

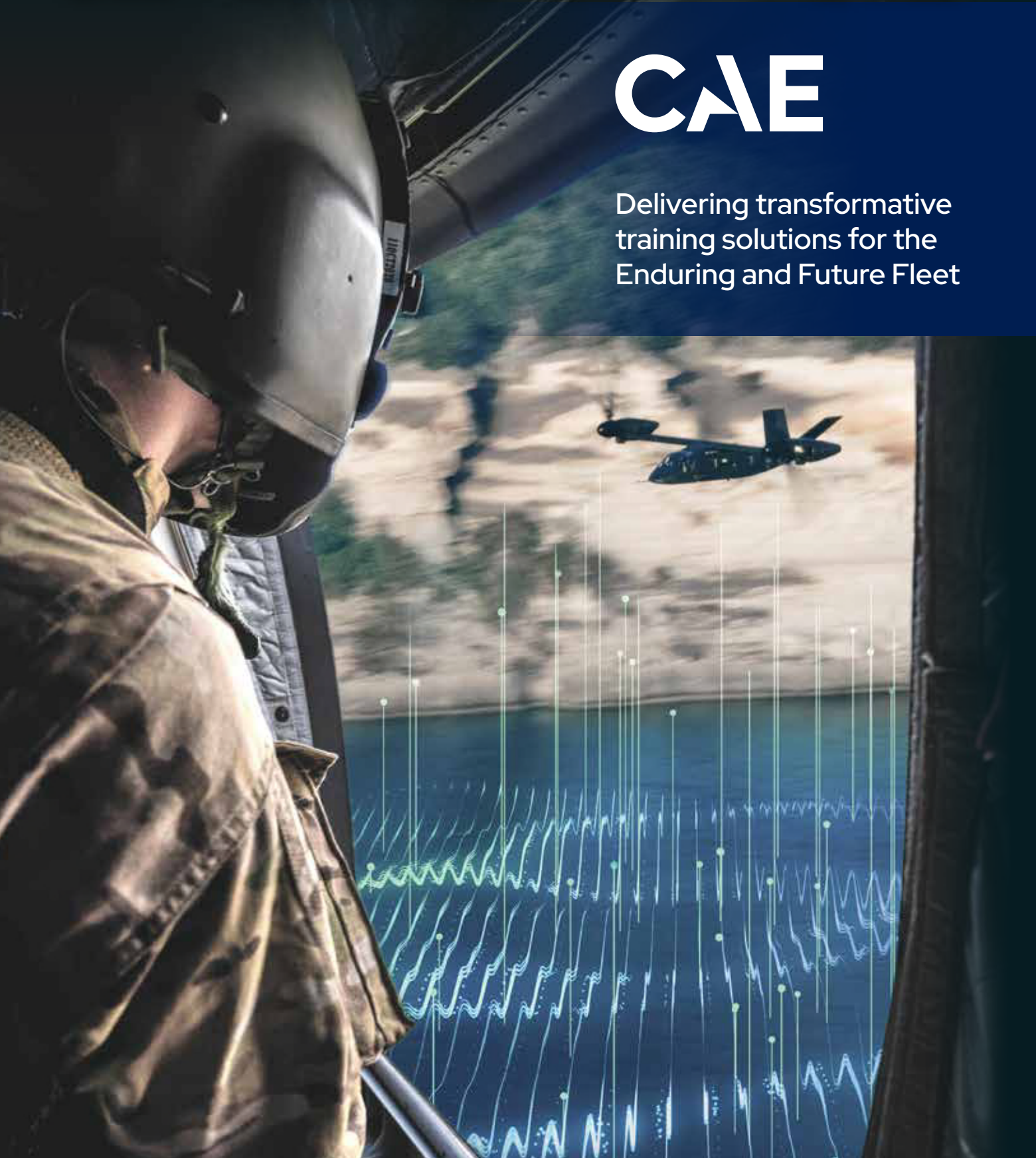
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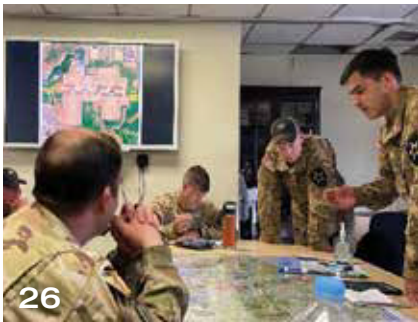
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18



16



26



28



30

Contents

July 31, 2023, Vol. 72, No. 7

TO THE FIELD

- 10 Army Aviation Branch Chief's Corner**
By MG Michael C. McCurry II
- 12 Chief Warrant Officer of the Branch Update**
By CW5 Michael A. Corsaro
- 14 Branch Command Sergeant Major Update**
By CSM Kirk Coley
- 16 Combat Readiness Center Update**
By CW4 Holly Riddle
- 18 Reserve Component Aviation Update**
By LTC Nicholas A. Steele
- 20 CCDC AVMC Tech Talk**
By Mr. F. Scott Smith
- 22 Ask the Flight Surgeon**
By LTC Brett Matzek, MD, MPH and James C. Dover, OD

SPECIAL FOCUS – Training

- 24 Simulation in Modern Army Aviation**
By CPT Ashley Howard and CW4 Christopher Crawford
- 26 Unnecessary Risk in the System: The Mission Approval Process**
By MAJ Michael Skuza
- 28 Measuring Aviation Training Program Effectiveness**
By LTC Eric Megerdoomian, MAJ Andy Bartlett, MAJ Brandon Wess, and MAJ Jake Rykken
- 30 Thinking outside the “Box” – Training a Combat Aviation Brigade at JRTC**
By MAJ Kellan S. Travis

SPECIAL FOCUS – Simulation

- 32 The Synthetic Training Environment - Evolving Its Collective Training Model**
COL Stephen Waldrop

Contents

July 31, 2023, Vol. 72, No. 7



SPECIAL FOCUS — Aviation Survivability

- 34 Project Manager Aircraft Survivability Equipment Update**
By COL Brock A. Zimmerman
- 38 Product Manager Air Warrior 2023: Update to the Field**
By Dr. Carlos Correia, Mr. Rob Seybold, MAJ Jeff Timmick, and Mr. Chuck Myer
- 40 Survivability: Building a Proactive Force**
By CW5 Casey W. Peterson
- 42 When Are Aircraft Combat Survivability Efforts Counter-Productive?**
By CW3 David S. DeAvila
- 44 Threat Change on Demand**
By Mr. Eric Bowes, Mr. John Sensing, and Mr. Robert Knopp
- 46 A Multi-Functional Sensor for Future Aviation**
By Mr. Jason Stevens and Mr. Jack Scherer

FROM THE FIELD

- 48 An Innovative Approach to Aerial Gunnery Operations**
By COL John W. McElveen
- 50 Unit Trainer/Evaluator Jump Start in the 28TH ECAB**
By MAJ Justin J. Shedron

DEPARTMENTS

AAAA NEWS	
AAAA President's Cockpit.....	8
AAAA VP Chapter Affairs.....	54
Chapter News.....	55
AAAA VP Membership	56
New Members.....	57
AAAA Family Forum.....	58
AAAA Legislative Report.....	65
AAAA Scholarship Foundation Donors.....	53

ARMY AVIATION COMMUNITY NEWS

Advertisers Index.....	60
Advertiser Spotlight.....	45
Art's Attic.....	66
Briefings.....	6
Calendar.....	64
Enlisted Spotlight.....	15
Hall of Fame.....	67
Historical Perspective.....	52
Industry News.....	60
People on the Move.....	62

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On The Cover

PAID ADVERTISEMENT: CAE Defense & Security is at the leading edge of digital innovation, providing training and operational support solutions across multi-domain operations to ensure mission readiness. CAE proudly serves the U.S. Army's Aviation Center of Excellence with academic, advanced aircraft simulation and flight instruction for both fixed-wing and rotary-wing Army Aviators. Caption provided by the advertiser.

Briefings

Fort Novosel Welcomes Corsaro

CW5 Michael A. Corsaro, chief warrant officer of the Army Aviation branch, speaks during a change of responsibility ceremony at Howze Field, Fort Novosel, AL, June 9, 2023. He assumes the position from CW5 Michael L. "Myke" Lewis Jr., who will retire with 34 years of service. Corsaro's most recent assignment was as the senior warrant office advisor to the commanding general, 4th Infantry Division and command chief warrant officer of 4th Combat Aviation Brigade, Ft. Carson, CO.



U.S. ARMY PHOTO BY KELLY MORRIS

Bragg Renamed Fort Liberty

On June 2, the world's most populated military installation, Fort Bragg, NC, was officially renamed Fort Liberty as part of a service-wide plan this year to scrub base names that honor Confederate officers.



U.S. ARMY PHOTO BY FT. LIBERTY PAO

Ft. Cavazos Airfield Renamed



U.S. ARMY PHOTO

The families of CW4 Keith Yoakum and CW2 Jason DeFrenn unveil the new sign at the airfield at Fort Cavazos, Texas, on May 4, 2023 in honor of the two pilots who died in Iraq. The Yoakum-DeFrenn Army Heliport was called Hood Army Airfield in honor of John Bell Hood, a Confederate general.

DOD Issues EFMP Policy



U.S. ARMY PHOTO

The Defense Department has issued its own Exceptional Family Member Program

to ensure consistency across the services for military families with special needs. Standardization of the program across the services includes – mandatory enrollment in EFMP for active-duty, military members who meet enrollment criteria; family support providers must complete at least one annual personal contact with each family assigned to their caseload and every family using their respective service's respite care program; guidance and transparency regarding the process and requirements for disenrollment; and respite care policy changes. For more information and enrollment, visit: <https://www.militaryonesource.mil/special-needs/efmp/>.

PACT Act Post 9-11 Special Enrollment Ending



U.S. ARMY PHOTO BY CPT. SAMUEL D. CORUM

Post-9/11 combat veterans who served between 2001 and 2013 have until Sept. 30 to enroll in Department of Veterans Affairs health care under the provisions of the PACT act which provides the potential to receive compensation to millions of veterans or their survivors who were exposed to radiation and toxic chemicals while in uniform, going back to the 1960s. To qualify for special period enrollment, veterans who have never before enrolled in VA health care must have served on active duty in a theater of combat operations during a period of war after the Persian Gulf War, and they must have been "discharged or released" between Sept. 11, 2001, and Oct. 1, 2013. Veterans who served "in combat against a hostile force during a period of hostilities" after Nov. 11, 1998, may also enroll during the special period. Combat veterans who exited service on or after Oct. 1, 2013 have up to 10 years after their military separation date. Any veterans who apply for the PACT Act payouts within a year of the bill signing are potentially eligible for retroactive benefits back to that date; but veterans who enroll after Aug. 9, 2023, will only receive payouts back to their date of filing. For more information go to www.va.gov/PACT or call 800-698-2411, option 8.



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Rolling Up Our Sleeves

In my first 'official' duty as your President, what a privilege and honor to represent our Association by attending the recent Army Special Operations Aviation Command change of command at Fort Liberty and inducting BG Phil Ryan into the Gold Honorable Order of Saint Michael (OSM) as part of his pre-change of command awards ceremony.

The Gold OSM is the pinnacle of the AAAA recognition pillar, and BG Ryan's incredible service and contributions to the Army and Army Aviation exemplify the spirit of this significant AAAA program.

That being said, what a productive few days the National Executive Group (NEG) had in Connecticut a few weeks ago in mid-June. Your AAAA team of MG (Ret.) Wally Golden, Senior Vice President; BG (Ret.) Tim Edens, Treasurer; MG (Ret.) Todd Royar, Secretary (thank you MG (Ret.) Jeff Schloesser and nominating committee for identifying and recruiting him to join the NEG!), and I... along with Bill Harris, Janis Arena, and Laura Arena enabling and facilitating the engagement... reviewed our strategic planning for the next 3-5 years for our current and future AAAA administrations.

Together with our Vice President for Membership, CW4 (Ret.) Becki Chambers; and Vice President for Chapters, LTC Jan (Ret.) Drabczuk, and our Chairman of the Strategic Planning Committee, COL (Ret.) Shelley Yarborough, we all worked through various issues ranging from the implications of the recently adopted AAAA By Laws revision, to the appointments of new AAAA National Members at Large and committee chairs. I could not be more pleased with the teamwork, initiatives, and innovations expressed by all. We are working hard to make sure that you, our members, have a professionally rewarding, relevant, and fun next few years.

We identified some specific areas that will need refinement in terms of written policies and procedures that will help our chapters maximize your membership benefits and your experience through Networking, Recognition, Voice, and Support. Those four pillars form the foundation of the AAAA mission statement to "Support the U.S. Army Aviation Soldier and Family." Your NEG and AAAA executive support staff are 100% locked on that mission; we take it very seriously and want you to know every decision we make is using that statement as our standard. We are all motivated and look forward to providing the very best support to our members that we can.

The NEG will be working on developing and initiating a few new programs over the coming months, as well as identifying and announcing our AAAA National Members at Large appointments and AAAA committee chair positions. Please, when you get messages from us through email, see our social media posts, or read something in the magazine that you have questions about or even disagree with, let us know.



AMP PHOTO BY REBE BOEIZ

MG (Ret.) Walt Davis inducts BG Phil Ryan into the Gold Honorable Order of Saint Michael during his PCS awards ceremony on May 31. Ryan spent three years as the 6th U.S. Army Special Operations Aviation Command (Airborne) Commanding General from June 2020 to May 2023.

Your AAAA National Executive Board, and especially those of us in your National Executive Group leadership, are here to serve you. We depend on all of you for feedback.

We hope to see many of you at the upcoming ASE Symposium at the Von Braun Center in Huntsville, AL September 11-12. And we are hard at work preparing for the Cribbins Readiness Conference, November 13-15, also in Huntsville; the Luther Jones Depot Forum in Corpus Christi, TX, December 5-6; and next year's annual Summit in Denver, CO, April 24-26, 2024. Go to the AAAA website at www.quad-a.org/events for more information.

Again, I'm honored to have my turn as your AAAA President, and I truly look forward to working with you our members – Active, National Guard, Reserve, DAC, Industry, Veterans and Retired – to maximize the AAAA experience, and have a great time doing it!

MG Walt Davis, U.S. Army Retired
36th President, AAAA
walt.davis@quad-a.org



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Defining Moments – Simulations and Training

By MG Michael C. McCurry II

This year, as we celebrate the 40th anniversary of the Army Aviation Branch, it is also fitting that we recognize the contributions of training aids, devices, simulators, and simulations (TADSS) systems with particular emphasis on flight simulators and simulations and their impact on Army Aviation during this period.



The evolution of simulators and simulations is significant and has played a pivotal role in the training and growth of the Aviation branch – past, present, and future. A defining moment is one that defines or transforms our existence. Within the Army Aviation branch's timeframe, we have had defining moments in simulations that created realistic environments for Soldiers and leaders to plan, train, test, and experiment. Tracking the accomplishments of simulations from the Link trainer to computerized, high-fidelity systems supporting Flight School XXI (FSXXI) today to the Synthetic Training Environment (STE) end state of the future indicates that we are on the right path.

The terms simulators and simulations are often used interchangeably, particularly in Aviation. The TRADOC Pamphlet 350-70-13 defines simulators as devices, computer programs, or systems that perform simulation, including flight simulators. On the other hand, it describes simulations as a method for implementing a model(s)

The Reconfigurable Virtual Collective Trainer is a line of effort that USAACE is working with the Synthetic Training Environment (STE) Cross-Functional Team.

over time, including any representation or imitation of reality. This definition is also inclusive of simulators.

Regardless of the term, the common denominator is the benefit simulation and flight simulators offer. They can recreate the experience of various aircraft and weapon systems to enhance the skills and proficiency of our Soldiers while reducing the cost and risks of live training exercises. While there is no substitute for live training, simulations can provide the building blocks for training progression and the flexibility when Soldiers cannot execute live training due to unforeseen circumstances such as inclement weather. Equally important, simulations deliver a means to rehearse difficult or dangerous tasks with minimal risk. It supports a “crawl, walk, run” approach to training.

One defining moment was the re-vamping of the Army's aviation training program to the new FSXXI program,

the primary training program for all Army rotary-wing aviators. The United States Army Aviation Center of Excellence (USAACE) conducts flight training using the advanced simulation devices found at Fort Novosel's contractor-owned helicopter simulations facility. FSXXI provides simulation services for UH-72A Training Helicopter Virtual Simulators; UH-60A/L, UH-60M, and CH-47F Advanced Aircraft Virtual Simulators; and UH-60A/L, UH-60M, AH-64D, and CH-47D Reconfigurable Collective Training Devices (RCTD). Additionally, the number, type, functionality, fidelity, and availability of the flight simulators meet the required student load, training schedules, and individual/crew and collective training requirements. As such, USAACE conducts 38 percent of its aviator training during Initial-Entry Rotary Wing (IERW) course using simulation. A 2007 United States Army Research In-

stitute for the Behavioral and Social Sciences study found that the number of hours required for FSXXI graduates to become fully mission-capable pilots was lower than for legacy pilots. Conversely, the cost comparison revealed that legacy training is substantially less expensive than FSXXI training.

PEO STRI has a requirement to develop, operate, maintain, upgrade, and support flight simulation training for the Army Aviation FSXXI curriculum. This simulation effort supports the training of FSXXI students conducting Initial Entry Rotary Wing (IERW) training, graduate-level pilot training, collective training, and Professional Military Education in training helicopter and advanced rotary-wing platform simulators.

Integrating simulations and training is integral to Professional Military Education (PME) development. USAACE is changing FM 3-04, Army Aviation, to reflect the Large-Scale Combat Operations (LSCO) doctrine stipulated in the October 2022 FM 3-0, Operations – another defining moment. We plan to publish this new doctrinal manual by December 2023; other aviation manuals will follow. As

USAACE cascades these doctrinal changes into our training, we will leverage simulations in our PMEs to familiarize students with aircraft systems, develop skills and proficiency, and incorporate them into collective exercises as we focus on developing Soldiers who can fight and win in the multi-domain environments of LSCO. Of course, integrating simulations and training has limitations, such as the inability to fully capture or reproduce the complexity and unpredictability of real-world situations or environments.

While the legacy Aviation Combined Arms Tactical Trainer (AVCATT) has provided a mobile, multi-station virtual simulation device that supports unit collective and combined arms training for Aviation Soldiers, we anxiously await the next defining moment – the Synthetic Training Environment (STE). The STE program will provide the Army with a usable, realistic, and complex training environment that enables units to improve their collective readiness through repetition and mastery. The Reconfigurable Virtual Collective Trainer, a platform allowing ground and air formations to conduct combined arms maneuver training, is a

line of effort that USAACE is working with the STE Cross-Functional Team. Although we are not there yet, we are progressing toward full implementation and achieving Aviation's next defining moment. Our Directorate of Simulations supports STE Software SPRINT Reviews and collaborates with PEO STRI to ensure USAACE's requirements for Future Vertical Lift (FVL), Launched Effects, and Future Tactical Uncrewed Aircraft Systems training in the STE development.

Over the last 40 years, simulations have been integral to Army Aviation training. It has provided defining moments in how we train and has shown its effectiveness and benefits in training Soldiers for combat. As we look toward the future with FVL and STE, we expect industry to balance the cost against live training and simulations to play an essential role in preparing our Soldiers to fight and win in LSCO.

Above the Best!

MG Michael C. McCurry II is the Army Aviation branch chief and commander of the U.S. Army Aviation Center of Excellence and Fort Novosel, AL.

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► Chief Warrant Officer of the Branch Update

Cleared for Take Off

By CW5 Michael A. Corsaro

I am honored and humbled to serve our Soldiers, NCOs, Warrant Officers, and Officers of our Aviation Total Force as the 10th Command Chief Warrant Officer of the Aviation Branch.

A force whose readiness will deter any potential adversary and assure our Allies and partners.

Taking the controls on June 9th at Howze Field, Fort Novosel, Alabama, my wife, Suk, and I marveled at all the history from the first rotary-wing flight class in 1955, through the Vietnam conflict, Desert Storm, and the Global War on Terrorism. It is a place where America's sons and daughters arrive to become Aviation Soldiers and are forged into America's heroes of the past, present, and future of Army Aviation.

Having CW5 Myke Lewis at the controls has been a blessing as we have undergone a transformation we have



CW5 Mike Corsaro inspects the saber he accepted from MG Michael C. McCurry (left), commanding general, U.S. Army Aviation Center of Excellence, during a change of responsibility ceremony on June 9, 2023 at Fort Novosel, AL while outgoing CWOB, CW5 Myke Lewis (back to camera) observes.

not seen in decades. From our modernized Aviation Warrant Officer Advanced Course (AWOAC), Unit Trainer/Evaluator (UT/E), Aviation Tactics Instructor Course (ATIC), along with Aviation Incentives and Professional Military Education programs (PME), Myke has carried the torch that has made our formations better.

Reflecting on the Past to Shape the Future

In the '90s, senior standardization pilots (SPs) would train aviators to "fight" their aircraft and not just fly them. Readiness Level (RL) progression included mission planning and planning cell implementation, overwater operations, aerial gunnery, battalion-level "Cross-FLOT" formation flight during deep attack operations, air assault operations, heavy lift air movements, and battalion-level battle handovers, all in support of the Army's AirLand Battle fighting doctrine. Junior aviators were taught detailed planning, briefing, rehearsing, executing, and after-action review procedures. These basic skills are the building blocks of Multidomain Operations in Large-Scale Combat that

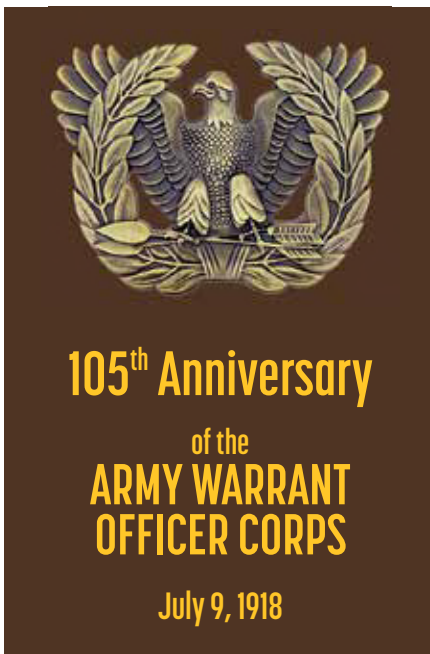
we need to fight and win today.

As the Army transitioned from the '90s, we moved into Unified Land Operations. Our training prepared us for counterinsurgency operations in Afghanistan and Iraq during two decades of continuous deployments. With Russia and China as our acute and pacing threats, we must learn how to "fight" our enduring and future aircraft on the battlefield of tomorrow to maintain our best deterrent - our readiness.

General Norman Schwarzkopf said, "It is better to sweat in peacetime than to bleed in combat." FM 3-0 outlines multidomain operations at echelon and focuses on LSCO on the battlefield. The "sweat equity" we need to generate today is getting back to the basics of detailed mission planning and execution.

Modernized AWOAC with Advanced Warfighting Skills - AWS

Commanders and SPs are still teaching the basics of mission planning; however, it is a diminishing skill across our formations. Now with our new modernized AWOAC in full motion, academic doctrine and tactics are being



taught by experienced and seasoned instructors across all COMPOs. They give our junior warrant officers the technical and tactical tools to succeed and the cornerstone on which to build.

Aviation Tactics Instructor Course – ATIC

Midgrade CW2 instructor pilots (IPs) in the '90s taught aviators how to fly their aircraft. Our IP Course has evolved since then and dedicates additional hours to tactical flight training and academics, paving the way for ATIC. ATIC will bridge the gap, move us forward into “fighting” our aircraft in LSCO environments, expound on the past experiences taught in Advanced Warfighting Skills (AWS), and set the foundation by developing institutional and operational capabilities. ATIC will empower our junior IPs with the cornerstones of mission planning and execution – and do it through single-ship and multi-ship LSCO scenarios. As ATIC moves forward, we can put the UT/E program in our pub bags as well.

Army Aviation Unit Trainer/Evaluator – UT/E

As the initial UT/E program vali-

ation has concluded, UT/E's can now conduct all maneuvers authorized by the Brigade Commander, including Autorotation and Emergency Procedures. By taking our UT program of the past and enhancing it with evaluation capabilities, UT/E's can help alleviate the workload so SP/IPs can concentrate on training the advanced tasks and tactics necessary to fight and win in a LSCO environment. The UT/E program is a program from the past, enhanced to meet the unit needs of today.

One success story is the 10th Combat Aviation Brigade UT/E “Green Platoon” program. They are on their second iteration and have already produced 12 Day/Night and Aviation Mission Survivability (AMS) UT/E's. The success of this brigade command-focused program evolved through applying “sweat equity.” Taking lessons learned from the first iteration, the Green Platoon Team screened 12 additional candidates for the program. The concept is simple: the brigade runs the program, battalions provide the resources, the curriculum is the appropriate Training Support Packages (TSPs), the candidate's duty is the class, and in 45-60 days, 10th CAB produces 12 additional Day/Night and

AMS UT/E's.

Another technique is to use the TSP as a training guide to progress junior pilots-in-command (PCs) and prepare them for their career track. The newly designated UT/E can now alleviate the SP/IP workload. This process also works by progressing senior AMSO and Safety Officers as UT/E's to share their knowledge and experience with junior aviators during RL progressions.

When Myke Lewis passed the saber during our ceremony, I inspected its meticulously-honed blade, and the weight of its responsibility was impressed upon me. Myke often said he felt privileged to be part of something bigger than himself, and I could not agree more. I am humbled at the privilege of carrying this torch forward and being part of this cohort of warfighters. I look forward to working together and serving our aviation enterprise, an enterprise that truly is “Above the Best!”

Fly Army! Above the Best!

CW5 Michael A. Corsaro is the tenth chief warrant officer of the Aviation Branch with the U.S. Army Aviation Center of Excellence, Fort Novosel, AL.

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Making the Transition

By CSM Kirk Coley

Like many organizations across the Army, the Aviation Center of Excellence is managing the transition period where the mantle of leadership is passed from one leader to another from squad leader up to command sergeant major.

That was the case for Command Sergeant Major Wilson and me on May 5, 2023, as we executed the symbolic change of responsibility with overwhelming support from Soldiers, Families, Civilians and Community partners. The service and sacrifice to country is still the greatest honor of all who served and the reason why more than one million volunteer to continue to serve. For those reasons, it is a distinct privilege and honor to have the trust of seniors and subordinates to serve as your next Command Sergeant Major of the Aviation Branch.

What was intended to be “six years and a wake up” has led to the discovery of my true calling and the profession I have grown to love for the past 28 years. It is proof that anything is possible if you start the day off with the basics, being at the right place, at the right time, in the right uniform, with the right equipment, and the right level of motivation to accomplish the task. I am extremely fortunate to have had the opportunity to serve as the Aviation Branch Training Sergeant Major for the past 30 months and it is inspiring to serve alongside some of the finest professionals both in and out of uniform who work tirelessly each



U.S. Army Aviation Center of Excellence Command Sergeant Major, CSM Kirk Coley, receives the Aviation Branch colors from USAACE commanding general, MG Michael C. McCurry II during a May 5, 2023 change of responsibility ceremony at Fort Novosel, AL.

day to give us the decisive advantage to meet the commander’s intent. The Army is truly a people business, and it will take everyone playing their part for us to achieve the desired outcome of caring for our most precious resources, our Army Family while preparing the branch for challenges.

We are extremely blessed to have some of the finest Soldiers and leaders in our profession who are competent and fully committed to serve our nation as we shift focus from fighting in 20+ years of Counter Insurgency operations to preparing the most lethal aviation fighting force capable of enabling the ground force to fight and win in Large Scale Combat Operations (LSCO). Having had the luxury of executing mobilization training with the Reserve Components, which account for 51% of the Aviation

Branch, I feel confident that all the hard work being placed on improving initial entry training, professional military education, and unit training management will produce the highly skilled Aviation Soldiers and leaders necessary for success in the future.

My focus will be to continue working with all of the stakeholders and experts across the aviation enterprise to drive change through modernizing and setting conditions for the Army of 2030. It starts with ensuring that all program of instructions is nested with Army doctrine and relevant to the future fight. We must also invest heavily in our Noncommissioned Officer Corps to cultivate leaders who are self-aware, resilient, adaptive, and possess the necessary skills to lead Soldiers in complex environments. We will need to leverage existing tools such as Individual Adaptability (I-ADPT), Leader 180 and

Enlisted Aviation Soldier Spotlight ▶

Each month we will feature a past AAAA National or Functional Enlisted or NCO Award winner as part of our ongoing recognition of the Best of the Best in our Aviation Branch. The CY 2022 National winners were featured in the April/May AAAA Army Aviation Mission Solutions Summit issue.



AVR FILE PHOTO

Donald F. Luce Depot Maintenance Artisan Award, 2014

Sponsored by AAAA

SSG Daniel M. Lewis

Company D, 3rd Battalion, 101st Aviation Regiment
159th Combat Aviation Brigade
(Then) Fort Campbell, KY

SSG Daniel M. Lewis is a first-rate aircraft structural repairer, who serves as an Aircraft Component Repair Supervisor for Company D, 3-101st Aviation Regiment (Task Force Attack), currently operating on Forward Operating Base Fenty, Afghanistan in support of OPERATION ENDURING FREEDOM. His mentorship and constant involvement with a young, under staffed airframe repair shop enabled TF Attack to maintain its 37 aircraft comprised of four different airframes. Under his leadership, the shop personnel completed 900 work orders and provided over 12,000 man-hours in support of the TF, allowing TF Attack to fly over 17,000 combat hours. SSG Lewis completed numerous depot level repairs ranging from structural fatigue to battle damaged aircraft with timeliness and the utmost precision. He was hand selected by the Aviation and Missile Command (AMCOM) Logistics Assistance Representative (LAR) and the Aviation and Missile Research, Development and Engineering Center (AMRDEC) Liaison engineers to develop procedures for the first advanced composite repair on the wide chord, UH-60M model main rotor blade in a combat environment. The procedures restored a \$170,000 unserviceable main rotor blade to serviceable condition within 24 hours. SSG Lewis' leadership, performance and dedication clearly identify him as the 2014 AAAA Donald F. Luce Depot Maintenance Artisan of the year.

the Aviation Maintenance Training Program to accurately assess, develop, and manage the talent across the total force and all compos.

As we continue to field new capabilities, such as upgrades to engines, weapon systems, long range missiles, Shadow Block III, Future Tactical Uncrewed Aircraft System (FTUAS) and Future Vertical Lift platform, institutional and operational training will be critical to transforming equipment into lethal combat capabilities. To achieve success developing the future force, it has never been more imperative that leaders at echelons establish published priorities nested within commanders' intent to train the force. While organizational culture is often fragile and takes effort to develop, units that prioritize shared understanding of their mission enable their Soldiers to work coherently, effectively, and efficiently are likely to thrive.

Though ReARMM (Regionally

Aligned Readiness and Modernization Model) is intended to provide some predictability in support of the Army People Strategy to enable modernization, the Aviation Branch must continue to maximize and capitalize on every opportunity to execute unit level training throughout each phase. The knowledge and skills developed throughout the modernization phase are essential to individual/collective training and helps to sustain aviation readiness for global response, while transforming the branch.

At the end of the day, the most important way to honor our Soldiers is to ensure that they are trained for the crucible of conflict and has the ability to fight and win when required. The job of all Soldiers is inherently dangerous based on the physical, mental, and spiritual demands of our profession. Our job is not just to train Soldiers till they get the task right, but instead train until they are not able to get it wrong regardless of the

environmental conditions and the operational environment.

As your Branch Command Sergeant Major, I will continue the efforts to advance our institutional training, develop leaders, manage talent and drive changes to deliver the world class aviation fighting force of the future. It is always a great day to be a Soldier, it's even a more exciting time to be an Aviation Soldier. Our Army is once again going through transition, and we have an awesome opportunity to invest in the future Soldiers who will lead us through the next conflict wherever that may be. I am extremely honored to serve alongside each of you, and I am very optimistic of the future of the Aviation branch.

Fly Army! Above the Best!

CSM Kirk Coley is the command sergeant major of the Aviation Branch at the United States Army Aviation Center of Excellence, Fort Novosel, AL.



Saving Lives through Digital Interactivity

By CW4 Holly Riddle

Businesses and organizations across the world were already becoming more digitally adaptive when COVID-19 quickly changed the way we were accustomed to interacting in the workplace.

However, many were only using this technology at a limited capacity. It wasn't until a global pandemic forced our hand that we fully explored the capabilities of this previously underutilized technology.

While everyone has an opinion on the pros and cons of increased technology-based solutions and telework, there is no argument that it has forever changed how business is conducted and missions get accomplished. Many Army courses had already instituted distance learning as part of the curriculum, but the pandemic illustrated the breadth of training that could be accomplished digitally. The U.S. Army Combat Readiness Center's (USACRC) Aviation Safety Officer Course (ASOC) is one resident course considering a distance learning module to ease the burden on students and units by reducing temporary duty time. This initiative is currently under development as we determine which training is most appropriate for digital delivery.

While ASOC was still able to accomplish group training during the pandemic following a quarantine period for students, future situations may require an alternative to in-person courses. Hangar and shop inspections, as well as ASOC's



capstone event at the USACRC's Crash Dynamics Lab (CDL), would be severely limited in a digital venue. The CDL is a state-of-the-art facility that provides an opportunity to investigate realistic recreations of ground and Aviation mishap scenes to train students in evidence collection and site management. Newly acquired technology, however, could soon make digital training more feasible.

Recently, the USACRC tested a 360-degree camera that can capture the CDL's mock mishap scenes to allow a student to use the program to collect evidence and document a mishap site. In just 10 minutes, images of a mishap can be taken to create a scene for use in investigation training and site inspections. The program can zoom into areas of interest so the user can transition from an overview of the scene to smaller areas for closer observation of evidence or areas of inspection. The technology can also be used to create virtual inspections of hangars, motor pools, ranges, and offices. Shop, fire and standard Army safety and occupational health inspections can all potentially be trained using this capability. The cameras work by recording an entire scene in one pass using multiple lenses arranged to capture sev-

eral angles at one time. The images are then stitched together, and the files can be used in software to produce viewable media.

This capability also creates immersive training possibilities beyond the course, including distance learning investigation training for board members of installation-level accident investigations. The camera provides the potential to create a mishap investigation course for personnel likely to be included on local boards such as maintenance and standardization subject matter experts and senior officers who may be appointed as mishap investigation board presidents. The overall benefits of the technology mean no interruption to future training and enhanced quality of distance learning courses. The fiscal ramifications for training safety professionals include reduced costs and increased throughput. Increasing the number of trained safety professionals in the force means fewer mishaps, lives saved, mishap costs reduced and increased readiness.

CW4 Holly Riddle is the Aviation Safety Officer course manager for the Combat Readiness Center at Fort Novosel, AL.

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United States Army Reserve Aviation – Preparing to Fight and Win Future Wars

By LTC Nicholas A. Steele

Mobilizations and deployments are arguably the peak of readiness for any military unit, especially for Reserve and Guard forces.

5-159th General Support Aviation Battalion (GSAB) is a USAR unit with an “available” mission year in FY24, ready to deploy in support of scheduled Large-Scale Combat Operations (LSCO) and/or Large-Scale Mobilization Operations (LSMO) requirements in FY24.

In the fall of 2022, 5-159th GSAB leadership committed to participate in the 2023 DEFENDER Europe exercise because it presented a tough, realistic, collective training opportunity, simulating LSCO and filling a critical rotary wing Aviation capability gap for operation SWIFT RESPONSE (SR23). SR23 presented a unique opportunity for a USAR GSAB to exercise mission essential tasks while supporting LSC/LSM operations with NATO partners and allies, conduct trans-Atlantic aircraft movement, and modernize equipment.

A 5-159th GSAB task force participated in SR23 from 5-21 May 2023, deploying 11 helicopters, 62 pieces of equipment, and 220 Soldiers across three different countries in support of a Spanish-lead Air Assault Task Force Joint Forcible Entry (JFE) in Spain and providing MEDEVAC support for a Polish Airborne Brigade’s JFE operations in Estonia.

One of the most challenging aspects of 5-159th GSAB’s participation in SR23 was the trans-Atlantic movement of aircraft and equipment through multiple ports and countries. As a USAR Aviation unit, our success was enabled by the DA Civilians and contractors who work at USAR Aviation Support Facilities, and we relied heavily on transportation and logistics assets from the 21st Theater



U.S. ARMY RESERVE PHOTO BY MAJ FORREST HALDWINORTH

A U.S. Army Reserve Forward Support Medical Platoon from Charlie Company, 5-159th General Support Aviation Battalion, 244th Expeditionary Combat Aviation Brigade, Army Reserve Aviation Command, prepares to provide MEDEVAC support to a 500-Soldier airborne operation conducted by the Polish 6th Air Borne Brigade outside Amari Airbase in Estonia during exercise Swift Response, May 12, 2023.

Sustainment Command, 16th Sustainment Brigade, and the U.S. Navy. Task Force movement was phenomenal training, and the experience gained throughout the coordination process will enable future USAR Aviation deployments and improve the deployment readiness for the Army Reserve Aviation Command.

Upon arriving at the exercise, 5-159th GSAB personnel focused on equipment set-up and establishing integrated operations and a battle rhythm with host nation counterparts. A Forward Support Medical Platoon (FSMP) consisting of three HH-60M MEDEVAC helicopters and 52 Soldiers from C/5-159th integrated with the Estonia Defense Forces enablers at Amari Air Base, while task organizing under the supported Polish BDE Headquarters. The C/5-159th Soldiers gained valuable operational experience navigating cultural, language, and procedural differences, while establishing integrated medical evacuation processes in support of a 500-Soldier Polish Airborne operation and 30 British Special Air Service (SAS) HALO jumpers.

Simultaneously, a 5-159th task force, augmented by Air Force weather and Joint Communications Support Element personnel, consisting of 4 CH-47F, 4 UH-60L, and 178 Soldiers, integrated

with a Spanish Rotary wing task force in support of the Spanish JFE Operations at Zaragoza Air Base in Spain. A total of 24 rotary wing aircraft conducted integrated air assault planning and executed 16 mixed multi-ship missions including a simulated Personnel Recovery event involving NATO AWACS assets from Germany and interdiction support from USAF A-10s. Operations culminated in a “capabilities demonstration” for the King of Spain involving a 21 aircraft, multi-phased raid operation to insert a multi-national assault force consisting of Spanish, Italian, and U.S. infantry forces.

Ultimately, 5-159th GSAB’s participation in SR23 was a huge success. They learned NATO doctrine while integrating operations with the Spanish Air Assault Task Force and achieved a level of procedural interoperability and readiness unobtainable through traditional training methods. As the USAR continues to prepare Soldiers for LSC/LSM operations, complex collective training exercises like DEFENDER Europe are key to developing interoperability with our partners and allies.

LTC. Nicholas A. Steele is the 5-159th General Support Aviation Battalion commander, Joint Base Langley-Eustis, VA

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The Journey to a New Rotorcraft Handling Qualities Specification

By Mr. F. Scott Smith



US ARMY PHOTO

Handling Qualities is classified as those characteristics of an aircraft that govern the ease and precision with which a pilot can perform a task.

The CH-47F DAFCS development aircraft performing the ADS-33E Hover Mission Task Element Maneuver.

The Aeronautical Design Standard (ADS)-33E-PRF is the industry standard for rotorcraft Handling Qualities evaluation and has been implemented and tailored for both rotorcraft and rotorcraft system development for the past 20 years. Since its release [2000], there have been many advancements in rotorcraft handling qualities research, which have set the stage for a desperately needed revision to this standard. Therefore, the conversion of ADS-33 into a Military Detailed Specification was initiated with the goals of preserving the technical content, incorporating updates and refinements developed by the Technology Development

Directorate (TDD) as defined in its draft “Proposed ADS-33F-PRF,” and converting to a format that allows more frequent updates to assist in rotorcraft development and testing.

The Process

Our journey began on an October afternoon in 2018 when the Systems Readiness Directorate’s (SRD) Aeromechanics Division met with SRD’s Technical Data Management Division. The Aeromechanics Division was seeking an official publication vehicle that would provide the rotorcraft community with the most up-to-date handling qualities evaluation criteria and conform to the U.S. Army’s Con-

tract Command’s requirements. With the aid of Tech Data Management, we determined that the best path forward was to convert the current ADS-33E’s requirements into a Military Standard, and thus a new specification, MIL-DTL-32742, was born.

SRD then formed an IPT, consisting of engineers from SRD, TDD, and the Navy’s Naval Air Systems Command (NAVAIR), to officially update our Handling Qualities Specification. We began by identifying the requirements of ADS-33E that were out-of-date with current research. Those requirements were updated with guidance from TDD’s proposed ADS-33F document and supplemented

with findings from current research programs. For example, those research activities have shown that the short-term yaw response to yaw controller input (bandwidth) requirement was overly restrictive, so the boundaries were relaxed. (Bandwidth is the measurement of how well the aircraft's response tracks the pilot's cockpit control inputs.) Also, the Procuring Activity is allowed some discretion when quantitative criteria do not demonstrate Level 1 standards. Mission Task Element (MTE) evaluations may be used to demonstrate that the aircraft satisfies its Level 1 handling qualities requirements. We then incorporated the new language into MIL-DTL-32742 while conforming to the formatting requirements of MIL-STD-961E [Defense and Program-Unique Specifications Format and Content].

Over the next four years, through personnel changes, funding shortfalls, new Army programs, and a worldwide pandemic, the SRD, TDD, and NAVAIR IPT collaborated with SRD's Technical Data Management Division to finalize the document.

Following numerous revisions of requirement modifications, document section realignment, and document reformatting, the final MIL-DTL-32742 was uploaded to the ASSIST database for public review in February 2022. After a 30-day review period, industry recommendations were received and adjudicated, which required additional edits and provided topics for future revisions of the specification. The final document was submitted to the Technical Data Management Division and officially published 12 April 2023.

One may think the IPT's task is complete with the successful conversion of ADS-33 into MIL-DTL-32742, but that is not the case. As a follow-on effort, the team will be developing a Military Handbook to supplement MIL-DTL-32742. The handbook will update, consolidate, and incorporate content from the ADS-33E Test Guide and the Background Information and Users Guide into a single document. The consolidation of the multiple documents into a Military Detailed Specification and Handbook will ensure more timely updates of

handling qualities requirements and testing guidance.

The Impact

So, how does this affect the Army Aviator? At the completion of this effort, the Aviation Enterprise will have two documents that contain all the available handling qualities design criteria, performance requirements, and methods of compliance guidance. The documents will ensure that current platform flight control system upgrades and newly developed aircraft will be designed to the most current handling qualities requirements. As systems are qualified to the new standard, handling qualities ratings should improve, which allows for increased safety in degraded visual environments and reduced pilot workload in the ever-changing operational environment.

Mr. F. Scott Smith is a Handling Qualities Subject Matter Expert in Aeromechanics for the Systems Readiness Directorate, U.S. Army Combat Capabilities Development Command Aviation & Missile Center, Redstone Arsenal, AL.

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Age Related Vision Changes

By LTC Brett Matzek, MD, MPH and James C. Dover, OD

Q: Reading smaller text in the dark is becoming difficult. Will this affect my ability to fly?

FS: This condition is called presbyopia and is a normal part of aging. It affects everyone eventually, but to varying degrees. Many will start noticing symptoms around age 45 with less change occurring after age 65. The condition is due to loss of elasticity of the lens of the eyes, which makes focusing on close objects more difficult. The condition is easily treated with the use of reading glasses or bifocal/trifocal/progressive lenses. If you already require glasses for far vision, you will need multifocal lenses to allow 20/20 correction for both far and near vision. These can take some getting used to and the pilot should be aware of this limitation.

Your near and far vision are tested at each flight physical, but if you are noticing symptoms prior to your exam, you should visit your optometry clinic or flight surgeon right away. As long as correction to 20/20 is achieved, no waiver is required. If your condition is severe enough that correction to 20/20 is not achieved, it is a disqualifying condition, and a waiver would be required. This is more likely in those who are already far-sighted and develop presbyopia.

You may be asking “What is 20/20 vision?” We use a standardized chart with letters or shapes of various sizes. The line that the person with “normal” vision can read at 20 feet is the 20/20 line. If your vision is 20/40, you can read the line that a person with normal vision can read at 40 feet. To meet requirements for normal vision, you must be able to correctly identify the letters and miss no more than 1 on the 20/20 line. We use a similar standardized chart for near vision where “normal” is still reported as 20/20.

Some pilots with presbyopia will have a decrease in depth perception, or stereopsis. If this occurs and they do not meet the standard, a full optometry evaluation and waiver request will be required. Depth perception is a critical sense for Aviation, especially in activities such as nap of the earth (NOE) flight, pinnacle landings and hovering.

Q: My friend says to investigate monovision contact lenses. What does this mean? Am I able to use these as a pilot?

FS: While contact lenses are authorized for flight in certain conditions, the use of monovision contact lenses are prohibited. Monovision contact lens use means one eye has a contact to correct for near vision and one for far vision (when needed). While this works well for many people, there can be significant degradation of stereopsis, contrast sensitivity and target acquisition. There have been Aviation incidents due to

their use which resulted in the prohibition by Army Aviation as well as the Federal Aviation Administration. Additionally, the use of bifocal, multifocal, and rigid gas permeable contact lenses are not allowed in Army Aviation due to potential complications during flight.

Q: I know cataracts can also be an issue as we age. How do they affect flight status?

FS: Cataracts are an opacity, or haziness, of the lens. They affect the ability of light to optimally reach the retina. This can result in blurry vision and glare which will affect night vision first, but eventually affect vision in all environments. Cataracts can be congenital or acquired through time. The acquired type can be caused by numerous conditions including UV light exposure, severe dehydration, diabetes, and other medical conditions.

For rated aviators, cataracts can be waived if they are asymptomatic and do not affect visual acuity. If they become symptomatic, such as worsening glare, sunlight intolerance or loss of visual acuity, surgical correction may be required. Surgical correction will require resubmission for a waiver. Cataract surgery involves removal of the native lens and implant of an intraocular lens. These are acceptable with waiver for rated aviators and aircrew. Exceptions to policy for pilot applicants are not given currently.

Our sight is critically important for our jobs in Aviation. As a result, we screen vision frequently and maintain strict standards, especially for rated aviators. We know there will be vision changes as we age but make sure to take care of your eyes as best as you can. Wear sunglasses when outside in the daylight, wear approved eye protection when appropriate, always fly with your visor down when able. Lastly, take care of your eyes by taking care of your overall health. Eating a healthy diet, maintaining healthy sleep habits and weight will reduce your risk of long-term vision issues.

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.

Fly Safe!

LTC (Dr.) Brett Matzek is a flight surgeon at the Department of Aviation Medicine, U.S. Army Medical Center of Excellence; and Dr. James C. Dover is an Aeromedical Optometrist at Lyster Army Health Clinic, and consultant for the Army Aeromedical Activity (AAMA). Both are located at Fort Novosel, AL.

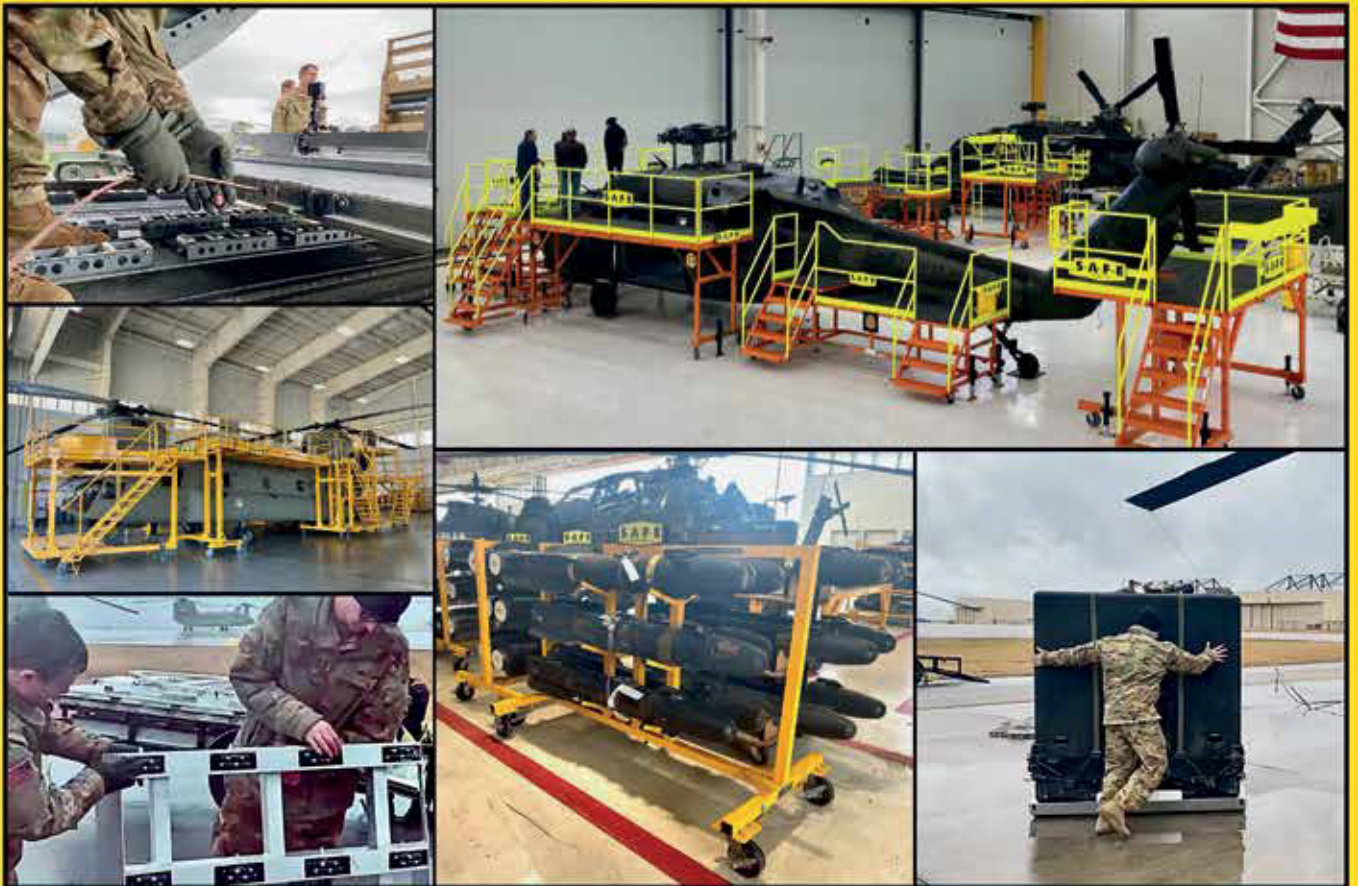
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Simulation in Modern Army Aviation

CPT Ashley Howard and CW4 Christopher Crawford



Aviation Branch continues to pursue the most significant and sweeping transformation in over 40 years to prepare Army Aviation for 2030. Branch-wide, our modernization, our training, and the tools we use every day to hone our skills are essential to prepare our aviators to fight and win in Large Scale Combat Operations (LSCO). Realistic live, virtual, and constructive training environments develop our leaders and remain vital in developing and executing a progressive training model for the operational force.

Simulations from the individual to the crew and collective levels sharpen our tactical skills and are essential in mastering the fundamentals of employing our aircraft as the aerial arm of the Combined Arms Maneuver Team. Proven over time, integrating Training Aids, Devices, Simulations and Simulators (TADSS) in training plans is an effective means to add realism to training, mitigate risk, and build low-cost competence prior to entering live training. The use of TADSS also provides opportunities to identify and mitigate risks prior to live execution through detailed rehearsal, as well as enhanced AARs.

At the Schoolhouse

Simulation is applied across our Professional Military Education including Aviation Warfighter Skills Course (the replacement for the Warrant Officer Advanced Course) preparing and training our Aviation experts to meet the challenges of LSCO. Training hours are now focused on learning how to



LTC Pearl Christensen, battalion commander of the 601st Aviation Support Battalion, 1st Combat Aviation Brigade, 1st Infantry Division, trains in a flight simulator on Fort Riley, KS.

execute the Aviation mission as part of the Combined Arms Maneuver Team through realistic scenarios, applying the skills necessary at the company and battalion level through simulation. The warrant officers exposed to Army simulations while attending courses at US-AACE gain a better understanding and mastery of how they can enhance training at home station with simulations to support an array of possible missions.

Future company commanders and staff officers attending the Aviation Captains Career Course are immersed in a LSCO environment for planning and executing their missions in conjunction with or in support of ground forces while integrating Division and Corps enablers. This combined virtual and constructive environment allows these leaders to plan and employ all the Aviation Core Competencies in each mission. Equally important, these leaders are exposed and trained across all aerial mission sets, executing these missions in simulators in all mission design series (MDSs), not just

their own, in a realistic operational environment.

As our focus is moving towards Divisions as the central maneuver element, the Army and Aviation must exploit every opportunity to exercise and visualize the LSCO fight for the Division and Corps. Through our Warfighters, combat aviation brigades (CABs) participate in constructive simulations to create the complexity of mission command, make the training environment appear much larger, and allow the Aviation brigade to understand how to support the Division mission. CAB participation also builds higher headquarters proficiency in the synchronization and integration of Army Aviation. Leaders also maximize the training opportunities these exercises present by integrating battalions as subordinate headquarters rather than creating a response cell. This provides battalion commanders and staffs with a robust mission command training exercise and further enhances brigade level proficiency.

Innovation

Innovation remains paramount for training and incorporating simulation. As we look across the force, we see CABs taking the initiative to refine and improve their training. One example is the successful integration of VBS3 into their UMS for RQ-7 and MQ-1 operator simulator training. VBS3 is a simple system to operate, requires less processing power, and allows connection to other workstations to integrate role players. VBS3 allows personnel to create more realistic and dense tactical scenarios at a reduced learning curve and allows real time adjustments. Role players can link with the UMS via laptops and participate via other constructed vehicles and effects. For example, AH-64 pilots can connect via a laptop and fly an AH-64 in the scenario with UACs in the UMS and get indicators of laser energy and shoot for remote designations. Simply, VBS3 offers massive benefits for tactical and METL training for UAS operators.

Another example is the Helicopter Aircraft Survivability Equipment Training System (HASE-TS) program designed to demonstrate the ability to embed software into a UH-60M improved data modem (IDM) to stimulate

aircraft survivability systems with no actual A or B Kits equipped and then provide 3D after action review (AAR) capability utilizing integrated vehicle health monitoring systems (IVHMS). This capability includes loading the aircraft via a GETAC aviation mission planning computer, running synthetic training threat models on the aircraft with full ASE response despite no fielded ASE or live threat, and pulling data which is continuously moving across the Ethernet and the IVHMS to create an AAR video showcasing aircraft performance and aircrew reaction in relation to threat symbology. Simulating realistic threat environments digitally with associated ASE indications is invaluable to crews training for a challenging operational environment. While both initiatives require further refinement, this innovation from the operational force and the aviation enterprise is a necessity to ensure we continually develop the best training options for our aviation units.

The future Operating Environment will be more lethal. The detection and observation of our forces will extend well beyond the purely physical into all domains – land, air, maritime, space, and cyberspace – and forces seen in any

domain will be at risk. The modernization of our enduring fleet along with the development of the Future Vertical Lift programs will add maneuverability, range, speed, payload, survivability, reliability, and, in some cases, reduce the logistical footprint from our present capability. For both our enduring and future aviation formations, training with simulation in a realistic live, virtual, and constructive environment will be essential to ensure the Army can fight and win the nation's wars during all aspects of multi-domain operations. Full integration of existing simulation and future opportunities remains an imperative for all aviation training.

Above the Best!

The views expressed in this article are those of the authors and do not necessarily reflect the official policy or position of Department of the Army, DoD, or U.S. Government.

CPT Ashley Howard is the Doctrine Branch Chief and CW4 Christopher Crawford is the Survivability Branch Chief of the U.S. Army Aviation Center of Excellence Directorate of Training and Doctrine at Ft. Novosel, AL

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The advertisement features a central image of an AH-64 Apache helicopter in flight over a desert landscape. The helicopter is equipped with various external stores. Below the helicopter, four specific equipment components are displayed and labeled: a Release Unit, an Ejector Release Unit, a Cargo Hook, and a Sonobuoy Launcher. The logos for ALKAN RAFAUT Group and ARESIA are positioned at the top left and right, respectively, with the word 'become' in the center. The text 'Carriage & Release systems' is overlaid on the left side of the helicopter image.

Unnecessary Risk in the System: The Mission Approval Process

By MAJ Michael Skuza



U.S. ARMY PHOTO BY AIR LION JUSTIN

DES's unique mission is to travel all over the world observing and mentoring Aviation units across all COMPOs: Active, National Guard, and the Reserves. This exposes us to the widest number of challenges units face and the unique solutions they use to solve them. We collect these challenges to find trends across the force and share solutions across the enterprise. One trend we see at every assessment is the “paper drill” we call the Mission Approval Process. It occurs for a variety of reasons; complacency, lack of clear policies and/or enforcement, and the departure of senior experience at the company level. These gaps could be inducing more risk into your formations than you are realizing and gets worse as the experience continues to leave the force.

The Experience Gap

The experience gap at the company



U.S. ARMY PHOTO BY LTJ SWAMINHA DECPA

level is a complex, multi-faceted problem dealing with force management, OPTEMPO, and competing opportunities that the Army is tackling. For the last two decades, the Army has been at war with constant operations, deliberate and protected training cycles, and unit wide resets that enabled units to focus on specific tasks and gain vast hours of experience with each deployment. These days are waning, and a new environment is emerging where continuation training is critical and company level directed training tasks are essential to building readiness for collective training exercises with the battalion. The experienced warrant officers that we have relied on for the last two decades with multiple iterations of CTCs, ARFORGEN training cycles, and deployments that knew what right looks like and what will be required of them are becoming a scarce resource across Army Aviation. To replace this resource, we build PCs into tracked warrant officers as fast as we can, trying to mitigate the risk with early specialization. What we are asking these new Instructor Pilots to do is train more first term Aviators with less overall experience and not enough help. This drastically increases their OPTEMPO and pulls them from

Alpha Company, 2-2 AHB pilots conducting mission planning and briefings in preparation of a company level operation with senior warrants to guide and mentor them through tactical operations.

2nd CAB conducting Air Assault operations supporting 4-6 Infantry Regiment out of Camp Humphries, South Korea.

continuation and collective level training, instead trapping them in the traffic pattern for RL progressions, PFEs, and APARTs. The details and effectiveness of the processes we rely upon to ensure safety and reduce risk get diluted when you combine the absence of senior Aviators in the company and the abundance of ATP requirements to a limited population of IPs. The common result is the mission approval process turning into a rushed paper drill done within 24 hours of the flight.

The Trend

During each unit assessment, we notice a trend where building the flight schedule, initial mission approval authority (IMAA) at the flight schedule meeting, through flight planning, and final mission approval devolves into a complacent process. This MBO de-evolution is enhanced with the absence of those critical senior warrant officers in the company. With the IPs trapped treading water to get through the ATP requirements, the process falls to the other PCs in the company to oversee the process. Further down the chain within this process is the constantly “updated” flight schedule that is left up to the company commander to deal with through the week. What

results is a tumultuous and unreliable training schedule for the whole company and drives the crews to last minute planning and last-minute approvals. Ultimately, what we see across the force are numerous continuation training flights that are planned last minute, not nested with any focused MET or tasks towards Company level goals, and the company commander has no idea what tasks are going to be trained by their crews.

One of the easiest solutions that is directly in the unit's control is the process by which you generate the flight schedule and mission briefs. Often, we see one week flight schedules that "evolve" into version 9 or greater on the company training boards. First step is to enforce the established IMAA policies and not pay lip service to it. Secondly, we see numerous PCs in the battalion listed as an MBO to create flexibility and backup the overtaxed standardization sections in the companies.

Recommendations for Closing the Gaps

IMAA SOP Enabling Mentorship

We typically see a battalion commander has a semi-detailed policy for IMAA-ing flights in the battalion, but rarely enforced outside of the weekly flight schedule meeting. This eliminates consistent interaction with their company commanders centered around their operations and training schedule. Instead, what the typical battalion environment devolves into is a constantly "updated" flight schedule at the company level that generates constant unpredictability for the aircrews and maintainers. This uncertainty in the daily company OPTEMPO typically pushes the PCs to stop anticipating their flights and stop planning their flights further than 48 hours out. One best practice that we see is when a Battalion Commander establishes clear, but strictly enforced IMAA procedures. This forces conversations with their ATP commanders and provides daily opportunities to give guidance and mentorship. These conversations can be critical, as most Flight Company commanders are very junior Captains getting their first taste at building flight schedules that tie into their training plans. A significant step in predictability starts with the LTC/Battalion Commander enforcing a clear IMAA policy for flight operations which in turn presents them with the opportunity to mentor Company Commanders and Platoon Leaders and keep the pulse on their battalion OPTEMPO.

Mission Briefing Officers

At each assessment, we see companies and battalions use flexibility as the primary excuse for making too many MBOs across the battalion. We notice that numerous PCs and every IP is appointed as an MBO regardless of actual operational experience. These MBOs are the same Aviators that are pressured into an early track and now relied upon to "reduce risk" through their formation. MBOs feel the pressure and see it as their responsibility to mitigate as much risk on each flight as they can, finding every way to get the flight to a Low risk level. This causes them to overlook the realities of the aircrew's own abilities or even the MBO's own experience and recency in the task or mission profile that is being briefed. The most successful MBO programs we see consist of an established MBO training and certification process that ensures each MBO is the right individual for that role in the battalion. To know that it's not only their job to evaluate and reduce risk in every flight, but to take a hard and realistic look at each aircrew's skill and recency in the tasks being asked to perform and be willing to elevate that risk from a mitigated Low up to a Moderate, if warranted. Additionally, refresher training is led by the senior

Aviators in the battalion based around scenarios and vignettes, taking an honest review of themselves over the past year of operations and risk assessments.

The Wrap Up

The growing experience gap in our formations could be causing us to unknowingly assume a lot of risk inside of our mission approval process that we are unaware of. By focusing on an already required process, establishing deliberate controls to enable mentorship and deliberate conversations, while ensuring those invested in the process understand their role and see themselves honestly, can go a long way in truly mitigating risk throughout the formation. Some additional things to consider that could assist in mitigating risk would be to build the elusive two-week flight schedule, establishing mandatory monthly tasks for all continuation flights, or detailed refresher training that is led by the senior MBOs based on realistic vignettes and actual unit RCOPs to tackle the hard situations that truly reduce risk in the right ways.

MAJ Michael Skurza is the Deputy Director of the Directorate of Evaluation and Standardization at the United States Army Aviation Center of Excellence, Fort Novosel, AL.

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Measuring Aviation Training Program Effectiveness

By LTC Eric Megerdooian, MAJ Andy Bartlett, MAJ Brandon Wess, and MAJ Jake Rykken

“Measure what is measurable and make measurable what is not.”

– Galileo Galilei

Are we measuring what has been accomplished or are we measuring the increase in our ability to accomplish our mission? If we focus on measures of performance alone we risk measuring performance as an end unto itself.

When units fail to measure both the performance and effectiveness of their aviation training programs before their arrival at the National Training Center, we witness a decrease in lethality and survivability in the contemporary operational environment and in increased risk to force and to mission. Measuring both the performance and effectiveness of aviation training programs arm commanders in recognizing divergent aviation training efforts not tied directly to the training objective set forth in the unit training plan. Failure to recognize divergent aviation training efforts results in not only inefficient use of the Flying Hour Program, but also a decrease in aviator proficiency and the correlated increased risk to force.

Measures of Performance (MOPs) refers to the metrics that are used to evaluate how well a particular process or system is performing. If we have clearly defined common indicators that help us measure the accomplishment of specific tasks or processes, then we are likely measuring performance alone. “What was our Operational Readiness (OR) Rate this month?” “Did we meet our Flying Hour Program (FHP) this month?” MOPs are typically easier to measure as indicators are generally clearly defined and can be quantified more easily.

Measures of Effectiveness (MOEs) on the other hand, evaluate the change in our behavior or ability in achieving the

training objectives, and in a broader sense, accomplishing our mission. MOEs risk being more subjective and offer more qualitative measurements unless the appropriate indicators are collected to provide quantitative feedback on the effectiveness of our training programs. “What is our ability to generate combat power?” “How many aviators experienced near misses in their first six months after achieving their Pilot In Command qualification?” Without MOEs as a part of a holistic feedback mechanism, we rob commanders of the understanding they need to make informed decisions about refining programs and allocating resources towards achieving a desired end-state.

What should you pause is this... we can measure performance without training strategies, training objectives, and desired end states tied to the unit’s mission. We can do work, but are we achieving anything?

As an Army we are starting to focus more effort on measuring the effect of our training programs towards the desired outcome. We no longer simply measure the push-up, sit-up and the 2-mile run. The ACFT now measures functional fitness needed on the modern battlefield with an eye towards holistic health. Despite expending the same number of rounds, the new M4 qualification starts to holistically assess a Soldier’s ability to employ situational awareness, safe weapon handling, and core marksmanship competencies.

How does this correlate to Aviation Training?

“Did you meet your Flying Hour Program (FHP) this month?” I ask this leading question to then ask this one... *“But what did you do with those hours, and did we move the bar in terms of our ability to accomplish our mission?”*

While the FHP provides a metric for tracking utilization of a resource, it alone cannot measure the effectiveness of our aviation training programs. The FHP is just one aspect of a broader approach to measuring training effectiveness which



U.S. ARMY NTC PHOTO



U.S. ARMY NTC PHOTO

is why it is essential to consider how the FHP was utilized and what was achieved with those hours to measure the performance of our training programs.

To achieve this, we must apply cognitive effort to the task of measuring both the performance and the effectiveness of our aviation training programs. We must start with the development of the Annual Training Guidance and the Unit Training Plan that clearly defines the desired end-state. Next, we must identify the necessary MOPs and MOEs that will reflect the effectiveness and the alignment of our training programs. Finally, we should select the indicators for each measure that inform our assessments.

Using Semi-Annual Training Briefs/Quarterly Training Briefs (SATBs/QTBs), training meetings, or flight scheduling meetings as an avenue for assessing our MOPs and MOEs, we can gain a more holistic understanding of how effective our training programs are. Simply asking both questions in these meetings can highlight effectiveness. “How many AMRs did we accomplish last week?” can produce a vastly different number than “How many AMRs did we accomplish last week enabling Companies to Plan, Prepare, and Execute through Air Mission Briefs and Rehearsals?” Beyond measuring effectiveness, when we ask the right questions, we can start to recognize if our efforts are aligned towards a common desired end-state or if they are divergent.

“What you measure is what you will get.”
 – Peter Drucker

Divergent Training Efforts

The power of assessing both MOPs and MOEs is that it highlights when “What we are doing.” is not properly aligned with “What we are trying to achieve.” If our MOPs and MOEs indicate that “We exceeded our FHP but we are still a T3.” then we may have divergent training efforts at echelon that need alignment.

When the desired end-state is clearly defined, the associated MOPs and MOEs are codified, and those indicators are measured; subordinate leaders will take note. Once informed and empowered, they align their actions towards this common

Left: AH-64s land at the Jump FARP as they await the trigger in support of the BCT at the NTC.

Middle: An AASLT departs the PZ during live fire training at the NTC.

Right: An LUH-72 with Eagle OC/Ts departs the holding area behind the AH-64s they are coaching at the NTC.

desired end-state. Commanders, mission briefing officers, air mission commanders, flight leads, and pilots in command become vested in ensuring each planned ATM task or flight is nested and aligned with the training objective. Failure to do so risks accruing metrics that indicate divergent training efforts not aligned with the desired end-state. Divergent training programs commonly result in ineffective training programs at best. At worst, divergent training efforts fail to increase aviator proficiencies, increase risk to force, and risk to mission.

In Conclusion

Focusing solely on Measures of Performance can increase risks to the force and to the mission as we fail to recognize the holistic effect of our training programs. Although measuring effectiveness requires more cognitive effort and analysis, it is necessary to avoid viewing performance as an end onto itself. Well-defined Measures of Effectiveness and their thoughtfully selected indicators can provide critical information about the effectiveness and alignment of our aviation training programs. Ultimately, the goal of measuring the effectiveness of our aviation training programs is to empower commanders in developing, assessing and refining training programs that increase the likelihood of mission success and aviator proficiency while decreasing risk to the force and to the mission.

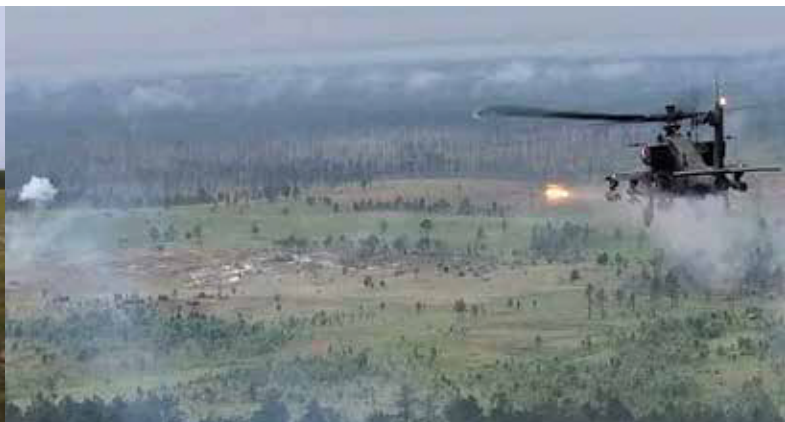
The views expressed in this article are those of the authors and do not necessarily reflect the official policy or position of Department of the Army, DoD, or U.S. Government.

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Thinking outside the “Box” –

Training a Combat Aviation Brigade at JRTC

By MAJ Kellan S. Travis



82nd CAB conducts training during JRTC Rotation 23-07.

ALL PHOTOS U.S. ARMY, JRTC EDITORIAL PHOTO

Focused on meeting the U.S. Army Forces Command (FORSCOM) Readiness Guidance, the Joint Readiness Training Center (JRTC) continues to shape opportunities for divisions to employ their combat aviation brigades (CAB) with battalion “pure” formations to train Large Scale Combat Operations (LSCO).

Over the past year, JRTC made multiple redesigns and improvements to incorporate the CAB into the “division fight,” and most recently supported the 82nd Combat Aviation Brigade as a rotational unit. To facilitate the training of multiple aviation maneuver battalions, aviation support battalion, and a CAB Headquarters, JRTC implemented numerous controls, expanded training areas, and made additions to scenario design to fully employ and safely train the largest aviation package in recent JRTC history. From this initial rotation, JRTC’s Task Force Aviation

captured valuable observations from the field and critical lessons learned to continue to improve the CTC experience for organic CABs to train, fight, and win in a LSCO environment.

Setting Conditions: Expanding JRTC for the CAB

To integrate a combat aviation brigade throughout an entire rotation, JRTC developed a robust scenario design to fully utilize the live and constructive, or virtual, division area of operations (AO). The increase of division aviation supported missions required additional resources outside the typical rotational construct and resulted in the augmentation of supplementary ground units and training areas outside of Fort Johnson. JRTC partnered with neighboring civil airfields and Army National Guard training areas to expand the division AO and provide the CAB multiple division shaping operations

in the deep area. Beyond the rotational brigade combat team (BCT), the CAB can support additional Fort Johnson tenant organizations to provide fully resourced Division missions and increase the opportunities to execute air assaults, artillery raids, and more.

JRTC redesigned the division’s airspace architecture which consequently requires aviation units to plan and execute longer flights, beyond 70 km, to simulate dislocation of the CAB positioned within the division support area (DSA). This expansion of the division AO and controlled airspace intrinsically mitigates the risks of increased air traffic and command and control (C2) requirements by synchronizing and dispersing simultaneous aviation missions. Additionally, Task Force Aviation refined JRTC Live Fire Ranges and developed new live fire training opportunities for rotational aviation units. These improvements support

multiple and massed AH-64 Apache engagements throughout the rotation as well as lift door gunnery for UH-60 Blackhawks and CH-47 Chinooks to meet collective gunnery table requirements with fully resourced air assault missions. Through these initiatives, the Joint Readiness Training Center provides comprehensive combined arms training to the combat aviation brigade.

CABs fighting LSCO at JRTC

While deployed to JRTC, CAB headquarters are fully immersed within division operations by commanding both live and constructive aviation battalions across the entire division battlespace. Incorporating the CAB HQ creates an additional layer between the aviation battalions which is not typically seen at JRTC and rotational multi-functional aviation battalion task forces (ABTF). With the organic CAB HQ participating, there is added friction and delays to orders production, communications, and shared understanding of the common operating picture. Despite this obstacle, the CAB HQ produces thoroughly analyzed and deliberate mission orders to the subordinate battalions than is typically provided to rotational ABTFs at JRTC. This creates a more realistic training environment and scenario for subordinate battalions as they plan and execute from brigade orders and operate as “pure” formations within their respective battalion competencies. The addition of the CAB HQ throughout the rotation, whether it be deployed to JRTC or operating from a home-station Mission Training Complex (MTC), provides the most inclusive training for any rotational aviation unit in a LSCO environment.

The widely dispersed training areas and the prescribed division airspace to simulate DSA distances to the forward line of own troops (FLOT), challenges CAB and aviation battalion sustainment operations. To meet the ground force commander’s intent of massing effects and combat power, aviation sustainment to arm and refuel rotary wing aircraft must be deployed forward of the division rear area to extend operational reach beyond the FLOT. The synchronization and execution of forward arming and refueling points (FARP) across the division AO is critical in providing flexibility and options to CAB elements operating within the BCT airspace. Units must continue to train and build proficiency in FARP

operations to be successful in a LSCO fight supporting the division. JRTC’s expansion efforts have generated additional sites, in and around Fort Johnson, to provide increased options for FARP employment to sustain combat training missions.

Way Forward: Improving initiatives to support the CAB

The 82nd CAB’s recent rotation at JRTC this spring validated newly instated redesigns while also highlighting improvements for future rotational CAB units. Most importantly, to appropriately observe and coach a full CAB requires a much larger observer-coach-trainer (OCT) team than is currently assigned to JRTC. For now, CABs and divisions should expect and plan to provide extensive guest OCT packages to augment Task Force Aviation at JRTC to ensure safety of training and provide valuable observations for after action reviews (AARs).

JRTC continuously looks for opportunities to expand training areas outside of the Fort Johnson “Box” and aims to deploy CAB and ABTF Tactical Assembly Areas greater than 100 kilometers from the FLOT to emphasize the tyranny of distance and stress those inherent C2 and sustainment challenges. Task Force Aviation continues to refine scenario design to give CABs the maximum training opportunities available. JRTC can provide resources and program robust scenarios for training anything from downed aircraft recovery teams (DART), personnel recovery, M-139 Volcano minefield emplacement, and beyond. The continuously evolving training aids and opportunities at JRTC allow CABs to exercise and train across the full spectrum of aviation core competencies and their respective LSCO mission essential tasks.

JRTC’s Task Force Aviation is postured to meet rotational unit training objectives and remains receptive to implementing new ideas at JRTC. We encourage rotational units to highlight specific training objectives during the initial planning conference and for all aviation organizations to reach out to the team to discuss the current trends and techniques from the field.

MAJ Kellan S. Travis is the senior Aviation Operations trainer at the Joint Readiness Training Center, Fort Johnson, LA.




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The Synthetic Training Environment - Evolving Its Collective Training Model



COL Stephen Waldrop

Committed to providing its Soldiers with the world's best training capabilities, the United States Army is leveraging today's cutting-edge commercial technology to enhance the readiness of its force. The Synthetic Training Environment (STE), which utilizes the Reconfigurable Virtual Collective Trainer – Air/Ground (RVCT-A/G) simulators, employs state of the art technology to allow for advanced air to ground integration training. This article explores how the U.S. Army plans to compliment the new Aviation Tactical Instructor Course (ATIC) at Fort Novosel, AL with the STE.

Enhancing Tactical Proficiency

The Aviation Tactical Instructor Course (ATIC) is currently under development at Fort Novosel and will focus on training seasoned aviators on mastering large scale combat operations (LSCO). According to course developers, "ATIC graduates will be able to validate and standardize unit trainer/evaluators (UT/E), and they will also be tactically focused subject matter experts who are able to train and employ aircraft as a weapon system in a multi-domain operational environment with graduate level understanding of the 7 Core Competencies of Army Aviation." Traditionally, conducting training of this size and scope involved rigorous classroom instruction and extensive resources to evaluate maneuvers in live aircraft, resulting in considerable risk, logistical commitments, and funding. However, the STE provides the Army Aviation Enterprise with an innovative, cost-effective, and scalable alternative.

The STE harnesses advanced technology such as virtual reality, artificial intelligence, and innovative simulations. As a result, the STE is able to fully immerse soldiers within digital combat scenarios that imitate the real world at a high level

of fidelity. The STE offers the unique opportunity to train without the limitations of physical constraints, allowing the rehearsal of collective training tasks that are considered to be high risk with live aircraft. Thus, the STE provides a safe environment for soldiers to hone their skills while also being able to learn from their mistakes without concerns of injury or damage to government property.

Realistic Training Scenarios

One of the key advantages of the STE is its ability to create highly realistic training scenarios. The STE offers an immersive experience that replicates the sights, sounds, and challenges of actual combat situations. From urban warfare to complex counterinsurgency operations, soldiers can navigate through dynamic environments, encounter lifelike adversaries, and respond to changing circumstances in real-time.

The STE leverages advanced artificial intelligence algorithms to generate intelligent virtual entities that behave realistically. These virtual adversaries can adapt to the soldier's actions, creating a responsive and challenging training environment. Additionally, soldiers can employ the same equipment and weapon



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systems that they would use in real life within the simulation, adding an extra layer of authenticity to their training experience. ATIC will use these realistic training scenarios to challenge students so the students can be successful in whatever real-world environment they may face later on.

Customization and Flexibility

The STE provides unparalleled customization and flexibility. ATIC Course instructors can design and tailor training scenarios to meet specific objectives, allowing instructors to focus on areas that require improvement. Instructors are able to quickly restart scenarios as needed, promoting iterative learning and skill enhancement. Lastly, the STE is specifically designed for collective training. Therefore, ATIC students will have to learn to work as a team to perform missions involving multiple aircraft.

Cost-Effectiveness and Resource Efficiency

The STE substantially lowers training expenses by eliminating the need for live ammunition, fuel, and maintenance of actual aircraft. ATIC will be able to engage in training exercises regularly, as the virtual environment removes logistical constraints and their associated costs. Moreover, the virtual nature of the STE reduces the strain on physical resources, freeing up training areas and equipment for other courses on Fort Novosel. Finally, the STE is designed to be user friendly and operated by soldiers. This user-friendly capability eliminates the need for a large support team, which are required for



other aviation simulators.

In conclusion, the US Army's integration of the Synthetic Training Environment into the Aviation Tactical Instructor Course at Fort Novosel heralds a new era of military training. This cutting-edge technology offers an immersive and highly realistic virtual environment, enabling soldiers to enhance their tactical skills, decision-making abilities, and teamwork capabilities. With the STE's customizability, flexibility, cost-effectiveness,

and resource efficiency, the US Army is poised to cultivate a highly proficient and combat-ready force. As the STE continues to evolve and advance, it holds the potential to revolutionize military training across all domains, setting new standards for military excellence in the 21st century.

COL Stephen Waldrop is the Director of Simulation for the U.S. Army Aviation Center of Excellence at Ft. Novosel, AL.

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Project Manager Aircraft Survivability Equipment Update

By COL Brock A. Zimmerman



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I am approaching my one-year anniversary as the Project Manager for the Project Management Office, Aircraft Survivability Equipment (PM ASE). PM ASE is laser focused on delivering the best survivability equipment and support to our soldiers anywhere and anytime. The Army's leadership recognizes ASE's critical capabilities and continues to dedicate the necessary resources to ensure our dominance on the future multi-domain battlefield. This article provides an update on each of the Product Offices programs and briefly peer into the future of PMO ASE.

Infrared Countermeasure (IRCM)

After years of development and testing, the Army has successfully fielded the Common Infrared Countermeasure (CIRCM) system to protect aircrews and aircraft from Man-Portable Air-Defense Systems (MANPADS). CIRCM is the next-generation, lightweight, laser-based, infrared countermeasure system for rotary-wing, tilt-rotor, and small fixed-wing aircraft. The system achieved Initial Operational Capability in September 2022 and is currently fielded on select aircraft. The Open System Architecture employed by the system provides flexibility to adapt to technology and threat evolution. One example of this flexibility is the development of the next generation Jupiter laser which will plug and play within the current architecture. The Jupiter laser will allow for threat overmatch against near peer threats. The program is also coordinating with FVL platforms to support aircraft integration and mission system operability.

The CIRCM system is replacing the Army's Advanced Threat Infrared Countermeasures (ATIRCM) system which has protected CH-47F crews and aircraft from advanced threats since 2009, while amassing over 300,000 hours flown in hostile environments. The ATIRCM system is now scheduled to begin demilitarization and disposal activities beginning in FY24 as the fleet transitions to CIRCM.

An AH-64D Apache helicopter assigned to Alpha Company, 1st Battalion, 3rd Aviation Regiment (Attack Battalion), 12th Combat Aviation Brigade, engages enemy targets during a combined arms live fire exercise as part of Griffin Shock 23 held at Bemowo Piskie, Poland, May 19, 2023.

Missile Warning (MW)

The Common Missile Warning System (CMWS) provides missile warnings for rotary and fixed-wing aircraft. CMWS has been in the field now for almost twenty years. Even today, the system continues to perform admirably with high reliability and exceptional performance against current threats. CMWS recently achieved Full Materiel Release (FMR) and will begin fielding the newer "Kilo-A" software version later this year. CMWS will remain an important part of the ASE portfolio well into the future.

The Limited Interim Missile Warning System (LIMWS) Quick Reaction Capability (QRC) continues to bridge the capability gap between the current legacy CMWS and the future missile warning system. During the past year, the LIMWS QRC program moved at a rapid pace, receiving Urgent Materiel Releases for both the AH-64E and HH/UH-60M platforms. These aircraft have flown over 4,600 hours with LIMWS in support of various operations with no mission affecting failures.

PM ASE is also focused on developing advanced missile warning capabilities to support Army Aviation on the future battlefield with the Improved Threat Detection System (ITDS). ITDS is the Army's next generation aviation missile warning and threat detection system. This system will increase detection range, improve detection in clutter, and provide agile algorithms to rapidly respond to emerging threats. ITDS will incorporate Modular Open Systems Approach (MOSA) and Future Airborne Capability Environment (FACE) approaches to facilitate future technological upgrades and maintain a competitive ad-

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- Army Aviation Fixed Wing Unit Award
- Army Aviation Logistics Support Unit of the Year Award
- Army Aviation Outstanding Logistics Technician of the Year Award
- Army Aviation Materiel Readiness Award for Contributions by an Individual Member of Industry
- Army Aviation Materiel Readiness Award for Contributions by an Industry Team, Group, or Special Unit
- Army Aviation Materiel Readiness Award for Contributions by a Small Business Organization
- Army Aviation Materiel Readiness Award for Contributions by a Major Contractor

Suspense: September 1

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

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vantage over near peer threats throughout its life cycle. ITDS is proceeding through the Army's Acquisition Shaping Panel (ASP) process, having completed ASP Parts 1 and 2 this year.

Threat Warning (TW)

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

The latest version of the Radar Warning Receiver (RWR), the AN/APR-39E(V)2 Modernized RWR (MRWR), is a fully digital system and the enduring RWR program for Army Aviation. The MRWR completed key test in 2023, with the final major evaluation taking place in 2024. The MRWR successfully achieved a production readiness determination and will begin fielding to the First Unit Equipped (FUE) following testing. The interim RWR, AN/APR-39D(V)2, which provides increased performance, recently completed FUE. The D(V)2 system will bridge the gap between legacy and Modernized RWR systems.

Common Systems Integration (CSI)

The CSI Product Office manages various programs to include the Joint Urgent Operational Needs Statement (JUONS) and CIRCM QRC efforts, PM ASE's FMS portfolio, Training Aids, Devices, Simulators, and Simulations (TADSS), and ASE Modernization and Future Vertical Lift (FVL) integration.

The JUONS program installed the Navy's Advanced Threat Warner-Large Aircraft Infrared Countermeasure on a limited number of aircraft in response to an urgent operational need. The JUONS program reached the end of a successful mission in September 2022 with over 51,780 combat flight hours with no aircraft lost to enemy missiles. The CIRCM QRC program, managed by PD CSI, also accelerated the fielding of CIRCM with the CMWS and integrated CIRCM with LIMWS and the ATW.

PM ASE's Foreign Military Sales (FMS) portfolio supports 19 different countries with the CMWS, LDS, and RWR approved for export to multiple countries. World events have created an even greater need for PM ASE's products resulting in increased emphasis on

PM ASE's FMS efforts. As a result, PM ASE is now expanding its FMS portfolio to include LIMWS, CIRCM, MRWR, and the Aircraft Survivability Equipment B-Kit Emulator (ABE). PM ASE's successful support to our FMS partners continues to be a top priority.

The TADSS team completed fielding ABE to various Training Centers in response to an Urgent Operational Need Statement for an Integrated Air Defense System (IADS) Training Capability. The TADSS Team is also developing the Embedded ABE (E-ABE) to provide pilots and aircrews realistic ASE training against enemy IADS in a simulated environment at their home stations. The TADSS team is supporting Army Aviation's development of a new synthetic training environment and the transition from paper training products to the Virtual Training Suite (VTS) for both operator and maintenance training.

The Future

The common thread throughout this article is that the ASE Modernization Team is laying the groundwork to modernize ASE products to support the future of Army Aviation. PM ASE is changing the approach for how ASE products are designed and developed by developing ASE capabilities as an integrated suite. ASE Modernization efforts will follow MOSA that aligns with the FACE architecture. The modernized ASE systems enable rapid responses to evolving threats and reduce the size, weight, and power impacts for both Future Vertical Lift and enduring fleets.

In closing, I want to bid a final farewell to our former Deputy, Doug Barnes. Doug retired from PM ASE on 25 March. He was a consummate professional who dedicated 23 years of his career to the ASE PMO culminating as the ASE DPM for 8 years. We all wish him well and welcome a new Deputy. Steve O'Brian comes directly from the IRCM PMO where he served as the DPM for five years. We are extremely thankful that the Army, and specifically PM ASE, will continue to benefit from Steve's capable leadership.

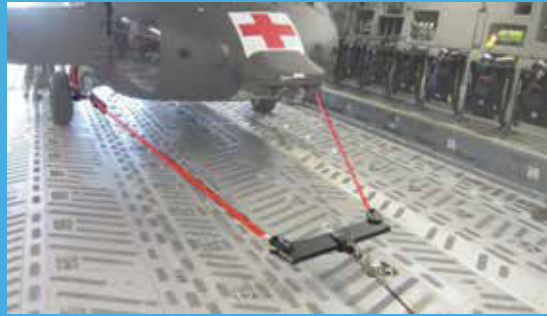
We had an exciting year for PMO ASE and expect the upcoming year to be even more eventful and rewarding.

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

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Product Manager Air Warrior 2023:



Update to the Field

By Dr. Carlos Correia, Mr. Rob Seybold, MAJ Jeff Timmick, and Mr. Chuck Myer

The Product Manager Air Warrior (PdM AW) organization continues to provide enabling capability to Army Aviation by designing, developing, and delivering cutting edge aircrew and personnel recovery equipment that enhances the aviator's situational awareness, survivability, and safety while maximizing performance inside and outside of the aircraft. PdM AW is one of several product offices under the leadership of PEO Soldier and PM Soldier Survivability (SSV). PEO Solider is led by BG Christopher Schneider located at Fort Belvoir, VA.

In FY23, PdM AW completed testing on numerous components and capability within the overarching Air Soldier System product line. Several of these components will transition to the field in the coming months. Specifically, the Aircrew Combat Ensemble (ACE) and the Nett-Warrior Aviation (NW-A) Tablet are moving to the production stage of the program life-cycle. Additionally, work is underway with PEO Aviation to support a Directed Requirement #2 (DR-2) to introduce a Degraded Visual Environment (DVE) capability to improve Aviator situational awareness, survivability, and safety.

Aircrew Combat Equipment

In early FY23 the AW team completed testing of the Aircrew Combat Equipment (ACE) with units from the 25th Combat Aviation Brigade (CAB)



A 25th Combat Aviation Brigade Crew Chief conducts flight testing of the Aircrew Combat Equipment (ACE) system on a UH-60.

in preparation for ACE fielding in FY24. The ACE will replace both the currently fielded Primary Survival Gear Carrier (PSGC) and Flexible Body Armor (FBA). The system provides rotary wing aircrews with a mission and survival vest that incorporates an integrated full body harness supporting hoist insertion and extraction, Soldier Protection System (Modular Scalable Vest) ballistic protection tailored to the aircrew mission, detachable leg straps to facilitate continued wear of the ACE while off-aircraft, personal flotation, and a new tailorable gear carriage system.

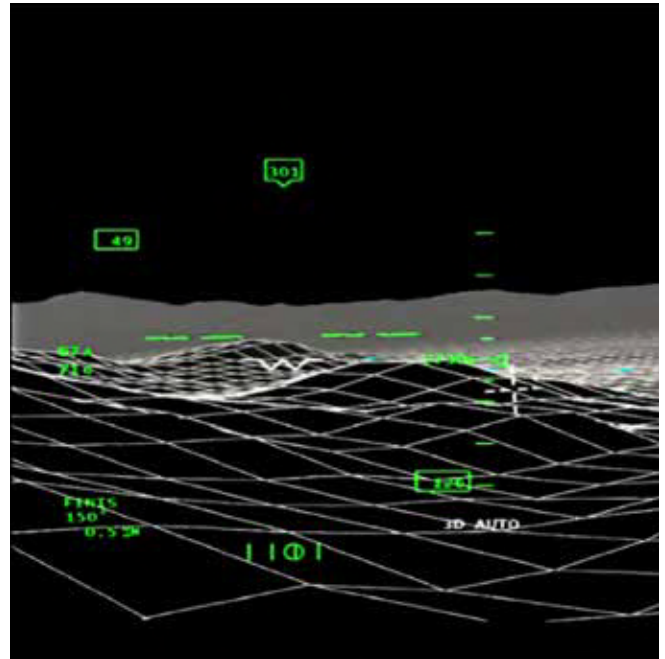
Unlike the "one size fits all" PSGC, ACE comes in five sizes and the optionally installed cummerbund life preserver unit eliminates the flotation collar from the shoulder/neck area, relocating that capability to the torso, when executing over water missions. The ACE also introduces the Crew Restraint Assembly (CRA), an integrated component of ACE which provides a vest-mounted rapid release of the nonrated crew member from the aircraft's safety tether in the event of an emergency. Additionally, the ACE is

being evaluated by both the Navy and the Air Force for potential use and is expected to have significant demand from our foreign military partners.

Heads-Up Display / Directed Requirement 2

PdM AW continues to support the 60V and 60M production lines with a modernized Heads-Up Display (HUD) system. The modernized HUD provides enhanced symbology and full color displays. It also features a wide field of view that allows the user to visualize symbology across a wider area and provide more viewable space in the user's field of regard. A full head tracking capability is undergoing developmental testing. Once complete, the system offers enhanced capability that includes synthetic vision, hazard depiction, friendly and enemy soldier location and other pilot line of sight. This capability can be added to the base, two dimensional, HUD in the future.

PdM AW is collaborating closely with the PEO Aviation Product Office for Aviation Architecture and Environment Exploitation (A2E2) leading



3D Conformal Symbology: Left, 3D LZ, Right SVS / World Grid

the effort in support of DR-2. AW will deliver enhanced HUD and improved Helmet Display Tracking System (HDTs) in support of this effort. The AW capability, along with critical components provided by the A2E2 office, will serve to demonstrate the effectiveness of operating in a Degraded Visual Environment (DVE) and inform the Army on the outcome of the learning excursion. DR-2 capability is scheduled for full installation in the FY25 timeline.

Nett Warrior- Aviation

The new NW-A tablet subsumes the Electronic Flight Bag (EFB) capabilities and is postured to provide Aviators a comprehensive approach to mission planning to include, removing paper from the cockpit. AW performed multiple demonstration events and Soldier touchpoints with the new tablet and continues to refine the system based on user feedback. Additionally, the tablet was used in several iterations of the Experimentation Demonstration Gateway Event (EDGE) exercise and received positive feedback. As a multi-use tablet, the NW-A device also provides the capability to provide the requisite third party capability through various developers to create, augment, and integrate new capabilities on the aircrew's devices. In short, the tablet will result in a one tablet, multiple capability solution for Soldiers. Platform connectivity on aircraft remains a top future focus area for tablet development.

Rotary Wing Helmet

In FY23, AW continued fielding the improved variant of the HGU-56/P, the Rotary Wing Helmet (RWH) to Active, Guard, and Reserve aircrew members. The RWH improved aircrew survivability by providing functionality changes that include adjusted head position; improved retention system; and factory-installed hear-through capability. These improvements enable the RWH to provide an increased field of view and increased stability while maintaining the same impact protection and lightweight performance. The AW team plans to complete fielding to all Compo 1 Combat Aviation Brigades in FY24.

Future Development

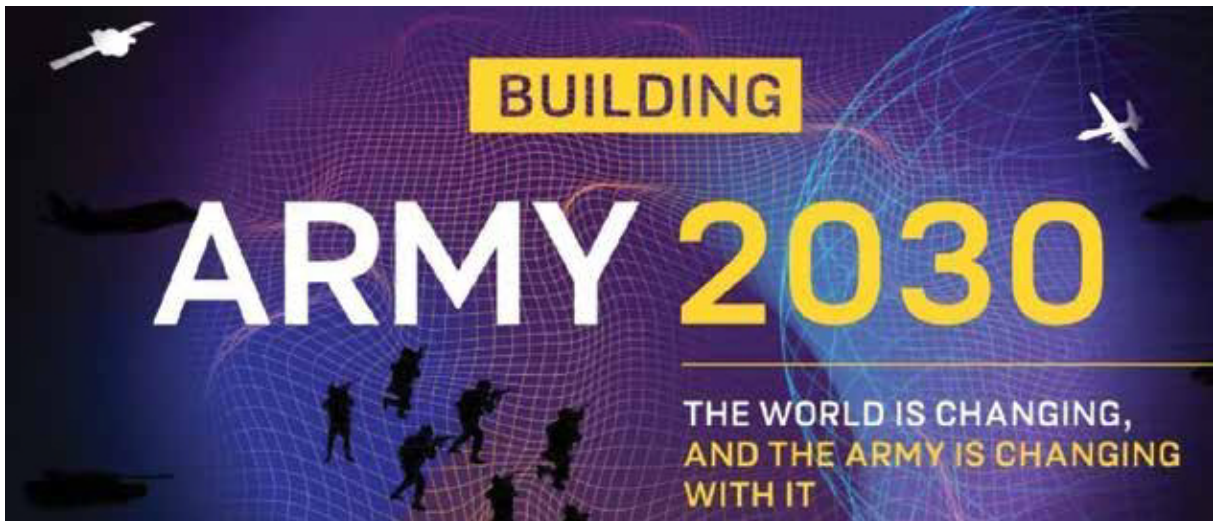
Future Vertical Lift (FVL) – As the Army moves to the FVL solution, PdM AW is postured to provide expertise to various working groups, Integrated Product Teams, and stakeholder engagements to solve critical aircrew survivability issues and provide the Army of 2035 capable, cutting-edge technology.

EDGE 23 – AW demonstrated connectivity of the NW-A that include the Aviation Ground Networking Radio (AGNR), TSM, BFT and recently a terrestrial cellular capability that could prove extremely useful in domestic and permissive environments. These advances in technology will ultimately play a role on how aircraft operations are executed in the future.

Aviation Platform Augmented Reality Integration (APARI) Technology Maturation Initiative (TMI) - goal is to provide seamless transition from dismounted to mounted on-the-move (OTM) operations during multi-domain operations (MDO). The World View experience displays the Common Operating Picture (COP) with terrain map, compass rose and displays friendly and enemy icons on the Integrated Tactical Network (ITN). This will extend head mounted displays (HMD) and information processing architectures, which enable enhanced situational awareness (SA) for aviation crews, and OTM mounted to dismounted ground troops while being transported on Army rotary wing aircraft.

In closing, PdM Air Warrior continues as the leader in Air Soldier Systems, Heads-Up Displays, and Mobile Hand-Held devices. We remain committed to working with stakeholders to provide innovative solutions to an ever-evolving Army. We synergize the efforts of the enduring and future, while maximizing opportunities to learn.

Dr. Carlos Correia is the product manager, Rob Seybold, the deputy PdM, MAJ Jeff Timmick, the APM, Air Solider Systems, and Chuck Myers, the APM, HUD Mobile Handheld Devices for the Air Warrior Product Office located in Huntsville, AL.



Survivability: Building a Proactive Force



By CW5 Casey W. Peterson

This article is not intended to be a history lesson, but after three years of holding the position of the Survivability Branch Chief and military service spanning 25 years over two services, I've come to discover a lack of understanding with our training methodology and development. We tend to focus on the here and now and often forget how we got to where we are today. After all, we should study the past to learn from those that came before us and attempt to better ourselves and those around us from that knowledge. To quote the USAACE Commanding General, MG McCurry, "we stand on the shoulders of giants." Many of those giants still walk among us and are more than eager to share their knowledge with the current generation of warfighter. Many have transitioned to the civilian sector and continue to serve the military in their new capacity and a few have passed on to Fidler's Green, leaving behind a rich legacy and strong foundations from which we have built upon.

One such giant, in the realm of survivability, is CW5 (Ret.) Michael S. "Machine Gun" Kelley. Still very much an active contributor to Army Aviation with his duties at the Army Reprogramming Analysis Team (ARAT). Mr. Kelley on a chance encounter was a wealth of infor-

mation providing insights to the "why" and "how" certain survivability initiatives progressed during his tenure as the Survivability Branch Chief. He provided history and documents that governed the process and analysis which went into making changes that were necessary and not just for the sake of change.

In 2007, in accordance with the Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01C, the *Functional Needs Analysis (FNA) for Aircraft Survivability* was initiated utilizing the Joint Capabilities Integration and Development System (JCIDS). JCIDS utilizes a top-down, capabilities-based requirements determination process which links national strategies and Joint Service concepts to the needs of the warfighter. The analysis in this FNA was focused on determining the gaps in capabilities as derived from current and programmed Aircraft Survivability Equipment (ASE), doctrine, and tactics, techniques, and procedures (TTPs) as they relate to standards contained in the JCIDS analytical process. This analysis, in conjunction with the Army and National Defense Strategy, is the driving force behind all the changes that take place in survivability. Although requirements were not set forth until 2008, holistic changes were made in the

last five years to meet those goals. Rest assured the delay in certain solutions was hindered by current operational priorities. The analysis considered a full range of possible solutions to capability gaps in aircraft survivability from a complete review of the impact achieved through Doctrine, Organization, Training, Materiel, Leadership, and Education, Personnel and Facilities (DOTMLPF) enhancements. Future conflicts require Aviation units supporting the Joint Force Commander to operate in environments that significantly threaten friendly aircraft. Failure to adequately address these gaps may result in the inability of the Joint Force to achieve desired effects on the modern battlefield. Due to the venue for which this article is published, I will not go into detail all the identified gaps, risk level, or untested solution sets.

But, with the revised TC 3-04.9, recent implementation of mission planning software, Aviation Mission Survivability Officer Course restructure, and the updated evasive flight maneuvers, the Aviation enterprise has locked down many of the identified gaps. Unfortunately, this process is not a "one and done" event. Now that the foundation has been laid, the solutions must be reassessed and modified continuously to remain proactive against an ever-evolving threat.

The USAACE DOTD Survivability Branch has diligently strived to close the gaps identified in the analysis process to ensure the combined arms team retains as much of its Aviation force as possible in large scale conflict. This is a holistic change to how we conduct business and major initiatives that were started prior to 2006 are just now coming to fruition. These initiatives have conformed to the Army 2030, and beyond, readiness goals. There has been angst from some of the force and leadership to step out of their comfort zone in this effort. I can appreciate the concern for current responsibilities, and the strain on resources, however that mentality is short sighted when it comes to a full force conflict. The units and leaders that have gone all in for a tactic's transformation are the revolutionaries and will be the winners on the battlefield.

Home station training is one of the force's top concerns with training survivability. The force is losing the capability at many of the facilities that previously permitted the use of expendables. Bypassing some of the standard process of acquisitions, Survivability Branch has facilitated government and contract entities with access to congressional

funding to focus their funds and efforts on developing a virtual threat environment and ASE response executed from the aircraft to establish or enhance the home station training capability. The primary goal is to provide a training environment that reduces negative habit transfer to an absolute minimum. Testing has been successful on the UH-60M through PEO AVN's CABAIL facility and will progress to aircraft trials in the UH-60, CH-47, and AH-64 as soon as the air worthiness process is complete. This has been quick turnaround for a product that the warfighter needs now, and I commend industry that listens to the warfighter and produces a product that is intuitive and as close to the real environment as possible. That is the challenge from Survivability Branch to industry...the force does not need products for the sake of producing products. The force needs products that will stand up to the enemy and maintain dominance on the battlefield. If it is not a realistic representation of the environment in which we must fight, then it is useless to the warfighter.

The Army is an expensive engine to run. This is unfortunately a limiting factor with many solutions going unfunded

until it is absolutely necessary. The process is designed to be proactive but is too often reactive. The force does not need to wait for a new material solution, they can be proactive now and study their adversary and environment, implement evasive flight maneuver training, and become proficient at fundamental and tactical flight. So be proactive, become proficient at controlling your aircraft in challenging environments. Study the enemy and their capabilities, build on the fundamentals to get after the more complex mission requirements. Understanding yourself and the enemy is the key to your survival.

The Survivability Branch is always searching for interested and qualified personnel. If you feel that you have the experience and the ability to contribute, contact the DOTD Survivability Office for a consideration packet.

Above the best!

CW5 Casey W. Peterson is the outgoing chief of the Survivability Branch, Directorate of Training and Doctrine, U.S. Army Aviation Center of Excellence at Fort Novosel, AL. Fellow contributor and incoming Survivability Branch Chief is CW4 Christopher P. Crawford.

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A CH-47F conducting flight training in Alaska.

U.S. ARMY PHOTO BY CW3 ARNOLD CACERES

When Are Aircraft Combat Survivability Efforts Counter-Productive?

By CW3 David S. DeAvila

Fatal aviation mishaps are devastating to families, communities, and the owning organizations. When Army aviation experiences a mishap, once the cause is identified as pilot error, there are usually some changes made to prevent additional loss of life and equipment. When the mishap is during a training exercise, almost always a new layer of preventive measures is employed and authority for that mode of training may be elevated to a higher echelon for approval. Instead of reinforcing the basics and taking a layered approach to training mission profiles, subsequent training is hampered. Combined with the counter-insurgency evolution of tactics, techniques, and procedures, we have seen new and po-

tentially avoidable mishaps occurring.

In the first two decades of this millennial, Army aviation streamlined its training and operations for threats present in the fight against non-linear and non-state belligerents. As part of this evolution, our community gradually reduced its focus on one of the most important functions of survivability, piloting. Some units practice maneuvering flight regularly, yet there hasn't been an enterprise-wide effort designed to train the tactics that combine our counter measures with skillful maneuver of the airframe until very recently. Transitioning from counter-insurgency type doctrine (small scale) to multifaceted large scale contingency operations doctrine with peer or near-peer adversaries, learning to

fly our aircraft at its full capabilities with increasing task saturation, is essential.

Transitioning Pilot Skills

Our doctrine is catching up to this new paradigm and our technology continues to outpace those of our adversary, yet our skilled and experienced pilots are not afforded the responsibility to adequately train new pilots on tactics and maneuvering flight. The prioritization of technologically survivable aircraft during 20 years of counterinsurgency de-emphasized the pilot skills we need in large-scale combat. The net result of our unchallenged operations has altered our understanding of risk acceptance, to an avoidable fault.

Aviators who operate in combat environments experience an immense level

of task-saturation. Even the most basic mission profile becomes inundated with multiple radio frequencies to monitor, coordination with several layers of aerial support, aircraft system indications, and navigation to an objective. Those are a small portion of the multitude of mechanisms vying for an aviator's attention in combat. Increasing technological upgrades to aircraft survivability are also adding to the aviator's workload.

In order to wring out every drop of survivability in large scale combat, the Army must increase focus on expanding maneuvering flight training to the envelope of aircraft performance. The ability to manage the cockpit, formation and route while piloting the aircraft to the limit of performance is a skill that WILL be required in near-peer/peer combat. This is not a case of simply limiting radio usage to concentrate on controls and instruments; this is a case for training current and future aviators to the maximal performance of their platform and abilities.

Training to the level of task-saturation derived from large-scale combat is crucial to aircraft survivability. Maneuvering flight under NVGs, in formation, transiting to an objective where you will be exposed to an adversary's Integrated Air Defense System (IADS) is extremely stressful. You will not expose pilots to this complex reality with casual training area radio calls. Pilots are going to be exposed to Hollywood action movie-levels of chaos, and training needs to reflect that reality.

Full-spectrum Training

Many pilots who have flown in combat over the last two decades have been exposed to this "semi-controlled chaos." Yet we've almost always had a "safety blanket" of counter measures or altitude-based tactics to mitigate the enemy's limited threats to our aircraft. Now we are approaching combat scenarios where the threat is likely to be unknown, so aviators will be required to memorize and perform a database of maneuvers to defeat threats as they arrive in real-time.

This new level of performance is only attainable through exposure to a full-spectrum training scenario. This is where risk versus reward rears its head toward our formations. In order to learn to fly at the limits and not become our own threat, we MUST train maneuvering flight at heightened levels of performance and task saturation.

Survivability efforts can be count-

er-productive when we are either training too advanced, too soon; or when we are attempting to train to the limits of aircraft performance without exposure to that aircraft's characteristics at the maximal envelope prior to adding in other risk factors. The conundrum is whether we risk losing aircraft at home, or if we guarantee losing aircraft in combat due to self-initiated limitations. How do we keep survivability-focused training safe AND effective?

We can mitigate the threat to self (risk) through incremental exposure to maneuvering during heightened states of chaotic mission execution. We cannot remove the opportunity for senior aviators to train junior aviators in high-risk profiles. We can place steps into the process to practice in a crawl, walk, run methodology. In order to add exposure and enhance aviator skills in complex environments, we need our aviators to have more experience with fundamentals in the early stages of their careers. Additionally, units can better utilize flight simulators for reinforcing fundamental tasks as well as complex mission rehearsal.

Back to the Basics

Some of our nation's most elite special operations ground units train basic warfighter skills exhaustively prior to ever rehearsing live fire drills or training missions. One potential way the United States Army Aviation Center of Excellence can influence the future positively is by adding flight school hours focusing solely on the basics. Flight school students would arrive to their units better than novice at skillful maneuver of their airframes. This would enable units to start "injecting the chaos" earlier in pilot progression, safely. Master the basics, and survivability automatically increases.

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

CW3 David S. DeAvila serves as an aviation combat forensics officer of the Aviation Survivability Development and Tactics (ASDAT) Team, headquartered at the U.S. Army Aviation Center of Excellence, Fort Novosel, AL.



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Threat Change on Demand

By Mr. Eric Bowes, Mr. John Sensing, and Mr. Robert Knopp

For the United States Army to maintain overmatch against Peer and Near Peer adversaries, the Army Reprogramming Analysis Team (ARAT) must keep on developing and maintaining updated and real-time mission software for all supported platforms, systems, and regions where Army Aviation may deploy and fight. Currently, ARAT conducts block cycle updates every 18 months as well as rapid reprogramming on validated threat intelligence as required by the Army Aviation user community. Figure 1 shows the process ARAT uses to accomplish its mission.

The latest ARAT Strategic Vision is to influence and enhance procedures and its infrastructure to adopt an even more rapid mission software release cadence responding to new or changes in enemy threat systems. Embracing a new Threat Change on Demand (TCoD) approach, ARAT will continue to ensure its products align with the latest intelligence and threat capabilities more effectively than current reprogramming practices. This is imperative to maintain the same, or even greater, mission readiness during Multi Domain Operations, that Army Aviators have relied on ARAT to provide for four decades.

To achieve its strategic vision, ARAT is modernizing across the entire Mission Data lifecycle to bridge known



Figure 1. – ARAT Cycle

process gaps. For example, ARAT intends to implement an autonomous infrastructure to minimize identified bottlenecks within the process. Ultimately, the TCoD process will:

- eliminate the need for block cycle and rapid reprogramming mission software events,
- enhance the ability to rapidly detect and assess the necessary reaction to a new or change threat,
- reduce time and potential omissions of threat changes that may impact threat identification,
- ensure that Army Aviation has current mission software to deploy and fight globally.

To achieve the TCoD capability, ARAT has invested in the development of an integrated enterprise system for streamlined threat change detection, analysis, mission software development and testing, and release of new mission software. This article intends to share some of the initiatives ARAT is pursuing to combat the exponential increase in both quantity and complexity of threats.

Identify and Analyze

ARAT is creating digital twins of each system under test (SUT), in its portfolio, to enable exploitation of Artificial Intelligence / Machine Learning (AI/ML) algorithms. The algorithms will analyze and detect threat changes or new threats among the myriad of ELINT signals in each Area of Operation (AO). The Intelligence Community processes approximately 1,000,000 ELINT intercepts weekly, driving nearly 1,000 ELINT intercepts per week being further analyzed as potential interest (Threat Change Detection). Currently, this is a heavily manual process which directly initiates Rapid Software Reprogramming, Situational Awareness Messaging, or “Maintenance” updates, depending on end user operational needs and concerns. System digital twins, paired with AI/ML will expedite the Threat Change



Universal Modernized Common Automated Test Suite (UMCATS) front view.

Detection process and allow human decision makers to focus on the operational mission rather than data mining.

Program (Develop and Test)

ARAT's major focus in the reprogramming life cycle occurs in the development and test stage. Here, ARAT has developed and is using key enterprise tools including the Simulation Model Framework (SMF), Unified Test Automation Suite (UTAS), and Universal Modernized Common Automated Test Suite (UMCATS). The ARAT test architecture with SMF, UTAS, and the UMCATS is just the start for the foundation of applying cognitive EW principles in the reprogramming lifecycle. Each of these capabilities leverage service-based tools and processes to create an efficient and integrated development and test environment.

ARAT took on a challenge to develop the SMF, a hardware-agnostic simulation software solution to standardize on a common format for RF Threat simulations, scalable to support any RF generator. SMF is a high-level programming language built off the fundamentals of MATLAB and enables engineers to create Threat simulation source code representations compatible with virtually any RF generator format.

SMF simulations contribute to Aviation Community mission readiness by allowing ARAT to replicate near peer threats of evolving complexity. The SMF simulations also support inter-service sharing of a common simulation format useable for a multitude of hardware employed across the Joint services. ARAT is working closely with the USAF and USN to develop a process to quickly assess battlefield Radio Frequency threats detected during combat operations not only to rapidly adjust mission software in the fight but also to build the simulations needed to test that software.

ARAT currently employs a thorough HWIL Test and Evaluation process that maximizes the fidelity and accurateness

of threat identification. ARAT's UTAS capability automates testing of mission software against thousands of threat emitter modes through multiple testing events without direct human participation. Future generations of UTAS will utilize AI/ML models to implement adaptive fault detection during active testing, as well as perform post test data analysis. The UMCATS, newly deployed by ARAT, provides the capability for ARAT to reduce mission software timelines by quickly configuring the suite to replicate any aircraft ASE configuration within the Army Aviation aircraft inventory.

Distribute

ARAT will soon be replacing its AWSSSP with a new capability called the ARAT Software Portal & Electronic Notification (ASPEN). ASPEN, designed and developed with the user will operate in the Amazon Web Services Cloud environment and provide ARAT with the benefits of Cloud architecture such as site redundancy and backup. Although focused on Army Aviation and ground mission software, ASPEN is scalable to host other Services or Industry partners for rapid software distribution, at the Secret level, to globally deployed units.

As always, ARAT will continue to modernize across the entire Mission Data lifecycle. TCoD, utilizing cutting edge Industry standards, practices, and innovation, is ARAT's next step. The end state of ARAT's enterprise will be to automate as much of the reprogramming cycle as possible to continually reduce the timelines necessary to keep Aviators ready for the current and future fight."

Mr. Eric Bowes is the program officer and Mr. John Sensing and Mr. Robert Knopp are members of the Army Reprogramming Analysis Team-Program Office, Intelligence, Electronic Warfare & Sensors Directorate at Aberdeen Proving Ground, Maryland.

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A Multi-Functional Sensor for Future Aviation

By Mr. Jason Stevens and Mr. Jack Scherer

The modern Army Aviation platform continues to face multi-faceted challenges. To maintain superiority, systems must continually display enhanced functionality while minimizing Size, Weight and Power, and Cost (SWaP-C).

Adversarial threat weapon systems continue to become more sophisticated, and operating techniques strive to impede our countermeasures. Sensors focused on protecting aircraft from these threats are prioritized in terms of placement and overall design, which leaves little room for different sensor suites. In addition to these weapons systems, different sensor suites must also account for obstacles, terrain, targets, and other aircraft threats. Increased Situational Awareness (SA), especially in Degraded Visual Environments (DVE), could greatly reduce these risks. DVE regularly causes the cancellation of routine missions and DVE-related accidents can cost the Department of Defense roughly \$100M annually. More critically, DVE can make missions extremely dangerous, and tragically has been attributed to 122 Army fatalities from FY02-20.

According to Fort Novosel's publication, Flightfax #108 in May of 2022, CW4 Shawn Johnston states, "A degraded visual environment (DVE) is unquestionably the most dangerous condition we encounter in Army Aviation. This environment has severely affected our readiness and ability to own and operate within battlespace. DVE may be the single toughest challenge we have encountered in Army Aviation because of the varying degree of factors we face when we cannot see where we are going." Increased visibility during dust, fog, rain, and nighttime would significantly improve pilots' ability to perform their missions and return home safely.

Within the U.S. Army Combat Capabilities Development Command (DEVCOM), the C5ISR Center's Electro-Optic and Infrared (EO/IR) technology experts work to develop and

mature advanced sensors. This area of sensing enables detection, localization, and characterization of targets, threats, and landmarks throughout multiple environments. Recent completed projects within C5ISR were able to drastically improve SA in DVEs.

Now the C5ISR Center is developing a novel sensor suite design that has capabilities to provide the aircraft and pilots with Threat Warning (TW), SA, and the ability to operate in DVEs. These improved capabilities will be vital to the performance of both Future Long Range Assault Aircraft (FLRAA) and Future Attack and Reconnaissance Aircraft (FARA), and development of a single sensor suite that accomplishes these goals would greatly reduce the SWaP-C of those platforms' sensor suite systems. In partnership with Industry, new sensor suites are in development for experimentation. The new sensor suites will be tested and characterized in a lab environment and brought to several live-fire events to collect live imagery. The operation of the sensor suite during live-fire events will provide data to indicate the effectiveness of the new sensor as a TW system.

Novel Design

The primary highlight of this system is the use of multiple different light bands of the imaging spectrum whereas traditional sensor suites focus only on one area of color. Utilizing sensitivity in a different band of the imaging spectrum allows for improved situational awareness, especially in multiple DVEs. This allows the sensor suite to run TW algorithms and provide SA imagery simultaneously. In the future, software implementations could possibly be used to provide image fusion of multiple bands for pilots in a Helmet Mounted Display, creating a single image with features from each individual wavelength. Utilizing different imaging bands could also improve TW effectiveness by providing additional characteristics by utilizing the advantages of multiple bands, respectively.

Along with the novel features, high-resolution imagery is captured at framerates faster than current generation sensor suites, which allows for quicker detection and improved object tracking. Additionally, greater resolution could improve detection, characterization, and localization of both threats and targets, especially at longer range. Faster framerates will also be essential in SA of future aircraft to reduce motion blur when moving at high speed and at low altitudes. It is rare to identify technologies that can drive significant improvements in both capability and SWaP-C. However, multi-functionality in a single sensor suite eliminates many additional sensors and control equipment.

Looking to the Future

The relative performance of a multi-band sensor suite is still in the investigatory stage compared to traditional TW systems. Ongoing experimentation, data collections, and analysis will provide initial performance indications. This performance will be used to refine current TW algorithms or develop new, specially tailored algorithms. The current sensor suite will also undergo testing in multiple different DVE to demonstrate SA performance in potentially hazardous flying environments. Concurrently with these efforts, a new, flight-ready sensor suite is being produced which is refining the overall design and allowing for data collection from current aviation platforms. Sustained, long-term efforts continue to improve performance in each ability and inform FARA and FLRAA of future specifications and capabilities.

Mr. Jason Stevens and Mr. Jack Scherer are both engineers of the Air Systems Division of the Research and Technology Integration Directorate (RTI), in the Combat Capabilities Development Command (DEVCOM) Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) Center, located at Fort Belvoir, VA.



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► From the Field

An Innovative Approach to Aerial Gunnery Operations

By COL John W. McElveen



SCARNG PHOTO BY CPT JAMIE DEBK

“Gun 16, this is Dagger 3 requesting immediate close air support; enemy forces are danger close and threatening to overrun our position.” “Dagger 3, this is Gun 16; send commanders initials. I understand this engagement will be danger close to friendly positions, turning inbound at this time.”

No matter whether this scenario is in a Large-Scale Combat Operation (LSCO) or a Counter Insurgency (COIN) mission, when troops on the ground need air support, they want it timely and accurate. Any professional will tell you if you want to improve your timing and accuracy, you need to shoot as often as possible in realistic environments. “Sets and Reps” is the key to improving one’s skills. Unfortunately, one cannot shoot a weapon once or even twice a year and expect to be at the level necessary for day one in combat. In this article we will explore the Apache helicopter aerial gunnery program and what needs to change to allow aircrews to attain proficiency through repetition versus an annual qualifying event.

The 1-151st Attack Reconnaissance Battalion, SCARNG, conducts a battalion size interdiction attack exercise over Poinsett Range, Sumter, SC.



PHOTO BY CAMDEN THRISHER

An AH-64E from 1-151st ARB, SCARNG, firing on Poinsett Range, Sumter, SC.

Annual Training Event

For the past 40 years, attack battalions have conducted aerial gunnery operations once per year during an annual training event. It is a great multi-echelon training event that leads to Mission Essential Task (METs) trained in all disciplines within the formation. The battalion normally deploys with 350 to 400 Soldiers to a field site for two to three weeks. A forward arming and re-fueling point (FARP) and an ammo holding area (AHA) are set up to accommodate the loading of ammo and fuel. A tactical operations center (TOC) is set up to control the movement of people and aircraft during the event. Gate guards, medics, officers in charge, range safety officers, tower operators, script readers, evaluators, and civilian personnel to ensure the targets and computer systems all operate properly. These significant personnel and logistical requirements are the major limiting factors to achieving more engagements.

There are many challenges that the unit must address if it wants to conduct year-round gunnery and improve the number of “sets and reps.” The focus must be on the employment of the Apache crew’s weapon systems without the personnel and logistical burden. The challenges to be addressed are the ammo storage, loading and refueling the aircraft, range scheduling and operations, and identifying a realistic shooting environment. With the goal to make Apache aircrews more lethal and ready to fight tonight, a group of motivated and innovative Warrant Officers went to work on a solution.

Shifting the Paradigm

The 1-151st Attack Battalion (AB) is located on McEntire Joint National Guard Base with a squadron of F-16s across the airfield. The 1-151st AB was fortunate to have an airfield commander that believed in what they were trying to accomplish and worked with them to solve every challenge they faced. Through a joint agreement with the base commander, the unit was allowed to set up a secure storage facility that met all Air and Army ammo storage requirements. The unit could now draw and store ammo for extended periods in a secure ammo point located on the airfield. This change drastically reduced the time, workforce, and equipment needed to bring ammo to the aircraft.

The necessity of setting up a FARP to load and refuel the aircraft for a gunnery event was addressed. “Why can’t we store the ammo on base, and load and fuel our aircraft where they are normally parked?” We have done this for the past 20 years in Iraq and Afghanistan without issue. Most Army bases do not store their ammo on the airfield with their aircraft, so valuable resources are required to get the ammo from the closest ammo storage point (ASP) to a temporary AHA and finally to a location that it can be loaded on an aircraft.

The 1-151st and the Air National Guard at McEntire researched and completed the necessary explosive and safety site surveys to allow for specific parking pads to double as arming pads when gunnery operations were ongoing. The pads are adjacent to standard aircraft parking and meet all the regulatory requirements to load and unload ammo. This change allowed for aircraft to be loaded during a typical workday and for aircrews to cut down on the time they spent in the aircraft loading and unloading.

Aerial Gunnery Range

With the ammo on hand and the ability to load the aircraft at home station, the unit needed an aerial gunnery range close to home with the flexibility to shoot any day of the week. The experts in the 1-151st looked across McEntire airfield to the 169th Fighter Wing for the answers. Shaw Air Force Base, also with a wing of F-16s, is located just a 25-minute drive down the road. These fighter aircraft are the primary users of the Poinsett Range complex located south of Shaw AFB. Pointset Range is an Air to Ground range that also houses an extensive Electronic Warfare capability.

When the Air Force sends F-16s or F-35s to shoot on a range, the unit sends no support personnel to the range. Instead, the aircraft is loaded with fuel and ammo at their home base, flown to the range, allowed to check in, expend ordinance, check out and return to base or their next mission. This process is so efficient for the unit and takes so little movement of personnel it can be duplicated daily if necessary, creating a proficiency level the Army might find hard to match.

Range operations are manned and operated with the mission to support

the aircrew without any additional military support. The Air Force allows their ranges to be scheduled in 15-minute increments. In most cases, an aircrew can call the same day of the training and schedule any 15-minute block available. At Poinsett range, an 8-minute flight from McEntire, Apache helicopters can check on to the range and shoot for 15 or 30 minutes, followed by an F-16 checking on just after them. No unit owns or signs for the range. They simply check on and check off at their designated times.

Almost all Army aerial gunnery ranges are sandwiched between other ground ranges which restricts the aircraft to one inbound heading. Aircrews are not allowed to fly their aircraft in the same manner they will be required to in combat. Scanning for targets on one azimuth plus or minus five degrees, the “bowling alley effect” is just not realistic. Whereas most of the ranges in the Air Force can be engaged from 360 degrees to the target. The Air Force’s Poinsett range gives aircrews the flexibility to set scenarios in a more realistic environment.

By addressing the challenges, the results have led to an aerial gunnery program that can shoot twice a month using only the normal full-time staff and no offsite FARPS. It is arguably the most efficient Apache gunnery program in the Army without any degradation in safety or standards.

Aircrews are now able to plan just days or even hours ahead of shooting, allowing them the ability to execute aerial gunnery task. With a 360-degree range just an 8-minute flight away and no logistical support needed, the 1-151st is now shooting their new AH-64Es twice a month almost every month.

Innovative leaders find ways to YES and create world-class combat units. Each unit will have to solve different challenges, but the end goal should be the same for all combat units - Increasing lethality through sets and reps!



COL John W. “Jay” McElveen is the director, Army Aviation and Safety and commander, 59th Aviation Troop Command, South Carolina Army National Guard.



Unit Trainer/Evaluator Jump Start in the 28TH ECAB

By MAJ Justin J. Shedron

The Aviation Branch initiative to implement the Unit Trainer/Evaluator-Aviation Tactics Instructor Course training model shifts significant training requirements from the institutional “schoolhouse” domain to the operational “unit” domain. The underlying rationale and anticipated benefit to Army Aviation are clear. However, for Army National Guard Aviation, this shift in requirements will require increased resourcing to ensure long-term viability.

Increasing Training Capability and Enabling Tactical Focus

The 28th Expeditionary Combat Aviation Brigade capitalized on the

Branch and Army National Guard (ARNG) – Aviation imperatives to participate in the Jump-Start program to aid in the assessment of ARNG unit concerns and equities associated with the program. The chain of command recognized the importance of embracing the fundamental change in how we train and saw the value in using locally trained UT/Es to perform base task training thereby enabling Instructor Pilots – eventually Tactics Instructors – to focus on tactical training. The UT/E Training Support Package (TSP) encompasses several advantages including the potential to increase unit training and evaluation capability without the constraints of

institutional course schedules and seat availability and the option to scale UT/E training for Day/Night/Night Vision Goggle in only 5 weeks (the entire TSP including Instrument can be completed in 7 weeks vs. 9 weeks legacy Instructor Pilot Course). Most importantly, it will allow Tactics Instructors to concentrate their efforts on collective tactical training and develop formations that are capable of surviving and winning in today’s Large Scale Combat Operations (LSCO) environment.

The brigade commander, COL Michael Girvin, offered that, “with the new direction the Aviation Branch took in Tactics, we jumped at the op-



BRANIG PHOTO BY SFC DEBREC NELAN

28TH ECAB aircraft and crew prepared for Helicopter Aquatic Rescue Team training at Fort Hunter, PA along the Susquehanna River on a foggy day.

Army Aviation Training Sites have employed to create what are arguably the best-trained military instructor pilots in the uniformed services. The prevailing feedback from unit leaders and trainers is that it will be critical that UT/E nomination, training, and validation are highly standardized.

Recognizing The Overall Cost & Associated Challenges

In addition to standardization considerations, are the cost increases in the form of flight-time, opportunity costs, maintenance man-hours, and overall operating costs. Each UT/E TSP candidate requires nearly 30 hours of simulator time and over 25 hours of flight time in the aircraft and twice that amount of time in academics, preflight planning, and post flight actions over the course of the TSP. These demands are in addition to pre-existing Aircrew Training Program (ATP) requirements on which current Unit and Army Aviation Support Facility (AASF) staffing levels were based. The long term impacts to the Flying Hour Program are difficult to predict and based on the moving targets associated with retention and the number of UT/Es trained per year however we can expect an increase in blade-time required. The simulator requirement alone is a “big lift” for most ARNG units that prevents the Instructor Pilot from supporting other training for the duration of the simulator trip and requires scarce simulator time.

Equally important are the opportunity costs associated with TSP execution on Inactive Duty Training (IDT) status. There is not enough training time available to support TSP completion over Unit Training Assemblies and each Additional Flight Training Period (AFTP) that the UT/E candidate uses to complete TSP training results in one less AFTP available for those critical pilots-in-command to execute flight training with other Aviators to complete steady state ATP requirements. Therefore, while it is possible to complete UT/E training using AFTP’s, stakeholders unanimously agree that training the TSP modules “straight-through” on Active Duty for Training orders is the preferred method. Conducting the training on orders would also address Fundamentals of Instruction related concerns. Specifically, this

would mitigate obstacles to learning, such as interference and disuse, that would be inherent in training TSP content on AFTPs with intermittent training touchpoints completed over a longer time.

Finally, depending on airframe, each additional hour of flight-time associated with the UT/E program beyond the ATP requirements prior to TSP implementation results in 16 or more maintenance man-hours and between \$2,000 to over \$10,000 of increased program expenditures if published hourly reimbursement rates are an accurate reflection of operating cost.

These costs were all previously supported by the Institutional Domain and will now be transferred to the Operational Domain. Moreover, Army Aviation recovers the investment in resources dedicated to completion of the legacy Instructor Pilot Course through the application of service obligations, whereas there is no service obligation associated with completion of the UT/E TSP, leaving the units with increased resource requirements and a less certain return on investment, further underscoring the importance of talent management and retention.

Supporting Our Trainers And Winning The War For Talent

With appropriate investments, the UT/E program will result in increased tactical capability. These investments should include funding for military orders for our Traditional “part-time” candidates and trainers, adequate AASF staffing commensurate with increasing requirements, and competitive pay and incentives in view of unprecedented competition from the commercial Aviation industry. It is essential that we implement Army Aviation’s Tactics Transformation. It is also essential that we properly resource increasing requirements and win the war for talent to set the conditions for long-term UT/E program success.



MAJ Justin J. Shedron is the 28th ECAB Airfield Manager and AASF#2 Operations Officer, Pennsylvania Army National Guard, Johnstown, PA.

Editor's Note: Throughout 2023 we will be celebrating the creation of Army Aviation Magazine in March 1953 by Founders, Art and Dotty Kesten, with articles about the 70-year history.

From page 9, ARMY AVIATION Magazine, Vol. 4, No. 1, Westport, Connecticut, January 1956

Design becomes reality as a flight demonstration in Philadelphia and the unveiling of a mock-up model in Fort Worth join together in two . . .

Widespread Debuts



FORT WORTH, TEX.—Tomorrow's helicopter is on display today at Bell Aircraft Corporation's plant here.

Identified as the Bell XH-40, winner of the Army's utility helicopter design competition, the single-rotor, turbine-powered craft is capable of matching the climbing performance of WW II fighters and the speed of many of today's light airplanes.

A detailed, full-scale mock-up model of the radically different military helicopter was unveiled late in November, more than three months ahead of schedule, to a 7-man Mock-up Inspection Board and some 70 AF, Army, Navy, civilian advisors and observers. Called the only new helicopter on the horizon by Bell Aircraft officials, the 6-place, closed-cabin XH-40 incorporates many revolutionary features successfully combined with time-tested systems.

Designed for frontline service, the new Bell helicopter is of low silhouette, compact configuration, exceeds the load-carrying abilities of current light cargo helicopters of equivalent performance, and has all major components arranged for easy replacement and repair in the field without special tools.

The first helicopter to provide in-flight blade tracking, the XH-40 features all-metal rotor blades, a new rotor hub design and the incorporation of a free-wheeling turbine engine resulting in significant savings in weight, wear and maintenance time. Bell engineers predict that the XH-40 will be the first helicopter to have a 1,000-hour flight period between overhauls, compared to the present-day major overhaul period of 600 hrs available only with the Bell H-13.

Other unique features designed into the helicopter include permanent work platforms and hoist mountings, built-in hub wrench, and simplified structural breakdown for quick and easy field maintenance and repair.

PHILADELPHIA INTERNATIONAL AIRPORT—The world's largest turbine-powered helicopter—the 40-passenger YH-16A "Turbo Transporter"—was flown here in early December in the first public demonstration of the huge craft.

Designed and built by Piasecki Helicopter Corporation for the U.S. Air Force's ARDC, the YH-16A is powered by two YT-38 shaft turbines—gas turbines whose power is harnessed to turn the Turbo Transporter's two giant rotors, rather than to provide thrust. Allison Division of General Motors is the designer and builder of the turbine engines.

The YH-16A, which weighs over 16 tons, has a top speed of approximately 150 mph. Its fuselage, which is 77½ ft. long, is large enough to accommodate three jeeps. Each of the 3-blade tandem rotors of the Turbo Transporter measures 82 ft. in diameter.

Similar in size and external appearance to its sister helicopter, the piston-engined YH-16 which flew two years ago, the new YH-16A is faster, can carry greater loads, is easier to fly and maintain, needs no warm-up and provides greater comfort for passengers and crew—all as a result of the use of gas turbine powerplants.

During recent flight tests, the aircraft demonstrated its ability to fly and maintain altitude with normal loads with one of its two engines purposely shut off.

Like its piston-engined predecessor, the YH-16A was built by Piasecki as part of a heavy cargo program designed to answer a military requirement for a 5-7 ton capacity cargo or troop-carrying helicopter. Data gathered from ground and flight tests of the new YH-16A are being used in building a third transport helicopter of even greater payload and a higher speed. Designed to carry 69 troops, the YH-16B is expected to be the production version of the Turbo Transporter.

Thank You to Our Scholarship Fund Donors



AAAA recognizes the generosity of the following individuals, chapters and organizations that have donated to the Scholarship Foundation, Inc. from May 2022 through May 2023. The list includes donations received for all scholarships, as well as the General Fund which provides funding to enable the chapter, corporate, heritage and individual matching fund programs as well as national grants. Every penny donated to the Scholarship Foundation goes directly towards scholarships as a result of the Army Aviation Association of America subsidizing all administrative costs (minus investment brokerage fees).

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AAAA Chapter Affairs By LTC (Ret.) Jan Drabczuk

I appreciate the support from Robert M. Puglisi, Treasurer; Chris Wanitshka, Senior VP; and Mike Younce, President, for authoring and sharing the Central Florida Chapter information.

The Central Florida Chapter



Despite the lack of an Army installation or Aviation Unit within 75 miles of Orlando, the Central Florida Chapter was established in 1985 and has grown to over 600 members by maintaining a focus on supporting the Aviation Soldier and family, as well as the extended Army community.

Their base of members consists of active duty, retired military, government employees and contractors that create a unique “Joint” Chapter with members from the Army, Navy, Air Force and Marine Corps as well as the large simulation and training industry contractor base in the Central Florida area. The Central Florida Chapter boasts one of the longest continuous numbers of monthly meetings, and in June 2023 they conducted their 352nd consecutive Monthly Social!

Activities

In addition to the monthly executive committee meetings, the Chapter also hosts networking “Socials” to provide an informal forum for industry, academia, and the Joint military community. Each month’s Social is sponsored by a local industry partner, and the money raised helps to fund their robust Scholarship program. There are even special nights throughout the year dedicated to Membership Night, Veterans Day, and the Holiday Toys for Tots drive.

Moreover, the Chapter introduced the 1st Annual Car Show at Gateway Auto in February 2023, a family-friendly and free event for all car enthusiasts. It served as a fantastic oppor-

tunity for members and their families to showcase their vehicles and foster a stronger sense of community.

The Chapter’s annual Scholarship Golf Tournament raises a significant portion of the \$38,000 in scholarships that the Chapter offers to qualified families of Chapter members. To date the Central Florida Chapter has given out over \$350,000 in scholarships to 127 students! The tournament is held as an associate event in support of the Joint services Training and Simulation Industry Symposium (TSIS) and the AUSA Sunshine Chapter’s Army Birthday Ball.

One of the activities that the Chapter is most proud of is their annual tradition of purchasing Thanksgiving and Christmas food baskets for Army Aviation families who have a loved one deployed or have a financial need. Over the past 25 years, the Chapter has purchased and delivered over 800 food baskets to our Army families! Partnerships with local businesses like Publix are key to enabling the Central Florida Chapter to continue their support for the Army Aviation and the community in Central Florida!

The Chapter’s holiday support doesn’t

The Chapter has contributed over \$100,000 in toys to the USMC Toys for Tots annual campaign.

end with food baskets – they also promote the USMC Toys for Tots Campaign at their December Social, which has become one of their most well-attended events of the year. The Chapter has contributed over \$100,000 in toys for the campaign, and each year they fill a 5-ton truck to the roof with contributions from the Chapter and the Social attendees!

The Chapter also helps to mentor future Army Aviators, and in 2023 in conjunction with AAAA National they provided funding to two cadets from the University of Central Florida ROTC unit selected for the Aviation Branch for them to attend the AAAA National Summit.

Chapter Officers include Michael G. Younce, President; Christopher Wanitshka, Senior VP; Robert M. Puglisi, Treasurer; Steve Grady, Secretary; John Ferrell, VP Membership; Daniel Gallagher, VP Scholarships & Awards; and Sean Osmond, VP Publicity.

The Central Florida Chapter supports the four pillars of AAAA, and their strong base of industry sponsors and membership base makes that happen. It is a great Chapter with a strong history of programs and community support.

Feel free to contact me if you need help for your Chapter.

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

ORDER OF ST. MICHAEL INDUCTEES

Aviation Center Chapter



CHAPTER PHOTO BY SWAN BAKER

SFC (Ret.) Shane M. Pomeranke is inducted into the Bronze Honorable Order of St. Michael by LTC Greg Sterley during the 110th Aviation Brigade Farewell on May 31, 2023 at Fort Novosel, AL. Pomeranke was recognized for his more than two decades of service and contributions to Army Aviation and its Soldiers culminating as the Brigade Sexual Harassment/Assault Response and Prevention (SHARP) NCOIC.



CHAPTER PHOTO BY SWAN BAKER

Mrs. Jessica L. Sterley is inducted into the Honorable Order of Our Lady of Loreto with her husband, LTC Greg Sterley (right), at her side by COL Michael Johnson, commander, 110th Aviation Brigade. Sterley was recognized for over a decade of support to the Aviation branch, its units and her family while assigned to Fort Novosel. The Sterley family will move to Fort Campbell, KY where LTC Sterley will assume battalion command at the 101st Combat Aviation Brigade.

Iron Mike Chapter



CHAPTER PHOTO BY LTC JR. JERRY VAN CIEGER

Chapter president, COL Bryan Morgan, inducts **CSM Robert B. Armstrong III** into

the Silver Honorable Order of St. Michael on June 2, 2023 at Fort Liberty, NC. Armstrong was recognized for his 25 years of Army Aviation service as he finished his final assignment in the Army as the 6th Command Sergeant Major of the U.S. Army Special Operations Aviation Command (Airborne).

AAAA Salutes the Following Departed...

COL James M. Bledsoe, Ret.
Deceased May 27, 2023

Keystone Chapter



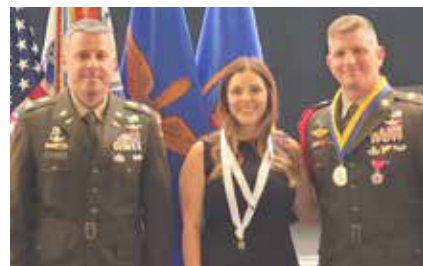
The 28th Expeditionary Combat Aviation Brigade and Eastern Army National Guard Aviation Training Site conducted their combined 62nd Annual Aviation Dining Out at the Hershey Lodge in Hershey, PA during the combined 28th ECAB and EAATS Dining Out on 25 March 2023. During the event, 10 individuals were inducted into the Bronze Honorable Order of St. Michael by then AAAA National Senior Vice President, MG (Ret.) Walt Davis and chapter president, LTC Greg Gobel. Pictured (left to right) are: MG (Ret.) Davis, LTC Gobel and inductees: **MAJ Justin Shedron, CW4 Brian Harmes, CW4 Bryan Young, CW4 Douglas Kephart, CW4 Greg Gallerizzo, CW4 Lee Jones, MSG Scott Davis, SFC (Ret.) Bryan Berlew, and SSG (Ret.) Michael Sweigart.**

Tennessee Valley Chapter



CHAPTER PHOTO BY RICHARD C. BRADEN

Mr. Keith R. Darrow is inducted into the Gold Honorable Order of St. Michael with his wife, Sheryl, at his side, by AAAA National Secretary and former Army Airworthiness Authority, MG (Ret.) K. Todd Royar, during a town hall meeting at Redstone Arsenal, AL on May 25, 2023. Darrow was recognized for his distinguished service as the delegated airworthiness authority for the large majority of Army aircraft. Pictured (left to right) are Dr. James Kirsch, Director, Software, Simulation, Systems Engineering and Integration (S3) Directorate, DEVCOM AvMC; Sheryl Darrow; Keith Darrow; MG (Ret.) Royar; MG Robert Barrie, PEO Aviation; and MG Thomas O'Connor, AMCOM commanding general.



A. Nichols, USAACE G1 Sergeant Major, into the Silver Honorable Order of Saint Michael for his 22 years of contributions to the branch and **Mrs. Megan L. Nichols** into the Honorable Order of Our Lady Loreto for her decades of support. The Nichols family will remain and continue to serve in the Wiregrass community.



CHAPTER PHOTO BY ELIZABETH GRAHAM

LTC Travis W. Blaschke is inducted into the Bronze Honorable Order of St. Michael
Continued on page 59



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AAAA Membership Update By CW4 (Ret.) Becki Chambers

During Summit, I spent time talking with Sam Baker, the 2022 DAC of the Year. He shared with me that his grandson, CPL Quentin N. Carr, would be joining him at Summit. We came up with the idea of Quentin writing an article for the magazine sharing his Summit experience.

The 2023 AAAA Summit as seen by an Enlisted Soldier

By CPL Quentin Carr

I had been looking forward to attending the AAAA Summit in Nashville for weeks.

As a junior Aviation Soldier in the United States Army, this was a rare opportunity to gather with other Aviation professionals, share insights, and witness my dad have the honor to be recognized as the Joseph P. Cribbins Department of Army Civilian (DAC) of the year.

As I walked into the 2023 Army Aviation Association of America (AAAA) Mission Solutions Summit at the Opryland Resort and Hotel, I was immediately struck by the energy. The hotel was packed, professionals from all over the world come together to see the newest trends, technology, and network. The plethora of exhibits from industry and upgrade of systems were phenomenal to see. Having the opportunity to network with these professionals created a new path for me in my career in Army Aviation. This venue is the perfect place for young Soldiers to come, meet, and speak with those currently serving, and others who have laid the bedrock for our branch. It was inspiring to see some of the branch's Founding Fathers.

Despite my age and the rank, camaraderie and sense of belonging that existed between almost every member of the conference made everyone approachable to me. This was a first for me, because the opportunity to speak and share ideas across rank and position with other members while serving is not always easy. The interaction between industry professionals, Civilians, Soldiers and Officers was something I will carry with me moving forward in my career. Everyone present shared a deep passion for Army Aviation and the commitment to serving our country. The ability to share our common voice together made me feel extremely supported by all the members present. It left me with a powerful message to carry forward when returning to my unit.

During my time at the Summit, I had the opportunity to meet and reconnect with friends of my dad. Some of them



CPL Carr with his grandfather, 2022 AAAA DAC of the Year, Sam Baker.

used to watch me run around as a young Army brat. I was very humbled to get the opportunity to speak to the group of courageous Vietnam Veterans who served in the same unit that I am currently serving at Fort Cavazos, TX. I couldn't help feeling a sense of pride and admiration for the Veterans and individuals who were inducted into the Aviation Hall of Fame and was amazed by their commitment to excellence.

Leaving the Summit, I felt a renewed sense of purpose and dedication in my military service. My dedication to our Aviation branch now knowing that I am a part of AAAA would build me to become a better Soldier. I am now able to be a more effective Aviation professional, better leader, and a stronger asset to my unit.

In conclusion, attending an Army Aviation Association of America Summit can be an incredibly inspiring and rewarding experience for young Soldiers. The cutting-edge technology, world-class exhibits, camaraderie, and sense of community. There was something truly magnificent about this gathering of Aviation Professionals. Whether you're a General Officer or a brand-new Private attending after Advanced Individual Training, being a part of AAAA is a fantastic opportunity to learn and grow as an Aviation professional. Everyone should strive to connect with others who share their passion for this amazing branch of Aviation, the AAAA Mission Solutions Summit is that event!

CPL Quentin N. Carr is a 15T, UH-60L Crew Chief, assigned to the Vultures, A/2-227th General Support Aviation Battalion, 1st Cavalry Division, Fort Cavazos, Texas and is a member of the Phantom Corps Chapter.



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 Mrs. Shaniel Meredith-Gelin
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Arizona Chapter
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 CW4 Ronald Serafinowicz
 PV2 Joshua James Telich
Aviation Center Chapter
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 WO1 Stephen M. Ashton
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 2LT Zachary T. Branner
 WO1 Ryan A. Bucher
 2LT Andrew Calegrave
 2LT Erin R. Carey
 WO1 Francisco M. Castillo
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 2LT Hayden G. Moelter
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 2LT Daniel B. Page
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 WO1 Andrew L. Perry
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 WO1 Isaias Rivas
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 LTC Friedrich Stern
 WO1 Armando B. Torres
 MAJ L.D. Walker
 Mrs. Rose Weast



AAAA Family Forum By Judy Konitzer

I am appreciative of Kelly Clark, M.Ed., MRT for taking time to collaborate on this article.

Navigating Ambiguity

By Judy Konitzer and Kelly Clark

AAAA's Spouse Professional Session "Navigating Ambiguity" in Nashville this year by Kelly Clark piqued my interest, and I was not disappointed.

Kelly began by asking some questions of the audience: Have you had to create new connections in new locations? Have you ever felt overwhelmed by a situation or series of events? Does turning the radio down help you find your destination etc. For me, Yes on all counts!

Kelly shared that her work with families, schools, and organizations was often working through ambiguous situations. "Ambiguity is something we constantly face in our military connected lives – yet we often just muddle our way through or have a tough time explaining 'how' to others." Kelly explained that her goal has always been "to equip people with the skills and strategies to reach their goals and desired outcomes with efficiency, clear communication, and energy left to keep moving forward."

Kelly described ambiguity as "a perception that is defined by our experiences, our knowledge, our values, and beliefs." Ambiguity can be especially troublesome because when we are facing a new or challenging situation our brains can interpret missing information or lack of clarity as a possible threat. This is our brain's way of protecting us – and is part of the human experience. We can help ourselves by being mindful of how we interpret and process the information we receive by identifying the type of ambiguity and then applying some strategies for moving through it.

Identifying the type of ambiguity is the first step in successful navigation:

Novel: We are usually intrigued and do



Spouses gather for a Professional Spouse Session with Kelly Clark (right of podium) at the Army Aviation Mission Solutions 2023 Summit in Nashville, TN.

not feel threatened. Examples can be reading a good mystery, a cliffhanger, a dramatic show, or story, meeting new people, or figuring out a puzzle when we have the pieces to solve it.

Complex: These are layered challenges with multiple step processes and more than one route to a solution or desired end state. They require time and outside support or resources. Complex situations may also take multiple steps to make progress, then re-evaluation, before making more progress. A prime example is a PCS move with many steps and having to wait for answers to move forward.

Insoluble: Here there is no defined solution or path and multiple start and end points. Huge transitions feel this way – when there is so much changing daily and no end in sight. During the pandemic there was constant new information, and no "solution" just ways to move forward with caution. We're also human, and sometimes we tend to just overthink issues when there are lots of good options.

By working through ambiguous situations, we can work toward a desired outcome, hone our skills, and build our tolerance to ambiguity in the process. Navigating ambiguity is not a series of steps that guarantee success but approaches that allow us to think more clearly and effectively.

Some strategies to navigate life more effectively and efficiently include:

Curiosity: Name how you feel and give yourself space to really dig into

what is going on in your mind.

Cognitive Flexibility: If what you are doing is not working, ask yourself why? What is different about this situation that may require a novel approach?

Connections: What is like past experiences, and what former strategies could be useful? Who else has faced similar situations that you could reach out to as a resource?

Communication: Get the words out by voice memo, calling a friend, or drawing it on a whiteboard. Share your plan with others and realize that ambiguous situations require a few looks to get filtered down to a workable problem statement.

Commitment: Don't let it take over your life – commit to a certain time (e.g., 10 minutes), commit to stepping away (at a certain time), commit to going down one path (forward motion) until a new decision needs to be made or progress needs to be evaluated.

For more information: www.learningandcreating.com

Kelly Clark, M.Ed., MRT is the Curriculum Developer for the Army Strategic Education Program at the U.S. Army War College and resides in Carlisle, PA with her husband and two daughters. She is the founder of the web-based Learning and Creating.com where she shares her resilience strategies curriculum.

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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Madison Clapp
Leigh-anna N. Hash
Tennessee Valley Chapter
Sara Blaschke
Megan Salem

OSMs *Continued from page 55*

and **Mrs. Sara Blaschke** is inducted into the Honorable Order of Our Lady of Loreto by chapter president, Mr. Gary Nenninger during a June 1, 2023 ceremony at The Overlook, Redstone Arsenal, AL. The Blaschkas were recognized for his exceptional 20 year Army career as a combat-tested aviator in tactical and operational-level aviation units and as an acquisition officer with numerous successes, and Mrs. Blaschke for her unfailing support to him and their units. Helping the Blaschkas celebrate is their son, Ryan.



CHAPTER PHOTO BY MRS. BRENDA TIMMICK

MAJ Jeffrey R. Timmick is inducted into the Bronze Honorable Order of St. Michael by Dr. Carlos Correia, Product Manager Air Warrior, and CW3 (Ret.) Robert Seybold, DPM, AW, on May 12, 2023 in Huntsville, AL. Timmick was recognized for his contributions to Army Aviation while serving as the Assistant Product Manager, Air Soldier Systems on the occasion of his change of duty to Washington, DC as a Department of the Army System Coordinator.



CHAPTER PHOTO BY MR. DAVID S. SIMAN

Mrs. Kathy E. Willerton is inducted into the Bronze Honorable Order of St. Michael by COL Calvin Lane, Project Manager, Utility Helicopters and MSG (Ret.) Charles Strowbridge, UHPO Logistics Division Chief on May 23, 2023 at Redstone Arsenal, AL. Willerton was recognized for her significant and lasting contributions to Army Aviation, working critical Army Aviation issues for the past 35 years, currently as the Chief of Readiness & Fleet Management and her contributions to the chapter Board.

Continued on page 61

Industry News *Announcements Related to Army Aviation Matters*

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

Army Eliminates AeroVironment from FTUAS Competition



AeroVironment has been eliminated from the Army's competition to provide the next increment of the Future Tactical Uncrewed Aircraft Systems. Meant to replace its Shadow UAS fleet, the Army awarded AeroVironment an \$8 million contract in 2022 to provide its Jump 20 system as an interim FTUAS capability for a single brigade. AeroVironment purchased Jump 20s developer, Arcturus, in 2021. An undisclosed number of Jump 20s have been provided through U.S. security assistance to Ukraine. The Army wants its FTUAS to be a vertical take-off and landing aircraft, so it can be runway independent, in addition to offering improved maneuverability and the capability to be controlled on the move.

Raytheon Rebrands as RTX



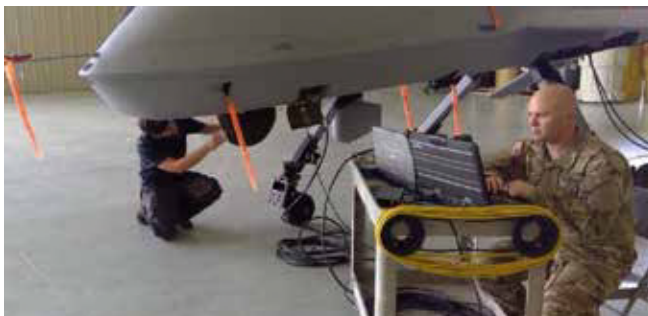
Raytheon Technologies shed its century-old name as the next step in an overhaul of its corporate strategy. The company unveiled its new three-letter name, RTX, in a LinkedIn post on Monday, June 19, 2023. The rebranding comes three years after Raytheon merged with aerospace manufacturer United Technologies Corp. to form Raytheon Technologies. Since then, the company's stock has traded under the RTX ticker symbol.

Sikorsky Celebrates 100th Anniversary



Sikorsky, a Lockheed Martin company, celebrated its 100th anniversary during the Paris Air Show at Le Bourget in June. Sikorsky has a history with the Paris Air Show. Fifty-six years ago, two Sikorsky HH-3E search and rescue helicopters, the first air-refuellable helicopters ever built, made the first non-stop helicopter flight across the Atlantic Ocean from New York, over London and finally to Le Bourget during the 27th Paris Air Show.

RTX Wins CSP v3 Contract



The U.S. Army selected RTX to provide advanced targeting sensors destined for installation aboard drones. The order for the Common Sensor Payload Version 3, or CSP v3, is worth as much as \$118 million and stems from a previous indefinite delivery, indefinite quantity contract, according to an announcement from the Program Executive Office for Intelligence, Electronic Warfare and Sensors. The sensor packages are typically fitted to the MQ-1C Gray Eagle uncrewed aircraft system and will have an improved camera with short-wave infrared capabilities and will also address hardware obsolescence in the current CSP Version 2 to ensure sustainment can continue well into the future.

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

Northrop Grumman, McLean, Virginia, was awarded a \$20,119,410 modification to contract W58RGZ-17-C-0014 for logistics support for the Special Electronic Mission Aircraft fleet; work will be performed in McLean, with an estimated completion date of Feb. 28, 2027.

The Nutmeg Companies Inc.,* Norwich, CT, was awarded a \$21,990,520 firm-fixed-price contract to construct an aircraft-support-equipment and vehicle-maintenance facility; work will be performed in East Granby, CT, with an estimated completion date of June 29, 2025.

Torch Technologies Inc., Huntsville, AL, was awarded a \$7,793,113 time-and-materials contract for technical services support for the Aviation Mission Systems and Architecture Project Management Office; work will be performed at Redstone Arsenal, AL, with an estimated completion date of May 23, 2028.

ADVERTISER INDEX

AREZIA.....	25	Phantom Products, Inc.	47
Army Aviation Museum		Pinnacle Solutions	13
Foundation	41	Rolls-Royce Defense	7
Bell	68	S.A.F.E. Structure Designs, LLC...	23
CAE	1	Science and Engineering Services,	
Coastal Seat Cushions, Inc.....	43	LLC.....	5
Dallas Avionics.....	11	Simulator Product Solutions.....	2
DigiFlight.....	17	SKEDCO, Inc.	31
Helibasket	37	True Blue Power.....	9
Hensoldt Inc.....	35	Tyonek	19
Parraid, LLC.....	27	Yulista Holdings, LLC.....	21

OSMs *Continued from page 59*

Washington Potomac Chapter



CHAPTER COURTESY PHOTO

COL Joseph W. Bishop is inducted into the Silver Honorable Order of St. Michael by Mr. Ron Lukow (right), AAAA Washington-Potomac Chapter President, and Mr. Steve Burns (left), Army National Guard Aviation and Safety Deputy Division Chief, on April 27th, 2023 during the Mission Solutions Summit in Nashville, TN. Bishop was recognized for having an immeasurable impact on Army Aviation, Soldiers and families during a variety of military assignments and most recently as the Chief, Army National Guard Aviation and Safety Division.



CHAPTER COURTESY PHOTO

BG David L. Hall is inducted into the Silver Honorable Order of St. Michael by (left to right) SGM Derrick Kuhns, Army National Guard (ARNG) Aviation, Intelligence, and Information Directorate SGM, Mr. Ron Lukow, AAAA Washington-Potomac Chapter President, and Mr. Steve Burns, ARNG Aviation and Safety Deputy Division Chief, on April 27th, 2023 during the AAAA Mission Solutions Summit in Nashville, TN. Hall was recognized for his 28 years of dedicated service to Army Aviation Soldiers and Families in a variety of command and staff positions, most recently as the Assistant Director, Army National Guard for Aviation, Intelligence, and Information.



CHAPTER COURTESY PHOTO

CSM Gregory A. Galassi is inducted into the Silver Honorable Order of St. Michael by COL

Brendan Cullinan (center right), commander of The U.S. Army Aviation Brigade (TAAB) and (from left to right); LTC David Crocker, AAAA Washington-Potomac Chapter Vice President for Operations and Commander of the United States Army Operational Support Airlift Activity (OSA-A); CW5 Scott Nalley, TAAB Command Chief Warrant Officer; LTC (Ret) James Boyd, TAAB Deputy Commander; and MAJ Wesley Emery, TAAB Executive Officer on May 18th, 2023 at Davison Army Airfield, Fort Belvoir, VA. Galassi was recognized for a 28 year-career of distinguished service and enduring impacts to the Army aviation branch, its Soldiers and their families culminating as the TAAB CSM.



MAJ David A. Witt is inducted into the Bronze Honorable Order of St. Michael by COL Brendan Cullinan (center right), commander of The U.S. Army Aviation Brigade (TAAB) and LTC David Crocker (center left), commander of the United States Army Operational Support Airlift Activity (OSA-A) on May 16th, 2023 at Fort Belvoir, VA. Witt was recognized for outstanding Army Aviation leadership and long lasting positive impacts on Soldiers and their families as the OSA-A Flight Detachment (OFD) Commander. His next assignment is at HQDA, G3 Training Division.



Want to change your AAAA Chapter Affiliation? No Problem!
Call 203-268-2450

AAAA Chapter News

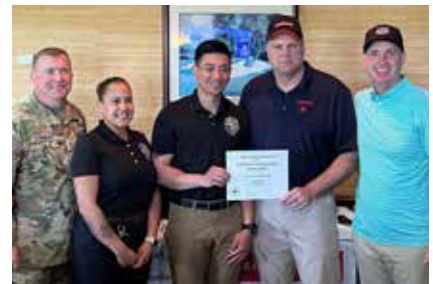
Washington Potomac Chapter Soldier/NCO of the Quarter

On May 5, 2023, during the chapter annual spring golf tournament at Woodlawn Golf Course, Ft. Belvoir, VA, four Soldiers were recognized as The Army Aviation Brigade Soldiers and NCOs of the first two quarters of the year, by chapter president, COL (Ret.) Ron Lukow and TAAB commander, COL Brendan Cullinan (right and far right, respectively in the photos).



ALL PHOTOS CHAPTER COURTESY PHOTO

Q1 Soldier - PFC Jacob Schonert, Fire Fighter, 911th Technical Rescue Engineer Company (TREC), 12th Aviation Battalion, TAAB. (l to r) CSM Alex Collins, 12th Avn Bn CSM; 1SG Joshua Williams, 911th TREC 1SG; PFC Schonert.



Q1 NCO - SGT John Macquiling, Flight Steward, U.S. Army Priority Air Transport (USAPAT) Battalion, TAAB. (l to r) CW5 Keith Scheurers, USAPAT S-1; SSG Patricia Aguilera, USAPAT Cabin Attendant; SGT Macquiling.



Q2 Soldier - PFC Ajay K. Daniel, Signal Operations Specialist, HHC, 12th Aviation Battalion, TAAB. (l to r) CSM Alex Collins, 12th Avn Bn CSM; PFC Daniel



Q2 NCO: SSG Raven A. Aguilar, Aviation Operations Specialist, USAPAT Battalion, TAAB. (l to r) CW5 Keith Scheurers, USAPAT S1; SSG Aguilar.



People On The Move



U.S. ARMY PHOTO

Aviation General Officer Promotions/Assignments

Ring Promoted and Assumes Command

MG James W. Ring took command of the Virginia National Guard as the Adjutant General of Virginia from MG Timothy P. Williams and was promoted to his current rank during a ceremony June 3, 2023, at the Virginia National Guard Sergeant Bob Slaughter Headquarters at Defense Supply Center, Richmond, Virginia. A Master Army Aviator, he has deployed to Iraq and Bosnia-Herzegovina, commanded 2-224th Aviation Regiment and served as the State Army Aviation Officer.

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 Novosel, AL.

36 Officers May 4, 2023 Class 23-013

- Commissioned Officers**
 2LT Burzinski, Anthony M. * -DG
 1LT Lumadue, Robert C. -HG
 1LT Price, Jeffrey S. -HG
 1LT Thomsen, Jackson H. -HG
 2LT Abella, Tristan Serv G. *
 1LT Arndt, Joseph A. *
 2LT Ayers, Wyatt J.
 1LT Bindon, David T. *
 2LT Garcia, Zena L. *
 2LT Gober, Benjamin W.
 2LT Hill, Robert W. *
 2LT Huerta, James M. *
 2LT Mujahid, Zaynab B.
 1LT Murphy, Johanna K.
 2LT Oakley, Veronica E. *
 2LT Ralston, Patrick I. *
 1LT Stice, Travis L.
 1LT Warner, Mitchell P.

- Warrant Officers**
 WO1 Hagans, Cameron W. * -DG
 WO1 Durand, Eli D. * -HG
 WO1 Milton, Matthew P. -HG
 WO1 Starr, Tyler D. * -HG
 WO1 Claassen, Samuel R.
 WO1 Ernst, Christopher M. *
 WO1 Guilford, Jacob A.
 WO1 Harrigan, Thomas L. *
 WO1 Hervey, Ethan T. *
 WO1 Kane, Michael S. *
 WO1 Porter, Haley M.
 WO1 Protheroe, Marc E.
 WO1 Santomango, Kenyon T.
 WO1 Scott, Drew C.
 WO1 Van Dyck, Landen M. *
 WO1 Vanover, Austin J. *
 WO1 Webb, William E. *
 WO1 Wilson, Joseph R. *

61 Officers May 18, 2023 Class 23-014

- Commissioned Officers**
 1LT Corkery, Nicholas J. * -DG



FSXXI Class 23-013

- 1LT Georgas, Henry B. -HG
 2LT Jorgensen, Edward D. -HG
 2LT Slade, Austin T. -HG
 2LT Adams, Carson F. *
 1LT Begin, Emma K. *
 1LT Berrios, Steven C. *
 CPT Blackwell, Chase R. *
 2LT Carroll, Brendan J. *
 2LT Dongilli, Vincent P.
 2LT Finley, Samuel S. *
 1LT Goldbach, Christian M.
 2LT Hartman, John S. *
 1LT Kleineschay, Trevor J. *
 1LT Kurbonov, Mirjavlon M. *
 1LT Livingston, Taylor D. *
 2LT Perry, Luke S. *
 1LT Quackenbush, Daniel L. *
 1LT Southard, Amanda C. *
 2LT Struhs, Jacob L. *
 2LT Wilson, Noah T. *

- Warrant Officers**
 WO1 Crawford, Justus A. * -DG
 WO1 Bradley, Joshua T. * -HG
 CW2 King, Kendal S. * -HG
 WO1 Mullane, Ian M. * -HG

- WO1 Whelen, Travis J. * -HG
 CW2 Aber, John A. *
 WO1 Bacon, Randy B.
 WO1 Bottinelli, Dylan P. *
 WO1 Chan, Benjamin M.
 WO1 Clark, Austin C.
 WO1 Conner, Christopher R. *
 WO1 Coury, Clay H. *
 WO1 Dickinson, Joseph M. *
 WO1 Ekkelboom, Dana C. *
 WO1 Elliott, Don A. *
 WO1 Ennis, Dillon G. *
 WO1 Gutierrezrojo, Daniel A. *
 WO1 Holverson, Mitchell A.
 WO1 Hood, Albert D.
 WO1 Iungerich, Corey R. *
 WO1 Kasperek, Zachary
 WO1 Kemp, Kyle W. *
 WO1 Kluver, Lauren G.
 WO1 Larson, Andrea L.
 WO1 Law, Cannon M.
 WO1 Lee, Juho
 WO1 Leon, Victor H.
 WO1 Malcolm, Gevanei D. *
 WO1 McClellan, Jack D. *

- WO1 Oliver, Jordan V.
 WO1 Pratt, Blake A.
 WO1 Rudiak, Matanel
 WO1 Smith, Kendall B. *
 WO1 Sullivan, Jesse R.
 WO1 Sullivan, Serena A.
 WO1 Vige, Hunter B. *
 WO1 Westfall, Taylor L. *
 WO1 Whalen, Andrew M.
 WO1 Wheatley, Martin S. *
 WO1 Willoughby, John D. *

55 Officers 1 June 2023 Class 23-015

- Commissioned Officers**
 1LT Granger, Benjamin E. -DG
 1LT Terry, Chandler A. -HG
 1LT Yang, Samuel -HG
 1LT Black, William M.
 CPT Guenther, Jackson B. *
 1LT Hanifin, Daniel B. *
 2LT Maas, Zachary M.
 1LT Marshall, Reed T.
 CPT Post, Austin M.
 1LT Probert, Brian E. *

People On The Move

2LT Sigala, Robert A. *
 1LT Simmons, Zachary A. *
 1LT Watson, Joseph C.

Warrant Officers

CW2 Shealy, Jonathan M. * -DG
 WO1 Brewer, Michael P. -HG
 CW2 Dilley, Adrian R. * -HG
 WO1 Engler, Matthew J. -HG
 CW2 Shoaf, Karen R. * -HG
 WO1 Akins, Taylor B. *
 WO1 Allen, Trevor M. *
 WO1 Black, Seth B.
 WO1 Bol, Caleb R.
 WO1 Connolly, Sean J.
 WO1 Denison, Jakeb S.
 WO1 Ducote, Blaine J.
 WO1 Egea, Oscar E. *
 WO1 Even, Harrison W. *
 WO1 Foster, Joel J.
 WO1 Greenhill, Terial T., Jr.
 WO1 Hall, Michael K., Jr. *
 WO1 Hindman, Tyler J. *
 WO1 Idriceanu, Andrei B.
 WO1 Ingram, Carson B. *
 WO1 Jones, Chase A. *
 WO1 Lhadon, Sonam *
 WO1 Lorimer, Aaron M. *
 WO1 McBride, Jesse J.
 WO1 McCarty, Dakota R.
 WO1 McCormack, Connor J.
 WO1 McDonald, Austin D. *
 WO1 McLaughlin, Mark S., Jr.
 WO1 Mees, Hunter J. *
 WO1 Mesiner, Phillip N. *
 WO1 Mitchell, Andrew P.
 WO1 Musci, Lawrence C.
 WO1 O'Neal-Kober, Ethan K.
 WO1 Osborne, Zachary M.
 WO1 Peterson, Stewart P. *
 WO1 Purcell, Ryan T.
 WO1 Rivera Pohl, Miguel R. *
 WO1 Smith, Brooke A. *
 WO1 Travers, Ryan L. *
 WO1 Uter, Ashary R.
 WO1 Wenzel, Justin M.
 WO1 Whitton, Tucker H. *

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



FSXXI Class 23-014



FSXXI Class 23-015

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. Novosel, AL.

AH-64 Attack Helicopter Repairer (15R)

Class 014-23

PV1 Kenneth Castillo * -DG
 SSG Fahad Maeedh F H Al Ahababi
 SGT Jassim Ahmed S A Al Mutawah
 SPC Koshish Kumar Arjal
 PV1 Douglas Michael Ballard
 PV1 Billy Eugene Harrison, Jr
 PV1 April Nicole Hecox
 SPC Shar Hel Htoo
 SPC Theresa Marie Merritt
 SPC Tyson Ira Redd

PFC Cameron Scott Smith
 SPC Jordan Lee Smith
Class 015-23
 PV1 Henry Llamas * -DG
 SPC Joshua Kenneth Bishop
 PV2 Benjamin Deacon Cooper
 PV1 Jakob Andrew Donaldson
 PV2 Connor James Howard
 SPC Zachary Allen Mangels
 PFC James Christopher McGovern
 PV1 Daniel Joseph Mendoza
 PFC Jonathan Ochoa
 PV1 Austin Dakota Rood
 PV1 Julian Anthony Samayoa
 PV1 Chance Aaron Weier
Class 016-23-No Honors
 SPC Gabriel Delaroca
 SPC Xavier Esteva
 SGT Michael Frutchey
 SPC Omar Martinezgallego, Jr
 SPC Jordan Masters
Class 018-23

PFC Daveyon N. Cowart * -DG
 PFC Seth Thomas Bearer
 SPC David Andrew Flores
 PV1 Yssabel Franz Carag Padua
 SPC Kevin Scott Stanford
Class 019-23
 PV2 Sebastian Dell St Clair * -DG
 SPC Sage J Beers
 SPC Christopher Daniel Cerny, Jr
 PFC Joshua Rey Cintron
 SPC Jianxiong He
 SPC Alex Matthew Tyler
 PFC Aaron Patrick Wells

CH-47 Medium Helicopter Repairer (15U)

Class 012-23
 PV2 Matthew Curtis Heinert * -DG
 PV2 Christian Astin
 PFC Gage Michael Bailey
 PV2 Donald Lane Bolt
 PFC Hunter Paul Finley

PV2 Ashton Caswell McKellips
 PV2 Jason Mendoza
 SSG Joshua Jonathan Munoz
 PFC Ethan Robert Nickel
 CPL Brendan Mercelis Parrish
 SPC Tremayne Perryman, Jr
 PFC Jacob Andrew Stewart
Class 013-23
 CPL Branden Dourgarian
 SPC Bryan Downing
 SPC Ezequiel Galvangoomez
 SPC Devin Kiehn
 SGT Tyler Kuschel
 PV2 Marcus Mitchell, Jr.
 SGT Dakota Neff
 SPC Samuel Ruhl
 PFC Adrienne Small
 SGT Bryan Wolf
Class 015-23
 PV2 Alec Dalantinow * -DG
 PFC Brian Angulovillanueva



People On The Move

AIT *Continued on page 64*
Graduations continued

SPC Carlos Bastida
PFC Douglas Davidson, Jr
PV2 Melvin Martinezrivera
PV2 Tyler Murphy
PV2 Samuel Sykes *
PFC Stirling Van Tuil
SPC Blake Visser
PV2 Jacob Watson

UH-60 Helicopter Repairer (15T) Class 034-23

SPC Casey Marie Parker * -DG
PV2 Daraly Estrada
PFC Randi Kaye Kaplan
SPC Desjardin Shawn Lima
PV2 Carlos Odis
PV2 Brennan Timothy Patterson
PV2 Tye Stone Richardson
SGT Victoria Rose Robinson
PV2 Austin Michael Sicard
PFC Samuel Walden Weick

Class 036-23

PFC Michael David Jarest * -DG
2LT Rokas Filipponis
PFC Dylan Steven Hardiman
PV2 Blaine Evan Harris
SPC Vladimir Martynov
PFC Medina Bryson Neff
PFC Austin James Norris
PFC Daniel Murray Recksiek
SGT Lukas Simkevicius
PFC Nathan Wade Sims

Class 037-23

PVT Tru Torre Tamez
PV2 Raphael Francis Weigang
SPC Broedy John Belgarde
SPC David Andrew Cypret
PFC Payton Reese Holcomb
SPC Steven Erik Jones
SPC Garrett Patrick Joyce
SPC Tyler Edward Patterson
PV2 Guillermo Raul Salasmezc
SPC Matthew Sher Sidhu
SPC Tyler Ayrton Stank

Class 039-23

SPC Mary Caroline R. Cahill * -DG
PV2 Jonathan William Bales
PVT Patrick Andrew Cordell
PV2 Hector Jamie Corral
PFC Wyatt J. Cupples Kirkendall
PFC Pierce Arthur Curry
PFC Ryan Patrick Donovan
PVT Ty Patrick Farmer
SPC Behnam Ghassemi
PVT Cielo Maria Gomez Avilaz
PFC Blanca Asusena Munozperez
PFC Alexia Marie Stone

Class 040-23

PV2 Joshua James Telich * -DG
PV2 Andrew David Jeffcoat
PFC Gerardo Miguel Luna, Jr
PV2 Giovanni Antonio Martinez
SGT Jorge David Mendozacuebas
PV2 Shane Michael Riscen
PV2 Taylor Jones Singer
PV2 Austin Merrick Thomas
PFC Raymundo Torres-Navarro

Class 041-23

PFC Caden David Flug * -DG
CPL Alex Antonio Alvarado *
PV2 Jacob Clayton Baker

PFC Joseph Gavin Danley
PFC Blake Malone Enfinger
SPC Inno Jardine R. Baylen Espende
PV2 Brandon Michael Faulk
SPC Dillon Taylor Funk
SGT Amanda Kaitlyn Green
PFC Chantz B. Husted
SPC Brian Russell Jones, Jr
PV2 Roderick Arnold Lehrke, III

Class 042-23

SPC Joshua Goodale * -DG
PV2 Christopher Logan Maher
PV2 David Juan Moraleschamorro
PV2 Michael Owen Orkowski
PFC Jeremy Matthew Phandenbecker
PFC Patrick Vincent Rigiero
PV2 Michael Justin Schober
PV2 James Enoch Smith
PV2 Edward Robert Watson
PFC James Logan Wellington
SGT Duane Kevin Woodward
PV2 Erik John Yeske

Aircraft Powerplant Repairer (15B)

Class 007-23

PFC Cassandra Alyssa Kuhrt * -DG
SPC Christopher M. Buckner
PFC Roshane Tevaun Cooper
PV2 Jose Pedro Gomez
SPC Jesse James Hardy
SGT Logan A. Horstman
SPC Nikita Maveyich Itin
PVT Adam Ibrahim Khalifah
PV2 Aleksander Edward Specht
2LT Nammom Yotying

Aircraft Powertrain Repairer (15D)

Class 003-23

PFC Grabiell Vazquez Sanchez * -DG
PFC Abiy Berhanu Alemu
PFC Jeremiah Logan Chipps
SGT Travis Lee Deyoung
PFC Dadien Christopher Dunigan
SFC Artan Fezaj
SSG Joshua Nathanael Fowler
SPC Patrick J. Francis
PV2 Riley John Valentine Hamer
SPC Kyaw Zaw Hein
PV2 Christian Julain Hinojos
PV2 Kolton James Junglas
SGM Mohammad Kh S Khaleefah
PV2 Daiphuc Nguyen

Aircraft Electrician (15F)

Class 006-23

PVT Preston Louis Ong * -DG
PFC Stephen Bailey Cooper
PV2 Kerron A. Edwards
PV2 Elijah Blythe Guillaume
PFC Payton Wayne Klinetobe
PV2 Troy Benjamin Knight
PV2 Andrey D Rojas
SPC Paul Russell Schaeffer

Aircraft Structural Repairer (15G)

Class 004-23

SPC Isai J. Hudy-Velasco * -DG
PV2 Jairo Bahe Narojas
PV2 Nathan Kimble Brown
PV2 Sergio Fernando Giraldo
PV2 Jamie C. Henderson
PV2 Jose Pablo Melendez, Jr
PV2 Joaquim Oliveira
PV2 Karsten Cooper Olson
PV2 Donta Shakur Simmons

Avionic Repairer (15N)

Class 003-23

SPC Miranda Grace Kelly * -DG
PV2 Faith Edwina Davis
PV2 Wyatt Michael Dunkle
PFC Jabreel Jejuan Jones
PV2 Karla Angelynn Miranda
PVT Therrell Dashun Phillips
PV2 Mary Elizabeth Pysh

Class 004-23

PV2 Thomas Aaron Stagliano * -DG
PV2 Coleton Chase Apodaca
PV2 Sakchi Mayben
PV2 Fabricio Saul Meza Pulcha
PV2 Evan Dean Podoll
PV2 William Herbert Bruke
PV2 Carlos Andres De La Mora
PV2 Emmanuel J. Munoz-Venegas

Class 005-23

SPC Christopher J. C. Babauta
PVT Jaydon Gabriel Chavez
SGT Tyler A. Jones
PV2 Kenneth Austin Vanderburg
PFC Jose Omar Colon Rivera

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

Class 005-23

PV2 Jacob Wyatt Hall
2LT Khalid Anwar A. A. Al Yafei
SPC Matthew Jacob Batson
PV2 Albert Mattiaant Carcaterra
PV1 Ethan James Christopher
PV2 Jonathan Armando Delapaz
SGT Warren Justin Hauser
PV2 Xavier David Shaw

Unmanned Aircraft Systems (UAS) Graduations

UAS REPAIRER

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

Shadow UAS Repairer Course

6 Graduates, 22 May 2023
PFC Levi Beiler -DG
SGT Gerald Gause
SPC Devin Michel
PFC Jovani Espindola

PV2 Joseph Suslik
PVT Randon Mild
7 Graduates 6 June 2023
SGT Dayne K. Mechsner -DG
SGT Michael Velez
SPC Jonathan Chestnut
SPC Grant Gray
SPC Heather A. Martinez
SPC Ezra M. Sosa
PFC Eren Altiner

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

8 graduates, 26 May 2023
PFC Adison South -DG
SGT Zachary Johnson
SPC Jonathan Hoenfeldt
SPC Jean Lain
SPC Jocelyn Ntakirutimana
PFC Jose Elias
PFC Lawrence Falcon
PV2 Ryan Curley
11 Graduates, 14 June 2023
SGT Ryan Thiebaud -DG
PFC John Charette
PFC Austin Hunt
PFC Jacky Tran
PFC Alliyah Williams
PV2 Alexander Llado
PVT Isaac Weede

Gray Eagle UAS Operator Course

5 Graduates, 6 June 2023
Class 23-004
SPC Joshua E. Castaneda -DG
PFC Jayme J. Schooler
PV2 Andon S. Blanchette
PV2 Fabian J. Rodriguez
PV2 Cole B. Crews
5 Graduates, 14 June 2023
Class 23-011
PV2 Benjamin M. Leeman -DG
SSG Adam Naddell
PFC Aaron D. Allen
PFC Derek S. Alsieux-Szabelak
PFC Brayden C. Cook

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

UPCOMING AAAA EVENTS

AUGUST 2023

1 Award Submission Deadline – Logistics Support Technician and Unit of the Year; Materiel Readiness Awards; Fixed Wing Unit of the Year; UAS Soldier, Technician and Unit of the Year
7-10 EANGUS 51st Annual Conference, Little Rock, AR
18-20 NGAUS 144th General Conference, Reno, NV

SEPTEMBER 2023

1 Award Submission Deadline – Air/Sea Rescue; ATC Controller, Maintenance Technician, Manager, Facility, and Unit of the Year; DUSTOFF Flight Medic, Medicine, and Trainer of the Year awards
12-13 Aircraft Survivability Equipment (ASE) Symposium, Huntsville, AL
22 National Aviation Hall of Fame Enshrinement, Washington, DC
28-29 Unmanned Aircraft Systems West, San Diego, CA



AAAA Legislative Report

By LTC (Ret.) Patrick "Josh" Baker

AAAA Representative to the Military Coalition (TMC)

josh.baker@quad-a.org

FARA Headwind?

If Authorization committee marks hold true as a prevailing wind for Aviation Programs-FARA is not looking good. Last month's article highlighted the House Armed Services Committee Tactical Air and Land Forces Subcommittee (HASC-TALF) Chairman's disdain over the lack of a bonafide Analysis of Alternatives (AoA) for FARA. In summary, during a special hearing on rotary wing Aviation the Chairman questioned how the Army is obligating over \$1 billion annually for FARA and have yet to deliver the AoA to the Hill. Pentagon insiders state the AoA should be complete later this calendar year. The HASC-TALF included a provision in its markup limiting the Secretary of the Army's travel to 70% of appropriated amounts until the Army delivers the FARA AoA to all four Defense Oversight Committees. This certainly sends a signal to the Army that there could be an escalation of oversight and restrictions levied on the Army on matters related to FARA. The HASC-TALF provision language is as follows:

SEC. 219 LIMITATION ON AVAILABILITY OF FUNDS PENDING DOCUMENTATION ON FUTURE ATTACK RECONNAISSANCE AIRCRAFT PROGRAM. Of the funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2024, and available for the Office of the Secretary of the Army for the travel of persons, not more than 70 percent may be obligated or expended until the date on which the Secretary submits to the congressional defense committees the analysis of alternatives document for the Future Attack Reconnaissance Aircraft program.

The question is if the HASC-TALF's take on the FARA program is a leading indicator for the remaining NDAA and Defense Appropriation Bill mark ups. The only additional data point is found in the HASC Full Chairman's Mark. FARA received a \$50 million funding reduction in "0603801A AVIATION—ADV DEV for excess to need." This cut is assumed to be linked to the delay of the Improved Turbine Engine (ITEP) although the Chairman's mark doesn't specifically cite that as the reason. The survival of the FARA FY24 budget request is to be determined as much more awaits throughout the mark up of NDAA and Defense

Appropriations bills. The HASC full committee markup is scheduled for 21 June 2023.

What About the Overall Aviation Budget?


If the HASC is a leading indicator on what will be authorized and appropriated, then it could be that Army Aviation will receive nearly the exact amount requested in the FY 24 President's Budget request. The HASC Chairman's mark is used as the baseline for the full committee mark up. The Aviation procurement accounts are at PB 24 requests with only Chinook and Blackhawk receiving adds. Research, Design, Test and Evaluation (RDT&E) programs were a net gain in the HASC Chairman's mark with the exception of FTUAS and FARA (previously highlighted). FTUAS received a \$29,047 million dollar reduction due to slow expenditure/disbursement rates. As a reminder, the Authorizations Committees (House and Senate Armed Services Committees) enact policy through the NDAA. The appropriations committees provide "real" program funding for execution via the Defense Appropriations Bill. The House Appropriations Committee for Defense (HAC-D) marked up their version of the bill but only provided the Army Aviation procurement top line funding amount of \$3,030,767,000. The Army top line RDT&E was provided at \$16,758,462,000. Funding tables were not provided, which allows for a better understanding of individual program allotments. Army Aviation Procurement and RDT&E dodged funding rescissions in the HAC-D mark. However, Missile Procurement Army, Other Procurement Army, and Army Working Capital Fund all received respectable funding rescissions from previous year's appropriations. The HASC and HAC-D budget positions still need to get through conference with the Senate defense committees. There are many more legislative hoops with input from numerous House Members and Senators as the bills move forward. The best hope is that Congress will follow through with regular order with the passage of the FY24 NDAA and Appropriations Bills by 1 September 2023. No doubt the DoD is exhausted with continuing resolutions.

A Budget in Decline and in Competition

The Army budget continues to decline year by year. Army Aviation's budget follows suit. This is not lost on Members. As a matter of fact, this is often noted by Chairmen and Ranking Members of Defense Committees during their opening comments for Hearings. Concern reverberates through the halls of the Capital about Russian aggression, the increased threat of China in the Indo-Pacific and the Army's dire need to modernize while sustaining the enduring fleet. The clear and present international threats recognized by Members must be balanced with the fiscal realities of the country. Defense spending is considered a "discretionary account" while social programs fall in to "mandatory spending" requirements for the country. Members must balance national security funding requirements against mandatory programs that have a real and immediate impact for constituents in districts and states. Members face an onslaught of tough decisions during deliberation of the FY24 defense bills.

ARMY AVIATION

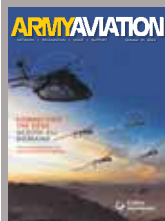
Upcoming Special Focus



2022 Blue Book Issue
ARMY AVIATION
42nd Technology:
Transforming Vertical Lift
Operations at the X

AUGUST/
SEPTEMBER

Blue Book Directory
AAAA Scholarship
Foundation Winners



ARMY AVIATION
October 2023

OCTOBER

Aviation Sustainment
Aviation Support
Aviation Soldier Support

Contact:
Bob Lachowski
Erika Burgess or
Carmen Touhy
AAAIndustry@quad-a.org
203.268.2450
ARMYAVIATIONmagazine.com

Art's Attic

By Mark Albertson



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



25 Years Ago July 31, 1998

Army Aviation: History at Wheeler Field, Hawaii*

"Located on the island of Oahu, Wheeler Field was named after Major Sheldon Harley Wheeler, a 1914 U.S. Military Academy graduate and World War I veteran who, in 1919, took command of Luke Field, on Pearl Harbor's

Ford Island. Wheeler and SGT Thomas Kelly were killed in a June 1921 landing accident at Luke Field and, on November 11, 1922, War Department General Orders No. 47 officially named a new airfield built on the site of the old Schofield Barracks cavalry drill field in Wheeler's Honor."

* See pages 21-23, "Army Aviation: History at Wheeler Field, Hawaii," by Captain Christopher Yuskaitis, Army Aviation, Vol. 47, No. 7, July 31, 1998.

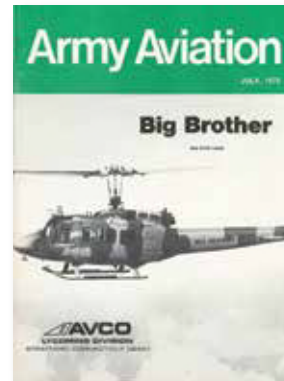


"Janey"

Connecticut-based military book publisher, Southfarm Press, is conducting a search for Piper Cubs named "Janey." This is part of a promotion for a forthcoming book, Janey: A Little Plane in a Big War. The author, Alfred W. Schultz piloted "Janey" in World War II. Schultz flew General George S. Patton, Jr. on battlefield observation flights and is credited with downing a Luftwaffe fighter. Owners of Piper Cubs sporting the name "Janey" are urged to contact the publisher, 800-260-7649, for inclusion of their aircraft in an advertising campaign and news releases boosting the forthcoming book.

Museum Foundation Donation

At the 1998 AAAA Convention in Charlotte, NC, Mr. Tom Walker of DynCorp, made a corporate donation of \$5,000 to the Army Aviation Museum Foundation. Flanking Mr. Walker are MG Daniel J. Petrosky (left) and MG Benjamin Harrison (Ret.) (right).



50 Years Ago July 1973

Humor from Art

For years, the husband had asked his wife for the "savings" every time she came home with a marked down new dress. "OK," he'd start, "You say you bought the dress on sale and saved \$30. Give me the \$30 you saved. The frustrated wife finally got even.

One night her husband came in the door completely out of breath, and she asked him what was wrong. "Nothing, honey," he said. "I just jogged all the way home behind the bus and saved 50 cents." "That was certainly foolish," she ridiculed. "Why didn't you run home behind a taxi and save five dollars?"

Air Mattress

Preparations for flight testing the Air Cushion Landing System are underway at Textron's Bell Aerospace Division, Buffalo, New York. Affixed to a Canadian CC-115 BUFFALO aircraft, the ACLS resembles an elongated elastic donut attached to the bottom of the aircraft.



Air escapes from the trunk through numerous small pores around the ground contact area; thus creating pressure which supports the load, and a layer of air lubrication that keeps the trunk clear.

Bird Dogs with Teeth

Showcased are O-1s with bite in Vietnam:

Under the Wing Bite: An old H-13 machine gun kit and 2.75" rocket-pods proved to be much trouble for "Charlie."



Utility Window: A pedestal mount, a used M122 cartridge catching bag, a tin can, and some stops so one doesn't shoot the wing or your pilot, and you've got yourself one hell of a utility window!



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 Novosel, Ala.

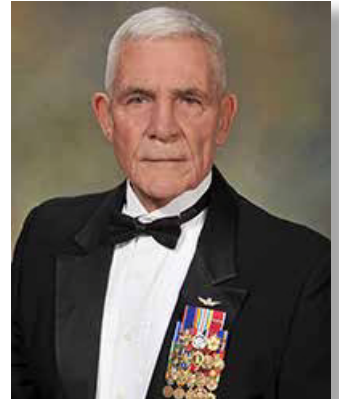
The deadline for nominations for the 2025 induction is June 1, 2024

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

Colonel Joseph W. Eszes, U.S. Army Retired

*Army Aviation Hall of Fame 2017 Induction
-Nashville, TN*



COL (Ret.) Joseph W. Eszes began his thirty-five year career in the Marine Corps, followed by service as an Army Warrant Officer and Regular Army Officer (commissioned in combat). Eszes commanded ground and Cavalry units at the platoon, battery, troop, squadron, and brigade levels.

His Army Aviation combat record is exceptional. He was nominated for the Medal of Honor for actions above and beyond the call of duty on December 9, 1971. The citation reads, in part, "Five times 1LT Eszes braved death in an attempt to rescue his fallen comrades." He was ultimately awarded the Distinguished Service Cross, the nation's second highest award for extraordinary heroism. His awards and decorations also include The Defense Superior Service Medal, four Legions of Merit, two Distinguished Flying Crosses; the Bronze Star, fifty-six Air Medals, four for valor; and two Purple Hearts. He is a Master Army Aviator with 3,100 hours, 1,671 hours in combat.

Under his command, the 6th Cavalry Brigade was twice awarded the Department of Defense Daedalian for distinguished aviation safety and he was inducted into the Silver Honorable Order of Saint Michael. He continues serving as the Secretary of the Army appointed Honorary Colonel, 16th Cavalry Regiment and is a frequent speaker at Fort Novosel (née Rucker), Alabama, where he teaches and mentors officers. Eszes is the first senior mentor for the Air Cavalry Leaders Course.



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