside the simulator. Fort Knox is the first installation to receive the system configured to train for both the UH-60M and UH-60L.

you can set it right at that threshold where you're either comfortable or you're pushing yourself a little bit beyond where you're comfortable and it's also a safer environment," said CW2 Paul Schroader, an aviator with Charlie Company, 5-159th GSAB based at Fort Knox, Kentucky. Pilots like Schroader praise the BAT as a step up from the T-BOS, giving them more realistic training. "We had a different type trainer before, that had some still really good features but not quite as feature-rich as what this one is, and this is definitely a great improvement."

As the IO, Graham can work from the system's six different monitors to quickly replicate and switch conditions to see how pilots adjust and adapt to change. This simulates and gives them the ability to give a pilot an absolute worst-case scenario so that he can get used to seeing how bad it can get.

"Qualified Army Aviators can take advantage of the BAT's innovative technology, allowing for a lot more valuable training time. The T-BOS was an older system. It had a lot of fabricated parts to try to replicate the cockpit where this is actually a live cockpit and we're able to take actual electronic

components from the real aircraft and actually implement them in here using the new hardware and software designed at Redstone Arsenal with the BAT team," said Scott Robbins, a contractor with PULAU Corporation.

Pilots work on three primary areas inside the simulator, which include instruments to see how they react to extreme weather conditions, emergency procedures to deal with legitimate engine failures, and tactical operations where they focus on mission survivability and how to deal with and avoid threats.

It also gives aviators a chance to improve on any areas they feel weak in without jeopardizing their safety or a multi-million-dollar aircraft. "It's a great training tool, inside the cockpit everything is simulated right down to the door handle. The guys are getting good training out of it and cost dollar per hour is obviously significantly less than a real aircraft," said Graham.

In an environment where winning matters, this new system is helping aviators *Rise Above*.

MAJ Eric W. Connor is the Army Reserve Aviation Command Chief of Public Affairs at Fort Knox, KY.



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► 128th Aviation Brigade Update

History of the 128th Aviation Brigade

By CPT Timothy Dore



U.S. ARMY 128TH AVN BDE. PHOTO

The 128th Aviation Brigade's motto "Born Under Fire" permeates everything we do as a unit in cultivating the future of Army Aviation Maintainers under the fire of rigorous training.

128th Aviation Brigade Commander, COL Bryan A. Morgan (center), with the brigade leadership at Joint Base Langley-Eustis, VA., September 2, 2020.

Although our lineage is short (the Brigade was activated in 1990 in Panama as a provisional unit in Operation Just Cause and served until 1995), the team at Fort Eustis is rich with history, experiencing birth and rebirth across the span of many decades.

When Army Aviation became an established branch in 1983, Aviation logistics training continued its mission under the command of the Transportation Corps at Fort Eustis, VA. The US Army Transportation and Aviation Logistics School (USATALS) trained Aviation maintainers and logisticians, but, as correspondence from MG Ellis D. Parker, Commanding General of the

US Army Aviation Center, to MG Fred E. Elam, Commanding General of the US Army Transportation Center, suggests, the hope was to "improve the perception of Aviation Logisticians as full members of the Aviation Branch." By 1985 the demand for unique Aviation-training was clear and the US Army Aviation Logistics School (USAALS) was formed. Although USAALS now served as a separate TRADOC school, the Transportation Corps retained command authority. Finally, by 1988, USAALS became a tenant activity at Fort Eustis, fully transitioning to the Aviation branch, a status it would retain until its disestablishment in 2012.

USAALS would train helicopter maintainers from initial-entry through the Advanced Noncommissioned Officer Course, the Warrant Officer Aviation Maintenance Technician Course, and the Aircraft Armament Maintenance Technician Course through four departments. The Department of Aviation Trades Training (DATT) trained the electrical, structural, Pneumatics, power train, and propulsion trades for all Army aircraft as well as warrant officer technical training. The Department of Aviation Systems Training (DAST) provided maintenance training on cargo and utility helicopter systems and Aviation Life Support Equipment (ALSE).

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The Department of Attack Helicopter Training (DAHT) conducted all enlist and warrant officer armament technician training, and the Department of Training Plans and Evaluation (DTPE) developed all the training through products, concepts, doctrine, and evaluations.

In line with USAAL's maintenance focus, the Army's Maintenance Test Pilot Course (MTPC), which began under the Transportation School in 1966, also ran at Fort Eustis on Felker Army Airfield, the world's first military heliport. The course ran until 1994 when MTPC moved to Fort Rucker, AL, to consolidate all aviator training. By 2011, the Department of the Army activated the 128th Aviation Brigade to provide all Aviation logistics training and brigade level command and control over the Aviation community at Fort Eustis.

Currently, the 128th Aviation Brigade consists of the 1st Battalion 210th Aviation Regiment which conducts all Initial Entry Training for Apache maintainers, while also training electrical, Pneudraulic, and avionics repairers for the Chinook and Black Hawk helicopters and the Warrant Officer Technician Basic and Advanced Courses. The 2nd Battalion 210th Aviation Regiment trains all Chinook and Black Hawk helicop-

ter systems repairers along with powerplant, powertrain, and structures repairers. The 1st Battalion 222nd Aviation Regiment serves as the student battalion and manages the trainee population as they make the transition from civilian to Soldier and learn their Aviation craft. Finally, the brigade headquarters company serves to not only complete the functions of a headquarters element, but also to manage the complex operations that running a school requires. All four bodies of the 128th Aviation Brigade play a crucial role in the functioning of the unit and the production of Army maintainers and technicians.

Over the course of several decades, our mission here at Fort Eustis has remained the same: train the future of Army Aviation. Through name changes and course redesigns, what is now the 128th Aviation Brigade has always faithfully served maintainers and aviators alike, and we will continue to shape the future. "Born Under Fire!"

CPT Timothy Dore is the commander of Co. A, 1-210th Aviation Regiment, 128th Aviation Brigade, Joint Base Langley-Eustis, VA.



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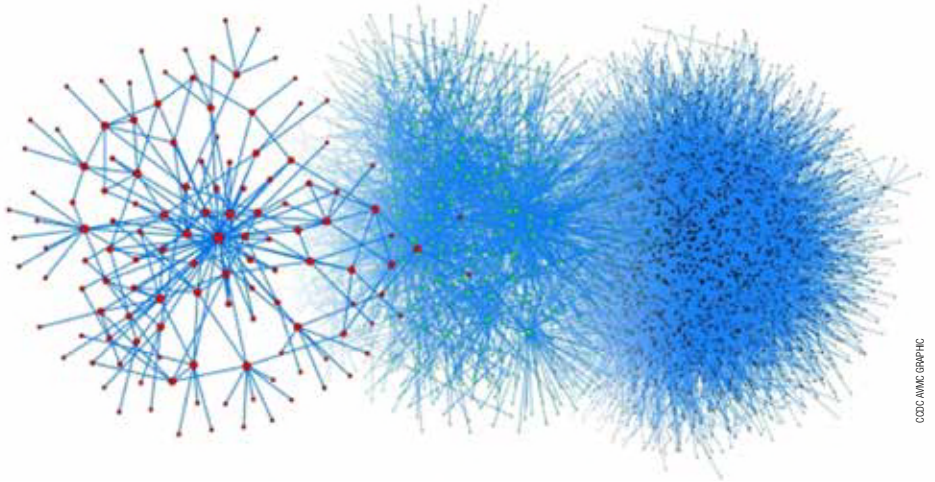
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Determinism in a Complex World

By Mr. Dave Cripps

Most people like predictability in most things. We have grown up in an age when systems and products have been designed to act in a particular fashion when certain inputs or environments are encountered, and we have grown to expect that behavior in most things.



CODIC/AMC GRAPHIC

We call that deterministic behavior. If A happens, then B results. When we flip the light switch, the light either turns on or off, depending on what the prior

state of the light was before we flipped the switch. When we put something in the refrigerator, we expect it to be maintained at a preset cool temperature. We



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expect that when we press on the accelerator of our car, it will speed up. That predictability makes us comfortable. A myriad of rule sets and standards have been developed over the years for practically all things to ensure that they act the way they are intended to act with nearly perfect reliability. Testing has been designed to put things into extremes of circumstances to ensure that they do in fact do what is expected all the time.

Complexity is causing even the most seemingly ordinary of systems to have a range of outcomes. Multi-switch circuits depend on the position of other switches in the circuit to determine if flipping a switch up turns the light on or off. Intelligent refrigerators can be commanded to adjust internal temperature remotely from a smart phone. Automatic braking and adaptive cruise control can override a driver's ability to control the speed of a car using the accelerator pedal. These are relatively simple examples that show how what we expect to happen may differ from what happens when influenced by other factors that complicate the situation. Many things in our day-to-day lives are influenced by many factors, often numbering in the tens of factors.

Aviation is no different. Design stan-

dards provide the rule set for system development. We don't want "discovery learning" in flight, so in training we introduce aircrews to various normal and simulated emergency conditions and demonstrate the correct methods to operate the aircraft in those situations. After initial training, we emphasize standardization to ensure aircrews continue to perform consistently. A comprehensive set of certification standards has been developed over the years to ensure that things always work the way pilots expect them to work, and flight testers put the aircraft through its paces to ensure that it acts as expected.

Like the light switch, refrigerator, and car accelerator, Aviation is becoming increasingly more complex. As such, airworthiness certification is facing a similar challenge with the vast explosion of complexity being designed into aircraft systems. But with many flight functions now being influenced by up to several hundreds or even thousands of factors and inputs, the magnitude of even attempting to test all possible combinations and permutations is overwhelming using conventional approaches. The advent of autonomous modes, such as adaptive flight controls that adjust the

way an aircraft responds to inceptor input based on conditions of flight, and eventually true autonomy, like optionally piloted assault aircraft, the complexity becomes so great that a deterministic approach to certification is no longer even a possibility. New approaches that incorporate design assurance (as opposed to exhaustive post-design testing) are being implemented in civil and military certification, and we are just beginning to mature many of these approaches. Model based systems engineering offers promise but is still in its relative infancy in terms of sole dependence on it for airworthiness certification. So, we are employing a hybrid approach, where we embrace new methods but ground them in conventional validation methods as we gain confidence. We believe that this approach will result in Army aircraft having an essentially equivalent level of overall flight safety as our current fleet that benefitted from a deterministic approach.

Mr. Dave Cripps is the Chief of Air Worthiness for the Systems Readiness Directorate of the Combat Capabilities Development Command Aviation and Missile Center at Redstone Arsenal, AL.

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► Ask the Flight Surgeon

Hypogonadism

By LTC Roger Williams, M.D. & CPT Karl Swinson, M.D.

Q: Last year I started an over-the-counter testosterone booster. Now I hear a testosterone guideline has been published. Should I stop, change, or continue my current medication?

FS: No aeromedical policy letter (APL) existed when this crew member started supplementation of testosterone (an androgen). However, all flight personnel should contact their aeromedical provider before starting any medications, including over the counter (OTC) medicines or supplements.

Current Army Regulations?

The new Hypogonadism APL requires aeromedical providers to screen for: diabetes, obstructive sleep apnea, obesity, exposure to chemotherapy/testicular radiation, HIV/AIDS, chronic narcotic/corticosteroid use, and pituitary dysfunction. If no alternate cause for your complaint is found, a testosterone lab should be drawn. If low, that lab will be repeated a week later.

While not required by the APL, some providers prescribe a few weeks of a holistic fitness program that includes improved sleep, exercise, and weight loss. These measures often successfully address symptoms and can resolve lab abnormalities without requiring medications and their possible side effect. Should the patient on flight status meet the criteria for hypogonadism as per current US medical guidelines, then supplementation to replace to normal testosterone levels is acceptable. The key point is “normal” levels.

Medical misuse and risks of over-use or unregulated use?

Misuse of testosterone is becoming far too common. Many seek various means of improving athletic performance. Health benefits from androgens and androgen precursors do exist, including improved strength, muscle mass, and libido. However, many men use doses that push their blood levels above acceptable limits, which puts their cardiovascular and endocrine health in jeopardy. Known side effects of these substances include potentially career-ending events like blood clots, heart attack, and strokes. Testosterone use is also contraindicated with history of prostate cancer, heart disease, stroke, and elevated blood counts. In addition, the usage of other medications, herbs, or supplements to affect testosterone levels, such as aromatase inhibitors or Clomid, is not looked on favorably unless prescribed for another recognized medical condition that will not hinder Aviation safety.

Testosterone uses in other populations

Women use testosterone for menopausal symptoms and sexual dysfunction. There is no current agreement about the

appropriate usage and levels for women. The Hypogonadism APL applies only to men so usage in women should be evaluated and cleared on a case-by-case basis.

Transgender men, born biologically as women, use testosterone to produce male physical characteristics like male pattern body and facial hair and musculature. The Sexual and Gender Identity Disorder APL does not mention testosterone but says any medication use is disqualifying. The APL says a waiver is possible if the condition does not impact Aviation performance.

AIDS wasting syndrome, the significant loss of weight in advanced HIV, is sometimes treated with testosterone. Testosterone can result in weight gain and increased lean muscle mass. Treatment of advanced HIV based on the HIV Infection APL would be disqualifying for flight duties.

Will testosterone use affect my military service or deployability?

Yes. Hypogonadism is an actual medical condition for which testosterone supplementation can be appropriate. However, taking doses above those listed in the current Army Aeromedical Policy letter on male hypogonadism is grounds for being relegated to duties not involving flight (DNIF). Please note that refusal to reduce testosterone doses to the levels outlined in the current hypogonadism APL is considered steroid abuse punishable under UCMJ article 112.

There are also many concerns regarding the use of testosterone clinically. Exogenous testosterone is associated with cardiac problems including heart disease, heart attacks, hypertension, and strokes. Testosterone supplementation can also cause increased estrogen levels in males through a biochemical process known as aromatization that converts testosterone to estrogen. Moreover, testosterone contributes to weight gain, not weight loss.

Air crew must also understand that OTC men's health pills, performance enhancers, and testosterone boosters are restricted (non-waiverable) Class 4 medications. Men who have elevated testosterone levels should have their dosage decreased and must be grounded temporarily due to the potential for withdrawal side effects.

Your flight surgeon must coordinate with the theater surgeon and have a testosterone waiver issued like the one required for flight duty. Should the aviator need medication changes or have significant side effects just before or during deployment that waiver will likely be denied. Unauthorized or electively increasing the dosage of testosterone or supplements must not be done as it may compromise both your life and your career.

Fly safe!

Questions for the Flight Surgeon?

If you have a question you would like addressed, email it to AskFS@quad-a.org. We will 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.

LTC (Dr.) Roger Williams and CPT (Dr.) Karl Swinson are flight surgeons at the U.S. Army School of Aviation Medicine, Fort Rucker, AL.



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Redefining Sustainment Integration for Future Army Aviation Platforms

By Mr. Tom Barthel and Ms. Lori Harting

The Army Aviation Sustainment Enterprise exists in a world of constant change and perpetual motion. Understanding that environment is difficult, and we have added increased complexity to our acquisition system process by introducing new organizations such as Army Futures Command (AFC) and adjusting responsibilities within other organizations that were previously tasked with the same or similar requirements – to develop, acquire and field new Army systems. What is constant within Army Aviation as we transition from legacy fleets to Future Vertical Lift (FVL) Family of Systems is the need to bring order and continuity to the change, chaos and churn occurring as we transition to modernized aviation sustainment concepts and refine current sustainment efforts. Guided by the Army Aviation Enterprise Sustainment Strategy (AAESS), Army Aviation and all our Aviation Enterprise partners will be better aligned no matter what the effort.

AAESS

The AAESS strategy has just finished a second iteration of review, updating and final staffing. It has been signed by the Commander, United States Army Aviation Center of Excellence (USAACE), Commander, United States Aviation and Missile Command (AMCOM), the Director of HQDA, DCS, G-3/5/7 DAMO-AV, the Program Executive Officer – Aviation (PEO-AV) and the Director of the Cross-Functional team Future Vertical Lift (CFT FVL). The AMCOM Commander is the Aviation Enterprise Lead Sustainment Integrator. Using the AAESS, we hope to guide Army Aviation Enterprise sustainment modernization by focusing on five main and enduring objectives that if reached, will offer Army Aviation affordable sustainment solutions no matter what the modernized system ultimately looks like.

As more organizations familiarize themselves with the AAESS and its concept, AMCOM has developed and

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fostered a collaborative team environment to partner with both CFT FVL and their Program Managers that yields significant success in our ability to be part of the conversation during the development of requirements documents and sustainment strategies for the current FVL prototypes. AMCOM reviews Draft-Capability Development Documents (CDDs) and provides input and common sustainment language across a multitude of topics and systems. These include areas such as affordability, maintenance metrics, support concepts, logistics footprints, intellectual property, training platforms, and predictive analytics. With new technologies and advancements in composite materials, it is imperative that we not abandon the legacy fleet support. We promote commonality across tooling and repair methodologies and support the Army's open architecture approach across platforms.

Life Cycle Sustainment Plan

When AFC shifted from using Key Performance Parameters in requirement documents to using a tiered approach, AMCOM successfully influenced the FLRAA and FARA A-CDDs to elevate sustainment requirement considerations within platform design. AMCOM participates in the trade space decision process setting program priorities. AMCOM logisticians embedded with working groups and teams of teams across the Enterprise are providing insight that is shaping contract language in areas such as provisioning and government interface of data. AMCOM participation in the development of the FLRAA draft Life Cycle Sustainment Plan (LCSP) will help shape the draft request for proposal expected in early 2021. FLRAA and FARA PSMs leverage one working team of subject matter experts to develop the LCSPs required at Milestone B. The maturation of the FLRAA

and FARA programs continues to refine, update and publish requirements. It is not understated to acknowledge the long-term impacts for the Army's ability to execute the National Defense Strategy will be based on the decisions being made today.

It is important to note that the milestones for both FARA and FLRAA development are currently first unit equipped in FY30. It's an aggressive schedule. FARA has a down-select before or circa MS B followed by a critical design review and first unit equipped in FY30. FARA is currently refining their tiered attributes and the A-CDD is in formal staffing. FLRAA recently presented their tiered priorities that were approved in an October 2020 Army Requirements Oversight Council (AROC) review. FLRAA's next major event will be the draft Request for Proposal (RFP) in early 2021 with a down select to a chosen OEM in FY22. FARA & FLRAA A-CDD attributes are informed by prototyping efforts and/or air vehicle demonstrator efforts, but sustainment solutions and metrics are being developed even before the systems have any level of final fidelity. FARA and FLRAA program managers are keying on affordability and schedule as their driving priorities. Affordability discussions have highlighted the importance of following the AAESS in developing sustainment concepts and AMCOM continuously provides input for shaping modernized, executable strategies.

Sustainment Options

One sustainment option that is being discussed and integrated simultaneously between legacy and FVL fleets is the common use of maintenance steering group (MSG-3 like) efforts for the FVL family. It will be a phased approach to detail processes, metrics and operational implementation of



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maintenance models. Both FLRAA and FARA PMs and PSMs are utilizing AMCOM expertise to focus their collaboration to ensure maximum commonality and compatibility to the legacy fleet and each other. Specific AMCOM achievements to requirement documentation include MG Royar's steadfast position on materiel availability as demonstrated in the FirePoint study completed on July 31, 2020 by Wichita State University (FirePoint Report No. FP2020-C3-S23-01) and other identified considerations for advanced manufacturing opportunities. The Executive Summary from the study stated the following:

The Army's Future Vertical Lift programs must be developed to improve readiness and decrease the logistics footprint needed to support the future fleet in a Multi-Domain battlefield. This will be achieved through driving Key Performance Parameters (KPPs) and Key System Attributes (KSAs) that address functional, operational needs throughout the total lifecycle of the platform.

The U.S. Army Aviation and Missile Command G-3/5, Operations, Plans & Strategies (AMCOM G-3/5) tasked the FirePoint Innovations Center at Wichita State University to conduct a review of the current Future Long Range Assault Aircraft (FLRAA) Capabilities Development Document (CDD) to understand the impacts to Reliability Availability Maintainability – Cost (RAM-C) with respect to KPPs affecting Materiel Availability (AM) and Operational Availability (AO). Specifically, the study examined if the metric (AM) could be increased from 75% to 80% without detrimental effects to RAM-C. Additionally, CCDC-AvMC tasked FirePoint with examining the Commercial Aviation Industry and investigating various aspects of their operations affecting Reliability, Availability, and Maintainability to determine best practices that may be, or should be, applied to

Future Army Aviation projects.

Using a proven system of systems modeling and simulation tool, Logistics Simulation (LOGSIM), baselines were created for Future Long Range Assault Aircraft (FLRAA) to model AM and AO.

The results showed that utilization of candidate technologies could increase AM from the baseline of 75.6% to a value of 82.8%. Likewise, improvements in AO were also shown to be achievable through the implementation of similar proven commercial technology and best practices.

Using the simulation outputs, the AO candidates were examined for their effects on Operating and Support (O&S) costs, showing that substantial cost savings could also be obtained through the implementation of these commercial technologies and processes.

The study resulted in the following conclusions/recommendations: AO of 84% Threshold (T) and 92% Objective (O); AM of 80% (T = O) are achievable.

Incorporation of the technologies to achieve the recommended values do not increase cost but will result in significant O&S cost avoidance.

Thus, with commitment from the Army Aviation Enterprise general officers and ultimately their organizational action officers and staffs, the AAESS will bring about affordable materiel solutions that will be enabled by accomplishment of the strategy objectives.

Mr. Tom Barthel is the AMCOM Aviation Enterprise Sustainment Integration Lead and Ms. Lori Harting is an aviation system coordinator for the Strategy and Systems Integration Division (G-3S) within the U.S. Army Aviation and Missile Command (AMCOM) G-3/5, Operation, Plans, and Strategy at Redstone Arsenal, AL.



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Reliability Centered Maintenance – Using Data to Inform Scheduled Maintenance Programs

By LTC Todd Hill

The Aviation Enterprise recognizes the need to increase the tempo of continuously evaluating the scheduled maintenance programs (SMP) of aviation platforms. In concert with the Program Executive Office (PEO), the United States Army Aviation and Missile Command (AMCOM) is moving forward with incorporating Reliability Centered Maintenance (RCM) practices on today's enduring fleet. RCM is a process to ensure that platform systems continue to operate at required performance levels and improve performance based on maintenance activities and programs.

AMCOM has quickly stood up a small team that analyze the current SMP effectiveness and drivers. The RCM program utilizes off-the-shelf

information technology tools to help identify constrained resources and operational availability impacts. Evaluating the effectiveness of the initial and current SMP has led AMCOM to increase the utilization of industry practices to improve the operational readiness of platforms utilized by the warfighter.

The aircraft or platform's SMP alignment with the inherent system reliability rarely captures 100% of the readiness drivers during initial release. The design and development of the aircraft programs cannot always anticipate SMP that are required before a platform operates in the field. This is due to the change in utilization, environmental conditions, human factors, and the unforeseen drivers of systems and component failures initially anticipated. These failures, or inefficient les-

sons, may be due to the initial scheduling interval or work scope of the maintenance lacking synchronization with the actual failure rate or drivers of the platform system, sub-system, or component. Older programs were slow to change or rarely adjusted proactively. Legacy SMP practices would often continue unchanged from the platform's launch. They would only address issues when owner/operators could not avoid problems – often resulting in management of systems that require increased funding and incurring large amounts of waste.

MSGs

In the 1960s, the commercial airline industry experienced increased maintenance costs that had become intolerable. The airline's problem with this tra-



U.S. AIR FORCE PHOTO BY STAFF SGT DARRIN GORPANTI

U.S. Army SPC Chauncey Ikaika Akau, an AH-64D Apache Longbow attack helicopter repairer, with 2nd Squadron, 6th Cavalry Regiment, 25th Combat Aviation Brigade, stationed at Wheeler Army Airfield, Hawaii, conducts routine maintenance between missions during Exercise Cobra Gold 2020 on Camp Akathotsarot, Phitsanulok province, Kingdom of Thailand, Feb. 26, 2020.

ditional approach to maintenance also affected the military. Although profit was not an objective common to both the airlines and the military, controlling costs and maximizing availability was. In 1978, the DOD contracted with United Airlines to conduct a study into efficient maintenance programs. The investigation resulted in the Maintenance Steering Group 2nd Generation, or MSG-2, by emphasizing hidden failures and moved from a process-oriented concept to a task-oriented idea. The adaption of a standard decision logic product resulted later in a third-generation or MSG-3. Manufacturers, regulatory authorities, and launch customers use this process to develop a platform's initial maintenance program or maintenance planning document. Once the platform begins

operation, the test or presumed data is replaced with actual reliability data from the process. This data is evaluated to determine the adjustment of maintenance practices, schedules, or tasks. This decision logic is called Reliability-Centered Maintenance.

RCM Process

AMCOM applies this decision logic to its sustainment strategy that involves all efforts towards the platform's continuous improvement by evaluating the SMP's effectiveness against unscheduled maintenance. The foundation for the AMCOM RCM process is based on data management and integrity. The AMCOM data team standardizes the data using work unit codes and quality processes that support the AMCOM management of component airworthiness. A structured Root Cause Analysis is then applied using the Define, Measure, Analyze, Improve, and Control format to identify and address the system failures/drivers within the prioritized weighted system indices. AMCOM and PEO teams then address the safety and operational failures using short-term and long-term actions. These actions include communication to operators and maintainers of the platform, activities on chronic or systemic serial number aircraft or sub-components, monitoring of specific sensors, removal of the high probability of failure components, changes or additions to source maintenance documents and procedures, modifications or additions to maintenance program tasks and intervals, and/or re-design of systems and components.

Case Study

The current review of the AH-64D/E Utility Hydraulic Manifold system revealed frequent bypass or indications of impending bypass events and the utility hydraulic manifold's random failure. Over the system's life, there have been efforts to improve the capture of fluid contamination that have reduced the filter's specifications from 15 microns to 5 microns. The most recent efforts include the use of a metal filter. The data revealed that bypass events begin occurring 118 flight hours after filter replacement, and the probability for a bypass increase as the filter reaches 225 flight hours. Reports of increased pressures within the system, possibly caused by flight control action or a cascading

hydraulic pump, are suspect for the filter's slow deformation. As a result of this analysis, AMCOM is conducting a case study at Hanchey Army Airfield to analyze the effectiveness of a 125 hour filter change for the Utility Hydraulic System. The research involves the AH-64E, with approximately half of the fleet at Hanchey Army Airfield selected for the 125 hour filter change. The study intends to determine if implementing a 125 hour scheduled filter change will significantly reduce the rate of unscheduled events. The AMCOM study will further analyze the filters using oil analysis labs, and the data visualization of the maintenance recorded data to gain more insight into a long term permanent repair that can prevent the filter's deformation from occurring. These efforts center around adjusting the SMP based on the operational data over the aircraft and system's life.

In contrast, identifying those systems that incur failure events outlines the systems and SMP tasks that do not cause availability issues. This insight allows for the future evaluation of the SMP tasks that incur cost and resources but have no benefit to the platform's readiness. The RCM decision logic and data support the future optimization of the SMP to add tasks where needed and remove tasks that are found not to be beneficial. This AMCOM effort continuously improves the SMP for the warfighter, enhances the process of RCM, and supports efforts to decrease cost thru the platform's life cycle duration. This successful implementation of RCM will increase reliability, cost-effectiveness, aircraft operational readiness, and a greater understanding of the level of risk that the organization is managing. The RCM program is a strategic process to achieve the leadership's desired level of performance. Using big standardized data, commercial software, and leveraging continuous evaluations of the SMP, allows AMCOM to better understand where maintenance is needed and where it is not beneficial – supporting the warfighter thru Reliability Centered Maintenance.

LTC William T. (Todd) Hill is a research officer for the Continued Airworthiness and Materiel Readiness Division (G-3M) within the U.S. Army Aviation and Missile Command (AMCOM) G-3/5, Operations, Plans and Strategy at Redstone Arsenal, AL.



U.S. ARMY CORPUS CHRISTI ARMY DEPOT PHOTO



Modernizing the Organic Industrial Base

By Mr. Kevin Besser

The Army Vision, a transformational path to Multi-Domain Operations (MDO) 2028/2035, is distilled by the Secretary of the Army into three key priorities: People, Readiness, and Modernization. It heralds unprecedented introduction of technologically-advanced weapon systems and Warfighter capabilities, undergirded by a materiel enterprise that is critical to sustainment and repair of these systems during peacetime, surge, and large-scale contingencies. The U.S. Army Aviation & Missile Life Cycle Management Command (AMCOM), headquartered at Redstone Arsenal, Alabama, is operationalizing MDO 2028/2035 priorities across our diverse workforce and portfolio of Aviation and Missile weapon systems, as well as at our organic industrial base (OIB)

activities. AMCOM's OIB activities include Corpus Christi Army Depot (CCAD), Letterkenny Army Depot (LEAD), U.S. Army Test, Measurement, and Diagnostic Equipment (TMDE) Activity (USATA), National Maintenance Program (NMP) sites, and a lean cadre of Logisticians, Analysts, and OIB Workload and Modernization Planners at the AMCOM Logistics Center (ALC). This team is essential to executing today's sustainment mission and posturing the OIBs for three of the Army's six modernization priorities: air and missile defense, future vertical lift, and long range precision fires.

One of the Army's most recognizable weapons is actually a fleet of rotary wing aircraft representing three general configurations: attack, cargo,

Mary King, aircraft electrician in the avionics/electrical branch at the Corpus Christi Army Depot, Texas, installs the instrument panel wiring harness as part of the assembly and repair of the UH-60L to UH-60V upgrade.

and utility. The unmistakable silhouettes of the AH-64 "Apache", CH-47 "Chinook, and UH-60 "Black Hawk" across domestic and international skies has been heard, felt, and seen by multiple generations since the 1960s and 70s. They are testaments to aerospace engineers who developed these battle-tested aircraft well before the introduction of iPhones and explosive growth in computerized weapons and sustainment. Today, modernized versions of these Army helicopters bear witness to a uniformed and civilian

cadre of Army Aviation Maintenance crews in the field and OIB. Critical flight systems—turbine engines, rotary blades, transmissions, and powertrain components that operate in perfect symphony—are overhauled and/or recapitalized to “like new” condition at CCAD on a near-daily basis. Despite the destabilizing effects of the COVID-19 pandemic, our Army Aviation maintainers are not only maintaining the fleet but playing a key role in modernization and Black Hawk service life extension. CCAD recorded a significant milestone in 2020: completion of their first UH-60V aircraft. The “Victor” suffix distinguishes each UH-60V as having been modernized with an all-new digital cockpit and recapitalized to “zero hours” condition. It was the automotive equivalent of taking a worn out 1997 vehicle and modernizing it to “better than new” condition with the latest powertrain components and a giant high-definition television in the dashboard replacing analog gauges and instrumentation. People and modernization delivering Army readiness.

The Future

Modernization is driving key changes across the Army OIBs and at AMCOM. The status quo is changing, and pace is intensifying to meet the Army Vision. At the AMCOM HQ level, an OIB Modernization Integrated Product Team (IPT) was created in 2020 with the charter to posture the OIBs collaboratively and cross-functionally for MDO 2028/2035 and beyond. The IPT Champion, Major General K. Todd Royar, AMCOM Commanding General, is actively participating to ensure materiel developers, materiel sustainers, maintenance planners, and the acquisition, facilities, supply chain, and futures communities are strategically aligned in support of OIB Readiness. Our objective is clear: we will not have a 20th Century OIB for the 21st Century Army.

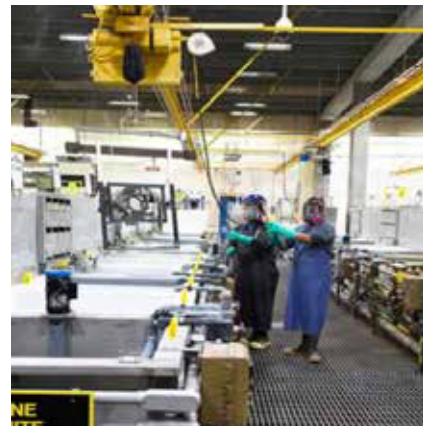
So, what does the 21st Century AMCOM OIB look like? First, it will continue to be **rooted in the workload and OPTEMPO requirements of our Army and Inter-Service DoD customers**. AMCOM closely collaborates with our customer and support organizations using the Sales & Operations Planning (S&OP) framework to ensure capacity, parts, and production capabilities are in place to meet over \$1B in annual

Class VII and Class IX sustainment workload. The AMCOM OIB strives to earn standing as a preferred source of repair based on our responsiveness, quality, competitive costs, and agility to sustain a broad spectrum of sustainment requirements.

Second, Aviation ***maintenance will become increasingly-reliant on computerized and digital technologies***. CCAD is working closely with the Combat Capabilities Development Center’s Aviation and Missile Center (CCDC AvMC) and Academia to pioneer “digital twin” capabilities that utilize automated structured blue light scanning during pre-repair inspection and quality control inspections. This digital scanning capability is a cornerstone and gateway to future digitally-enabled Advanced Manufacturing and Remanufacturing capabilities such as 3D blueprints, virtual reassembly, additive manufacturing, big data analytics, and automated/robotic repair. Additive manufacturing technologies are being utilized today to facilitate rapid prototyping, “digitally print” custom tooling and fixtures, and augment local remanufacturing capabilities. Additionally, CCAD is working closely with the CCDC AvMC and via Public-Private Partnerships to implement new plating and anodizing capabilities that significantly reduce personnel and environmental risks, particularly exposure to hexavalent chromium and toxic heavy metals, while continuing to support the production quality and anti-corrosive properties necessary for critical safety items.

Third, CCAD will be ***capable of sustaining the most technologically advanced aircraft in the fleet and their secondary components***. AMCOM is working closely with the U.S. Army Program Executive Office - Aviation to prepare for the sustainment of new Future Vertical Life (FVL) aircraft, the Improved Turbine Engine Program (ITEP), and Unmanned Aircraft Systems (UAS). New systems will not only bring new combat capabilities to the Warfighter, but also new sustainment capabilities to the Aviation Maintenance community.

Fourth, the 21st Century OIB will have ***new and modernized facilities and infrastructure*** that are inherently flexible with multi-functional shop floor production capacity. CCAD’s Building 1700, currently under construction, is a seven-phase military construction



U.S. ARMY CORPUS CHRISTI ARMY DEPOT PHOTO

CCAD artisans making history by applying new skills in Tagnite immersion on Nov. 3, 2020. Tagnite coatings significantly improve the corrosion-resistance of critical secondary items, enhancing materiel and Warfighter readiness.

project designed to eliminate single points of failure and support elastic Class IX component sustainment for both legacy and future weapon systems. Moreover, given CCAD’s proximity to the Gulf of Mexico, it will be rated for hurricane-force winds and provide essential climate and corrosion controls. Following completion of Building 1700, the vision for CCAD is to construct a new Aircraft Remanufacturing Facility that can accommodate all legacy and future aircraft under a single roof also with hurricane, climate, and corrosion safeguards.

Fifth, but foremost, ***people will always be the bedrock*** of the Army OIB and its ability to meet the dynamic requirements of a MDO 2028/2035-capable Army. From mobile Depot Field Teams to skilled artisans, and parts planners to supporting analysts, the 21st Century OIB is driven by a resilient team grounded in diversity and inclusion. The Army and AMCOM are committed to reinforcing our focus on People, and ensuring workplaces maximize their safety and provide a Quality Work Environment. We will implement a gold standard of training to build and maintain personnel readiness, resilience, and empowerment to always serve Army Strong!

Mr. Kevin Besser is a logistics management specialist in the Industrial Operations Directorate of the U.S. Army Aviation and Missile Command Logistics Center (ALC) at Redstone Arsenal, AL.



Training for Flaw Detection Is Vital Prior To Assembly

By Della Adame

A supply chain is only as strong as the weakest link and when it comes to the rotary Aviation industry, weakness is prohibited. Notwithstanding unexpected delays in production and training due to the COVID-19 pandemic, the Corpus Christi Army Depot's (CCAD) Non-destructive Testing (NDT) program ensures that it is the strongest link in the supply chain for the U.S. Army.

At CCAD, the ability to examine the internal structure of manufactured

components identifying any flaws or defects is paramount prior to the assembly of an aircraft. Defects, undetectable to the untrained eye, are made visible by special testing methods known as Non-destructive Testing (NDT).

Prevention of defect development into a critical flaw is vital to risk reduction and safety principles. Internal detection of the minutest changes in thickness, corrosion, flaws and material density is critical to our mission.

John Quesada of the NDT Program

Office explained that during the pandemic, CCAD delivered the proper training needed for inspectors, whether virtual or face-to-face, and continuously provided quality NDT support to the Warfighter.

Processes

Great care is taken ensuring that every single part that goes into an aircraft has zero defects.

Approximately, 80% of all NDT inspections performed at CCAD are pen-



U.S. ARMY PHOTO BY DELLEADAME, CORPUS CHRISTI ARMY DEPOT

CCAD artisan Paul Zaklukiewicz, Non-Destructive Tester applies a concentrated fluorescent oil penetrant to the aircraft component to help detect defects under black light.

etrant and magnetic particle methods of inspections.

Type 1 penetrants have fluorescent dye in the liquid that illuminates under ultra-violet black lights making it easier for the human eye to detect defects in component characteristics or welding.

Only three methods of penetrant application and removal processes are utilized at CCAD- method A (water washable); method C (solvent removed); and method D (post emulsifier). Each method denotes the means

by which the penetrant is removed from test specimens.

Magnetic particle inspections can only be performed on materials that are ferrous; i.e. can be magnetized. Once a part or component becomes magnetized, a fluorescent oil based solution, that has very tiny metal particles, is applied. Any cracks on or near the surface will cause a break in the magnetic field. This break will produce a positive and negative field at each end of the break. Just like the common horseshoe magnet, the break will attract tiny fluorescent metal particles at the break site.

The use of Radiography Inspection is familiar to most individuals who have had an X-ray. The test part is placed between the radiation source and film (or detector). CCAD uses direct Digital Radiography with Digital Detector Array (DDA) panels.

"From manufacturing, refurbishment, examination to final flight test, the U.S. Army is assured that components are defect free and the aircraft are ready to engage and improve combat readiness," acknowledged Mr. Rod Benson, CCAD Chief Operations Officer.

Training

The NDT Certification Program is responsible for the allocation of funds for critical training needs as it relates to industry standard recertification requirements.

According to Bryan McMillan, CCAD Workforce Development Division, collaboration between CCAD and Wichita State University (WSU) garnered high level training from Cowley College in Wichita, Kansas, for certification levels I and II. At the conclusion of the six-week training course, three NDT operators will be certified through comprehensive written examinations and hands-on examinations.

"The instructor led training provided was exceptional and fulfilled all requirements for NDT Level I & Level II. Both theory and application reinforced a technical understanding which enhances and ensures safety, quality and reliability for NDT examination processes," said Yessica Hernandez, Division Chief, Directorate of Manufacturing & Process Production.

"The instructor's aerospace experience was instrumental in providing and keeping with the type of training our NDT artisans require," noted George Franco, Quality Assurance Specialist in the NDT Program Office, "Cowley

College and WSU were invaluable for their assistance and participation in facilitating this training opportunity. We look forward to working together again."

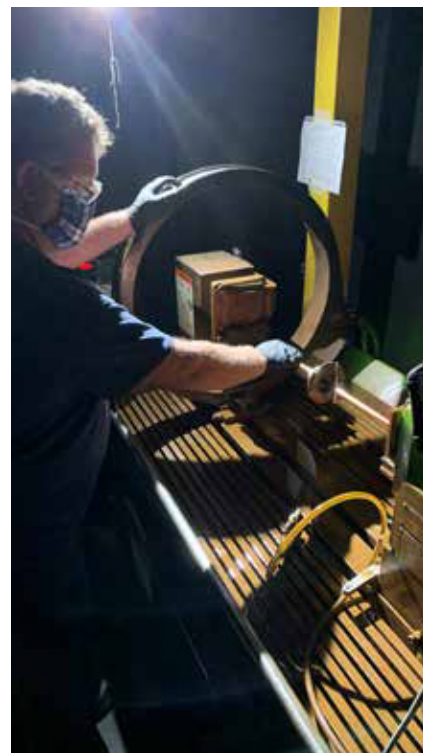
With supplemental training and the future deployment of new technology at the Depot, the natural progression of an Artisan's lifecycle brings about the opportunity to bolster and enhance methods of prevention and detection.

Looking Ahead

CCAD continues to look beyond 2020, for more efficient and sustainable methods to safely inspect aircraft components. Recruitment and retention of a workforce that is trained in the latest technology ensures capabilities for future workload.

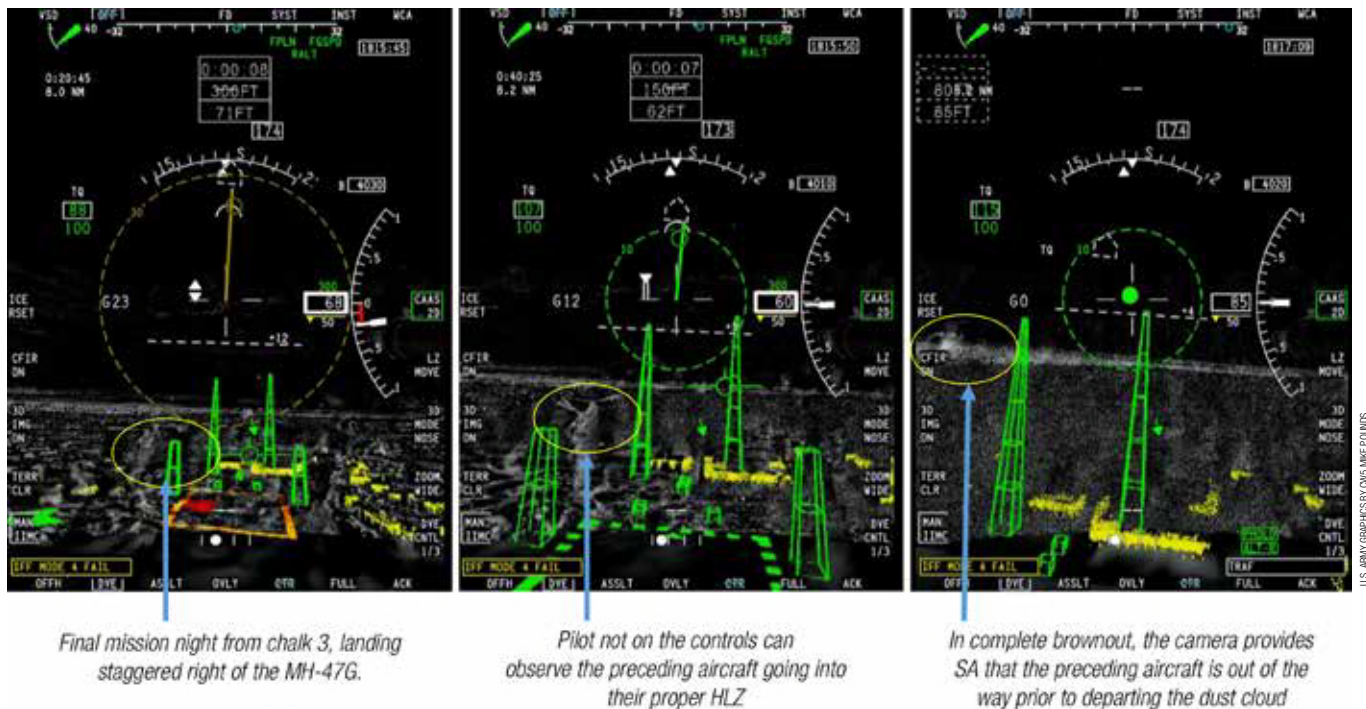
Hernandez summed it up, "Most importantly, CCAD remains the U.S. Army's resource of choice with its NDT testing providing a permanent record of the inspection for all components that are manufactured, with the assurance of precision, quality and accuracy in each and every aircraft."

Della Adame is a public affairs specialist at Corpus Christi Army Depot, Texas.



U.S. ARMY PHOTO BY ENERY MARTINEZ, CORPUS CHRISTI ARMY DEPOT

CCAD artisan Paul Pealer, Non-Destructive Tester applies a concentrated fluorescent oil penetrant to the aircraft component to help detect defects under a black light.



Still Owning the Environment: An Update on Army Special Operations Degraded Visual Environment Solutions

By CW5 Mike Pounds and CW4 Brad Palm

Facing the need to tactically and technically overmatch America's adversaries, the US Army Special Operations Aviation Command (USASOAC) remains dedicated to solving the problems caused by the Degraded Visual Environment (DVE). Led by the partnership of the Systems Integration Management Office (SIMO) and the Technology Applications Product Office (TAPO), the last 18 months brought continued development to the DVE Pilotage System (DVEPS) culminating in a successful October 2020 Operational Test and Evaluation (OT&E) at Fort Bliss, TX. In execution, DVEPS exceeded expectations as a situational awareness tool for Army Special Operations Aviation (ARSOA) operational aircrews and is paving the way for full pilotage in almost any environment.

Positive OT&E results have provided valuable opportunities to share these breakthroughs during technology demonstrations for stakeholders across Army Aviation and other services. SIMO demonstrated DVEPS in November and December 2020 to the US

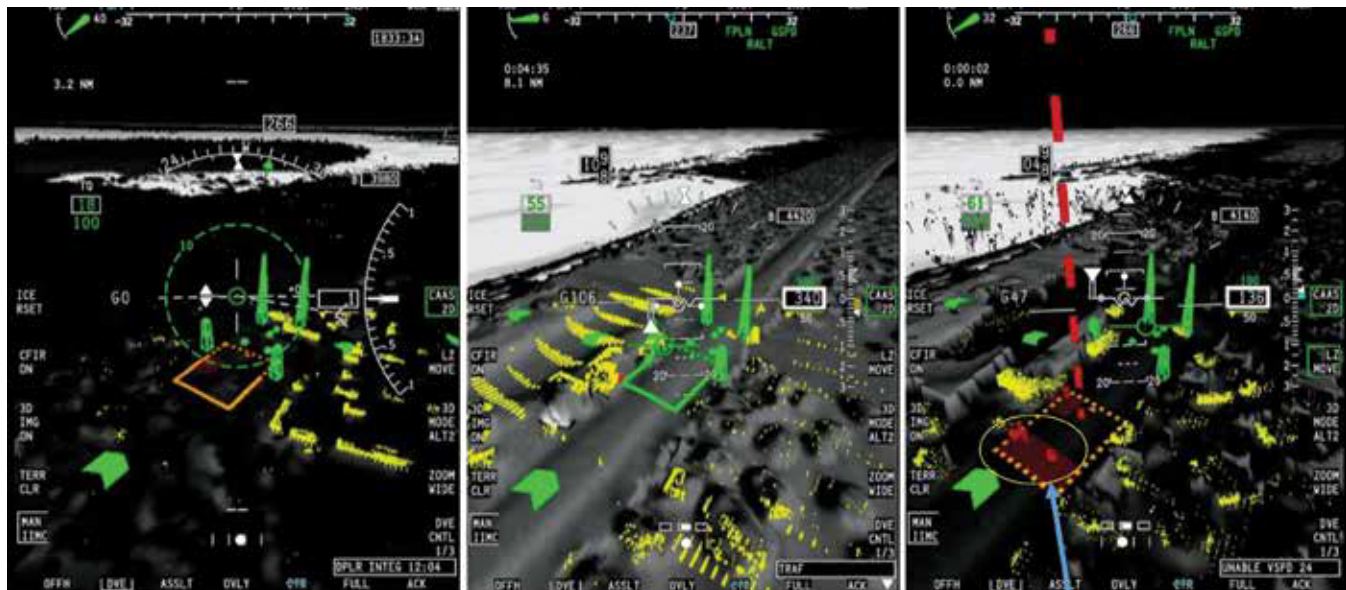
Army Aviation Center of Excellence (USAACE), Program Executive Office – Aviation (PEO-AV), the Future Vertical Lift Cross Functional Team (FVL-CFT), and Air Force Special Operations Command (AFSOC). Future demonstration efforts are under consideration for 2021 to the Air Force and Naval Air Systems Command (NAVAIR).

DVEPS' success is inherent in its design. Three key attributes make the solution possible: fused video, 3-D sensor driven imagery, and cueing. Future increments will include automated flight control direction. Video from the fixed-forward "brown-out" camera is processed in DVEPS' Synthetic Vision Avionics Backbone (SVAB) processor. The SVAB conducts pixel-to-pixel fusing of video with real-time sensor inputs from a Light Distance and Ranging array (LiDAR). Combined with a priori (remembered) data such as Digital Terrain Elevation Data (DTED), DVEPS provides a uniquely useful and accurate image with highlighted obstacles. Cueing imposed over the approach image provides the aircrew with color con-

trasted symbology that directs flight control inputs to stay on course, avoid obstacles, or maintain position. Not yet integrated is an autopilot driven, sophisticated flight control system capable of interpreting fused data and associated cueing. In seeking a true DVE pilotage solution, autonomous flight control is the most complex endeavor.

As DVEPS enters service with ARSOA, it will build a reputation as an effective combat solution in both the terminal area and enroute through the most difficult conditions. The path to a full pilotage solution, however, requires complex designs and rigorous testing. Efforts to this point for a situational awareness tool have already cracked the code that creates predictable and repeatable combat approaches in DVE conditions. Future considerations include introduction of "heads-up, eyes-out" helmet mounted displays and the fusion of Terrain Following (TF) radar into cueing and imagery before completing the steps necessary for autonomous flight control integration.

The ARSOA enterprise is dedicated



After each approach, pilots can use the "see and remember" feature to check their HLZ's for exfil

HLZ executed in a clear area.

Road Signs

to leading rotary-wing efforts to create a system that will not only mitigate the risks of flying in DVE, but ultimately cause DVE to be as valuable to special operations forces as darkness is now. ARSOA's goals far surpass mitigation;

we seek full exploitation. We want adverse weather to be a mission enhancer that gives ground force commanders the opportunity to execute their missions in almost any condition—ultimately extending their reach to prosecute

targets and defeat our Nation's enemies.

CW5 Mike Pounds is the out-going Chief of Sensors and Navigation (S&N) and CW4 Brad Palm is the in-coming Chief of S&N for SIMO at Fort Campbell, KY.

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Exercising the Gold Book in a Decisive Action Environment

By LTC Kevin J. Consedine

The 3-82nd General Support Aviation Battalion (GSAB), 82nd Combat Aviation Brigade recently supported the 2-101 Brigade Combat Team (BCT) “Strike,” 159th Infantry Brigade in the first Decisive Action (DA) Joint Readiness Training Center (JRTC) rotation since the COVID-19 pandemic. Following a four-month moratorium on collective training, Paratroopers of 3-82 GSAB were prepared for a rotation defined by COVID-19 protocols, atrophy of skill sets, and August temperatures in Louisiana. However, after a gun raid and two battalion-sized air assaults in the opening week of force-on-force, the narrative evolved into a viability

assessment of the 101st Airborne Division Gold Book given a near-peer threat and non-organic air-ground partners. Following the initial Combined Arms Rehearsal (CAR), a senior leader posed a question to ponder throughout the rotation:

Did experience in the 101st as a Squadron Executive Officer and Brigade S3 better prepare a Multi-Functional Aviation Task Force (MFATF) Commander to support 2-101 during JRTC 20-09?

Understanding of the Gold Book, its planning timelines, and outputs certainly made it easier to anticipate the needs of the Strike Team. However, tactical experience as an aviation

officer conducting air assaults in Iraq and Afghanistan contributed more to an ability to support than any alumni status with the 101st. The timelines, inputs, and outputs associated with the Gold Book are more aspirational than practical concerning a DA environment. A couple of points in support of my possible heresy:

First, *the 96-hour deliberate air assault timeline is arguably not viable for anything other than an initial joint force employment.* JRTC does a tremendous job of replicating a highly dynamic threat environment where units do not have 96 hours to devote to a singular event. Even “Time Constrained Planning” is often difficult given the non-habitual



HH-60Ms at Dawn in Tactical Assembly Area Arrow, Aug. 21, 2020.

U.S. ARMY PHOTO BY CPT SHAWN COOPER/CSA 3-82 GSAB

relationships that exist between air/ground units and the requirement for an in-person air mission brief (AMB). That leaves the final option in the Gold Book and what we leveraged most in JRTC 20-09: Hasty Air Assaults planned and executed in one duty cycle.

Second, *in a dynamic environment, hasty Air Assaults become the rule versus the exception.* Conventional Army Aviation executed in this fashion for years in Iraq and Afghanistan; however, most often in the Direct-Support Rotary Wing domain. In this capacity, aviators work alongside the same group of special operators and develop the habitual relationships necessary to plan and execute air assaults inside a

compressed timeline. The planning and contingency development necessary to execute a large-scale air assault vastly exceeds that of small special operations teams. Planning at scale, on a condensed timeline, can be completed virtually with reliable communications media at the Secret (SIPR) level. However, these options were intermittent during JRTC 20-09 and would be in a DA environment, with non-organic air and ground units operating with different command and control (C2) capabilities. These C2 constraints ultimately result in the third Gold Book pitfall: risk acceptance with respect to planning outputs.

Air Mission Coordination Meeting (AMCM) deliverables often become

the first casualties of any hasty air assault. There are six critical outputs of the AMCM that serve as the backbone of the AMB: the Air Movement Table (AMT), Communications Card, PZ diagram, LZ diagram, operations sketch capturing the ground tactical plan, and route cards. In the course of hasty planning, we tend to accept risk with half of these documents in the interest of making the mission happen. In three air assaults conducted during JRTC 20-09, AMTs were under revision up to the point of execution. Operational sketches were often unavailable given the use of a SIPR portal with reliability and access challenges from remote tactical assembly areas (TAAs). Communications improved during the final air assault but after significant early challenges: differing Julian dates for frequency hop (FH) communications, communication security (COMSEC) changes not synchronized, and SIPR tools (Wave, MIRC e.g.) not available on account of Wide Area Network (WAN) outages.

Hasty air assaults will likely be the norm against a near peer adversary. However, the Gold Book is highly predicated on organic CABs supporting organic BCTs with habitual relationships and a common C2 architecture established prior to the first AMCM. Absent these commonalities, how do disparate units execute effectively? The remedy is likely a blended solution encompassing task organization, education, and scaling.

If an organic CAB-BCT match is not feasible, having a similar task organization is a plausible mitigation factor. Heavy CABs that do not get the repetition of air assaults, arguably, will have a steeper learning curve supporting a light BCT heavily dependent on rotary-wing for combined arms maneuver. Additionally, education is a huge component of air assault preparation. A BCT or MFATF's initial planning repetition of a battalion-sized air assault in over six months should not take place at a Decisive Action Training Event. To that end, the 82nd CAB offers an Air Assault Planner's Course to engender a common planning lexicon between the CAB and BCTs before initial planning begins. Lastly, scaling is critical for the success of air assaults where the task organization resembles more a pick-up game than a deliberate pairing of enablers. In these instances, there is an inverse relationship between

the speed of planning and the size of the assault force. For example, if a battalion or brigade level air assault is required, 72 to 96 hours of planning is likely the tactical cost. Conversely, the risk associated with hasty planning is more prudent with a company-level assault or smaller in size.

Despite Hurricanes Marco and Laura contributing to a truncated rotation, JRTC 20-09 served as a needed repetition for the aviation component of the nation's Immediate Response Force (IRF). The Gold Book is a tremendous framework for air assault planning,

significantly more robust and contextual than the Army Aviation SOP and Army Aviation Handbook. However, for purposes of hasty execution, it assumes the existence of several constants between air and ground units in a DA environment: habitual planning norms, the ability to communicate consistently, and the time necessary to generate planning outputs which, coincidentally, are the same across deliberate and hasty operations. As Army Aviation pivots to Multi-Domain Operations, these assumptions will encounter more friction as entities across divisions,

as well as Compo 2 and 3 partners, establish the symbiotic relationships required for success. How we task organize, educate, and scale, absent habitual relationships, may well dictate success or failure against Geronimo in Fort Polk, Louisiana to a near-peer adversary on a future battlefield.

LTC Kevin J. Consedine is the commander of 3rd Battalion (General Support Aviation), 82nd Aviation Regiment, 82nd Combat Aviation Brigade at Fort Bragg, NC.

► News Spotlight

JTF-B Concludes Hurricane FHA/DR Mission

By Capt. Rachel Salpietra, Soto Cano Air Base, Honduras



In the middle of the night of Nov. 30, 2020, Soldiers assigned to the 396th Combat Support Hospital and 1-228th Aviation Regiment, carry a Honduran citizen to a U.S. Army HH-60 Black Hawk helicopter for transport to the burn rehabilitation center in Tegucigalpa.



Guatemalan Armed Forces members participate in unloading 7,700 lbs. of humanitarian aid food items from a U.S. Army CH-47 Chinook helicopter assigned to the 1-228th Aviation Regiment, Joint Task Force-Bravo, in El Estor, Guatemala, Nov. 23, 2020.

After nearly a month of supporting Foreign Humanitarian Assistance and Disaster Relief operations under authorities granted by the Acting Secretary of Defense, at the request of U.S. Agency for International Development (USAID), U.S. Southern Command and Joint Task Force-Bravo concluded immediate response missions for Hurricanes Eta and Iota in Central America on Dec. 2, 2020.

During the course of JTF-Bravo's FHA/DR missions, the command supported 295 missions, providing medical and casualty evacuations for people in need of urgent care. JTF-Bravo's assets rescued 810 citizens, transported 163 rescue and aid workers, and nearly 350,000 pounds of food, water, hygiene kits, and other life-saving aid. Additionally, JTF-Bravo transported nearly 564,000 pounds of relief supplies in support of the USAID-led humanitarian response to the region.

During the early, critical stages of disaster relief operations, the unique military capabilities fielded by JTF-Bravo enabled the U.S. to assist its partners in the region with immediate, life-saving efforts. Within an hour of receiving requests for support from the Honduran government, JTF-Bravo personnel were flying immediate life-saving missions. As friends and neighbors to Central America, JTF-Bravo has stood by its partners for nearly 40 years and continues to do so today.



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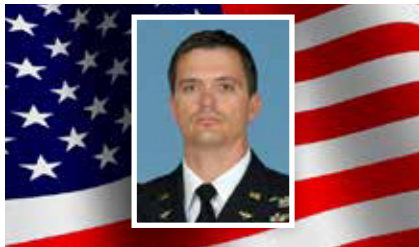


2020 National Functional Award Winners

Army Aviation Association of America

Army Aviation Trainer of the Year

Sponsored By: L-3 Technologies,
Link Training & Simulation



CW3 GREG R. HECKATHORN
Company C, 2nd Battalion
4th Combat Aviation Brigade,
4th Infantry Division

Chief Warrant Officer Three Greg R. Heckathorn flawlessly balanced an extreme OPTEMPO consisting of concurrent NTC and JRTC rotations, an Aviation Resource Management Survey (ARMS), a Directorate of Evaluations and Standardization (DES) inspection, and Fort Bliss Installation MEDEVAC coverage while simultaneously preparing his organization for a CENTCOM deployment. Archangel DUSTOFF was consistently the most dynamically tasked flight company within the 4th Combat Aviation Brigade as well as within the 4th Infantry Division during FY 19 and 20. As the company SP, he instituted a rigorous training program to both combat complacency and to ensure all air crewmembers received power management academic and aircraft power management instruction. In lieu of slots at the High-Altitude Army National Guard Aviation Training Site (HAATS) due to COVID-19, he conducted hands on aircraft instruction in the Fort Carson Mountain Training Areas at HLZs with altitudes in excess of 12,300 ft. MSL to prepare junior air crews on power management principles they would encounter in Afghanistan. While in theater, he was essential to the creation of a standardized COVID-19 decontamination SOP within the Brigade which became the standard within the CENTCOM AO. CW3 Heckathorn's mission focus and devotion to duty was essential to the execution of Archangel DUSTOFF's no fail MEDEVAC mission and identify him as the 2020 Army Aviation Association of America Army Aviation Trainer of the Year.

Army Aviation Medicine Award

Sponsored By: Gentex Corporation



MAJ NICOLE J. SIEGLER
34th Expeditionary Combat Aviation
Brigade
St. Paul, Minnesota

MAJ Nicole J. Siegler is assigned as the Brigade Surgeon for the 34th "Red Devils" ECAB. She volunteered for the Brigade's entire deployment in support of Operations Inherent Resolve and Spartan Shield and was the only medical provider throughout the duration. She developed the rotation plan of 12 surgeons, physician assistants, and behavioral health officers from four different states and subordinate commands. This resulted in 100% medical provider coverage for the entire deployment cycle at 15 locations throughout CENTCOM. As Camp Taji's base support cell began to redeploy, she assumed the additional role of Base Surgeon and immediately coordinated with the medical facility to make up any shortfalls with the 34th ECAB medical staff. She developed a base-wide plan for medical support during emergency base closures and led a trauma team for casualty care when the medical center was overwhelmed with 22 casualties on two major IDF attacks. With the outbreak of COVID-19, she quickly developed unified mitigation policies across the Task Force along with procedures for flight crews that would decrease the risk of exposure. As a result of her efforts, not a single mission was cancelled due to the spread of COVID-19. This dedication to Aviation Medicine and care for the Soldiers in her charge make her the obvious choice for the 2020 AAAA Army Aviation Medicine Award.

Army Aviation Dustoff Flight Medic of the Year

Sponsored By: Air Methods Corporation



SFC JESSIE R. TURNER
Company C, 2nd Battalion,
4th Aviation Regiment,
4th Combat Aviation Brigade
Fort Carson, Colorado

SFC Jessie Turner seamlessly balanced the roles of First Forward Support Medical Evacuation Platoon (FSMP) Sergeant, Flight Instructor, Critical Care Flight Paramedic and Fort Bliss Installation MEDEVAC coverage Non-Commissioned Officer in Charge while simultaneously preparing his organization for a CENTCOM deployment. Further, he pulled 24 hour MEDEVAC duty throughout the six month rotation at Fort Bliss, TX during which he was involved in five MEDEVAC missions that saved the lives of six service members. Most notably, he was involved in three back-to-back MEDEVAC missions in one day involving a fall from an LMTV, an F-16 pilot ejection recovery, and a gunshot wound to the face which demonstrated his exceptional abilities as a flight paramedic. However, what really makes him stand out is his aptitude for leading Soldiers as a senior NCO. Drawing from his years of experience in medicine and the Army, he is constantly teaching his subordinates and advising his superiors in ways that both enable them to absorb and apply knowledge. Through cultivating the minds of his team, his influence extends far beyond his own reach, as each of the Soldiers he has mentored continue to thrive throughout Archangel DUSTOFF and beyond. SFC Turner's dedication and accomplishments identify him as the 2020 Army Aviation Association of America DUSTOFF Flight Medic of the Year.



2020 National Functional Award Winners

Army Aviation Association of America

Air Traffic Control Maintenance Technician of the Year

Sponsored By: Raytheon Company



SSG NAIYIM Q. BROSSIEAU
Company F, 2nd Battalion, 4th
Aviation Regiment
4th Combat Aviation Brigade
Camp Dahlke, Afghanistan

SSG Naiyim Q. Brosseau has made unmatched achievements in excellence, earning a "never before seen" three commendable, 100 percent, evaluations for sub-areas during the Forces Command's Aviation Resource Management Survey (ARMS) inspection for Army ATS. His efforts in analyzing and support maintenance of five tactical ATC systems led F Company, Task Force Mustang, to earn a three-year high score on ARMS totaling 92 percent. His efforts contributed to the effectiveness of ATC support during simultaneous Combined Training Center rotations preparing 4th CAB for combat operations. Forward deployed to Afghanistan, SSG Brosseau quickly used his technical expertise to employ satellite communications, UHF/VHF, and FM communications packages to support Tactical Aviation Control (TAC) Team ATC missions across the theater. His skills as a communication navigation system expert contributed immensely to his role as the Airfield Management NCO at Camp Dahlke; working tirelessly to correct radio blind spots to enhance the safety of aviation operations in an already high threat environment. SSG Brosseau's exceptional contributions and achievements supporting the Army aviation, ATC, and ATC Maintenance mission, unquestionably identify him as the 2020 Army Aviation Association of America Air Traffic Control Maintenance Technician of the Year.

Air Traffic Controller of the Year

Sponsored By: Raytheon Company



SSG RICKY D. GIBBS
1st Battalion,
58th Aviation Regiment

SSG Ricky D. Gibbs has thrived as the senior Air Traffic Controller and standardization noncommissioned officer for the battalion. During the pre-deployment certification exercises and subsequently the nine-month deployment in support of Operation Enduring Freedom, Combined Joint Task Force - Horn of Africa (CJTF-HOA) his efforts directly lead to the mission's unparalleled success. As the battalion's Air Traffic Control standardization noncommissioned officer, he led, planned, and executed numerous training exercises to ensure the battalion's air traffic controllers were trained and certified to assume the mission throughout East Africa. He used his vast knowledge and experience as a seasoned Air Traffic Controller to create the first Army tactical control training program for two separate facilities at Baledogle Military Airfield, Somalia and Manda Bay, Kenya in support of CJTF-HOA. Additionally, SSG Gibbs was the first Army Air Traffic Controller to be certified to conduct Landing Zone Safety Officer (LZSO) operations in the AFRICOM area of responsibility. His expertise in Air Traffic Control and airfield management directly impacted the safety of over 13,000 aircraft movements across the AOR. SSG Gibbs' hard work and dedication to excellence identify him as the 2020 Army Aviation Association of America Air Traffic Controller of the Year.

Air Traffic Control Manager of the Year

Sponsored By: Raytheon Company



CW2 BRYAN J. NELSON
1st Battalion,
58th Aviation Regiment

Chief Warrant Officer Two (CW2) Bryan J. Nelson has achieved excellence as a Military Air Traffic Control Manager during training in the continental United States and while deployed during combat operations in Africa. Over the course of the year CW2 Nelson has trained National Guard forces as part of Joint Combined Arms Live Fire Exercise Northern Strike 19, readied his own controllers for deployment, deployed as a contingency location officer in charge (OIC), and supported Combined Joint Task Force- Horn of Africa (CJTF-HOA) missions as the Airfield Manager and Air Traffic Control Officer for Magogoni Airfield in Manda Bay, Republic of Kenya. During his combat tour, CW2 Nelson provided critical leadership and air traffic control expertise in response to an unprecedented attack on his airfield by the radical Islamic terrorist organization al-Shabaab. Throughout this year of high intensity training and combat, he was the leader of choice to manage air traffic control operations at critical locations supporting no fail missions. CW2 Bryan Nelson's leadership, innovation, and skill has advanced the field of military and civilian aviation air traffic control in both the United States and the Republic of Kenya. His outstanding leadership and technical acumen identify him as the 2020 Army Aviation Association of America Air Traffic Control Manager of the Year.

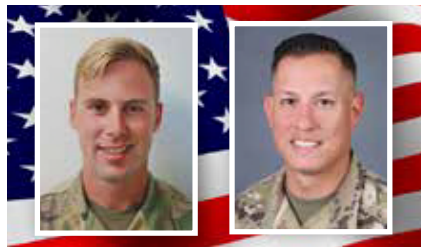


2020 National Functional Award Winners

Army Aviation Association of America

Air Traffic Control Facility of the Year

Sponsored By: Raytheon Company



Commander: CPT
Nathan D. Strohschein

Senior NCO: SFC
Douglas B. Miller

Air Traffic Control Unit of the Year

Sponsored By: Raytheon Company



Commander: CPT
Jeremy A. Armijo

Senior NCO: SFC James
P. Hankins

Donald F. Luce Depot Maintenance Artisan Award

Sponsored by Army Aviation Association of America



MR. JOSE E. ZEPEDA JR.
Corpus Christi Army Depot
Corpus Christi, Texas

BALEDOGLE MILITARY AIRFIELD TOWER 1ST BATTALION, 58TH AVIATION REGIMENT Somalia

The 1st Battalion 58th Aviation Regiment Airfield Operations Battalion Baledogle Mobile Tower System is the example of professionalism and dedication for expeditionary air traffic services. The facility had a demanding year supporting the Combined Joint Task Force-Horn of Africa (CJTF-HOA) in support of Operation Enduring Freedom (OEF). The Controllers who worked within the facility kicked off 2020 by deploying to Camp Lemonnier, Djibouti, Africa to support CJTF-HOA. From there, the facility team traveled to Baledogle Military Airfield (BMA), in Somalia. The controllers initially assumed the Landing Zone Safety Officer (LZSO) mission from the Air Force at the contingency location and fully assumed the mission with zero underlap in capability to aircraft at its location in less than two weeks. Upon the arrival of the mobile tower system (MOTS), the team rapidly established the tactical tower facility and by the end of the 9-month deployment, the controllers successfully and safely controlled over 13,000 aircraft movements, 23 MEDEVACS and 15 aircraft emergencies. Their management of two separate landing areas, due to a bisected runway, ensured safe landings in all conditions, even NVGs. Safe, Orderly, and Expeditious is the Battalion's motto and each Guardian Eagle Soldiers' outstanding accomplishments earned them the recognition as the 2020 Army Aviation Association of America Air Traffic Control Facility of the Year.

COMPANY F, 2ND BATTALION, 4TH COMBAT AVIATION BRIGADE Task Force Mustang Afghanistan

Foxtrot Company, Task Force Mustang achieved what no tactical ATC unit has been able to in more than three years with a 92 percent score during the Forces Command Aviation Resource Management Survey (ARMS). Earning three commendable 100-percent sub-section evaluations, they also led the 4th Combat Aviation Brigade's highest awarded company safety program with a 97 percent for ARMS. They received commendable evaluations from the NATO Air Safety Office, and the United Kingdom's Ministry of Aviation Operations Team during inspection of their Phoenix Aerodrome Flight Information Services facility managing Resolute Support Headquarters helicopter landing zone, and the entire Kabul Base Cluster airspace. Extending their influence to coalition forces, The Special Operations Aviation Training Company-Afghanistan worked with F Company to stage Shank Tower as their primary training hub for Afghan military rotary wing. Simultaneous to operating two premier ATC facilities in the combat theater, F Company took on integrated roles with the JTACs from coalition forces and the 817th Expeditionary Air Operations Squadron to become the go-to landing zone control operators in the most tactically vital locations. Their expertise, professionalism and focus allowed them to execute more than 3,300 movements a month, without incident. For their dedication to US and Coalition forces in Afghanistan, F Company, 2-4 General Support Aviation Battalion is unequivocally the Army Aviation Association of America ATC Unit of the Year.

Mr. Jose Zepeda distinguished himself as an aircraft paint subject matter expert at Corpus Christi Army Depot. As the result of a new standard implemented by the Occupational Safety Health Administration, CCAD was selected as the starting point for hexavalent chromium reduction for Army aviation platforms. A primary depot team was assembled, and they projected the study to take over two years to complete. Mr. Zepeda joined the aircraft platform team four months into the project, subsequently submitting over 19 engineering changes for approval and holding meetings with Army Aviation and Missile Command, engineers from the U.S. Army Combat Capabilities Development Command, Defense Logistics Agency, and DLA Hazmat to ensure CCAD alignment with the Army goals for hexavalent chromium mitigation. He was instrumental in the depot's success at the removal and reduction of chrome six-class C primer from all depot paint shops and six work centers, well ahead of the projected timeline. His efforts also resulted in CR6 removal from 174 Army technical publications and set the standard for Air Force and Navy publications. The process has changed the face of Army aviation rotary wing coatings for the UH-60 Black Hawk, AH-64 Apache, CH-47 Chinook, and OH-58 Kiowa. Mr. Zepeda's accomplishments clearly identify him as the 2020 AAAA Donald F. Luce Depot Maintenance Artisan of the Year.

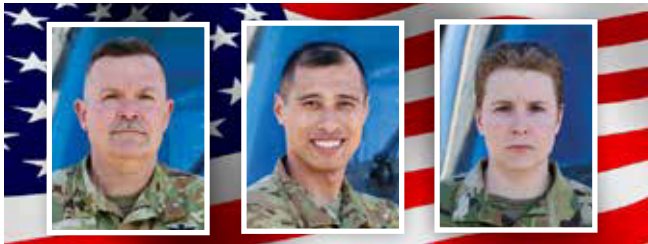


2020 National Functional Award Winners

Army Aviation Association of America

Army Aviation Air/Sea Rescue Award

Sponsored by UTC Aerospace Systems



CW4 Loyd R. McCoy 1LT Eduard Cruz SGT Taylor B. Hagerty



SGT Joel G. Coelho SGT Jeffrey M. Regets

COMPANY C, 3RD BATTALION, 238TH AVIATION REGIMENT New Hampshire Army National Guard Concord, New Hampshire

Pilot in Command: CW4 Loyd R. McCoy

Pilot: 1LT Eduard Cruz

Crew Chief: SGT Taylor B. Hagerty

Flight Paramedic: SGT Joel G. Coelho

Flight Paramedic: SGT Jeffrey M. Regets

On 25 February 2020, the aircrews of DUSTOFF 69 (D069) and DUSTOFF 70 (D070), both HH-60M MEDEVAC aircraft stationed in northern Iraq, received an Urgent MEDEVAC 9-Line request. The 9-Line called for the evacuation of multiple casualties taken during an assault in a nearby mountainous area and specified that a rescue hoist would be required. Over the course of the next five and a half hours, and three trips back and forth to the Role 2 Hospital, D070 would conduct seven dynamic rescue hoist iterations, recovering four critically wounded patients. While enroute to the Role 2, the flight paramedics rendered critical, life-saving care. Throughout the operations the D070 crew not only handled the complex hoist operation with extreme skill and courage, but coordinated with U.S. Special Operations Forces, Iraq Special Forces, AH-64 Air Weapons Teams, and multiple Close Air Support and ISR assets that were on station and actively engaging the enemy. D070 rejoined with D069 which had landed at a different location and taken on an additional two casualties. Three of the six rescued Soldiers lived because of the valorous actions of the two crews. Despite the proximity of enemy forces, the crews repeatedly exposed themselves to enemy fire. The actions of the C/3-238th crews warrant the 2020 Army Aviation Association of America Air/Sea Rescue Award.



AAAA Award Nominations Are Open



AAAA Hall of Fame Inductions

Suspense: June 1

AAAA Functional Awards

Suspense: July 1

- AMSO Award
- ASE Award
- Avionics Award

- Donald F. Luce Depot Maintenance Artisan Award

Suspense: August 1

- Logistics Unit of the Year Award
- Materiel Readiness Award for a Contribution by a Small Business or Organization
- Materiel Readiness Award for a Contribution by an Individual Member of Industry
- Materiel Readiness Award for a Contribution by a Major Contractor
- Materiel Readiness Award for a Contribution by an Industry Team, Group, or Special Unit

- UAS Soldier of the Year
- UAS Unit of the Year
- Fixed Wing Unit of the Year

Suspense: September 1

- Air/Sea Rescue
- ATC Facility of the Year
- ATC Unit of the Year
- ATC Technician of the Year
- ATC Controller of the Year
- ATC Manager of the Year
- DUSTOFF Medic of the Year
- Medicine Award
- Trainer of the Year

AAAA Scholarship Foundation Awards

Applications Due: May 1

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Any questions? Call (203) 268-2450.

■ BRANCH UPDATE

BY MG RONALD E. ADAMS

WOMEN IN AVIATION: CELEBRATING THE PAST, BUILDING THE FUTURE

The U.S. Army Aviation Warfighting Center hosted a Women in Army Aviation Symposium in late February. Over 90 aviation soldiers of both genders and all ranks traveled to the conference representing DOD-wide backgrounds and experiences. The goal of our symposium was twofold: first, to recognize and celebrate women's 21 years of service within Army Aviation and second, to identify and discuss current "gender issues" within the branch.

There are differing, sometimes contentious, opinions as to the value of highlighting one gender within a two-gender military. But at the same time, it is almost universally admitted that there are fundamental differences between the genders that may affect the way we do business. In that light, the symposium's intent was to encourage open, fair discussion of how the branch as a whole can best address these challenges.

Women have now served in Army Aviation for more than 21 years. The first female pilot, 2LT Sally D. Woolfolk (now COL Sally Murphy) graduated from

A review of the recent Women in Army Aviation Symposium.

the rotary wing aviator course in June 1974. Females were serving as enlisted maintainers with the graduation of PVT Linda Plock in February, 1974 and were integrated into the Aviation warrant officer corps in June, 1975 with the graduation of WO1 Jennie Vallance, Jr. As women began to attend and graduate from these aviation schools, they

began serving in all capacities within the branch, except for attack, cavalry and special operations.

Almost 20 years later, in 1993, congressional legislation opened the door for women to fly attack aircraft and serve in those units as both pilots and maintainers. Further legislation in 1994 allowed women to serve in air cavalry line troops. A steady number of women have since graduated from the AH-64, OH-58D and AH-1 courses at Fort Rucker, constantly adding to the number of women in the attack/cav arena. Women have served in and have commanded both attack and cavalry units; they have deployed around the globe; they have flown in combat. They have been recognized as superb

commanders and NCOs, award-winning aviators, and outstanding officers and soldiers.

While celebration was the initial order of business, the symposium also offered a rare opportunity for several generations of female soldiers and officers to discuss the challenges of a career in Army Aviation, and initiate mentoring-type discussions.

USAAVNC took this opportunity to stimulate discussion and to disseminate information. I opened the agenda with a branch overview and discussion of where women are serving within the branch today, and was followed by many superb speakers, to include BG Patricia Hickerson, who chaired a dynamic, multi-media presentation of various recruiting efforts of yesterday and today.

Lieutenant Colonels Joe and Maureen Lebouef from the United States Military Academy presented a fast-paced, interactive discussion of gender differences, both behavioral and physical. They demonstrated some fundamental differences between men and women and the resulting cultural effects. Men and women often see the same situation very differently. This is not necessarily a bad thing, but often challenging to acknowledge and appreciate.

The symposium audience was also brought up to date on the "Washington Perspective" by LTC Karen McManus. As the Pentagon's Women in the Army Representative (as well as an aviator), she provided an update of trends that are affecting women in today's military.

Presentations by the Aviation Research Laboratory (USAARL) provided a much anticipated forum for discussion of anthropometry (body measurements) and how this affects cockpit coordination, skills and safety. Ongoing studies are validating these standards, and may result in changes. The Aeromedical Center and

USAARL participants also addressed the current pregnancy policy and research demonstrating the effects of the aviation environment on the developing embryo. They also examined the relatively new issue of the "aging" female aviator; how are health and flight skills affected versus the traditional male standard?

One of the main objectives of the symposium was accomplished by establishing work groups to discuss gender issues as they affect the entire branch, not just the female soldiers. The work groups were chaired by professional military facilitators and subject matter experts. These "group leaders" ensured that group discussion was oriented toward illuminating appropriate branch-wide issues, rather than recounting purely personal experiences.

Within this framework, the work groups identified issues which the Aviation Center Team is already working — issues briefed at our NCO symposium and at our Brigade Commander VTC update.

The work group outbriefs provided impressive snapshots of the intended symposium goals: professional women sincerely presenting their best effort at making Aviation a stronger, more cohesive branch.

The representatives at the conference collectively represented a strong, dynamic female population that takes their role as part of the Aviation warfighting team very seriously. They are out front, and are willing to help lead us to a better future. We can all be tremendously proud of their contributions to our nation, our Army and to Army Aviation.

★ ★

MG Adams is the Aviation Branch Chief and Commanding General, USAAVNC and Ft. Rucker, AL, and Commandant, U.S. Army Aviation Logistics School, Ft. Eustis, VA.



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AAAA Chapter Affairs

By LTC (Ret.) Jan Drabczuk

I appreciate the support from COL Wayne Thomas, the Wright Brothers Chapter President, and from LTC James "Dave" McDarmont, Chapter Senior VP, for providing and sharing this information for our membership.

The Wright Brothers Chapter

Columbus, Ohio based Wright Brothers Chapter (WBC) was established in 1991 at a time when aircraft were abundant, and the number of Aviation personnel were much significantly higher than they are today.



It was established in order to commemorate and document the contributions of Army Air Crews from Ohio in the defense of their country, and to recruit and support future generations of Army Aviators. Over the years, the Chapter has experienced the typical ups and downs that likely every Chapter has foregone.

Since 2004, members of the WBC have participated in KFOR6A in 2004, OIF 2004, 2006, 2009. OEF in 2012. OSS/OIR in 2015, 2018, 2019, 2020. Fixed Wing mobilizations in 2006, 2013, 2016 and 2020. Members have also participated in humanitarian support with Hurricanes Katrina, Irma, Harvey, and Maria along with support to Haiti and numerous other missions supporting local entities.

Membership Increase

The Chapter supports the 1st Battalion 137th Aviation Regiment and the Ohio National Guard. A concerted effort continues to increase Chapter membership. One of the main objectives for sustaining and growing participation was to re-engage retirees in the efforts of Chapter officer duties. They continue to have a full slate of officers to include a VP of Scholarships, Social Events and Enlisted Membership. Their goal was to have redundancy and a team approach using both the voice and pulse of active military members in addition and complement to the application of the consistent and available time that some retirees were able to offer. Chapter membership remains steady in this COVID environment.

New Scholarship Program

One specific goal that the Chapter has pushed was to establish and provide scholarship funding to deserving WBC members and their families. The Chapter has appointed a scholarship Vice President who actively solicits donations. Their first scholarships were established in 2014 when they presented two \$1,000 academic scholarships to their members. With increased membership, the Chapter was able to increase to four scholarships in 2018. They plan to continue and grow their scholarship program.

Chapter Activities

Chapter events are planned considering both the wide age range of 20 to 80 year-old members as well as the professional goals of AAAA. Over the years the Chapter has conducted numerous events designed to raise awareness and increase funds for the scholarship initiative. Besides their annual golf tournament in the spring, in July 2019 the Chapter had another successful outing at the Columbus Clippers minor league baseball game. The Chapter also supported the Ohio Army Aviation Ball in August 2019. This ball is sponsored by the State of Ohio Aviation Directorate. Everyone associated with Ohio Army Aviation (and friends of the program) are welcome. Enlisted, Warrant, and O-Grade, Currently Serving and Retired, etc. This is an event to celebrate all Army Aviation in Ohio, not just a specific helicopter battalion or organization. This past year has been a dy-

namic and busy year with virtually all of Ohio's Army Aviation units performing overseas deployed service. The Chapter planned to conduct their annual golf tournament and Clippers event but unfortunately, Chapter meetings this past year have diminished significantly due to COVID challenges.

Summary

The Wright Brothers Chapter like most chapters this past year has had difficult times. COVID has kept the Chapter from having more events and activities. They remain strong and committed to keep the Chapter active and alive. I feel confident that 2021 will bring better times. The Chapter will continue to have well planned events and meetings that are enjoyable from both a social and professional standpoint across the breadth of demographics in the chapter. Their planning in the past has paid off and they continue to grow. The Chapter has great Chapter leadership and AAAA is excited about the bright future ahead for this Buckeye State Chapter and its member families!

Feel free to contact me if you need help for your Chapter, Executive Board support, would like your Chapter featured in *ARMY AVIATION* magazine or to obtain clarification of National procedures.

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

AAAA News Order of St. Michael Inductees

Aviation Center Chapter



CHAPTER PHOTO BY MS. JAMEL L. JACK

Dr. James J. Martin, Enlisted Training Branch Chief, is inducted into the Bronze Honorable Order of St. Michael by COL Brian T. Watkins, director of the U.S. Army Aviation Center of Excellence (USAACE) Directorate of Training and Doctrine (DOTD) at Fort Rucker, AL on Dec. 16, 2020. Martin was recognized for more than 30 years of service, including active duty as a UH-60 Instructor and in his current position, as he changes duty to Director, Foreign Affairs Security Training at Blackstone, VA.

Gold Standard Chapter



CHAPTER PHOTO BY MAITHEA ACQUINO

CW4 Boyd W. Crawford, standardization pilot for the 8-229th Avn. Regt., is inducted into the Bronze Honorable Order of St. Michael, by MAJ Steve Kramer, Asst. G-3, U.S. Army Reserve Aviation Command and Chapter VP Programs, at Ft. Knox, KY on Sept. 12, 2020. Crawford was recognized for his leadership in a multitude of critical assignments across the Aviation Enterprise.



CHAPTER PHOTO BY MR. JACK PINE

LTC Joseph Spencer, XO of the 8-229th Avn. Regt., is inducted into the Bronze

Honorable Order of St. Michael, and his wife, **Marlene**, into the Honorable Order of Our Lady of Loreto, by chapter president, COL (Ret.) Andrew Doehring (right), and VP Programs, MAJ Steve Kramer (left), on Sept. 12, 2020 at Ft. Knox, KY. LTC Spencer was recognized for his contributions to Army Aviation over 16 years; Mrs. Spencer was recognized for her outstanding leadership of the unit Family Readiness Group and support of her husband. LTC Spencer is now the 244th Expeditionary Combat Aviation Brigade Executive Officer at Ft. Knox.

Savannah Chapter



CHAPTER PHOTOS BY SGT ANDREW S. MICHEL

CW5 Brent A. Melland, outgoing command chief warrant officer of the 3rd Combat Aviation Brigade, is inducted into the Silver Honorable Order of St. Michael, by brigade incoming CCWO, CW5 Timothy Slifko, at 3CAB headquarters, Hunter Army Airfield, GA on Nov. 10, 2020. Melland was recognized for more than 34 years of aviation service.



CHAPTER PHOTO BY MAJERIC J. JAMES

CSM (Ret.) Derwood L. Norris is inducted into the Bronze Honorable Order of St. Michael by North Carolina State Army Aviation Officer and chapter president, LTC Mark Pickett, on Dec. 17, 2020 at the ARNG Aviation Support Facility #1, Morrisville, NC. Norris was recognized for over 38 years of aviation service culminating as the senior NCO for both the 449th Theater Aviation Brigade and 1-130th Attack Recon Bn.



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Tarheel Chapter



U.S. ARMY NATIONAL GUARD PHOTO BY SGT JAMAR MARCEL PUGH, 382ND PUBLIC AFFAIRS DET.

AAAA National Senior VP, MG (Ret.) William T. Crosby (far left) and VP National Guard and Reserve Affairs, MG Lester D. Eisner (far right), pose with five members and former members of the North Carolina Army National Guard, 449th Combat Aviation Brigade, following their induction into the Honorable Order of St. Michael during an annual North Carolina Army National Guard Aviation and Safety Office conference, Raleigh, N.C., Dec. 5, 2020. Inducted were (l to r): **CW5 (Ret.) Kurt "Jay" Cunningham**, **CW5 Scott Monticelli**, **MG M. Todd Hunt** (NC Adjutant General), **CW5 Christopher Woodard**, and **LTC Patrick Szvetitz**. MG Hunt, the first Army Aviator to serve as TAG, was inducted into the Gold Order and the others into the Bronze Order for their long-standing contributions to Army Aviation.

Tennessee Valley



CHAPTER PHOTO BY MRS. DEBRA TROKER

Chapter

LTC Patrick "Josh" Baker, product lead for Launchers and Test Sets Product Office, is inducted into the Bronze Honorable Order of St. Michael by COL Christopher Snipes, Project Manager, Tactical Aviation & Ground Munitions Project Office on Nov. 24, 2020 at



CHAPTER COURTESY PHOTO

Redstone Arsenal, AL. Baker was recognized for his career-long support of Army Aviation.

Gary Nenninger, president of Tennessee Valley Chapter, inducts **Mrs. Cora F. Bowden**, a Department of the Army Civilian with the Aircraft Survivability Equipment Project Management Office, into the Honorable Order of Our Lady of Loreto on Nov. 20, 2020 in Huntsville, AL for her many years of support and Family Readiness Group (FRG)

leadership roles in multiple Army Aviation units and organizations.



CHAPTER PHOTO BY

Washington Potomac Chapter

COL (Ret.) Randolph R. Rotte Jr. is inducted into the Gold Honorable Order of St. Michael by AAAA National Treasurer, MG (Ret.) Walter L. Davis during a ceremony at the Boeing Philadelphia facility, Ridley Park, PA, on Nov. 12, 2020. Rotte was recognized for his 26 years of active duty service, to include command of aviation units during Operations Desert Storm and Iraqi Freedom, and later as chief of the HQDA G-8 Aviation Division; and,



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BOOK REVIEW

Taking Fire, Memoir of an Aerial Scout in Vietnam

By Colonel David L. Porter, U.S. Army, Retired

Reviewed by Lieutenant Colonel Hugh L. Mills, Jr., U.S. Army Retired

David Porter's new book *Taking Fire, Memoir of an Aerial Scout in Vietnam*, includes a comment that the aerial recon mission was called, "Dancing with the Devil," or just "the Dance." Kris Kristofferson (an Army Aviator) wrote a song called *To Beat the Devil* and it includes the lyric, "You've been reading my mail." Reading *Taking Fire* reminded me of that lyric. As an Air Cavalry Scout platoon leader for two tours in Viet Nam, David's book was a walk down memory lane. When I arrived in January 1969, I wanted to fly scouts for the 11th Armored Cavalry Regiment. I wound up in the 4th Cavalry of the Big Red One in the same AO as Blackhorse. The Air Cavalry Troop was the most unique and flexible aviation unit in Viet Nam. A mixture of Scouts, Guns, Slicks and our wonderful Aero Rifle Platoon gave us all the ability to cover recon, direct action, downed aircraft rescue, ground operations and economy of force. *Taking Fire* has all that and more. The Cambodian Border area and Thunder Road were their responsibility, and it was a rough AO.

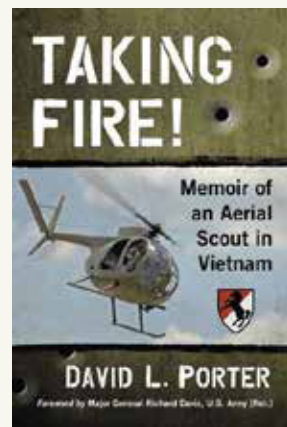
There were differences in our experiences such as their arrangement of pilots, Oscars and aircraft configuration but that was common among different units. Darkhorse did not normally fly with left seat Oscars. Our gunner/crew chiefs flew back seat right side as we were always in a right-hand turn but "whatever works" was the rule.

Taking Fire is an excellent examination of the inner workings of the ACT and operating in Viet Nam. His description of Lift pilots, Gun pilots and scouts was spot on in my experience. Slicks were always bitching about something but lived well, Cobra pilots assumed God-Like personas and Scouts were stoic, aloof and brooding but driven and infinitely more handsome.

Taking Fire is a walk through in detail of the inner workings of the ACT of Blackhorse and is an excellent treatise on the Air Cavalry in Vietnam from one storied Troop's perspective. His is a different experience than mine, but it is much the same and I read it with recognition, remembrance and admiration.

Allons!

LTC (Ret.) Hugh L. Mills Jr. is a retired Army Aviator, Army Aviation Hall of Fame inductee and one of the most decorated Army Aviators of the Vietnam War having served as Darkhorse 16 ('69 & '72) and Charliehorse 38 ('71 & '72). He is the author of "Low Level Hell, A Scout Pilot in the Big Red One."



GRAPHIC BY MCFARLAND & COMPANY, INC.

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AAAA **Membership Update** By CW4 Becki Chambers

The Membership Corner

Interesting aspects of the Reserves and National Guard are the unique lives outside of military service that are led by the part-time Soldiers – those of us that are TPU and M-Day Soldiers.

One such unique individual is CW3(P) Kevin Afflick. He is currently a UH-60L pilot in the US Army Reserves while working full time as a helicopter pilot for the Charleston County Sheriff's Department.

Kevin grew up in St. Andrews parish, close to Kingston, Jamaica. Family was a big part of his life and he is still close with the family that still live there. His upbringing and the standards set for him are a large reason why he is so successful today. Kevin's mother was a schoolteacher, so doing poorly in school was not an option.

When Kevin was 19, he emigrated to New York. Following in the footsteps of his father (Jamaica Defense Force, 20 years) and his brother (British Army, 8 years), Kevin enlisted in the US Army in 1998. He attended basic training at Fort Leonard Wood, MS, then went to Shepherd Air Force Base in Wichita Falls, TX, to become a Dental Specialist. He was the honor graduate in his tri-service class, one that included Navy and Air Force personnel.

His first duty station was Fort Huachuca, AZ, where he served as a Dental Assistant, Medical Supplier, and first line Supervisor. While living in Arizona, Kevin volunteered as an Arizona Ranger, a law enforcement auxiliary. While stationed in Vilseck, Germany



The Afflick Family: (left to right) daughter Nadia; Kevin; his mother, Lorna; wife, Rebekah; and daughter, Timera.

in 2001, he played soccer for the 409th Base Support Battalion (BSB), who came in third in the European command championship. He completed his associate degree in General Studies from the University of Maryland, University College (UMUC) and his bachelor's degree in human resource management from American Intercontinental University (AIU).

He moved in 2004 to Walter Reed Medical Center in Washington, DC, where he held the position as NOCIC of Oral Maxillo-Facial Surgery clinic and the NCOIC of the Personnel Section (S-1) and supply Sergeant.

After leaving active duty in September 2006 and moving to Richland County, South Carolina, he became a part of the Richland County Sheriff's Department. He successfully completed the South Carolina Criminal Justice Academy and earned his Master of Business Administration (MBA), Organizational Psychology and Development Management from American Intercontinental University (AIU). He was assigned to the Uniform Patrol Division and Special Response Team (SRT) in 2010. Kevin joined the South Carolina National Guard in 2007 and applied for and was selected to be a

Warrant Officer Aviator.

After his graduation from Warrant Officer Candidate School in 2007 as Honor Graduate and Flight School in 2009, He deployed to Iraq as an Apache Attack Pilot for 1-151 ARB and performed additional duties as an Aviation Life Support Officer (ALSO). In 2015 he transferred to the Army Reserves and served in Warrant Officer/Officer Recruiting from 2015-2020. In April of 2020 he joined A Co, 2-135th at Fort Bragg as a UH-60 pilot.

Kevin is married and has two children: Timera, 10, who is currently learning to play the piano, and Nadia, 14, who loves to draw and wants to go to college for graphic design.

He said, "I believe the AAAA organization gives a voice on important matters that impact us as Aviators and our families. The organization provides an outlet for us to network with others and recognize those Soldiers that go above and beyond. Family support has been a large part of my life and I know that if I needed support AAAA would be there."

CW4 Becki Chambers
AAAA Vice President for Membership



New Lifetime AAAA Members

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Colonial Virginia Chapter

Martin J. Moreno

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Keystone Chapter

CAPT James Jenkins

North Country Chapter

CPT McCoy Bean

Pikes Peak Chapter

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LTC Tyler Partridge

Savannah Chapter

CW4 Mark H. Johansen, Ret.

Tennessee Valley Chapter

Timothy J. Sweeney

Thunderbird Chapter

COL David E. Sullivan, Ret.

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1SG Anthony Picarro

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SPC Logan Reid Covington

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Wright Brothers Chapter

CW4 Henry Mentrak

No Chapter Affiliation

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LTC Friedrich Stern

Jean K. Tinsley

WO1 Armando B. Torres

MAJ L.D. Walker

Rose Weast



AAAA Family Forum

Making 2021 Resolutions Meaningful

By Judy Konitzer

We celebrated holidays and brought in 2021 with a serving of “black-eyed peas” for good luck and a desire to make resolutions more meaningful. I found the following suggestions from two Veterans to be worthy of consideration.

Texas Congressman Dan Crenshaw on Veterans Day shared his philosophy that living with certain principles and beliefs can make you happy and successful, and we should not be forgetful why Veterans fought for us in the first place. It’s important to be helpful, honest, caring, and a loving patriot while loving yourself, as well as your neighbor, and never giving up on what is right. It is too easy today to lose gratitude for America and so much easier to demand more of others than yourself. “Accountability and responsibility are hard concepts to accept.”

Seek Perspective

Crenshaw said, “Putting hardships in perspective allows gratitude and from there comes hope and perseverance.” His mother died when he was 10, but he remembers her dealing with cancer with grit, humor, and grace. He was blinded in one eye after being hit by an IED when deployed as a Navy Seal in Afghanistan and felt this was difficult, yet felt other Soldiers endured worse. And knowing Gold Star wives who persevere puts even more things in perspective.

Do Something Hard

He feels that true purpose and happiness is achieved thru hardship and when they are forced upon you, “you must embrace them because you have no choice.” Overcoming pain builds character and more fortitude to do something even harder, therefore suffering should not be avoided but embraced, because “with suffering comes value.”

Live According To Your True Purpose With No Plan B

Having a “Plan A” means giving 110% to living according to the purpose and mission you know you have and is a deeper



GRAPHIC BY MEGHAN HUTTO

concept than just giving up. If you really can’t do something you should have a back-up plan, if it is not Plan B, which means cutting corners and doing just enough to get by giving you mediocrity.

Right Sense Of Shame

Shame is good when it means you feel bad about your shortcomings and don’t lazily accept them. This is hard because none of us are fine the way we are. We have work to do and need to be held accountable in order to pave the way to do what is right. He feels our institutions seem to be coddling our youth by telling them they are never wrong or in need of self-improvement allowing building their self-esteem as the goal.

Sense Of Duty

In the military our sense of duty is deeply engrained and becomes self-evident. There are rules because no one is perfect, but this sense of duty must be self-actualizing, meaning doing the simplest things right, working hard, and doing what it takes vs. being the weakest link. Laws can be enforced after they are broken, but it takes a good and moral people to avoid breaking them in the first place, otherwise we are nothing but a society in turmoil and chaos.

American values are not necessarily self-sustaining. Personal responsibility, personal fortitude, moral truth, and gratitude for our Nation to pursue our happiness are things that must be taught and passed down. “We must mold our future generations instead of simply reflecting the whims of a restless youth.” Also, our country cannot survive the increasing number of citizens wishing to survive off the work of others, while realizing we must take care of our neighbors before demanding our government do it all.



Join Community Organizations

LTG (Ret.) H. R. McMaster shared in a Wall Street Journal op ed that “Veterans by joining community organizations can help their fellow citizens by sharing the type of experiences they have valued where “bigotry, racism, and other forms of intolerance and prejudice have no place.” They can encourage their fellow citizens to be bound together through a sense of common purpose, mutual respect and willingness to sacrifice. By understanding the rewards of military service their fellow citizens could” transcend political and social differences, thereby regaining confidence in our national character and restoring pride in the republic that veterans fought to preserve.”

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

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AAAA Awards



Order of St. Michael Inductees

Gold

CSM Clifton P. O'Brien, Ret.
Air Assault Chapter

Silver

Timothy S. Hillenburg
Corpus Christi Chapter
CW4 Andrew L. Isaac, Ret.
Idaho Snake River Chapter
CW5 Brent A. Melland
Savannah Chapter

Bronze

CW2 Joseph B. Bailey
Mount Rainier Chapter
MAJ Andrew Bartlett
Pikes Peak Chapter
CW4 Anas Bashir
Desert Oasis Chapter
1SG Patrick Bernard
Pikes Peak Chapter

LTC Christopher M. Buck
Greater Atlanta Chapter
BG Stanley E. Budraitis
Magnolia Chapter
CW5 Kurt "Jay" Cunningham
Tarheel Chapter
LTC Jason A. Ellington
Greater Atlanta Chapter
LTC Benjamin R. Gering
Mount Rainier Chapter
CW5 Scott Harper
Air Assault Chapter
1SG David Hood
Pikes Peak Chapter
CW4 Ammon L. Hughes
Air Assault Chapter
CW4 Jason Ingraham
Northern Lights Chapter
CW4 Christopher Johnson
Bavarian Chapter
MSG Khristin Lee
Bavarian Chapter

MSG Damon J. Lindsey
Desert Oasis Chapter
SSG Ricardo J. Martinezfigueroa
Follow Me Chapter
CW4 John P. Nix
Desert Oasis Chapter
SSG Bradley A. Obenland
Northern Lights Chapter
CSM Robert F. Petree
Mount Rainier Chapter
CW5 Ronald G. Skipper
Yellowhammer Chapter
CW4 James R. Suggs Jr.
Desert Oasis Chapter
1SG Brian Webber
Pikes Peak Chapter
1SG David A. Wilson
Iron Mike Chapter



Knight Recipients

CW3 Aaron V. Cheateaux
Mount Rainier Chapter
Thomas Clark
Aviation Center Chapter
CW3 Mickael Cruz-Sanchez
Air Assault Chapter
SFC Ed. C. Gerriff

Mount Rainier Chapter
LTC Christopher P. Hill
Tennessee Valley Chapter
CSM Jasper C. Johnson
Aviation Center Chapter
MAJ Ralph D. Nab
Aviation Center Chapter
MAJ Carl E. Warren
Aviation Center Chapter
MSG Jackie Zerby
Iron Mike Chapter



Our Lady of Loretto Recipients

Wendy Buck
Greater Atlanta Chapter
Christie Freeman Harper
Air Assault Chapter
Carol O'Brien
Air Assault Chapter
Shellie Petree
Mount Rainier Chapter
Sara Jane Winterton Boswell
Northern Lights Chapter

In Memoriam

LTC John M. Weaver



AAAA

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



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Application Deadline is May 1!

For more information on how you can contribute
or to learn more about the application process, go to

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Industry News

Announcements Related to Army Aviation Matters

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


CAE USA Cleared to Provide USAACE Advanced Flight Training

CAE announced on Dec. 22 that CAE USA is authorized to proceed on the United States Army contract to provide advanced helicopter flight training support services. CAE USA will provide classroom, simulator, and live flying instructor support services for Army aviators training to fly the CH-47 Chinook, UH-60 Black Hawk, and AH-64 Apache helicopters at the U.S. Army's Aviation Center of Excellence (USAACE) at Fort Rucker, Alabama. The total value of the contract, including the one-year base contract and six one-year options through 2027, is expected to be approximately \$90 million. The initial base contract was included as part of CAE's first quarter fiscal year 2021 order intake. The contract was protested and the contract award to CAE USA was subsequently upheld by the U.S. Court of Federal Claims.




Kaney Selected to Improve Army Rotorcraft Power Systems

The U.S. Army has selected Kaney, Inc. for the Small Business Innovative Research (SBIR) program with the goal of improving Army rotorcraft platforms. Under this effort, Kaney will develop technologies to improve efficiencies within rotorcraft power systems needed to support aircraft modernization and mission capability expansion. Phase I scope will include preliminary design work for power electronics line-replaceable units (LRUs), as determined by an architecture study. Work will be performed by Kaney teams in Rockford, IL and Dayton, OH.



Davis Joins FlightSafety Services Corp.



Dan Davis has joined FlightSafety International as President, FlightSafety Services Corporation. Following graduation from the United States Military Academy at West Point and his service in the U.S. Army as a Field Artillery Officer with the 1st Infantry Division, he held leadership roles with Lockheed Martin, and was most recently the Chief Operating Officer at Cornerstone Consulting. His broad base of industry experience spans the Department of Defense and Special Operations Forces community.

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

Avion Solutions Inc., Huntsville, AL, was awarded an \$8,820,564 modification to contract W31P4Q-18-A-0047 for logistics support for the Unmanned Aircraft Systems project manager's office; work will be performed in Huntsville, with an estimated completion date of Aug. 31, 2021.

General Atomics Aeronautical Systems Inc., Poway, CA, was awarded a \$93,293,554 hybrid (cost-plus-fixed-fee and firm-fixed-price) contract for research, development, test and evaluation of artificial intelligence for the smart sensor prototype unmanned aerial platform; work will be performed in Poway, with an estimated completion date of March 2, 2023.

L3 Technologies Inc., Salt Lake City, UT, was awarded a \$29,197,837 firm-fixed-price contract for the manned/unmanned teaming hardware, as well as technical and engineering support, for the Apache helicopter; work will be performed in Salt Lake City, with an estimated completion date of June 30, 2023.

Lockheed Martin Corp., Orlando, FL, was awarded a \$10,395,412 modification to contract W31P4Q-19-C-0071 for engineering services in support of the Hellfire Missile and Joint-Air-to-Ground Missile; work will be performed in Orlando, with an estimated completion date of May 9, 2022.

Raytheon Technologies, McKinney, TX, was awarded a \$235,576,667 C-Type, multi-year procurement contract for the production and delivery of the Silent Knight Radar in support of U.S. Special Operations Command (USSOCOM) requirements; work will be performed in McKinney and Forest, MS, and is expected to be completed by July 2025.

The Boeing Co., Mesa, AZ, was awarded a \$13,900,000 modification to contract W58RGZ-16-C-0023 for software upgrades to the flight management computer for the AH-64E; work will be performed in Mesa, with an estimated completion date of Dec. 31, 2024.

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UPCOMING EVENTS

February 2021

9-10 AAAA Luther G. Jones Army Aviation Depot Forum, Corpus Christi, TX
CANCELLED

March 2021

11-12 32nd Annual Women in Aviation International Conference (Virtual)
 16-18 AUSA Global Force Next (Virtual)
 22-25 HAI Heli-Expo 2020, New Orleans, LA

ARMY AVIATION Magazine

64

January 31, 2021



AAAA Legislative Report

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

FY21 National Defense Authorization Act:

As this arrives to your mailbox fresh into 2021 and on the cusp of the inauguration of a new President, much developed in December; in the final throws of 2020 which will be remembered in history as a year of political controversy cloaked in a shroud of pandemic cloth. In true Congressional fashion, the National Defense Authorization Act (NDAA) pushed the 11th hour of 2020 and was fortunately passed by the House and Senate on December 3rd. The final bill authorizes \$740.5B to DoD for fiscal year 2021. The interesting political twist on the bi-partisan passage in both the House and Senate was the fact that President Trump vetoed the bill based on his objection of re-naming confederate named bases and his objection to provisions restricting rapid withdrawal of U.S. forces from Afghanistan and Germany. In response to the veto and for the first time in his Presidency, Congress had to act in another bi-partisan action to pass a measure that overrode the veto and effectively made the legislation law.

FY21 Defense Appropriations:

Similar to the NDAA, Congress waited until late December to address funding for the government to include Defense Appropriations. As you know, for yet another year, we have discussed the chronic short term funding measures called Continuing Resolution and how damaging they are to the DoD and our industry partners. Election drama, COVID-19 relief... you name it, there was always an excuse why Congress could not get funding legislation passed on reasonable timelines. Maybe our legislator's hearts grew three sizes larger or maybe they just didn't want to spend Christmas in Washington D.C., but regardless the reason and just days before Christmas, Congress passes a \$1.4 trillion-dollar omnibus spending bill (to include defense appropriations) in conjunction with a \$900B COVID 19 relief bill.

Farewell to Congresswoman Martha Roby

After 10 years serving Alabama's 2nd Congressional District, home of Army Aviation's Center of Excellence, Rep. Roby



U.S. Congresswoman Martha Roby and MG David J. Francis following her induction as a Knight of the Honorable Order of St. Michael on Dec. 14, 2020 at Ft. Rucker, AL.

was bid farewell on 14 December during her last trip to Fort Rucker while in office. MG David Francis, USAACE and Fort Rucker commanding general inducted Rep. Roby as a Knight of the Honorable Order of Saint Michael in appreciation for her decade long support of Army Aviation priorities. Her commitment to our enterprise had longstanding impacts to aviation readiness and modernization.

Francis stated, "We just want to say thank you for your incredible service to our nation, to the Aviation Center here and Fort Rucker, and your support of Army Aviation at large. When you support Fort Rucker, you're supporting all of Army Aviation and the United States Army. That is most particularly felt by a wounded Soldier on the battlefield that hears that medevac helicopter coming, a Soldier in

a firefight that has an Apache come overhead and fix the problem, or a Soldier that is getting extracted on a CH-47 on the battlefield. And I know you've seen it because every Mother's Day you go to visit our Soldiers that are downrange. What an incredible example you have been and continue to be for Army Aviation. So, thank you and we wish you all the best as you head into the next chapter."

Congresswoman Roby expressed gratitude for the opportunity to serve five Ft. Rucker commanding generals and Army Aviation at large. "Fighting for our military over the past decade has been one of my highest honors as a Member of Congress. Army aviation has and will continue to be vital to our success at home and abroad. I am grateful for the opportunity to serve Ft. Rucker and all the men and women who work tirelessly to support our warfighters. Thank you for inducting me as a Knight of the Honorable Order of Saint Michael. I am deeply honored and humbled by this recognition and thank each of you for your service and sacrifice as well as that of your families to our great nation."

ARMY AVIATION

Upcoming Special Focus

FEBRUARY 2021

PEO Aviation
Rotary Wing Project
Manager Updates
Army Capability
Managers
Futures Command

MARCH 2021

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People On The Move

Aviation General Officer Promotions/ Assignments

Tate Changes Command and Retires



U.S. ARMY PHOTO BY SGT EDNA J. RUCKSTINE

MG Frank W. Tate is inducted into the Gold Honorable Order of St. Michael by LTG Thomas S. James, commanding general of First United States Army, with the assistance of his wife Beverly Tate at the close of the Division West, First Army change of command ceremony at Division West Headquarters, Fort Hood, Texas, Dec. 14, 2020. The Tates are retiring after 33 years of service.

Hall Takes Over Assistant Director, ARNG



U.S. ARMY PHOTO

BG David L. Hall was promoted to his current rank on Dec. 3, 2020 and assumed the responsibilities of National Guard Assistant Director for Army National Guard Aviation and Information Warfare. Hall's most recent previous assignment was as commander of the California Army National Guard 40th Combat Aviation Brigade. He takes over from BG J. Ray Davis who retired.

Awards

10th CAB Recognized as Best of the Best



10TH CAB FACEBOOK PHOTO

The FY19 Chief of Staff of the Army, Deployment Excellence Award "BEST OF THE BEST" award was presented to the 10th Combat Aviation Brigade. The award is given to the unit that displayed the best deployment operation in the Army. 10th CAB also won an award in the sub-category "Deploying Large Active." The awards were made possible by the hard work of the team of CW2 Steve Tipton and SFC Blain Peters, shown holding the awards, and flanked by the CAB command team (r to l), COL Travis McIntosh, CSM Rodolfo Lopez, and CW5 Rolando Sanchez. Congratulations!

FY22 Colonel/Lieutenant Colonel Army Competitive Centralized Selection List - Commands Selection Board Results

The fiscal year 2022 Army colonel and Army Acquisition Corps (AAC) lieutenant colonel competitive centralized command selection board results were released Dec. 10, 2020. The Army lieutenant colonel CSL selection board results are scheduled for release in May 2021; the AAC colonel CSL board results release date has not yet been announced. Congratulations to the following 29 Army Aviators on their selection.

O-6 Principal

LTC(P) Boardman, Benjamin *
LTC(P) Chung, Christopher M.
LTC(P) Clyde, Christopher H.
LTC(P) Cody, Clinton R. *
LTC(P) Cullinan, Brendan J. *
LTC(P) Jaeger, Timothy R. *
COL James, Jeremy W.
LTC(P) Jones, Bryan C.
LTC(P) Morgan, David W.
LTC(P) Morris, John A. III *
COL Rowland, Matthew L. *
LTC(P) Schwenn, Khirsten T. +
LTC(P) Smith, Derek A.
COL Von Hagel, Daryl S. *
LTC(P) Waleski, Roger P. Jr. *

O-6 Alternate

COL Hogan, Kyle M. *

COL Verenna, Tony K.
COL West, Jason L. *
LTC(P) Woody, Bryan T. *

O-5 Principals

MAJ(P) Brewington, Thomas
MAJ(P) Kia, Aaron *
MAJ(P) Mulder, Jonathan
LTC Riddle, Bryan *
MAJ(P) Rieck, Andrew *
MAJ(P) Rogers, Clifton *
MAJ(P) Swanson, Howard *

O-5 Alternates

MAJ(P) Galvin, Michael
LTC Montoya, Scott *
MAJ(P) Solano, Robert

* = AAAA Member

+ = Life Member

Flight School Graduates



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

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

47 Officers November 5, 2020 Commissioned Officers

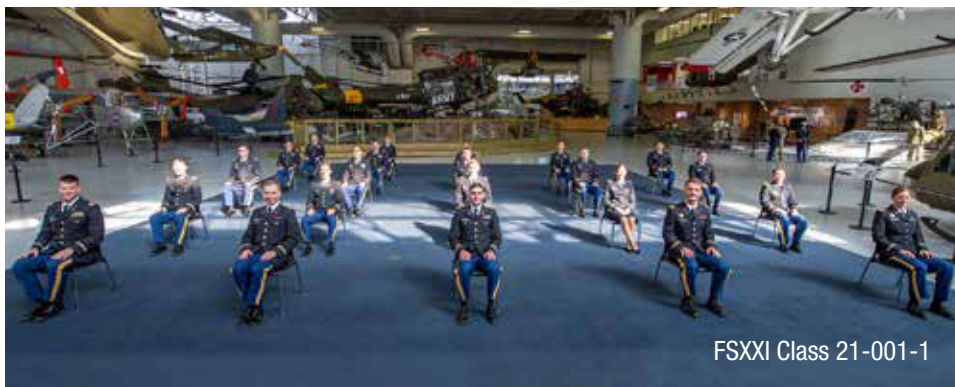
2LT Stanley, Jeremy T. * - DG
2LT Mason, Christian T. * - HG
1LT Reynolds, Adam F. - HG
2LT Alberson, Justin W.
2LT Allen, Anne B. *
2LT Bingham, Lane M.
2LT Bisset, Christopher E. *
2LT Davis, Blake D. *
1LT Dellinger, Chelsee M. *
2LT Fuentes, Dawnnie C. *
2LT General, Mark O. *
2LT Warneke, Ryan *
2LT Wingfield, Abigail M. *

Warrant Officers

WO1 Dreyer, Timothy J. - DG
WO1 Duncan, Ty N. - HG
WO1 Hill, Nathaniel T. - HG
WO1 Sheldon, Michael J. - HG
WO1 Altholtz, Joseph D.
WO1 Atelian, Robert C.
WO1 Birch, Shawn C. *
WO1 Botti, Andrew G.
WO1 Brizendine, Dakota T. *
WO1 Cantrell, Casey B.
WO1 Connors, Kevin P.
WO1 Cooper, Chaz C. *
WO1 Draper, Deni L.
WO1 Espana, Kevin J.
WO1 Fletcher, Daethan A.
WO1 Greger, Blake C.
WO1 Hanley, Jeffrey R.
WO1 He, Ruijie *
WO1 Holmes, Jonathan L.
WO1 Hymes, Michael A., Jr.

People On The Move

W01 Kirby, Brian P.
 W01 Lively, Christopher M.
 W01 Mueller, Matthew C.
 W01 Olver, James Z.
 W01 Pringle, Reed M. *
 W01 Riddle, Zachary M.
 W01 Roop, Christopher A. *
 W01 Rossmiller, Travis J.
 W01 Schneider, Kyle A.
 W01 Smith, Hunter J.
 W01 St. Peter, Joseph J.
 W01 Thorn, Anthony S.
 W01 Villalobos, Vincent A.
 W01 Wood, Albert A. - HG



FSXXI Class 21-001-1

38 Officers November 19, 2020

Commissioned Officers

2LT Carter, Jevan O. - DG
 2LT Curran, Ross D. * - HG
 2LT Johnson, Lauren E. - HG
 2LT Baldwin, Caleb A. *
 2LT Carter, Leno K.
 2LT Cashman, Sean M.
 2LT Doolittle, Evan A.
 2LT Fahlberg, Natalie C.
 2LT Guetens, Vaughn C.
 2LT Huynh, Tran P.
 2LT Lee, Timothy M.
 2LT Malnasi, Paul A.
 2LT McDonald, Alexander J. *
 2LT Rudisill, Devin C.
 2LT Shin, Joseph D.



FSXXI Class 21-001-2

Warrant Officers

W01 von Hemert, William J. - DG
 W01 Bloom, Aubrey J. * - HG
 W01 Dell, Dillon S. - HG
 W01 Ingram, Shane S. - HG
 W01 Sobeske, Richard E. - HG
 W01 Ames, Adam D. *
 W01 Barnhill, Bryant D.
 W01 Brown, Danielle N.
 W01 Carnley, Michael G.
 W01 Coffman, Adam C.
 W01 Currier, John T., Jr.
 W01 Hill, Jason W.
 W01 Hogan, Cameron C.
 W01 Medley, Marshall J.
 W01 Obolonchik, Ruvim V. *
 W01 Pipkin, Andrew D.
 W01 Rec, Zachary E.
 W01 Sampson, Clint A.
 W01 Schaffner, Clay M.
 W01 Stafford, Austin M.
 W01 Tixier, Trevor M.
 W01 Udseth, Kurt F., Jr. *
 W01 Wiley, Richard R.



FSXXI Class 21-002-1



FSXXI Class 21-002-2

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



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People On The Move

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 040-20

PFC Sky Farrell * - DG
SPC Nicholas Arango
PV2 Feras Bouti
SPC Everol Bruce, Jr
SPC Jordan Clarkston
PV2 Eric Gardner
PFC Crystal Richardson
PV2 Carlos Rodriguezcaicedo
SPC Quinton Romney
Class 042-20
PVT Vladyslav Kramarenko * - DG
PFC Wenting Li
PV2 Carmen Tapia-Rodriguez
SPC Alex Alvarez
SPC Erik Bay
PVT Pearce Bloom
PVT Dylan Gifford
PVT Jose Gonzalez-rodriguez
PVT Nathaniel Harris
SPC Caleb Herring
SPC Michael Hull

CH-47 Medium Helicopter Repairer (15U)

Class 038-20

PFC Nicholas Gordy * - DG
SPC Rickey Conrad, Jr
SGT Victor Diaz
PVT Dawson Frazer
SPC Rachel Herb
SGT Matthew Herman
PFC Emily Mitchell
SPC Mykel Ostrom
SGT Sarah Ritter
PV2 William Thomas

UH-60 Helicopter Repairer (15T)

Class 079-20

AB Zachariah W. Lausche * - DG
AB Steven Wyatt Blackwood
AB Jared Alan Evans
AB Martavious Jaylon Koger
AB Keith Andrew Nelson
AMN Christian Lee Spenner
SRA Kevin Mitchell Valdner
Class 080-20

SPC Carmonie Elias Bates
PVT Derek Betances
PFC Colby Skyler Buchert
PVT Russell James Card
SPC Brian Scott Frazier
SGT Samuel William Harris
SGT Jason Elias Kayyal
SPC Austin Jarrett Phipps
SPC Alexander Stephen Piner
SPC Kyle Anthony Roth
PFC Michael Paul Sweeney
SPC Levi Denton Wilson

Class 081-20

PFC Sam Adriane Cleofas * - DG
SPC George Edward Ballard Jr
PFC Thomas A Bowser, Jr
SPC Tonatsiu Toy Campos
PVT Trevor James Clements
PVT Rain Arthur Thomas Coleman
PVT Kathryn Grace Hall
PVT Jennifer Nicole Myers
SPC Jonathan C. Scarborough
SPC Elijah Quinton Small
SPC Tyler Robert Wagner
SPC Dylan Michael Fuller Williams

Class 082-20

SPC Logan Reid Covington * - DG
PVT Nicholas David Diaz
PFC Talon Joseph Freeman
PFC Clayton Henry Easton Frye
PVT Mikil Henriques
PV2 Joshua Raymond Hurlburt
PFC Paul Elroy Lindner, III
PVT Ron Patrick Mathurine
SPC Jason Daniel Parfitt
PV2 Anthony Stephen Soto
PV2 Jacob Elliot Vashon
PVT Ruan Visser

Class 083-20

PV2 Jason Carranza * - DG
SPC Phillip Carney
PV2 Carmen Suzanna
PFC Levi Cirre
PFC John Ellis
PFC Irving Espinoza
PV2 Neil Fenner
PFC Jacob Fontenot
SPC Dylan Formby
PFC Daniel Garcia
PV2 Carlos Giraldo
PV2 Jeremiah Harris

Class 084-20

PFC Nathan Jones * - DG
PV2 Clint Hamilton
PV2 Samuel Hinton
SPC Jacob Kelly
SGT Joseph-Patrick Nealon
PFC Jakob Pohl
SPC Joseph Seneca
PV2 Anthony Torres
PFC John Williams II
PFC Austin Wilson
PV2 Ethan Woodard
PV2 Xiaotang Zhou

Aircraft Powerplant Repairer (15B)

Class 015-20

PV2 Jordan N. Koury * - DG
SGT Hussam M. N Al Shamrani
PFC Joseph Houston Brock
PV2 Jason Michael Cross
PV2 Caleb Earl Cummings
PV2 Nathan Williamalexan Gaceta
PV2 Noe Alexis Gonzalez
PV2 Tyler Zane Reed

Aircraft Powertrain Repairer (15D)

Class 010-20

PFC Edgar Albert Wagner
PV2 Nathan Jack Williams II

Aircraft Pnedraulics Repairer (15H)

Class 016-20

PVT Andre Bernard Dalia * - DG
PFC Keaton James Derouchie
PVT Jamie Lee Dorris
PVT Benjamin Paul Harrison
Ovt Avery Issac Krone
PFC Alejandro Dejesus Luque
PV2 Jackson Hunter Pirch
PV2 Devon Curtis Rein
PV2 Jennings Ulysses Walkup

Class 017-20

PFC Anthony J. Simensen * - DG
PFC Connor Edward Goett
PVT Brandon Bross Mcdowell
PVT Nathan Peter Mondloch
PVT Garrett Jackson Tumblin
PFC Brody Thomas Weavill
SPC Trayveion Marcellous Yates

Aircraft Structural Repairer (15G)

Class 11-20

SPC Ian Anthony Mangini * - DG
SGT Mubarak J. M. Al. Anazi
SFC Adel Ghareeb Z Al Anazi
SPC Melanie Ann Dewerff
PVT Brenden Wade Goetz
PVT Scott Thomas Greenawald Jr.
PVT Xavier Terrence Harris
PFC Sangkyu Lee
PV2 Michael Peter Mrugala
SPC Luis Rodolfo River-Santiago
PV2 Brian Sanchez
PV2 David Christopher Saval
PFC Nicholas Peter Skillpa
PVT Bailey Michael Watson

Avionic Repairer (15N)

Class 019-20

PV2 Fallon Deandra Coats * - DG
PV2 Russell Luke Carrington
PFC Haley Kay Crider
PV2 Miriam Estrada
PFC Baily Cakes Murphy
PV2 Alyssa Samantha Pagan
PV2 Monet Elayia Smith
Class 020-20

PV2 James C. Fasel * - DG
PV2 Christian Caleb Burnes
PV2 Garcia Luis Espitia
PFC Adam C.S. Henry
PV2 Bobby Allen Nguyen
PV2 Davion Elijah Raney
PV2 Carlos Velez-Roldan

Class 021-20

PV2 Jeffery John Pelech Jr * - DG
PFC Caleb Andrew Garnett
PVT Colton Lee Kitchen
PFC Juan Carlos Melendezaponte
PV2 Jessie Lee Michael
PV2 Jermarcus Antoniom Phillips
PV2 Daniel Rivas
PV2 Robert Joseph Williams Jr

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

Class 019-20

PV2 Daniel Amidor * - DG
PV2 Dalton Addison
PV2 Dylan Bowlin
PV2 Mason Bradberry
PV2 Zachary Collins
PFC Nathan Fowlkes
PV2 Raul Gonzalezfigueroa
PV2 Glenn Harris, III
PV2 Jessica Hopper
PV2 Jalan Lee
PV2 Gable Leonard
PV2 Jahi Martindale

Class 020-20

PFC Johnnathan Kennedy * - DG
PV2 Myron Holley
PFC Joseph Hoover, Jr
PV2 Jonathan Ixchop
PV2 Jeffrey Mccoy
PV2 Lucas Mccoy
PV2 Shaun Mccue
PV2 Kent Mistal
PV2 Micahel Poston
PV2 Bianne Regis
PFC Bryan Santos
PV2 Gabriel Starr

Unmanned Aircraft Systems (UAS) Graduations

UAS REPAIRER

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

Gray Eagle UAS Repairer Course

16 Graduates, 5 November 2020

PFC Elias S. A. Martinez - DG
PV2 Bryce A. Leonard - HG
PFC Evan Bodie



People On The Move

PV2 Dearlo R. Benjamin
 PV2 Quentin C. Bowe
 PV2 Dalton J. Brock
 PV2 Jackson T. Essary
 PV2 Kaleb A. Fleece
 PV2 Jacob D. Garcia
 PV2 Christopher L. King
 PV2 Christopher A. Orr
 PV2 Karl B. Rupp
 PV2 Layla D. Salas
 PV2 Anthony T. Siciliano
 PV2 Hollywood L. Terry
 PV2 Theron D. Troy

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

23 Graduates, 6 November 2020

PV2 Zachary L. Canterbury - DG
 SPC Braden R. Asher - HG

SPC Christian A. Lebron
 SPC Frederick J. Toro Resto
 PFC Christopher R. Bonjour
 PFC Isaac A. Hubbard
 PFC Joseph C. Tsuha
 PV2 Miguel A. Aguiniga
 PV2 Joshua A. Banko
 PV2 Mark C. Bess
 PV2 Stephen B. Carey
 PV2 Chandler L. Charpentier
 PV2 Jarred M. Crowell
 PV2 Conner J. Schraeder
 PV2 Granville S. Shrader
 PV2 Javeon M. Simmons
 PV2 Joshua M. Smith
 PV2 Damion R. Sturgill
 PV2 Jordan L. Terrell
 PV2 Blaze A. Tuski
 PV2 Carlos G. Tyndall
 PV2 Kody M. Vandorp
 PV2 Isaiah Wrighton

DG - Distinguished Graduate

HG - Honor Graduate

* = AAAA Member

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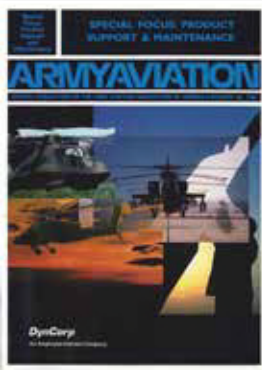
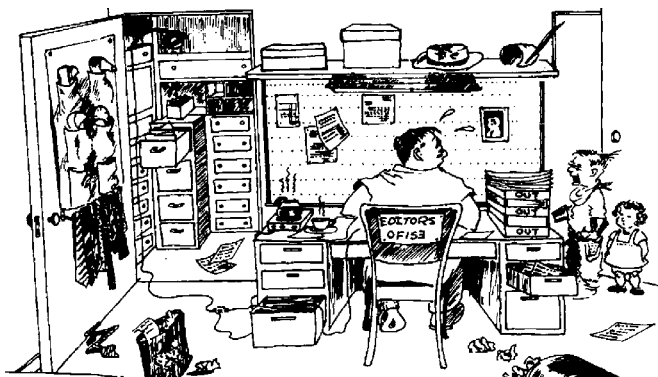
TOP MONTHLY RECRUITER WINS \$100!

Questions? Contact - membership@quad-a.org - quad-a.org

Art's Attic

By Mark Albertson

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



25 Years Ago January 31, 1996

Briefings

The U.S. Army's RAH-66 Comanche prototype lifted off for the first time, January 4, 1996, at Sikorsky's West Palm Beach Development Flight Test Center. Developed by the Boeing-Sikorsky RAH-66 Comanche

team, the prototype took off at 1:06 PM. During the flight, test pilots conducted a variety of maneuvers, including hovering, left and right hover turns, forward flight. The



prototype will be put through its paces in a series of flight tests throughout 1996, intended to develop the Comanche's full flight capabilities. Indeed, with the "opening the envelope process," the RAH-66 will be flown faster and maneuvered more aggressively in the weeks and months ahead.

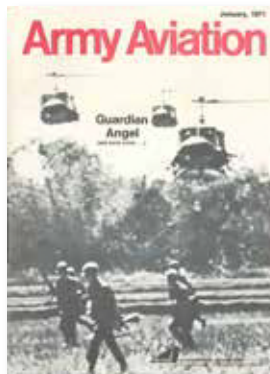
Army Aviation, the Future is Now . . . MG Ronald E. Adams



In preparing Army Aviation for the 21st century, the Aviation Vision is . . . "Aviation is the relevant force for the 21st century, providing Combat, Combat Support, and Combat Services Support capabilities across the spectrum of full-dimensional operations."

Induction

Dr. Charles Ledbetter (left) and Mrs. Eva Ledbetter (right) are pictured with Major Celeita A. Kramer, WVARNG, while taking part in Major Kramer's induction into the West Virginia Women's Hall of Fame. Major Kramer is the first woman UH-60 pilot; and the first female UH-60 maintenance test pilot.



50 Years Ago January 15, 1971

Last Two!

Fort Rucker, Alabama: The last two H-37 "Mojave" helicopters in the active Army inventory prepare to leave the U.S. Army Aviation Center for Tucson. Arizona. Considered obsolete by the Army, the Sikorsky-built, twin-

engine aircraft will be put in storage at the Davis-Monthan, AFB. The H-37s not in storage are presently in service with the ARNG and Army Reserve.



"Lone Ranger"

The Army Combat Developments Command Experimentation Command (CDCEC), at Fort Ord, California, recently concluded experiments concerning how many observation helicopters should be employed in an Air Cavalry Combat Brigade. Operation: LONE RANGER was to determine the proper mix of attack helicopters and observation helicopters for combat operations, based, of course, on the ability of observation helicopters to detect a column of enemy vehicles moving along a preplanned route.

Get the Point!



Fort Bragg, North Carolina: SP4 Leslie Brown (left) takes a hammer to one of the giant tacks used to nail down a new airfield membrane material being tested by the 47th Combat

Engineer Battalion (Airborne). Assisting SP4 Brown is SP4 Thomas Jenkins. The membrane is designed for use on forward area landing strips, and is undergoing tests at Fort Bragg's Falcon Strip.

Change of Plans. . .

Training plans for FY '72, for 1,900 initial entry helicopter pilots for the Warrant Officer Flight Training recruiting program, has been suspended until July 1, 1971.



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 2022 induction is June 1, 2021

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

Army Aviation Hall of Fame

Major General Richard E. Stephenson

Army Aviation Hall of Fame 2001 Induction – Charlotte, NC



MG Richard E. Stephenson has made major contributions to the Army and Army aviation for more than 40 years as a combat aviator, logistician and retiree. Many of his innovations have had dramatic impact on Army aviation.

With his background in the research, development, test and engineering process and knowledge of the Army planning, programming and budgeting systems, he and the Aviation branch chief developed the first Army Aviation Modernization Plan. This comprehensive effort led to organizational design improvements and improved working relationships among the many agencies involved in Army aviation. It also led to a 10 year plan of \$45 billion, establishing clear priorities and resources for the Big Five aviation systems – Apache, Black Hawk, Chinook, Kiowa Warrior and Comanche. The success of this effort led to each Army branch being required to develop a modernization plan.

Again, while commanding the Aviation Systems Command, he reinvigorated the Army Aviation Safety Program with the branch chief, the Safety Center commander and the Department of Army staff. This led to less than two major aircraft accidents per 100,000 flight hours, the best aviation safety record in the Department of Defense.

Stephenson's outstanding contributions to Army Aviation and aviation logistics had a very positive impact in the overwhelming success of Army Aviation in one of its finest hours – Operations Desert Shield and Desert Storm.

During both active service and retirement he has been a leader in AAAA as chapter president twice, chairman of the Awards Board, president of the Scholarship Foundation, secretary, treasurer, senior vice president and president of the National Executive Board, and as a prodigious fund raiser for the Scholarship Foundation.

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