

ARMY AVIATION

NETWORK | RECOGNITION | VOICE | SUPPORT

December 31, 2019



UH-72A Lakota

**Versatile and Proven Capabilities.
Mission Ready.**

AIRBUS

SUPPORTING CUSTOMERS
WORLDWIDE WITH THE



HIGHEST
QUALITY
SOLUTIONS.



BOTTOM LINE, from prototype and fabrication through complex modification and integration, our men/women in uniform and foreign partners deserve the most technologically advanced solutions available. Science and Engineering Services, LLC (SES) has accepted the challenge of bringing these technologies directly to the warfighter on a variety of aviation platforms. Through advance R&D, prototyping, manufacturing, training, and total systems integration, our team has the knowledge and technical expertise to handle most any project delivering the highest quality products.





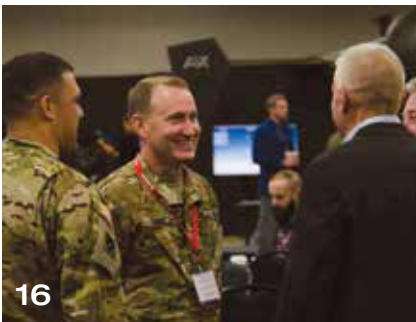
22



10



12



16



20

Contents

December 31, 2019, Vol. 68, No. 12

TO THE FIELD

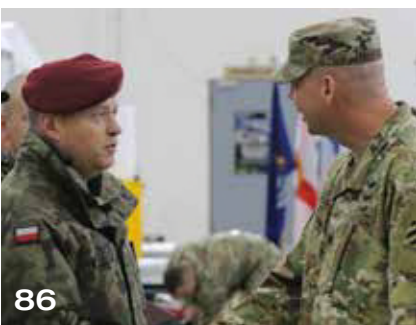
- 10 Army Aviation Branch Chief's Corner**
By MG David J. Francis
- 12 Chief Warrant Officer of the Branch Update**
By CW5 Jonathan Koziol
- 14 Sergeant Major of the Program Executive Office**
By SFC Eric K. Drabenstot
- 16 Program Executive Officer Aviation Update**
By MG Thomas H. Todd III
- 18 Reserve Component Aviation Update**
By COL Joseph Bishop
- 20 Combat Readiness Center Update**
By COL Jason L. Miller
- 22 128th Aviation Brigade Update**
By CPT Jacob D. Terlizzi
- 24 AMRDEC Tech Talk**
By Mr. Brad Mason
- 26 Ask the Flight Surgeon**
By MAJ (Dr.) Eric Abdul

SPECIAL FOCUS — Industry Support & Challenges

- 28 Army Aviation Modernization ... GE Aviation's Support for Building the Future**
By Bill Bohman, Tom Climer, and Jason Jundt
- 32 Private Sector SATCOM and Tactical Networking Advantages Key to Success of Army Aircraft Modernization Efforts**
By Ken Peterman
- 34 FlightSafety International's Flight School XXI UH-72A Lakota Simulation Program**
By Bert Sawyer

Contents

December 31, 2019, Vol. 68, No. 12



SPECIAL FOCUS — Industry Support & Challenges

- 36 Big Ass Fans Case Study – Creating A Comfortable, Energy Efficient Hangar**
By Alex Risen
- 40 The Avalex Cockpit Management Unit Family– Enabling Rapid Transition from Concepts to Doctrine Through Solutions that Synchronize Existing and Future Platforms**
By Daniel Eckiss

SPECIAL FOCUS - Industry Directory

- 44 2019 Industry Partners Directory**
ARMY AVIATION Magazine's original directory of current contact information for year round reference to the industry partners of the Army Aviation team.

SPECIAL FOCUS — Science & Technology

- 64 An Inflection Point for Army Aviation Science & Technology**
By Carvil E. T. Chalk
- 66 Airworthiness Readiness for Future Vertical Lift**
By Mr. Keith R. Darrow

SPECIAL FOCUS — Future Vertical Lift

- 68 Future Vertical Lift Cross Functional Team Update**
By LTC Matthew Kukla

FROM THE FIELD

- 70 AAAA Symposia In Huntsville**

DEPARTMENTS

	AAAA NEWS
AAAA President's Cockpit.....	8
AAAA VP Chapter Affairs.....	76
Chapter News.....	77
AAAA VP Membership.....	78
New Members.....	79
AAAA Family Forum.....	80
AAAA Legislative Report.....	85
AAAA Scholarship Foundation Donors.....	75
ARMY AVIATION COMMUNITY NEWS	
Advertisers Index.....	84
Art's Attic.....	89
Briefings.....	6
Calendar.....	55
Enlisted Aviation Soldier Spotlight.....	15
Fallen Heroes.....	83
Hall of Fame.....	90
Industry News.....	84
People on the Move.....	86

ARMY AVIATION is the official journal of the Army Aviation Association of America (AAAA). The views expressed in this publication are those of the individual authors, not the Department of Defense or its elements. The content does not necessarily reflect the official U.S. Army position nor the position of the AAAA or the staff of Army Aviation Publications, Inc., (AAP). Title Reg® in U.S. Patent office. Registration Number 1,533,053. SUBSCRIPTION DATA: ARMY AVIATION (ISSN 0004-248X) is published monthly, except May and September by AAP, 593 Main Street, Monroe, CT 06468-2806. Tel: (203) 268-2450, FAX: (203) 268-5870, E-Mail: aaaa@quad-a.org, Army Aviation Magazine E-Mail: magazine@quad-a.org, Website: <http://www.quad-a.org>. Subscription rates for non-AAAA members: \$30, one year; \$58, two years; add \$10 per year for foreign addresses other than military APOs. Single copy price: \$4.00. ADVERTISING: Display and classified advertising rates are listed in SRDS Business Publications, Classification 90. POSTMASTER: Periodicals postage paid at Monroe, CT and other offices. Send address changes to AAP, 593 Main Street, Monroe, CT 06468-2806.



GIVING THE ARMY AN EDGE

The U.S. Army seeks its next-generation aircraft and the AVX Aircraft and L3Harris compound, coaxial helicopter (CCH) answers all requirements with a mindset to exceed. Our cutting-edge technologies provide faster, lighter and more lethal capability.

Designed to defeat tomorrow's threats.

#FARACCH

Lethal. Survivable. Affordable.
AVXAIRCRAFT.COM



L3HARRIS™

Publisher / William R. Harris Jr.

Editor / CW4 (Ret.) Joseph L. Pisano Sr.
editor@quad-a.org

Associate Editor / CW5 Adam Jarvis
adam@quad-a.org

Director of Design & Production
Anne H. Ewing
magazine@quad-a.org

Web Edition / Trudy Hodenfield
trudy@quad-a.org

Contributing Editor / Mark Albertson
mark@quad-a.org

Family Forum Editor / Judy Konitzer
judy@quad-a.org

Advertising Director / Robert C. Lachowski
bob@quad-a.org

Advertising Manager / Erika Burgess
erika@quad-a.org

Marketing Director / Jennifer Chittum
jenn@quad-a.org

Social Media Manager / Chelsea Jarvis
chelsea@quad-a.org

Circulation Department
Deb Cavallaro
Debbie Coley
Elisabeth Mansson
Sue Stokes

Web Master / Mary Seymour
mary@quad-a.org

Editorial Address

593 Main Street, Monroe, CT 06468-2806
Tel: (203) 268-2450 / Fax: (203) 268-5870

Visit our website for additional
articles and updates.

ARMYAVIATIONmagazine.com

On The Cover

PAID ADVERTISEMENT: ON THE COVER: The versatile UH-72A Lakota pictured on the cover is used in support of U.S. efforts in securing the Southwest border. With more than nine configurations available, the UH-72A Lakota covers a broad spectrum of military missions. Fielded as a commercial off-the-shelf (COTS) asset, the Lakota includes the latest in modern technology and innovations and is one of DoD's only ACAT 1 programs delivered on-time, on-cost and on-quality since its inception. *Caption provided by the advertiser.*

SECDEF Appeals to Governors on Spouse Employment



DOO PHOTO BY LINDA FERRINARO

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

Battalion Commander Assessment Program (BCAP)



U.S. ARMY PHOTO BY RACHAEL DEHNA

Army Chief of Staff GEN James C. McConville called it a different way of picking leaders as the Army announced a new program for officers on the lieutenant colonel centralized selection list to attend a five-day assessment program at Fort Knox, KY in January. Those selected by the board process will attend the Battalion Commander Assessment Program (BCAP) where they will undergo a series of assessments aimed at determining their fitness for command and potential. In recent years, battalion commanders and officers

identified to fill critical billets on division-level staffs were selected by a board that met to review all eligible officers' personnel files, determine if they make the cut for battalion command, and produce an order of merit list of those selected. The BCAP consists of physical, cognitive, and non-cognitive assessments during which participants will test on written and verbal communication, interview with behavioral psychologists, and take part in a panel interview with senior Army officers. According to MG J.P. McGee, director of the Army Talent Management Task Force, two pilot BCAPs were run this past summer. McConville mentioned the Army will potentially expand the BCAP to sergeants major and brigade-level commands in the future, based on what the Army learns in January.

HSM Authorized for Recent Natural Disasters



IMAGE FROM WIKIPEDIA.ORG

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

Spouses/Vets – Census Bureau Temp Jobs Nationwide

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



CENSUS BUREAU PHOTO/MARRIWE LEE PHOTOGRAPHY

TO WIN THE FIGHT, YOU HAVE TO BE IN THE FIGHT.



Time and distance: every choice a battlefield commander makes must conform to these two variables. That's why our V-280 Valor is a revolution in warfighting. With more than twice the speed and range of current helicopter platforms, soldiers will have more options than ever to enter the fight on their own terms.

GO ABOVE AND BEYOND FLIGHT AT BELL.CO/V280VALOR

BELL V-280 VALOR |     



Army Aviation Moving Out!



API PHOTO BY CHELSEA JAMES

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

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

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

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

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

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

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

ley Chapter and our AAAA National staff: without Chapter President Garry Nenninger and teammate Jerry Davis, as well as Bill Harris and Janis Arena and staff, events like these could not happen.

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

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

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

Enabling the Extraordinary
To Fly To Power To Live

MEGGITT



EXTREME

Advanced thermal
management
for extreme military
environments

Around the globe, military and aerospace systems designers have turned to Meggitt to help them meet thermal and power management challenges with compact, lightweight, and efficient vapor cycle systems, liquid cooling systems and thermal components including fans, pumps and compressors.

Meggitt has developed cooling solutions for the most challenging flight conditions, missions, and extreme environments. From low supersonic flight, to high hot wet hover, to desert and arctic operations, our thermal management solutions are proven and ready to meet the challenge of the more electronic platform and battlefield.

For more information please contact:

Meggitt Defense Systems

9801 Muirlands Blvd.

Irvine, CA 92618

Tel: +1 949 465 7700

E-mail: gerry.janicki@meggitt.com

www.meggittdefense.com



Training to Fight in Large Scale Combat Operations

By MG David J. Francis



U.S. ARMY PHOTO BY 1LT ERIC JUNGELS

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

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

Flying and fighting rotary wing aircraft in any kind of combat is a complex endeavor, but the profile we fly in combat is always based on one thing:

the threats we face. The peer and near-peer threats we face today have had the time and luxury of watching us fight and have developed systems and tactics with the intent of countering the asymmetric advantage Army Aviation brings to the fight. It’s safe to say that in order to remain asymmetric, we have to adapt to future threat capabilities. A significant part of process entails regaining our ability to fly against high-end threat systems. To accomplish this, we have to return to a mode of flight that presents the enemy with the least likely probability of “seeing” us – terrain flight.

As we start to come back down from altitude to avoid the known threats, we need to focus on the known and sometimes forgotten threats that we encounter in terrain flight. Like everything else we do, the focus is all about the way we train. We know that in order to have the enemy

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

lose us in the clutter, we have to be in the clutter – both manmade and natural. This places considerable emphasis on terrain flight mission planning. And while the steps to this planning process are numerous, the three that jump out at me are the enemy, the terrain and the rehearsals.

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

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

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

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

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

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

Above the Best!

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



NOW HIRING Pilots & Aviation Maintenance Technicians



We value **YOUR military aviation skills.**

**Medevac • Tactical Operations • Standardization Officer
Safety Officer • Maintenance Test Pilot
Instructor • Aircraft Technician**

Bring your expertise to the civilian helicopter air ambulance industry - we'll guide you during your transition as we have done for many other veterans.

You'll enjoy a comprehensive, competitive compensation package, a positive culture and career advancement options.

ACCESS
VETERANS serving communities.
QUALITY
ADVANCED fleet equipment.
SAFETY

FAA-RECOGNIZED Safety Management System.

Discover your next career at lifeteam.net/career-center

**Visit us at the "Warriors To The Workforce" Career
Fair 15-16 April, 2019 at the
Army Aviation Mission Solutions Summit in Nashville.**





▶ Chief Warrant Officer of the Branch Update

Career Decisions

By CW5 Jonathan Koziol



U.S. ARMY PHOTO BY PEPERE-ETIENNE COURTELDE

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

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

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

To make a 20+ year career in the military, there are a lot of decisions and tradeoffs to best manage your career and family. Sometimes you can't get everything you want, and sacrifices will need to be made. Personal balance is even harder to manage with a growing family. Meaning, some Soldiers will decide a 20 year career will not work for them. Some of you may leave the service without ful-

ly knowing the pitfalls of transitioning to civilian life and what key benefits you had while on active duty.

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

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

Lastly, the new blended retirement option for our younger Soldiers. Viewing the Defense Finance and Accounting Services (DFAS) website and re-

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

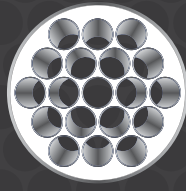
viewing the program is key. Being disciplined to take advantage of the Thrift Savings Plan (TSP) share matching early in your career will help with financial decisions in your future. For the pilots, investing your flight pay is a great way to help with future financial decisions. Investing early can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

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

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

Above the Best!

CW5 Jonathan P. Koziol is the chief warrant officer of the Aviation Branch with the U.S. Army Aviation Center of Excellence, Fort Rucker, AL.



ARNOLD DEFENSE

PROTECTING THE MODERN WARFIGHTER

THE LATEST GENERATION OF LIGHTWEIGHT, MULTI-MISSION, SMART ROCKET LAUNCHERS FOR LAND, SEA, AND AIR PLATFORMS



FLETCHER – LASER GUIDED
WEAPON SYSTEM

LWL12 – 12-ROUND
LIGHTWEIGHT LAUNCHER



Arnold Defense has delivered over 1 million 2.75"/70mm rocket launchers for both US and worldwide forces. Our innovation, integrity and dedication produce the world's finest rocket launchers. We are now proud partners of Team Apache.

ARNOLDDEFENSE.COM



▶ Sergeant Major of the Program Executive Office

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

Complex Terrain Airspace Control

Effective Airspace Management in a UAS Contested Environment

By SFC Eric K. Drabenstot

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

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

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

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

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

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

TAIS used data feeds by integrating Cursor on Target data on an unclassified network, and All-Purpose Structured Eu-



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

rocontrol Surveillance Information Exchange data on a classified network to create air tracks. The data was fused using a software program embedded in the TAIS software. Air tracks displayed on the TAIS Airspace Workstation (AWS) enabled air traffic controllers to provide timely input to battle captains within their respective command posts.

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

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

► Enlisted Aviation Soldier Spotlight

Each month we will feature a past AAAA National or Functional Enlisted or NCO Award winner as part of our ongoing recognition of the Best of the Best in our Aviation Branch. The CY2018 National winners were featured in the April/May AAAA Annual Summit issue.

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

SPC Luis D. Marino

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

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

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

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



APRILE PHOTO

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

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

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



**YOUR READINESS
IS OUR FIRST PRIORITY.**

BRINGING BEST-IN-CLASS AVIATION SERVICES TO THE MILITARY CUSTOMER

- Global aerospace maintenance, repair and overhaul support for aircraft, rotorcraft, engines & avionics
- Full engineering capability, including reliability-based and predictive maintenance


StandardAero

www.standardaero.com



PEO Aviation – One Final Challenge

By MG Thomas H. Todd III

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



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

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

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

My challenge to industry: Look at the Army Aviation fleet through a new lens. The military industrial base has its own perspectives and interests that are often limited to advancing a company's

proprietary solution. Instead, shift focus to the Soldier on the battlefield, and make every effort to avoid stovepipes that limit the capability of that Soldier or what we deliver in the future. This must be a team effort, and maintaining rigid proprietary practices impedes our progress. What we're working hard to do within the PEO, and what I'm asking industry to do, is to integrate horizontally and vertically. Our Soldiers, and their families expect and deserve our most integrated solutions.

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

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

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

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

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

“One Team”
T²

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



The **MD 530F**[®] Cayuse Warrior


An evolution of the fabled OH-6 Cayuse light observation helicopter, and widely recognized for speed, safety, agility and the ability to operate with ease in confined spaces and at high altitudes, the **MD 530F Cayuse Warrior** is adaptable to support both training and combat missions.

Delivering increased operational capabilities, greater mission versatility, and superior performance in the execution of a broad range of mission profiles, the **MD 530F Cayuse Warrior** offers a safe and efficient crew environment as well as mission training skills that will positively transfer to all other platforms.



MD HELICOPTERS[™]

MADE IN AMERICA

    | MDHELICOPTERS.COM



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

By COL Joseph Bishop

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

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

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

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

In the last ten years, the ARNG constructed ten new AASFs, built ten new



U.S. ARMY NATIONAL GUARD PHOTO

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

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

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

All AASFs earn a standardized FTS requirement to fulfill common facility functions to include the command element and embodies a wide range of skill sets drawn from Active Guard Reserve soldiers, Federal Military Technicians

and Title 5 federally funded National Guard Employees. The military technicians, as a condition of their civilian employment, maintain dual status as members of the ARNG and remain qualified in both their civilian and military position. The level of aviation specific FTS provides a capability for each AASF to train aircrew members, achieve Army regulated aircrew requirements and meet aircraft maintenance standards.

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

Army National Guard -- Warfighting-Capable, Governor-Responsive!

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

EARNING OUR WINGS



LOGISTICS > MODIFICATIONS
ISR > GLOBAL SUPPORT SERVICES
PROGRAM MANAGEMENT > MAINTENANCE



The wings don't come with the uniform at King Aerospace — our team members earn them. We do more than deliver responsive maintenance and aviation support services in some of the most demanding operational environments around the globe. Our team members possess a relentless commitment to our cornerstone principles, quality and our customers' missions. We treat our customers like family — the King family.

GET THE ROYAL TREATMENT > 972.441.2423 > KingAerospace.com



Low Altitude Training

By COL Jason L. Miller

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

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

R-COP

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



U.S. ARMY PHOTO BY SGT THOMAS CALVERT

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

Crew Coordination

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

Fly the Aircraft

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

Conclusion

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

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



PROTECT



CAFS
CONFORMAL AUXILIARY
FUEL SYSTEM

INSTALLATION OR
REMOVAL TIME



USABLE FUEL PER TANK



IAFTS
SINGLE INTERNAL AUXILIARY
FUEL SYSTEM
FOR **UH-60M**

INSTALLATION OR
REMOVAL TIME



USABLE FUEL PER TANK



For more than 40 years,
the U.S. Army has trusted Robertson for helicopter fuel
systems with uncompromising safety performance.
Robertson continues its long standing support and
history of *Extending The Reach Of Freedom.*

ROBERTSON
FUEL SYSTEMS
A HEICO COMPANY



Modern Instructional Technology Opportunities in Army Aviation Maintenance Training

By CPT Jacob D. Terlizzi

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

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

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

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

While the idea of virtualized maintenance training may be foreign or uncomfortable for some, it appears more natural to the current generation of Initial Entry Training (IET) Soldier. This is evident



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

by the popularity of the Virtual Interactive Environment (VIE) trainer amongst AIT Students, which is a basic-level virtual touch screen procedural trainer that allows students to manipulate the aircraft and components in order to walk through procedures outlined in their manuals.

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

In October 2019, the 128th Aviation Brigade hosted an initial planning conference to do just that and begin what is currently known as the Aviation VR/AR Maintenance Training Initiative. The meeting brought together Aviation Maintenance instructors, course man-

agers, training developers and systems integrators, and USAACE's Directorate of Simulation (DOS) to form the initial working group and kick start the effort.

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

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

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



WE CAN **DESIGN** IT.
WE CAN **BUILD** IT.
WE CAN **SUSTAIN** IT.

○ An Alaska Native Regional Corporation (ANC) 8(a) proudly supporting the US Army and our Allies.

Engineering & Manufacturing

Maintenance & Modifications

Logistics & Product Support

Training Systems

Base Operations

Committed to Quality: AS9100D | AS9110C | AS9017 | FAA Part 145

WWW.YULISTA.COM

Contracting for Aircraft Services under Experimental Certificate

By Mr. Brad Mason

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



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

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

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

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

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



DELIVERING READINESS

Providing innovative and cost-effective solutions for the Army's number one priority.


ARMY AVIATION READINESS TOOLS

- Aviation Field Maintenance – East (AFM II – East)
- Aviation Field Maintenance – West (AFM II – West)
- Army C-12 Transport Contractor Logistics Support
- Worldwide Logistics Support Services Contractor Logistics Support (WLSS-C)
- Responsive Strategic Sourcing for Services (RS3)

DynCorp
INTERNATIONAL

 @DynCorpIntl

dyn-intl.com


We Serve Today for a Better Tomorrow.™



Corneal Refractive Surgery for Applicants

By MAJ (Dr.) Eric Abdul

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

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

Surgical Options

LASIK, LASEK, and PRK are all types of corneal refractive surgery and can be approved for Aviation duty in the

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

Do Your Research

I encourage you to also discuss your case before surgery with an Army Flight Surgeon and/or an Optometrist with Army aeromedical experience. Your recruiter, ROTC or cadet command, or non-flight qualified military medical pro-

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

When To Act

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

Fly safe!

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

ArmyAviation

Full Lighting Lineup



PERSONAL LIGHTING

VEHICLE LIGHTING

EQUIPMENT LIGHTING

MOVEMENT LIGHTING

SPECIALTY LIGHTING

POLICE/SECURITY/
FIREFIGHTER LIGHTING

OFF-ROAD LIGHTING

For all of your lighting needs - We are always here.

Send your address to catalog2019@phantomlights.com and get your own.

#TEAMPHANTOM



Phantom Products, Inc.
474 Barnes Blvd., Rockledge, FL 32955
PH: (888) 533-4968
www.PhantomLights.com

©2019 - Phantom Products, Inc.
www.phantomlights.com



www.PhantomLights.com

Army Aviation Modernization ... GE Aviation's Support for Building the Future

By Bill Bohman, Tom Climer, and Jason Jundt



ALL GRAPHICS COURTESY GE

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

Building from an Extraordinary Base ... the legendary T700

Today's Black Hawk and Apache Warriors enjoy the full benefits of the clearly best in class T700 engine, the industry standard for reliability, fix-forward maintainability and low life cycle cost. The T700's unique, fully modular design is key to this success. Over 12,000 T700 engines are in service with over 30 countries today, easily the most prolific engine in its size class. With over 100 million flight hours, the T700 is a combat proven veteran fully trusted by those in harm's way.

Introducing the T901 ... a revolutionary step forward

Challenged by Iraq and Afghanistan's imposing operating environments, the Army needed dramatically improved

engine performance. GE's new T901 engine meets this challenge. It's the engine the Army needs to improve helicopter performance today and for next generation aircraft under development in the FVL program.

The T901 provides 50+% more power (3,100 shp); 25% better Specific Fuel Consumption; 20% longer engine life; is 50% more reliable than T700; and power for Future Vertical Lift Capability Sets 1 thru 3.

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



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

design and technologies, it significantly reduces overall Army program risk.

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

Benefits

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

For Pilots –

- Power to accomplish the mission, to include Hot & High (6K/95)
- Range/station time to reach objective/engage targets
- Safer operations - smaller avoid region
- Crisper engine transient response – better aircraft handling

For Maintainers –

- Fully modular like T700 – full fix forward capability
- Advanced Engine Health monitoring system – easier fault isolation
- 50% more reliable than T700
- fewer unscheduled removals



YOUR MISSIONS CAN CHANGE OVERNIGHT.

So Can Your “Utility” Helicopter.

Achieve Full ISR Capability in Less Than Two Hours* with the L3Harris MatriX™ Systems Kit.

UH-60 MATRIX ISR KIT INCLUDES:

- Choice of an MX™-Series turret configured for ISR operations
 - > Walk-on/walk-off mission console designed for the UH-60 platform
 - > Rapid integration and enhanced mission versatility heavily reduce financial investments, cost schedules and technical risks
- Flight-tested and proven on UH-60 Black Hawk helicopters, and fully transferable to other classes of helicopters

Look to the L3Harris MatriX ISR to take your UH-60 platform to the next level.

L3HARRIS.COM

* Timing on record for UH-60 helicopter transformation



L3HARRIS™
FAST. FORWARD.



SAVING LIVES SINCE 1981

**STILL OUR BEST SELLING PRODUCT
SKED® CONTINUES TO SAVE LIVES**



****EQUIPPED WITH
COBRA BUCKLES FOR
RAPID PATIENT PACKAGING**

**SKEDCO® PJ SKED
(SK-215C)**

**“LIGHTER
FASTER
EASIER TO CARRY”**



**UNIVERSAL LITTER
TIE-DOWN STRAPS™**

NSN: 6530-01-530-3860

PATIENT LITTER STRAPS

NSN: 6530-01-536-4145



**The only Litter Tie-Down Strap
with Airworthiness Release
(AWR 1330), 3000lb MBS.
Patient Litter Strap, 5000lb.**

**WWW.SKEDCO.COM
800-770-7533**



- fewer low power removals
- T700 field support equipment compatible with T901
- For Fleet Managers –
- Smaller logistics footprint, fewer spare engines
- Significant life cycle cost savings
- Ability to correlate issues, establish fleet patterns
- Ability to develop customized overhaul work scopes, speed depot overhauls at reduced costs

Designing the future requires a thorough understanding of the past. The T700's combat proven, fully modular single spool architecture was carried forward to the T901. This design avoids the complexity, reliability challenges, increased cost and weight penalties of a dual spool design while delivering the same or better performance. The T901's fully modular design supports Warfighter readiness through better reliability and the ability to fix the engine in austere forward areas. The last forty years of operational experience proves full modularity is the single best way to reduce engine shop visits and thus minimize lifecycle costs.

Future Vertical Lift ... powering the future

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

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

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

GE has two decades experience developing open standards systems. Our sys-

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

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

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

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

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

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

BUILDING THE

FUTURE

WITH

ARMY AVIATION

- 2019 Logistics Support Facility (LSFMA-V) Prime Contractor
- 2019 BAE Systems Small Business Supplier of the Year
- 2018 Lockheed/Sikorsky Elite Supplier
- 2017 Lockheed/Sikorsky Elite Supplier
- 2017 Lockheed/Sikorsky Supplier of the Year (Black Hawk)
- 2017 Lockheed Martin RMS Outstanding Small Business
- 2016 UTC/Sikorsky Supplier Gold
- 2015 UTC/Sikorsky Supplier Gold

BUILD THE FUTURE WITH US.
Visit www.Tyonek.com/careers

Tyonek is hard at work building the future. We added new facilities and faster precision machines to deliver more OEM-quality avionics, electronics, and mechanical components for aviation and ground systems. We expanded our hangars to meet the demands for maintenance and modification on Army, other DoD, and FMS aircraft. We designed and fielded new products to meet current needs and help defend against tomorrow's threats.

Tyonek is proud to help build the future with Army Aviation.





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

By Ken Peterman

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

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

To empower our military forces with cloud-enabled technologies, much like what AMCS will provide to aircraft, the U.S. Army must have access to the

latest advancements in satellite communications (SATCOM) and terrestrial networks. Of note, 81% of respondents to the same survey agree it's critical for U.S. military forces to have access to a modernized end-to-end satellite and terrestrial networks to make cloud-enabled technologies and the Internet of Battlefield Things a reality across the battlespace.

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



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

U.S. AIR FORCE PHOTO BY TSST GREGORY BROOK



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

Delivering Connectivity

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

can offer U.S. Army airborne platforms.

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

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

Tactical Datalink

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

In addition to the originally fielded capabilities of the STT, it is now capa-

ble of Concurrent Multiple Reception (CMR), in which a radio can demodulate and decrypt multiple messages from multiple users simultaneously. This has the effect of reducing message latency and increasing the overall throughput of the network, which can also greatly enhance the Army's tactical networking capabilities.

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



VIASAT PHOTO

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

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

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

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

By Bert Sawyer



ALL PHOTOS COURTESY FLIGHTSAFETY INTERNATIONAL



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

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

During the initial planning phases, it was determined the UH-72A simulators would require the capability of training all common core tasks in the

Top left: Simulator Cockpit View (Including Chin Display)

Top right: Simulator Cabin Area (Instructor Operator's Station)

Bottom: Victory Hall Bay Remote Operator's Station

current syllabus along with potential future training tasks. With this requirement the simulator must be capable of training to standard and without negative habit transfer, all primary tasks, all basic instrument tasks, all advanced instrument tasks, and all basic warfighting skills tasks to



Gray Eagle ER

THE MULTI-DOMAIN SOLUTION

Gray Eagle Extended Range provides the warfighter persistent and reliable mission support in Multi-Domain Operations. Providing over 40 hours of endurance with a modular architecture that integrates multiple advanced payloads for standoff in a contested environment. Gray Eagle Extended Range is a combat proven system that supports Army forces today and into the future.

ga-asi.com



Leading The Situational Awareness Revolution

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

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

Advanced Technology

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

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

The Operational Flight Trainers (OFT) feature a 6 degree of freedom electric motion system with a 60 inch stroke along with electric control loading for the flight controls. The flight crew station also provides for secondary motion cuing which replicates normal vibrations associated with the UH-72A helicopter flight. The Instrument Flight Trainers (IFT's) are pedestal mounted and provide both electric control loading

and a secondary motion cuing system. The IFTs fully replicate the OFTs including the visuals with the only exception being the full motion system, however the motion system can be fully integrated with the IFTs should future requirements dictate.

Enhanced Tactical Training

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

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

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

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

and proficiency to the student which significantly reduces time required for run-ups and shutdowns in the actual aircraft.

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

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

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

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



Deployed?

Or Know an Army Aviation Soldier who is?
Spread the Word!

You are eligible for a FREE
12 Month AAAA Membership.
Contact: Membership@quad-a.org



If you can't detect it you can't defeat it



Our solutions detect and defeat the threats that most systems miss. That's why you can trust in our expertise to protect pilots and their crews from what they can't see.



NORTH CAROLINA ARMY NATIONAL GUARD PHOTO

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

By Alex Risen



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

Dim Lights And Hot Summers

Here's the problem: what happens when you combine legendary Carolina summers, a heat island created by the airport's tarmac, and a hangar with no

air conditioning? A 25,000-sq-ft furnace. Small portable fans couldn't make a dent in the heat, and technicians often roasted as they worked, slowing them down and decreasing productivity — sweaty workers means dropped tools, impaired focus and potential water damage to sensitive electronic systems. The cavernous hangar was also poorly lit with inefficient metal-halide fixtures. The outdated halides produced dim light, had a lengthy warm-up period, and wasted energy compared to the latest LED technology. Technicians used task lights to supplement the fixtures, creating a cluttered mess of cords that presented a trip hazard. "I wanted to increase light levels and decrease energy

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

consumption," said Dobson. "Our goal is to convert entirely to LED lighting in the North Carolina National Guard".

Working With Big Ass Fans

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

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

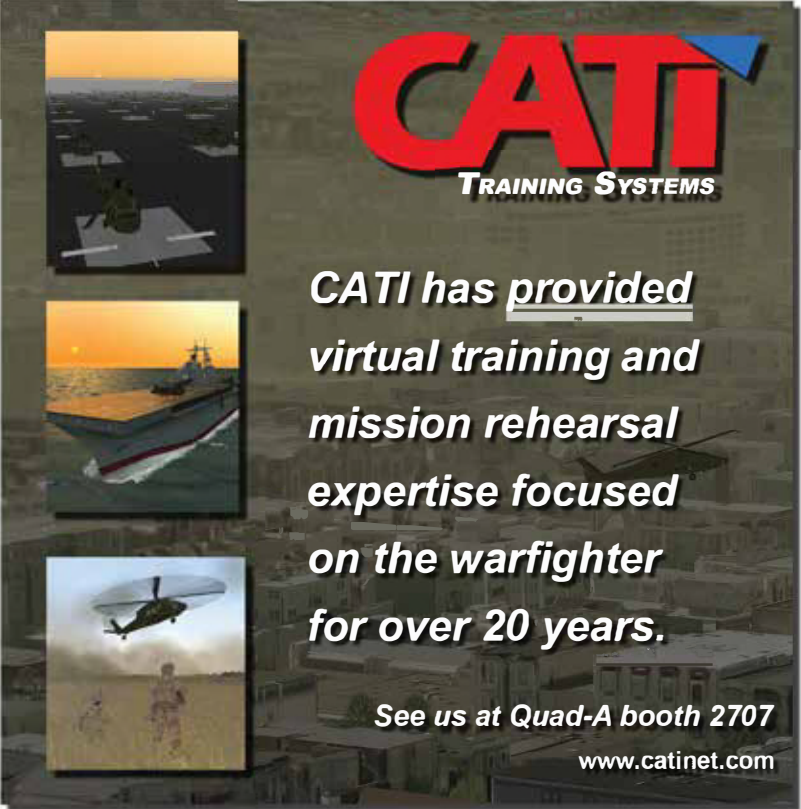
Top-To-Bottom Impact

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

Year-Round Improvements

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

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



CATI
TRAINING SYSTEMS

CATI has provided virtual training and mission rehearsal expertise focused on the warfighter for over 20 years.

See us at Quad-A booth 2707

www.catinet.com

**NEW AWR APPROVED
H-60M CUSHIONS**

FROM
OREGON
AERO



6A-0251-101 6A-0251-103 6A-0251-105

BACK CUSHIONS AVAILABLE WITH LUMBAR SUPPORT. WOOL/SHEEPSKIN COVERS OR FABRIC COVERS. SEAT CUSHIONS ARE AVAILABLE FOR OTHER MILITARY AIRCRAFT. VIEW OUR FULL RANGE OF U.S. ARMY AWR APPROVED PRODUCTS ON OUR WEBSITE.

COASTAL



SEAT CUSHIONS, INC.

THE EXCLUSIVE WORLDWIDE DISTRIBUTOR OF OREGON AERO SEAT CUSHION SYSTEMS FOR MILITARY FIXED WING AND ROTOR WING AIRCRAFT

(954) 980-6929 • FAX (772) 673-0200 • WWW.COASTALSEATCUSHIONS.COM • SALES@COASTALSEATCUSHIONS.COM

The Avalex Cockpit Management Unit Family

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

By Daniel Eckiss



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



and Avalex Technologies Corporation has stepped up with a well-received solution that assists the Army in addressing this challenge – the Avalex family of Cockpit Management Units.

Near Term and Future Synchronization

Current Army aviation platforms are projected to be in the fight for the next 20 years as future vertical lift is developed and tested. Therefore, MDO enabling solutions will first be fielded on UH-60s, CH-47s, AH-64s and other existing platforms. Avalex understands that an investment in technology should therefore fit both

the near-term upgrade path and have enough lifecycle and expandability to synchronize into future platforms. Our cockpit management unit (CMU) product family has been selected to solve cross-platform technology insertion problems well into the future.

Future Requirements, Simplified

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

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



CONNECT WITH CLARITY

Photo courtesy of DVIDS

SECURE DIGITAL INTERCOMMUNICATIONS (SDI)

Telephonics' SDI provides our global customers with a state-of-the-art, lightweight, low power and open architecture communications solution. SDI is fielded on more than 50 platforms/programs worldwide providing platform controllers of fixed- and rotary-wing aircraft and ground control shelters with battle-proven reliability, even in the most challenging of environments.

To learn more, visit our website www.telephonics.com.



**A MEMBERSHIP
FOR THOSE HONORED FEW**



**THE
DISTINGUISHED
FLYING CROSS
SOCIETY**

"...for heroism and extraordinary achievement while participating in aerial flight."

www.dfcsociety.org

and platform data sharing that enables new component integration in months or weeks versus years. The CMU model-based software and proven RTOS aligned with DO-178C provides assured access to mission critical components. Our full-featured CMU Software Developers' Kit (SDK) enables cooperative development with U.S. Army

software teams. New components can be added to a CMU software defined control head through field-installable software configurations. Last minute ground force, coalition and other mission requirements for additional gear can be accommodated as easily as downloading a new app on a smart phone.

Train Experts Faster

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

training demands especially benefits our Army aviators in the ARNG and USAR communities who are expected to maintain proficiency with 1/30th the time in the seat.

Maintaining the Momentum

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

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

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



MNG
Ministry of National Guard
Kingdom of Saudi Arabia

Vinnell Arabia

Visit Vinnell Arabia Booth #702 at the Army Aviation Mission Solutions Summit, April 22-24, 2020 in Nashville, TN

POSITIONS AVAILABLE IN SAUDI ARABIA FOR IMMEDIATE HIRE

<i>Aircraft Mechanics</i>	<i>Flight Operations</i>
<i>Air Traffic Control</i>	<i>Aviation Instructors</i>
<i>ARFF EMT - B</i>	<i>Aviation Instructor Pilots</i>
<i>Aviation Logistic</i>	<i>Maintenance Test Pilots</i>
<i>Aviation Production Control</i>	<i>Quality Control/</i>
<i>Base Operations</i>	<i>Quality Assurance Safety</i>
<i>Environmental Compliance</i>	<i>...and many more</i>

www.vinnellarabia.com

Tickets and Registration Open 1/8/20



Sponsored by AAAA

2020★SUMMIT

ARMY AVIATION MISSION SOLUTIONS SUMMIT

April 22-24, 2020

Gaylord Opryland Hotel & Convention Center, Nashville, TN

quad-a.org/20SUMMIT #20SUMMIT

AAAA AIR ASSAULT CHAPTER



2020 Golf Tournament



WHERE: Gaylord Springs Golf Links . 18 Springhouse Lane, Nashville, TN 37214
<http://www.gaylordsprings.com/>

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

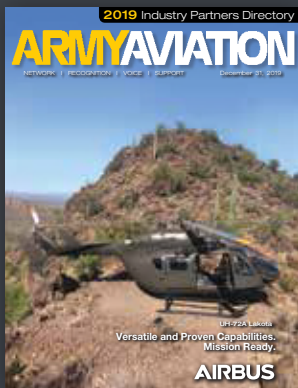
FORMAT: 4 Person Scramble

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

REGISTRATION: Visit <http://2020aaaagolftournament.ezregister.com> to register as an individual golfer, a foursome, or select a sponsorship level

TUE APRIL
21st

<http://2020aaaagolftournament.ezregister.com>



2019 ARMY AVIATION Industry Partners Directory

ARMY AVIATION Magazine's Industry Partners Directory is a paid advertising section of ARMY AVIATION's world-wide, year-round reference for individuals and organizations engaged in the overall field of U.S. Army Aviation. The organizations are listed by the following categories: Consultants/Special Services, Educational, Maintenance and Product Overhaul, Manufacturing, Publications and Financial Services.

Any firm that wishes to be included in next year's Industry Partners Directory should contact Erika Burgess at Army Aviation Publications, Inc., 593 Main Street, Monroe, CT 06468-2806; Telephone: (203) 268-2450 or email: erika@quad-a.org

Associations

American Freedom Foundation
<http://www.americanfreedomfoundation.org>



In return for their service and sacrifices made for our country, AFF believes Veterans, military service members, and their families are deserving of support that empowers and enables them to lead confident and productive lives. AFF honors, serves and supports Veterans, military service members, and their families by creating awareness and building support of their service, sacrifice and needs through partnerships with military focused organizations. AFF is, and always will be, relentlessly driven to bettering the lives of our Veterans, military service members, and their families.

SMA (R) Jack Tilley
 Co-Founder and Chariman
 10865 Hoffner Edge Drive
 Riverview, FL 33579
 (813) 541-4512
jacktilley12@verizon.net

Ted Hacker
 Co-Founder and President
 10865 Hoffner Edge Drive
 Riverview, FL 33579
 (615) 330-9394
ted.hacker@americanfreedomfoundation.org

Consulting/Special Services

Bihrlle Applied Research Inc.
www.bihrlle.com



Bihrlle Applied Research Inc. is an aeronautical research & development company specializing in the development of physics-based math models for commercial and military fixed-wing and rotary-wing aircraft, including full-envelope, upset recovery, failure and subsystem modeling.



Brian Wachter
 VP Corporate Development
 81 Research Drive
 Hampton, VA 23666
 (757) 327-4409
bwachter@bihrlle.com

Nathan Graybeal
 Senior Engineer
 81 Research Drive
 Hampton, VA 23666
 (757) 327-4386
ngraybeal@bihrlle.com

Clausewitz Technology
www.clausewitztechnology.com



Clausewitz Technology assists companies with business development activities involving Army Aviation and Electronic Warfare. Being located at Huntsville, Alabama, next to Redstone Arsenal, facilitates relationship management with AvMC and PEO-Aviation.



Buck Clemons
 President
 210 Pennsylvania Ave
 Madison, Alabama 35758
 (912) 659-0810
william.clemons@clausewitztechnology.com

COLSA Corporation
www.colsa.com



Provider of value-added and cost-effective solutions to Government and Commercial customers by providing the latest and most sophisticated engineering, programmatic, and information technology and services.



Ted Martin
 VP, Business Development
 6728 Odyssey Drive
 Huntsville, AL 35806
 (256) 964-5437
tmartin@colsa.com



James Kennedy
 Army Aviation Programs
 6728 Odyssey Drive
 Huntsville, AL 35806
 (256) 964-5248
jkennedy@colsa.com

Cruz Associates, Inc.
www.cruzinc.us



Cruz is a family-owned small business headquartered in Yorktown, Virginia with over 20 years of experience providing extensive aviation, ordnance, and engineering support services to the United States Army and Navy.



Eric Cruz
 President
 6515 Geo Wash Memorial Hwy, Ste 209
 Yorktown, VA 23692
 (757) 833-7538
eric.cruz@cruzinc.us

Greg Stewart
 Vice President, Operations
 6515 Geo Wash Memorial Hwy, Ste 209
 Yorktown, VA 23692
 (757) 833-7538
greg.stewart@cruzinc.us

Brian Thompson
 Vice President, Military Programs
 6515 Geo Wash Memorial Hwy, Ste 209
 Yorktown, VA 23692
brian.thompson@cruzinc.us

Cypress International
www.cypressintl.com



A multi-service consultancy team providing business focused strategic assistance and specializing in helping industry support the U.S. Department of Defense and other federal departments and agencies.



Shelley Yarborough
 Director, Army Aviation & DoD Vertical Flight Programs
 1201 E. Abingdon Drive, STE 400
 Alexandria, VA 22314
 (703) 549-5880
syarborough@cypressintl.com



Walt Davis
 VP, Army Aviation & DoD Vertical Flight Programs
 1201 E. Abingdon Drive, STE 400
 Alexandria, VA 22314
 (703) 549-5880
wdavis@cypressintl.com

Defense Acquisition, Inc.

www.da-inc.com



DAI is an SDVOSB based in Huntsville, AL providing Aviation/ Missile services focused on Business & Acquisition Management, Test & Evaluation, Safety & Mission Assurance, Systems Engineering, Information Technology, and Logistics.

Steve Smith
President
6767 Old Madison Pike, Suite 265
Huntsville, AL, 35806
(931) 801-8593
steve.smith@da-inc.com

Jeff Dahlgren
Director, Aviation Operations
1759 Sound Hammock Dr.
Navarre, FL, 32566
(931) 302-2058
jeff.dahlgren@da-inc.com

Eagle 6 Technical Services, LLC

https://eagle6usa.com



Eagle 6 is a SDVOSB specializing in ASE systems engineering, cybersecurity, enterprise logistics and training services for US Government, Commercial and FMS clients.



John Burns
President and CEO
3218 East Colonial Drive, Suite G
Orlando, FL 32803
(407) 730-0331
johnburns@eagle6usa.com



Terry Cook
Director of Operations
3218 East Colonial Drive, Suite G
Orlando, FL 32803
(904) 806-4692
tpcook@eagle6usa.com

FREEMAN HOLDINGS GROUP

www.freemanholdingsgroup.com



Group of 13 nation-wide fixed base operators (FBOs) with 11 of 13 DoD contract fuel; long runways; top-of-the-line, elegant facilities; outrageous customer service; premium crew cars and the best amenities and food in town!



MILLION AIR ALEXANDRIA (KAEX)
Steve Mohror (US Army, RET)
General Manager
1303 Billy Mitchell Blvd
Alexandria, LA 71303
(800) 285-8695
info.aex@millionair.com



MILLION AIR LAKE CHARLES (KCWF)
Joe Torres (US Army, Ret)
General Manager
4500 Chennault Parkway
Lake Charles, LA 70615
(888) 744-8468
jtorres@millionair.com



FREEMAN JET CENTER OF LOUISIANA (KLCH)
LAKE CHARLES REGIONAL AIRPORT
Mike Stunkard (US Army, Ret)
General Manager
500 Airport Blvd., Hangar 1
Lake Charles, LA 70607
(337) 478-7722
mstunkard@freemanjetcenter.com



MILLION AIR MEDFORD, OR (KMFR)
Joe Keith (US Navy, Ret) Photo
General Manager
2040 Milligan Way
Medford, OR 97504
(541) 842-2254
infonow@millionairmfr.com



MILLION AIR MOSES LAKE (KMWH)
Larry Godden
7810 Andrews St., N.E., Suite 134
Moses Lake, WA 98837
(877) 762-0222
lgodden@millionair.com



MILLION AIR ORLANDO (KSFB)
Greg Smith (US Navy, Ret)
General Manager
2841 Flightline Avenue
Sanford, FL 32773
(407) 585-6300
gsmith@millionair.com



MILLION AIR RIVERSIDE (KRIV)
Barry Schmelter (US Marine Corps, Ret)
General Manager
17405 Heacock Street
Moreno Valley, CA 92551
(951) 247-2111
bschmelter@millionair.com



MILLION AIR ROME (KRME)
Steve Ingerick (US Air Force, Ret)
660 Hangar Road, Suite 148
Rome, NY 13441
(800) 400-1509
singerick@millionair.com



MILLION AIR STENNIS (KHSA)
David Turner (US Marine Corps, Ret)
General Manager
7250 Stennis Airport Drive
KILN, MS 39556
(228) 463-2389
dturner@millionair.com



MILLION AIR SYRACUSE (KSYR)
Tommy Kimmes (US Army, Ret)
General Manager
110 Air Cargo Road
Syracuse, NY 13212
(800)-400-1509
tkimmes@millionair.com



MILLION AIR TOPEKA (KFOE)
Walt Frederick (US Army, Ret)
General Manager
6700 SW Topeka Blvd
Building 610, Forbes Field
Topeka, KS 66619
(877) 886-7352
wfrederick@millionair.com



MILLION AIR VICTORVILLE (KVCV)
Jessie Harris (US Army, Ret)
General Manager
18590 Readiness Street
Victorville, CA 92394
(760) 246-7794
jharris@millionair.com



MILLION AIR YUMA (KNYL)
James Combs (US Marine Corps, Ret)
General Manager
3681 South Burch Way
Yuma, AZ 85365
(877) 812-1175 OR (928) 247-9571
jcombs@millionair.com

GasTOPS Inc

https://www.gastopsusa.com



GasTOPS is dedicated to providing real-time condition monitoring solutions applying advanced fluid measurement and analysis technologies. These solutions enable Condition Based Maintenance (CBM), improve readiness, reduce costs... ensuring mission success.



Steve Odom
President/CEO
4960 Corporate Drive, Suite 140
Huntsville, AL 35805
(256) 562-1120
steve.odom@gastopsusa.com

HW Farren LLC Aircraft Transportation

www.farreninternational.com



HW Farren LLC is a transportation company supporting the aerospace industry.



Glenn Wargo
Director, Aircraft Transportation
1881 US Highway 46
Ledgewood, NJ 07852
(800) 253-3203
gwargo@farrenintl.com

Integration Innovation, Inc. (i3)

i3-corps.com



i3 is solving Army Aviation's toughest problems through a commitment to excellence with a focus on Systems & Software Engineering, C4ISR, Hypersonic Weapon System Development, and Interactive Training Solutions.



Rich Kretzschmar
President
689 Discovery Drive
Huntsville, AL 35806
(256) 382-4334
richard.kretzschmar@i3-corps.com



CJ Jacobs
Vice President - Intelligence, Training,
& Systems Engineering Services
689 Discovery Drive
Huntsville, AL 35806
(256) 513-5179
charles.jacobs@i3-corps.com

Intuitive Research and Technology Corporation

www.irtc-hq.com



INTUITIVE is an aerospace engineering and analysis firm that provides a wide range of services including programmatic support, systems engineering, product development, production systems support, and technology management solutions.



Donna Meadows
Senior Vice President
5030 Bradford Drive, Suite 205
Huntsville, AL, 35805
(256) 922-9300
donna.meadows@irtc-hq.com

John H. Northrop & Associates, Inc.

www.jhna.com



JHNA supports government S&T and R&D customers who are developing future aviation and autonomous systems capabilities by providing expertise in software architecture, aviation systems engineering, concept development, M&S, and program management.



Ian Northrop
CEO
2111 Eisenhower Ave, Suite 201
Alexandria, VA 22314
(703) 946-7429
ian.northrop@jhna.com



Brad Snowden
Director, Future Aviation Programs
4800 Courthouse St, Suite 203
Williamsburg, VA 23188
(757) 812-0694
brad.snowden@jhna.com



Jeff Showalter
Chief Development Officer
5021 Technology Dr, Suite B1
Huntsville, AL 35805
(202) 236-3685
jeff.showalter@jhna.com

Logos Technologies LLC

www.logos-technologies.com



Logos Technologies specializes in advanced sensors, wide-area motion imagery (WAMI), advanced analytics, and processing of large, multisource datasets. Our miniaturized WAMI and multi-INT systems are configured for manned and unmanned platforms.



John Marion
President
2701 Prosperity Avenue, Suite 400
Fairfax, VA 22031
(703) 584-2725
jmarion@logostech.net



Dave Fields
VP of Technology
2701 Prosperity Avenue, Suite 400
Fairfax, VA 22031
(703) 584-2725
dfields@logostech.net



Doug Rombough
VP of Business Development
2701 Prosperity Avenue
Fairfax, VA 22031
(813) 523-8271
drombough@logostech.net



Alan Murdoch
VP of International Programs
2701 Prosperity Avenue
Fairfax, VA 22031
(703) 584-4361
amurdoch@logostech.net

Myles Associates



Myles Associates provides strategic insights, guidance, and assistance to key clients supporting U.S. national security interests.



James R. Myles, Major General, USA, Ret.
President
(256) 665-3620
James.Myles@Myles-Associates.com



Brenda J. Bates
Director, Government & Industry Relations
(256) 604-8446
Brenda.Bates@Myles-Associates.com

Navigator Development Group Inc.

www.ndgi.com



Navigator Development Group Inc. is a solutions provider across the Aviation, Training and Technology sectors. Since 1997, Navigator has delivered a best-in-class client experience supporting DoD and other federal agencies.



Keith Gay
Owner / CEO
116 S. Main Street
Enterprise, AL 36330
(334) 347-7612
kgay@ndgi.com



James Moentmann
President
6767 Old Madison Pike, Bld 2, Ste 200
Huntsville, AL 35806
(256) 489-3372
jmoentmann@ndgi.com



Robert Hutson
Executive Vice President
116 S. Main Street
Enterprise, AL 36330
(334) 347-7612
rhutson@ndgi.com

Outerlink Global Solutions

www.metroaviation.com



Outerlink Global Solutions is focused on providing organizations with solutions to identify and mitigate risks. IRIS is a turnkey solution for maintaining operational control and oversight from a single corporate operator to fleet operations. Combining the four elements of monitoring, alerting, tracking and communication, IRIS exceeds any system commercially available today.



Mike Stanberry
President & CEO of Metro Aviation
P.O. Box 7008
Shreveport, LA 71137
(318) 698-5200
mstanberry@metroaviation.com



Don Rucker
Director of Technical Services of Metro Aviation
P.O. Box 7008
Shreveport, LA 71137
(318) 698-5200
drucker@northfids.com

Peduzzi Associates, Ltd.

www.peduzziassociates.com



A certified Service-Disabled Veteran-Owned Small Business that specializes in providing subject matter expertise in Aviation Training, Development and Business Management for Local, State and Federal Government agencies and commercial clients.



Garrett Jensen
Director of Aviation and Tactical Systems
221 S Alfred ST
Alexandria, VA 22315
(703) 836-7990
garrett.jensen@peduzziassociates.com



Chad Cuomo
Director of Huntsville Operations
221 S Alfred ST
Alexandria, VA 22315
(703) 836-7990
chad.cuomo@peduzziassociates.com

PeopleTec

www.peopletec.com



PeopleTec specializes in systems engineering & integration, hardware & software development, cybersecurity, data analysis and innovative business intelligence (Rubix), delivering high-value engineering services to our DoD customers.

Doug Barclay
Sr. Vice President
4901-I Corporate Drive
Huntsville, AL 35805
(256) 319-3804
doug.barclay@peopletec.com

Dennis Dunaway
Group Vice President
4901-I Corporate Drive
Huntsville, AL 35805
(256) 319-3857
dennis.dunaway@peopletec.com

Radiancetech, Inc.

www.radiancetech.com



Radiancetech develops customer-focused solutions in the areas of cyber solutions, systems engineering, prototyping and integration as well as operational and strategic intelligence including scientific and technical intelligence.

Pete Weiland
Executive Vice President - Chief Technology Officer
350 Wynn Dr.
Huntsville, AL 35805
(256) 704-3401
peter.weiland@radiancetech.com

Eric Briggs
Senior Vice President - Engineering Services
350 Wynn Dr.
Huntsville, AL 35805
(256) 704-3401
eric.briggs@radiancetech.com

Tim Tinsley
Senior Vice President - Integration and Prototyping
350 Wynn Dr.
Huntsville, AL 35805
(256) 704-3401
timothy.tinsley@radiancetech.com

Laura Bequette
AVP, Aviation Programs
350 Wynn Dr.
Huntsville, AL 35805
(256) 704-3401
laura.bequette@radiancetech.com

Recoil Logistic Systems, LLC

www.recoil-usa.com



Lightweight, ballistically tolerant extended range fuel tanks. Tanks range in size from 35.5 gallons (134.4 litre) to 850 gallons (3,217.6 litre). Custom tanks and special application tanks fabricated. Special Mission solution consulting.



Joseph Rice
Managing Director
Post Office Box 1365
Grants Pass, OR 97527-0113
(541) 326-1911
joseph@recoil-usa.com



Tanya Wilson
Administrative Director
Post Office Box 1365
Grants Pass, OR 97528-0113
(423) 404-5007
tanya@recoil-usa.com



Jere Bragado
Director - Aircraft Intergration
Post Office Box 1365
Grants Pass, OR 97528-0113
(541) 326-2105
jere@recoil-usa.com

Science Applications International Corporation (SAIC)

www.saic.com



SAIC® is a premier technology integrator offering high-end solutions in engineering, IT, and mission solutions. Headquartered in Reston, Virginia, SAIC has approximately 23,000 employees.



Curtis D. Potts
Vice President, Business Development
6725 Odyssey Drive
Huntsville, AL 35806
(256) 319-8419
curtis.d.potts@saic.com



Michael N. Thome
Senior Director, Aviation Programs
6725 Odyssey Drive
Huntsville, AL 35806
(256) 971-6474
michael.n.thome@saic.com

Stevens Aerospace and Defense Systems

www.stevensaerospace.com



Stevens Aerospace Government Group delivers dedicated solutions in modification, repair & overhaul for government and special operations aircraft. The Government Group focuses on crucial issues for aircraft obsolescence, intelligence, surveillance, reconnaissance solutions. Contact: Jim Williams at (866) 800-6164.

J.B. Brown
Deputy Government Operations
600 Delaware Street
Greenville, SC 29605
(864) 525-9357
jbrown@stevensaerospace.com

Jim Williams
Vice President Government Operations
600 Delaware Street
Greenville, SC 29605
(864) 304-1736
jwilliams@stevensaerospace.com

Gene Gunnin
Vice President Government Programs
600 Delaware Street
Greenville, SC 29605
(864) 361-7579
ggunnin@stevensaerospace.com

David Crowder
General Manager Donaldson Facility
600 Delaware Street
Greenville, SC 29605
(864) 444-6585
dcrowder@stevensaerospace.com

The University of Tennessee Haslam College of Business Aerospace & Defense Division

aerospace-defense.utk.edu



AEROSPACE & DEFENSE

The University of Tennessee's Haslam College of Business Aerospace & Defense Division features an Aerospace & Defense Masters of Business Administration, and a catalog of customized short courses tailored to your needs. The Haslam College of Business has been ranked in the Top 5 nationally for customized executive education.



Dr. Ben Skipper
Executive Director
1000 Volunteer Blvd
Knoxville, TN 37996
(865)974-1921
bskipper@utk.edu

Yulista Holding LLC

www.yulista.com



YULISTA

Yulista is an ANC 8(a) regional corporation providing aviation modernization, maintenance and training solutions to our customers world-wide.....Anytime and Anywhere!



Joseph Parsley
Director, Business Development
631 Discovery Drive
Huntsville, AL 35806
(256) 763-2933
joseph.parsley@yulista.com

Education

Air Rescue Systems

www.airrescuesystems.com



Air Rescue Systems (ARS) manufactures cutting edge helicopter rescue extraction equipment (AWR 980, AWR 9) and provides advanced helicopter hoist operations training.

Bob Cockell
President
4454 Dead Indian Memorial Rd
Ashland, OR 97520
(541) 690-6178
bob@airrescuesystems.com

FlightSafety International

http://www.flightsafety.com



FlightSafety International is the world's premier professional aviation training company and supplier of flight simulators, visual systems and displays to commercial, government, and military organizations.

Afshan Baharmast
FlightSafety Services Corporation
Vice President New Business & Program Proposals
10770 E. Briarwood Ave., Suite 100
Centennial, CO 80112
(303) 783-1023
Afshan.baharmast@flightsafety.com

Science and Engineering Services, LLC

www.ses-i.com



An industry leader in the modification and integration of manned and unmanned platforms, aviation training and total fielding solutions. SES offers a turnkey solution with a full spectrum approach that delivers the highest quality product to our customers.



E.J. Sinclair
Chief Executive Officer
248 Dunlop Boulevard
Huntsville, AL 35824
(256) 258-5000
e.j.sinclair@ses-i.com



Skip Sherrell
Vice President, Business Development
248 Dunlop Boulevard
Huntsville, AL 35824
(256) 258-3992
skip.sherrell@ses-i.com

The University of Tennessee Haslam College of Business Aerospace & Defense Division

www.aerospace-defense.utk.edu



AEROSPACE & DEFENSE

The University of Tennessee's Haslam College of Business Aerospace & Defense Masters of Business Administration, and a catalog of customized short courses tailored to your needs. The Haslam College of Business has been ranked in the Top 5 nationally for customized executive education.



Dr. Ben Skipper
Executive Director
1000 Volunteer Blvd
Knoxville, TN 37996
(865) 974-1921
bskipper@utk.edu

U.S. Naval Sea Cadet Corps

www.seacadets.org



The U.S. Naval Sea Cadet Corps (USNSCC) is a federally-chartered non-profit military based youth organization for young people, ages 10 through the completion of high school. The USNSCC is sponsored by the Navy League of the United States and supported by the U.S. Navy and U.S. Coast Guard.

Paul Zambarnardi
Executive Director
2300 Wilson Blvd, Suite 200
Arlington, VA 22201
(703) 312-1544
pzambarnardi@seacadets.org

Yulista Holding LLC

www.yulista.com



Yulista is an ANC 8(a) regional corporation providing aviation modernization, maintenance and training solutions to our customers world-wide.....Anytime and Anywhere!



Joseph Parsley
Director, Business Development
631 Discovery Drive
Huntsville, AL 35806
(256) 763-2933
joseph.parsley@yulista.com

Maintenance & Product Overhaul

Arista Aviation Services, LLC

www.aristaas.com



FAA certified provider of maintenance, repair & overhaul of rotary wing platforms, specializing in Bell medium hull and Sikorsky UH-60 to include airframe, electrical & avionics. Arista can offer individual customizable solutions while also possessing the facilities, knowledge & certifications to support large fleets.

Richard Enderle
President & CEO
690 Aviation Blvd
Enterprise, AL 36330
(334) 347-1240 ext 2203
renderle@aristaas.com

Bill Parsons
Chief Operations Officer
690 Aviation Blvd
Enterprise, AL 36330
(334) 347-1240 ext 2202
bparsons@aristaas.com

Rob Dodson
VP Business Support
690 Aviation Blvd
Enterprise, AL 36330
(334) 347-1240 ext 2225
rdodson@aristaas.com

Daryle Pilkinton
Business Development
690 Aviation Blvd
Enterprise, AL 36330
(334) 347-1240 ext 2272
dpilkinton@aristaas.com

Astronics Test Systems

www.astronictestsystems.com



We ensure optimal performance of mission critical systems through innovative test solutions. With nearly 60 years of experience, we offer test expertise for aerospace, military, and other high reliability industries.



Randy Schnell
Manager, Sales & Business Development, Communication Test Systems
12889 Ingenuity Drive
Orlando, FL 32826
(407) 619-7163
randy.schnell@astronics.com

Blackhawk Aerospace Solutions

www.blackhawk.aero



Headquartered in Huntsville, Alabama, near the heart of U.S. Army Aviation, Blackhawk Aerospace Solutions brings together a powerful mix of capabilities and experience to serve as a single-source provider of comprehensive PT6 engine performance solutions for government and military customers. Blackhawk Aerospace Solutions, LLC is AS-9100 Rev D certified.



Pete Franks
President
150 W Park Loop, Suite 106
Huntsville, AL, 35806
(256) 217-1620
pete.franks@blackhawk.aero

Columbia Helicopters, Inc.

www.colheli.com



Columbia Helicopters operates the largest fleet of civilian variants of CH-47 and CH-46 helicopters in the world and operates an FAA approved repair station. Choose Columbia for complete life cycle support for your CH-47 platforms.

Santiago Crespo
Vice President of Business Development and Marketing
14452 Arndt Road NE
Aurora, OR 97002
(503) 678-1222
screspo@colheli.com

Jim King
Vice President of Business Management
14452 Arndt Road NE
Aurora, OR 97002
(503) 678-1222
jking@colheli.com

DynCorp International

www.dyn-intl.com



We Serve Today for a Better Tomorrow™

DynCorp International provides a complete range of aviation maintenance, sustainment, logistics, flight operations and training to government clients worldwide. Our highly experienced, quality focused team provides innovative solutions delivering readiness.



James P. Cassella
SVP, Chief Growth Officer
1700 Old Meadow Road
McLean, VA 22102
(571) 722-0224
Jim.Cassella@dyn-intl.com



Bill "Sweet" Tart
SVP, Business Development
DynAviation
13500 Heritage Parkway
Fort Worth, TX 76177
(571) 722-0216
William.Tart@dyn-intl.com



Doug Eller
Sr. Dir., Business Development
DynAviation
310 Bridge Street, Suite 400
Huntsville, AL 35806
(256) 924-3305
Douglas.Eller@dyn-intl.com

East/West Industries, Inc.

www.eastwestindustries.com



Since 1968, East/West has designed and manufactured innovative, economical, high quality aircraft seats, life support and ground support equipment – such as our Crash-Attenuating Seats and our Master Crane®. East/West is a woman owned small business and a registered AS 9100 Company.

Joseph Spinosa
Vice President, Business Development
2002 Orville Drive North
Ronkonkoma, NY 11779
(631) 981-5900
jspinosa@eastwestindustries.com

Elbit Systems of America

www.elbitsystems-us.com



Elbit America is the leading source of innovative, technology based systems and sustainment support for diverse defense and commercial air and ground vehicles.



Layne Merritt
Vice President, Technology
4700 Marine Creek Parkway
Ft. Worth, Texas 76179
(682) 286-2000
layne.merritt@elbitsystems-us.com



Mark Stiner
Senior Director, Customer Relations
5030 Bradford Drive, Bldg. 2, Suite 115
Huntsville, AL 35805
(256) 480-2470
mark.stiner@elbitsystems-us.com



Paul Cooke
Senior Director, Business Development
Vertical Lift
4700 Marine Creek Parkway
Ft. Worth, Texas 76179
(817) 234-6786
paul.cooke@elbitsystems-us.com



Harry Hewson
Senior Director, Vertical Lift
4700 Marine Creek Parkway
Ft. Worth, Texas 76179
(682) 286-2252
harry.hewson@elbitsystems-us.com



Jeff Hager Photo
Director, Business Development
4700 Marine Creek Parkway
Ft. Worth, Texas 76136
Jeffrey.hager@elbitsystems-us.com



Jeremiah (J.J.) Arnold
VP Business Development,
Sustainment & Support
10823 NE Entrance Road
San Antonio, TX 78216
(210) 804-7743
jeremiah.arnold@elbitsystems-us.com



William (Buck) Butler
Program Manager II, Sustainment &
Support Solutions
5030 Bradford Drive, Bldg. 2, Suite 115
Huntsville, AL 35805
(256) 480-2469
William.butler@m7aero.com

Erickson Incorporated

www.ericksoninc.com



Erickson Defense and National Security provides world class support offering two lines of business. Erickson Aerial Operations is a global leader in providing commercial air support specializing in passenger, cargo, and CASEVAC operations. Erickson Mission Support Solutions provides full spectrum engineering, modification, and overhaul services for DoD legacy aircraft.



Kevin Cochie
Vice President Defense & National
Security
5550 SW Macadam Avenue, Suite 200
Portland, OR 97239
(503) 505-5800
kcochie@ericksoninc.com



Scott Zurschmit
Sr. Director, Capture Management,
Defense & National Security
5550 SW Macadam Avenue, Suite 200
Portland, OR 97239
(971) 255-5035
szurschmit@ericksoninc.com



Mark Cooper
Sr. Director Business Operations &
Integration
5550 SW Macadam Avenue
Portland, OR 97239
(321) 544-2606
mcooper@ericksoninc.com



Stu Hartwell
Director of Defense & National Security
Sales
5550 SW Macadam Avenue
Portland, OR 97239
(256) 690-3736
shartwell@ericksoninc.com

Fastening Systems International, Inc

www.fsirivet.com



Specializing in Sheet Metal & Composite Tool kits. Cordless Riveter Kits, Air Hydraulic & Hand Hydraulic Riveters. Cherry & Huck Aerospace products.

Mark Herand
VP of Sales & Marketing
1206 E. MacArthur Street
Sonoma, CA 95476
(707) 935-1170
mherand@fsirivet.com

Nolund Kowalski
Military Sales
1206 E. MacArthur Street
Sonoma, CA 95476
(405) 371-6336
nkowalski@fsirivet.com

General Atomics Aeronautical Systems, Inc. (GA-ASI)

www.ga-asi.com/



General Atomics Aeronautical Systems, Inc. (GA-ASI) is the leading designer/manufacturer of Remotely Piloted Aircraft (RPA) systems, radars, and electro-optic and related mission systems, including Predator® series and Lynx® Multi-mode Radar.

Donald Cattell
Vice President, MQ-1C Business Unit
Don.Cattell@ga-asi.com
(858) 312-3687

Christopher MacFarland
Director, Business Development
Christopher.MacFarland@ga-asi.com
(256) 428-8604

Jordan Ramrus
Senior Technical Director
Jordan.Ramrus@ga-asi.com
(858) 312-2681

John Steen
Manager, Business Development
John.Steen@ga-asi.com
(256) 428-8609

Clifford Stone
VP of Product Life Cycle Sustainment
Clifford.Stone@ga-asi.com
(858) 924-7324

Kellstrom Defense

www.kellstromdefense.com



Kellstrom Defense is a global provider for the sustainment of legacy defense aircraft through OEM strategic distribution, repair services, and engineered products for military transporter, fighter, and rotary wing platforms.

Ruth Garcia
Director of Marketing
100 N. Pacific Coast Highway Suite 1950
El Segundo, CA 90245
(424) 217-1368
Ruth.Garcia@KellstromDefense.com

King Aerospace

<https://kingaerospace.com/>



King Aerospace, Inc. (KAI), an FAA-authorized repair station, delivers aircraft MX and logistics support worldwide. It operates facilities in TX; NM; Camp Humphreys, Korea; and 24/7 global logistics outposts.

Greg Mitchell
VP of Government Services
4500 Westgrove Drive, Suite 250
Addison, TX 75001
(972) 248.4886
gmitchell@kingaerospace.com

Kipper Tool Company

www.kippertool.com



Kipper Tool creates custom kits, ranging in size from portable tool boxes to 40-foot containers. We also offer individual tools for sale, or can organize your existing tool load.



Phillip Gaines
Sales Representative
2375 Murphy Blvd
Gainesville, GA 30504
(770) 534-8701
Phillip.Gaines@kippertool.com



Allison Strickland
Sales Operations Specialist
2375 Murphy Blvd
Gainesville, GA 30504
(678) 989-1354
Allison.Strickland@kippertool.com

L3Harris Technologies - Huntsville Operations

www.L3Harris.com



L3Harris is a world leader in Communication, Electronic Warfare, & ISR. The diverse portfolio includes leading technology in Training & Simulation, Systems Integration, Aviation Products, ISR, Sensors, Coms, and Modernization and Sustainment.



Rick Rife
VP Army/SOF Accounts & HSV OPS
555 Discovery Drive NW, Suite 201
Huntsville, AL 35806
(256) 759-9595
Rick.Rife@L3Harris.com

M1 Support Services

www.m1services.com



M1 Support Services provides high quality, cost effective aircraft maintenance and modifications, flight operations, engineering support, depot level field teams, training development and delivery and contractor logistics support worldwide.

William Shelt
President
300 N. Elm Street, Suite 101
Denton, TX 76201
(940) 323-1119
william.shelt@m1services.com

Kathy Hildreth
Managing Director
300 N. Elm Street, Suite 101
Denton, TX 76201
(940) 323-1119
kathy.hildreth@m1services.com

The Marvin Group

www.marvingroup.com



The Marvin Group (Marvin Engineering, Marvin Test Solutions, and Marvin Land Systems) proudly supports the warfighter with integrated weapon systems and electronic test equipment to ensure mission readiness.



Stephen T. Sargeant
Major General, USAF (Ret.)
Chief Executive Officer
Marvin Test Solutions, Inc.

Vice President, Strategic Development
The Marvin Group
Tel: +1 (949) 263-2222
Cell: +1 (310) 912-0112

Moog Inc., Aircraft Sector

www.moog.com/aircraft



Moog offers a variety of engineered support solutions to complement the highly responsive repair and overhaul services provided for our existing products, including obsolescence management, supply chain partnerships, and logistics support.

Jeff Markel
Director, Sustaining Engineering and Modernization
Military Global Sustainment
160 Jamison Road
East Aurora, NY 14052
(716) 725-4874
jmarkel@moog.com

Pinnacle Solutions, Inc.

www.Pinnacle-SI.com



Pinnacle Solutions is an employee-owned aerospace company offering manned and unmanned aviation products and services including Flight and Maintenance Training Systems, Engineering/Training Services; Aviation Maintenance/Operations; and Logistics Support/Analysis.



Mike Durant
President & CEO
5030 Bradford Dr. NW, Bldg 1, Suite 130
Huntsville, AL, 35805
(256) 327-4181
MDurant@Pinnacle-SI.com



Duke Tucker
Vice President – Business Development
5030 Bradford Dr. NW, Bldg 1, Suite 130
Huntsville, AL, 35805
(256) 489-4691
DTucker@Pinnacle-SI.com

Science and Engineering Services, LLC

www.ses-i.com



An industry leader in the modification and integration of manned and unmanned platforms, aviation training and total fielding solutions. SES offers a turnkey solution with a full spectrum approach that delivers the highest quality product to our customers.



E.J. Sinclair
Chief Executive Officer
248 Dunlop Boulevard
Huntsville, AL 35824
(256) 258-5000
e.j.sinclair@ses-i.com



Skip Sherrell
Vice President, Business Development
248 Dunlop Boulevard
Huntsville, AL 35824
(256) 258-3992
skip.sherrell@ses-i.com

South-Tek Systems LLC

www.southteksystems.com



Manufacturer of low and high pressure Nitrogen Generators for NVDs and aircraft maintenance and support. Safe, durable, deployable technology eliminates reliance on high pressure N2 bottles from a gas supplier.



Marya Breznay
Military/Industrial Sales Market Manager
3700 U.S. Highway 421 N.
Wilmington, North Carolina 28401
(910) 408-4857
breznay@southteksystems.com

StandardAero

www.standardaero.com



StandardAero is one of the world's largest independent providers of MRO services including engine and airframe maintenance, repair and overhaul, engine component repair, and design/engineering services.

Pat Lemons
Program Manager, US Army
PO Box 22178
Huntsville, AL 35814
(334) 538-3702
Pat.Lemons@StandardAero.com

Scott Schisser
VP, Strategy & Business Development
1050 30th Street NW
Washington, DC 20007
(202) 465-8157
Scott.Schisser@StandardAero.com

Lou Vogler
Director of Strategy
3523 General Hudnell Drive
San Antonio, TX 78226
(210) 334-6124
Lou.Vogler@StandardAero.com

Stevens Aerospace and Defense Systems

www.stevensaerospace.com



Stevens Aerospace Government Group delivers dedicated solutions in modification, repair & overhaul for government and special operations aircraft. The Government Group focuses on crucial issues for aircraft obsolescence, intelligence, surveillance, reconnaissance solutions. Contact: Jim Williams at (866) 800-6164.

J.B. Brown
Deputy Government Operations
600 Delaware Street
Greenville, SC 29605
(864) 525-9357
jbrown@stevensaerospace.com

Jim Williams
Vice President Government Operations
600 Delaware Street
Greenville, SC 29605
(864) 304-1736
jwilliams@stevensaerospace.com

Gene Gunnin
Vice President Government Programs
600 Delaware Street
Greenville, SC 29605
(864) 361-7579
ggunnin@stevensaerospace.com

David Crowder
General Manager Donaldson Facility
600 Delaware Street
Greenville, SC 29605
(864) 444-6585
dcrowder@stevensaerospace.com

Strata-G Solutions, LLC

www.stratag-llc.com



STRATA-G is a wholly owned subsidiary of The Aleut Corporation (TAC), an Alaska Native Corporation (ANC) and Small Disadvantaged Business (SDB). Strata-G's primary operations are located in Huntsville, Alabama offering Design, Engineering, Prototyping, Hardware Manufacturing, and Platform Modernization delivering high quality, rapid response Aviation, Ground, and Unmanned platform systems products and services.



Devin Whitaker
President & Founder
2901 Wall Triana Highway, Suite 200
Huntsville, AL 35824
(256) 713-0482
devin.whitaker@stratag-inc.com



Beth Whitaker
Director, Customer Relations & Marketing
2901 Wall Triana Highway, Suite 200
Huntsville, AL 35824
(256) 713-0482
beth.whitaker@stratag-inc.com



Scott Harvey
Executive Director, Business Development
2901 Wall Triana Highway, Suite 200
Huntsville, AL 35824
(256) 535-3060
scott.harvey@stratag-inc.com

Summit Aviation, Inc.

www.summit-aviation.com



Summit Aviation offers a broad spectrum of military aircraft maintenance services (MRO, Integration & Flight Sustainment). Our highly trained technicians provide exceptional service and customer support for fixed/rotary wing aircraft.



Lou Karnes
Vice President of GDAS
4200 Summit Bridge Road
Middletown, DE 19709
(302) 449.1079
lkarnes@summit-aviation.com



Joseph Moore
Business Development Manager
4200 Summit Bridge Road
Middletown, DE 19709
(256) 975-6708
jmoore@summit-aviation.com

Turbo Pure Water

www.TurboPureWater.com



Turbo Pure Water customizes enhanced distillation systems for turbine rinse and airframe wash, mitigating corrosion & increasing flight readiness.



Courtney Lawyer
Vice President
4511 NW 42nd St.
Lincoln, NE 68524
(402) 467-9300
Courtney@turbopurewater.com

Tyonek Native Corporation

www.tyonek.com



Tyonek is a high quality manufacturing and services company engaged at every step of the lifecycle of aerospace and defense systems, subsystems and components.



Steve Adlich
President
229 Palmer Road
Madison, AL 35758
(256) 258-6200
sadlich@tyonek.com



Doug Baker
Vice President, Business Development
229 Palmer Road
Madison, AL 35758
(256) 258-6200
dbaker@pdnet.net

Vertex Aerospace

vtxaero.com



Vertex Aerospace is a global defense company, headquartered in Madison, Mississippi, that offers a one-stop-shop solution for aftermarket aerospace services for fixed and rotary wing aircraft.



Brock Gaston
Sr. Capture Manager
555 Industrial Drive S.
Madison, MS 39110
(601) 607-6385
Robert.Gaston@vtxaero.com

Vertical Aviation Group

www.vertical.global / www.cmr.global / www.tmr.global



Mi-8 Helicopter Operations, Maintenance and Training Vertical is the industry leading Mi-8 series helicopter company serving the US DoD, DOS and Foreign Militaries with full spectrum, CAA/CARB certified aviation solutions. 10 years experience providing exceptional airlift and a perfect safety record to the US Army and DOS in Afghanistan and Colombia. Depot level MX, complete engine overhaul and full motion simulator training facilities in the US and Colombia provide highly cost-effective capabilities.

David J. Burachio
COO/Business Development Director
2020 Ponce de Leon Blvd, Suite 906
Coral Gables, FL 33134
(305) 606-6433
dburachio@verticalusa.com

Vinnell Arabia, LLC.

www.vinnellarabia.com



Vinnell Arabia is a military knowledge transfer company, which delivers a full range of products and services for air and land forces, as well as customized doctrine-based ground and aviation training, full-scope maintenance, logistics support services and military translation solutions. We have a respected history in supporting the Ministry of National Guard and the US Army Office of the Program Manager, Saudi Arabian National Guard (OPM-SANG) - a relationship that spans over 42 years. We have been the leader in providing US military subject matter expert labor, customized doctrine-based ground and aviation training, and full-scope maintenance and logistics support services in the Kingdom of Saudi Arabia.



Ross E. Ridge
General Manager
Vinnell Arabia Unit 61322 Box A-01
APO AE 09803-1322
Riyadh
Kingdom of Saudi Arabia
rridge@vinnellarabia.com
+966 50 775 3254



James Upright
Senior Aviation Recruiter
2340 Dulles Corner Blvd.
Herndon, VA 20171
james.upright@ngc.com

Yulista Holding LLC

www.yulista.com



Yulista is an ANC 8(a) regional corporation providing aviation modernization, maintenance and training solutions to our customers world-wide.....Anytime and Anywhere!



Joseph Parsley
Director, Business Development
631 Discovery Drive
Huntsville, AL 35806
(256) 763-2933
joseph.parsley@yulista.com

Manufacturing

A.A.I. (Aviation Artifacts, Inc.)

www.ALSET.us

A.A.I.

Manufacturer and Distributor of the ALSET Tester supporting Aviation Life Support Equipment. (ALSE)

Robert Chad Le Beau
President/CEO
19572 Lost Creek Drive
Estero, FL 33967
United States
(800) 845-1994
robert@aaiusa.com

Aero Dynamix Inc.

www.aerodynamix.com



Aero Dynamix, Inc. (ADI) is an industry leader and principle innovator with 25+ years of experience on "INTEGRATED" Night Vision Goggle (NVG) compatible solutions.



Stu Parker
Sales & Marketing Manager
3227 W. Euless Blvd
Euless, TX 76040
(817) 571-0729
sparker@aerodynamix.com

Air Rescue Systems

www.airrescuesystems.com



Air Rescue Systems (ARS) manufactures cutting edge helicopter rescue extraction equipment (AWR 980, AWR 9) and provides advanced helicopter hoist operations training.

Bob Cockell
President
4454 Dead Indian Memorial Rd
Ashland, OR 97520
(541) 690-6178
bob@airrescuesystems.com

Airbus Helicopters Inc.

https://www.airbus.com/us/en/helicopters/military-helicopters/uh-72a.html

AIRBUS

Airbus Helicopters in North America provides rotary-wing aircraft to military and DOD customers around the globe. Airbus contributes \$15 billion annually, supporting over 275,000 jobs in more than 40 states.



Scott Tumpak
Vice President Military Programs
2701 N. Forum Drive
Grand Prairie, Texas 75052
(972) 522-5361
scott.tumpak@airbususna.com



Mike Arrington
Senior Director, Lakota Programs
2701 N. Forum Drive
Grand Prairie, Texas 75052
(972) 641-3725
michael.arrington@airbususna.com



Brian Diaz
Site Director, Fort Rucker
2701 N. Forum Drive
Grand Prairie, Texas 75052
(334) 312-1738
brian.diaz@airbususna.com



Charlie Weaver
Senior Manager, National Guard/FMS
Business Development
2701 N. Forum Drive
Grand Prairie, Texas 75052
(703) 447-0320
charles.weaver@airbususna.com

Arnold Defense

www.arnolddefense.com



ARNOLD DEFENSE

Arnold Defense is the world's largest manufacturer of rocket launchers and have delivered over 1.25 million 2.75/70mm launchers to both the US and worldwide forces since 1961. We offer the next generation of lightweight, multi-mission, smart launchers for all platforms. Arnold Defense has revealed the newest member of their rocket launcher family, the laser-guided Multiple Launch Hydra System (MLHS). Offering the same capability as the LAND-LGR4 "FLETCHER" system but with dramatically greater capacity, the MLHS holds 23 rockets, over FLETCHER's 4. MLHS represents a significant product development of Arnold Defense's FLETCHER system.

Michael Brown
Vice President & COO
Arnold Defense
(636) 575-9190
mbrown@arnolddefense.com

Advanced Turbine Engine Company

www.atecadvantage.com



ATEC, a Joint venture between Honeywell and Pratt & Whitney, brings together the world-class engineering,

production, and manufacturing capabilities of two industry-leading companies. ATEC is fully committed to performing on current and future Army programs to provide critical capabilities to the Army's aviators.



Jerry Wheeler
President
620 Discovery Drive, Suite 130
Huntsville, AL 35806
(860) 371-0157
jerry.wheeler@pw.utc.com



Bryan May
Vice President
620 Discovery Drive, Suite 130
Huntsville, AL 35806
(480) 205-5574
bryan.may@honeywell.com



Sam Torrey
Business Development
620 Discovery Drive, Suite 130
Huntsville, AL 36806
(256) 682-3950
samuel.torrey@pw.utc.com

Axnes, Inc.

www.axnes.com



Axnes produces PNG wireless intercom solutions for aircraft and other mission platforms. Axnes is a supplier to Airbus, Bell, Leonardo, and Sikorsky. Worldwide, 1500+ aircraft are equipped with Axnes products.



Cecile Dybo
Director Military and Government
Operations
102 S. Tejon Street, Suite 1147
Colorado Springs, CO 80903
(571) 651-0246
cad@axnes.com

BAE

www.baesystems.com

BAE SYSTEMS

BAE Systems' Electronic Systems sector has operations spanning commercial and defense electronics markets, and offers a broad portfolio of mission critical electronic systems, products and capabilities.



Bob Claypool
VP, Customer Requirements, Electronic
Systems
BAE Systems
2000 North 15th Street
Arlington, VA 22201
(703) 247-4765
bob.claypool@baesystems.com



Cheryl Paradis
Optical Electronic Warfare Systems,
Electronic Systems
BAE Systems
95 Canal Street
Nashua, NH 03064-2813
(603) 885-8238
cheryl.labombard-paradis@
baesystems.com



Marc Casseres
Precision Guidance Solutions,
Survivability & Targeting Solutions
BAE Systems
65 River Road
Hudson, NH 03051-9601
(603) 885-9601
marc.casseres@baesystems.com



Joe Jellison
Director for Army Aviation Programs,
Electronic Systems
BAE Systems
620 Discovery Drive, Suite 205
Huntsville, AL 35806-3200
(256) 890-8187
joseph.jellison@baesystems.com



Ron Lukow
Director For Army Aviation Programs,
Electronic Systems
BAE Systems
2000 North 15th Street
Arlington, VA 22201
(703) 247-4606
ronald.lukow@baesystems.com



Michael Olmstead
Director for Intelligence Systems &
Capabilities, Electronic Systems
BAE Systems
46210 Guardian Way, Suite 155
Aberdeen Proving Ground, MD 21005
(410) 610-9828
mike.olmstead@baesystems.com



Perry Bowden
Director, Strategy & Planning, Optical
Electronic Warfare Systems
BAE Systems
620 Discovery Drive, Suite 205
Huntsville, AL 35806-3200
(256) 890-8166
perry.bowden@baesystems.com



Chris Hamann
Director for Programs, Optical
Electronic Warfare Systems
2000 N 15th St., Suite 800
Arlington, VA 22201
(703) 247-4644
Christopher.hamann2@baesystems.com



Tony Nieto
Senior Manager, Intelligence Systems
& Capabilities, Electronic Systems
BAE Systems
4116 Avenida Cochise Ste S
Sierra Vista, AZ 85635-5871
(520) 508-3762
anthony.nieto@baesystems.com



Jeff Oakley
Senior Manager, Controls and Avionics
Systems, Electronic Systems
BAE Systems
1098 Clark Street
Endicott, NY 13760
(607) 240-9185
jeff.oakley@baesystems.com

Bell
bellflight.com



Bell is on a mission to change the way the world flies with superior vertical lift that saves lives, preserves freedom and provides customers innovative solutions with exceptional value.



Vince Tobin
Executive Vice President, Military
Business
3255 Bell Helicopter Boulevard
Fort Worth, TX 76118
Office: (817) 280-7502
vtobin@bellflight.com



Keith Flail
VP Adv Vertical Lift Systems
3255 Bell Helicopter Boulevard
Fort Worth, TX 76118
Office: (817) 280-8068
kflail@bellflight.com



Steve Mathias
VP Global Sales & Strategy
3255 Bell Helicopter Boulevard
Fort Worth, TX 76118
Office: (817) 280-1359
Cell: (817) 771-1962
smathias@bellflight.com

Bell AVLC Crystal City



Mitch Snyder
President & CEO
3255 Bell Helicopter Boulevard
Fort Worth, TX 76118
Office: (817) 280-4100
msnyder@bellflight.com



Jeff Schloesser
Executive Vice President, Strategic
Pursuits
Bell Advanced Vertical Lift Center
2231 Crystal Drive, Suite 1010
Arlington, VA 22202
Office: (703) 271-4950
(202) 714-4950
jschloesser@bellflight.com



Kraig Siracuse
Senior Vice President, Washington
Operations
Bell Advanced Vertical Lift Center
2231 Crystal Drive
Arlington, VA 22202
Office: (703) 271-4900
(202) 320-4993
ksiracuse@bellflight.com

BIRD Aerosystems

www.birdaero.com



BIRD Aerosystems is a leading provider of innovative Airborne Missile Protection Systems (AMPS) that protect aircraft against MANPADS and other Surface-to-Air Missiles while leveraging BIRD's patented Threat Confirmation and Jamming solutions - MACS/SPREOS (DIRCM).



Mr. Shaul Mazor
VP Marketing & BD
10 Hasadnaot st
Herzliya 4614001
ISRAEL
+972 543055828
Shaul@birdaero.com

The Boeing Company

www.boeing.com



Boeing's Vertical Lift organization delivers proven, flexible and affordable attack and mobility capabilities and products to global customers while working to innovate and develop the next generation of rotorcraft.



Stephen Parker
Vice President & General Manager
Boeing Vertical Lift
2 Industrial Highway, Ridley Park, PA
19078
O: (610) 591-2575
stephen.k.parker@boeing.com



Andrew Buita
Vice President, Cargo & Utility
Helicopter Programs, H-47 Program
Manager
2 Industrial Highway, Ridley Park, PA
19078
O: (610) 591-2117
andrew.l.buita@boeing.com



Kathleen Jolivette
Vice President Attack Helicopter
Programs & Senior Mesa Site Executive
5000 East McDowell Road, Mesa, AZ
85215
O: (480) 891-9001
kathleen.r.jolivette@boeing.com



Ken Eland
Director & Program Manager Future
Vertical Lift
2 Industrial Highway, Ridley Park, PA
19078
O: (610) 591-6519
kenneth.g.eland@boeing.com



David Palm
Director Vertical Lift Sales & Marketing
5000 East McDowell Road, Mesa, AZ
85215
O: (480) 891-1312
david.c.palm@boeing.com



Jessie Farrington
Director Attack Helicopters Sales &
Marketing
5000 East McDowell Road, Mesa, AZ
85215
O: (480) 891-9171
jessie.o.farrington@boeing.com



Randy Rotte
Director Cargo Helicopters & Future
Vertical Lift Sales & Marketing
2 Industrial Highway, Ridley Park, PA
19078
O: (610) 591-2983
randolph.rotte@boeing.com

Boeing Global Services

Boeing Global Services combines services capabilities of Boeing Defense, Space & Security and Boeing Commercial Airplanes to provide customers with uncompromising services worldwide with emphasis on delivering superior readiness solutions while reducing costs.



Chris Colavita
(Acting) Director BGS United States
Army Services,
499 Boeing Boulevard SW, Huntsville,
AL 35824
O: (256) 937-5196
christopher.h.colavita@boeing.com



Mike Spencer
 Director BGS Sales & Marketing-US
 Army Services
 499 Boeing Boulevard SW, Huntsville,
 AL 35824
 O: (256) 937-5543
 michael.a.spencer4@boeing.com

Boeing Defense, Space & Security

Within Boeing's Defense, Space & Security business we know our customers' mission is our mission. We are making the technologies that will define the future and our BDS products help connect, protect, explore and inspire the world.



Tony Crutchfield
 Vice President Army Systems for
 Boeing Government Operations
 929 Long Bridge Drive, Arlington, VA
 22202
 O: (703) 465-3884
 anthony.crutchfield@boeing.com



Bill Phillips
 Vice President Army/SOF & Huntsville
 Customer Engagement
 499 Boeing Boulevard SW, Huntsville,
 AL 35824
 O: (256) 461-1184
 william.n.phillips@boeing.com

CAE USA

www.caeusa.com



CAE is a global leader in training and simulation for the defense, civil aviation, and healthcare markets.



Bruce Tuftie
 Vice President, Strategy & Business
 Development
 4908 Tampa West Blvd
 Tampa, FL 33634
 (813) 887-1320
 bruce.tuftie@caemilusa.com



Michael Weigart
 Director, Army Business Development
 4908 Tampa West Blvd
 Tampa, FL 33634
 (813) 887-1374
 Michael.Weigart@caemilusa.com

Chemring Countermeasures USA

www.chemring.co.uk



CCM USA is a world leader in the design, development and manufacturing of advanced expendable countermeasures from MTV to Special Material pyrophoric decoys, Naval countermeasures and Marine Location Markers.



Dana Dreeke
 Director of Sales and Marketing
 121 N. Commerce Drive
 Chester Township
 (610) 497-7979
 sales@alloysurfaces.com

Ken Tuten
 VP of BD
 155 Kilgore Drive
 Toone, TN 38381
 (731) 228-5200
 contact@kilgoreflares.com

Coastal Seat Cushions Inc

www.CoastalSeatCushions.com

COASTAL SEAT CUSHIONS INC

"Exclusive Worldwide Distributor for Oregon Aero
 For Seat Cushions for Military Aircraft"

Coastal Seat Cushions is the Worldwide Exclusive Distributor for Oregon Aero for Seat Cushions for Military Aircraft including H-60, AH-64, CH-47, OH-6.

Bill Irvine
 President
 183 NE Royce Ave
 Port St Lucie, FL 34983
 (954) 980-6929
 Sales@CoastalSeatCushions.com

Cobham Aerospace Connectivity

www.cobham.com/aerospaceconnectivity



Design & manufacture of avionics for special mission & military aircraft, including: Flexcomm™ tactical multi-band radios, FliteLine™ com/nav radios, audio management systems, anti-jam GPS systems, and military antenna solutions.



Jorge Torres-Cartagena
 Business Development Manager -
 Radio/Audio
 6400 Wilkinson Drive
 Prescott, AZ 86301
 (928) 583-4462
 jorge.torres-cartagena@cobham.com



Matt Cadwell
 Antennas Sales Director - US/Marlow
 6400 Wilkinson Drive
 Prescott, AZ 86301
 (214) 762-5861
 matt.cadwell@cobham.com

Collins Aerospace

www.collinsaerospace.com



Collins Aerospace – created in 2018 by combining UTC Aerospace Systems and Rockwell Collins – is a leader in technologically advanced, intelligent solutions for the aerospace and defense industry.



Fred Manzo
 Director, Army Programs
 1300 Wilson Boulevard, Suite 200
 Arlington VA 22209-2307
 (571) 982-2632
 fred.manzo@collins.com



Ed McKee
 Director, Redstone Arsenal Programs
 5025 Bradford Drive, Building 1, Suite 135
 Huntsville, AL 35805-1973
 (256) 476-6296
 edward.mckee@collins.com

Composite Factory LLC

www.compositefactory.com



COMPOSITE FACTORY designs and manufactures products utilizing advanced composite materials to enhance the performance of the US warfighter and his/her equipment. We offer Engineering, Tooling, and Production under one roof



Scott Kratzer
 Vice President of Business
 Development
 143 Thunder Road, Suite B
 Mooresville, NC 28115
 (704) 696-1084
 s.kratzer@compositefactory.com



Joe Hofmann
 Chief Operations Officer
 143 Thunder Road, Suite B
 Mooresville, NC 28115
 (704) 696-1084
 j.hofmann@fibreworkcomposites.com

DAYTON-GRANGER, INC.

http://daytongranger.com/



Established in 1943, DAYTON-GRANGER produces over 700 high-end Aerospace proprietary products for commercial and military aircraft. Core products: ANTENNAS (Conformal, Blades), ELECTROSTATIC protection (Static Dischargers, Electrostatic Test Sets) and LIGHTNING Protection (Transtrike and Strikeguard).

Christopher Maholm
 Director of Business Development and Engineering
 P.O. Box 350550
 Ft. Lauderdale, FL 33335
 (954) 463-3451
 cmaholm@daytongranger.com

Donaldson Company

www.donaldsonaerospace-defense.com



Donaldson's Aerospace & Defense business unit is a leading worldwide provider of filtration systems for the defense industry. Its filtration solutions protect fixed-wing aircraft, rotorcraft, military ground vehicles, electronic equipment, space vehicles, missiles, military shipboard systems and amphibious vehicles. Donaldson, committed to advancing filtration technology and providing quality products and prompt customer service assists customers from its many sales, engineering and manufacturing locations around the world.

Rob Barr
 Aftermarket Sales Manager
 17891 Chesterfield Airport Road
 Chesterfield, MO 63005
 (636) 300-5260
 rob.barr@donaldson.com

Vince Testa
 Account Manager
 17891 Chesterfield Airport Road
 Chesterfield, MO 63005
 (636) 300-5288
 vince.testa@donaldson.com

East/West Industries, Inc.

www.eastwestindustries.com



Since 1968, East/West has designed and manufactured innovative, economical, high quality aircraft seats, life support and ground support equipment – such as our Crash-Attenuating Seats and our Master Crane®. East/West is a woman owned small business and a registered AS 9100 Company.

Joseph Spinosa
Vice President, Business Development
2002 Orville Drive North
Ronkonkoma, NY 11779
(631) 981-5900
jspinosa@eastwestindustries.com

Eaton

www.eaton.com/aerospace



Eaton is a leading innovator of aerospace products and services that optimize safety, reliability and power management. Our logistics network reaches all corners of the globe to ensure the highest levels of operational readiness.

Charlie King
Military Account Manager - U.S. Army
(931) 494-1083
CharlesFKing@eaton.com

Elbit Systems of America

www.elbitsystems-us.com



Elbit America is the leading source of innovative, technology based systems and sustainment support for diverse defense and commercial air and ground vehicles.



Layne Merritt
Vice President, Technology
4700 Marine Creek Parkway
Ft. Worth, Texas 76179
(682) 286-2000
layne.merritt@elbitsystems-us.com



Mark Stiner
Senior Director, Customer Relations
5030 Bradford Drive, Bldg. 2, Suite 115
Huntsville, AL 35805
(256) 480-2470
mark.stiner@elbitsystems-us.com



Paul Cooke
Senior Director, Business Development
Vertical Lift
4700 Marine Creek Parkway
Ft. Worth, Texas 76179
(817) 234-6786
paul.cooke@elbitsystems-us.com



Harry Hewson
Senior Director, Vertical Lift
4700 Marine Creek Parkway
Ft. Worth, Texas 76179
(682) 286-2252
harry.hewson@elbitsystems-us.com



Jeff Hager Photo
Director, Business Development
4700 Marine Creek Parkway
Ft. Worth, Texas 76136
Jeffrey.hager@elbitsystems-us.com



Jeremiah (J.J.) Arnold
VP Business Development,
Sustainment & Support
10823 NE Entrance Road
San Antonio, TX 78216
(210) 804-7743
jeremiah.arnold@elbitsystems-us.com



William (Buck) Butler
Program Manager II, Sustainment &
Support Solutions
5030 Bradford Drive, Bldg. 2, Suite 115
Huntsville, AL 35805
(256) 480-2469
William.butler@m7aero.com

EnerSys

www.enersys.com



EnerSys is the global leader in stored energy solutions for industrial applications. We provide reserve power and motive power batteries, chargers, power equipment, and outdoor equipment enclosures to customers worldwide.

Daniel A. Soltan
Aviation Sales Manager
2366 Bernville Rd
Reading, PA 19605
(509) 879-1597
daniel.soltan@enersys.com

Steve Benulis
Director of Marketing
2366 Bernville Road
Reading, PA 19605
(610) 208-1778
steven.benulis@enersys.com

Scott Lichte
Sr. Service and Applications Engineering Manager
617 North Ridgeview Dr
Warrensburg, MO 64093
(660) 429-7556
scott.lichte@enersys.com

Erickson Incorporated

www.ericksoninc.com



Erickson Defense and National Security provides world class support offering two lines of business. Erickson Aerial Operations is a global leader in providing commercial air support specializing in passenger, cargo, and CASEVAC operations. Erickson Mission Support Solutions provides full spectrum engineering, modification, and overhaul services for DoD legacy aircraft.



Kevin Cochie
Vice President Defense & National Security
5550 SW Macadam Avenue, Suite 200
Portland, OR 97239
(503) 505-5800
kcochie@ericksoninc.com



Scott Zurschmit
Sr. Director, Capture Management,
Defense & National Security
5550 SW Macadam Avenue, Suite 200
Portland, OR 97239
(971) 255-5035
szurschmit@ericksoninc.com



Mark Cooper
Sr. Director Business Operations &
Integration
5550 SW Macadam Avenue
Portland, OR 97239
(321) 544-2606
mcooper@ericksoninc.com



Stu Hartwell
Director of Defense & National Security
Sales
5550 SW Macadam Avenue
Portland, OR 97239
(256) 690-3736
shartwell@ericksoninc.com

FLIR Systems, Inc.

https://www.flir.com/



FLIR is the global leader in thermal imaging infrared cameras. FLIR offers a diversified portfolio that serves a number of applications in government & defense, industrial, and commercial markets.



LTG(R) Jim Barclay
VP of Business Development &
Partnerships
200 Clinton Avenue W, Suite 402
Huntsville, AL 35801
(256) 520-7508
James.Barclay@flir.com



Scott Crizer
Director, Army Programs
2800 Crystal Drive, Suite 330
Arlington, VA 22202
(703) 416-1041
Scott.Crizer@flir.com

GE Aviation

www.geaviation.com



GE is the world's leading producer of large and small jet engines for military and commercial aircraft.



Harry Nahatis
Vice President and General Manager,
Turboshaft/Turboprop Engines
1000 Western Avenue
Lynn, MA 01910
(781) 594-9079
harry.nahatis@ge.com



Bill Morris
Executive Director, U.S. Army Programs
1299 Pennsylvania Avenue, NW -
Suite 900
Washington, DC 20004
(202) 637-4085
william.h.morris@ge.com



Vance Sales
Director, Army Programs - Huntsville
Operations
655 Discovery Drive - Suite 301
Huntsville, AL 35806
(256) 217-9107
vance.sales@ge.com

General Atomics Aeronautical Systems, Inc. (GA-ASI)

www.ga-asi.com/



General Atomics Aeronautical Systems, Inc. (GA-ASI) is the leading designer/manufacturer of Remotely Piloted

Aircraft (RPA) systems, radars, and electro-optic and related mission systems, including Predator® series and Lynx® Multi-mode Radar.

Donald Cattell
Vice President, MQ-1C Business Unit
Don.Cattell@ga-asi.com
(858) 312-3687

Christopher MacFarland
Director, Business Development
Christopher.MacFarland@ga-asi.com
(256) 428-8604

Jordan Ramrus
Senior Technical Director
Jordan.Ramrus@ga-asi.com
(858) 312-2681

John Steen
Manager, Business Development
John.Steen@ga-asi.com
(256) 428-8609

Getac Inc.
www.getac.com



COTS rugged manufacturer of end-user devices that are MIL-STD 810G and available on various contracts such as CHES, CHS, and AIT. Our specialty is ability to customize our devices to meet unique Army mission requirements.



John Aller
Getac Army Sales Manager
15495 Sand Canyon Avenue
Irvine, CA 92618
(703) 439-4636
John.Aller@Getac.com

Honeywell Aerospace
aerospace.honeywell.com



THE POWER OF CONNECTED

Honeywell products are found on virtually every defense platform. The Aerospace business unit builds engines, cockpit and cabin electronics, connectivity systems, mechanical components and more.



Tory Burgess
Director of Business Development,
Army Aviation
(256) 631-9019
James.Burgess2@honeywell.com



Roderick Hynes
Sr. Director, US Army Programs
(256) 224-8287
Roderick.Hynes@Honeywell.com

IAI North America
www.iainorthamerica.com



IAI North America is the US subsidiary of IAI Ltd. a globally recognized technology and innovation leader specializing in developing and manufacturing advanced, state-of-the-art systems for air, space, sea, land, cyber and homeland security.

Peter Costello, CMO
13873 Park Center Road., Suite 400N
Herndon, VA 20171
(703) 243-2227
pcostello@iaidc.com

Lisa Gordon
Director, Marketing Communications
601 New Jersey Ave., Suite 230
Washington, DC 20001
(202) 715-0952
lgordon@iaidc.com

Scott Thompson
Director, Army Business Development
13873 Park Center Rd., Suite 400N
Herndon, VA 20171
(703) 243-2227
sthompson@iaidc.com

Industrial Smoke & Mirrors
www.industrialsmokeandmirrors.com



ISM is an Engineering company that bends metal in-house. ISM designs and manufactures simulated cockpits and cabs with control loading systems, motion seats, with mounted and dismounted weapons systems.



Don Peterson
Sales and Business Development
Manager
3861 Shader Road
Orlando, FL 32808
(407) 299-9400 ext: 242
don.peterson@
industrialsmokeandmirrors.com

Inter-Coastal Electronics Inc. (ICE)
https://inter-coastal.com



ICE designs and manufactures state-of-the-art embedded test, telemetry and training instrumentation for Aviation Warfighters, enabling seamless Force-on-Force and Aerial Gunnery weapon engagements with comprehensive AARs at CTCs and Home Stations.



Shawn Kirkpatrick
President
5750 E. McKellips Road
Mesa, AZ 85215
(480) 981-6898
skirkpatrick@inter-coastal.net



Jim Barker
Vice President of Business
Development
5750 E. McKellips Road
Mesa, AZ 85215
(480) 981-6898
jbarker@inter-coastal.net



Greg Kraak
Vice President of Programs
5750 E. McKellips Road
Mesa, AZ 85215
(480) 981-6898
gkraak@inter-coastal.net

Insitu, Inc.
www.insitu.com



Insitu serves our Warfighters by providing timely and actionable information through our trusted family of Tactical Unmanned Aircraft and Software Solutions. Insitu is a wholly-owned subsidiary of The Boeing Company.



Brian Zarchin
U.S. Army Programs Lead
Washington D.C. Area Office
(509) 637-5254
Brian.zarchin@insitu.com



Scott Miles
U.S. Army and USMC Programs
Huntsville Office
(509) 637-0691
Scott.miles@insitu.com

Intercomp Company
www.intercompcompany.com



Intercomp designs and manufactures platform scales, jack weigh kits, and calibration solutions at our facilities in the United States to assist our customers in aircraft weighing operations.

Eric Larson
Military Accounts Manager
3839 County Road 116
Medina, MN 55340
(763) 476-2531
ericl@intercompcompany.com

Kellstrom Defense
www.kellstromdefense.com



Kellstrom Defense is a global provider for the sustainment of legacy defense aircraft through OEM strategic distribution, repair services, and engineered products for military transporter, fighter, and rotary wing platforms.

Ruth Garcia
Director of Marketing
100 N. Pacific Coast Highway Suite 1950
El Segundo, CA 90245
(424) 217-1368
Ruth.Garcia@KellstromDefense.com

Kennon Products
https://kennonproducts.com/



Kennon is ISO 9001:2015 certified with 35 years' experience manufacturing custom, protective products for aircraft. We currently hold several SBIR awards for innovative solutions in inflatables and anti-ballistic aircraft products.



Joe Wright
CEO
2071 N. Main St.
Sheridan, WY 82801
(307) 674-6498
joe@kennoncovers.com



Todd Pierson
Director of Military Sales
2071 N. Main St.
Sheridan, WY 82801
(702) 290-7575
todd@kennoncovers.com



Stu McRae
Army Business Development
2071 N. Main St.
Sheridan WY 82801
(307) 674-6498
stuart.mcrae@kennoncovers.com

Liquid Measurement Systems

www.liquidmeasurement.com



LMS offers comprehensive engineering expertise in aircraft fuel quantity gauging. Designing and manufacturing reliable and value-driven solutions increase life cycles of existing platforms and allow rapid implementation in experimental aircraft.



Jonathan Farnham
141 Morse Drive
Georgia, VT 05478
(802) 528-8150
jonathan.farnham@liquidmeasurement.com



Adam Truso
141 Morse Drive
Georgia, VT 05478
(802) 528-8145
adam.truso@liquidmeasurement.com

Lockheed Martin

<http://www.lockheedmartin.com/us/html>



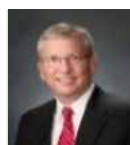
Lockheed Martin is a global security and aerospace company and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.



Dan Curry
Director, Army Aviation Programs
2121 Crystal Dr
Arlington, VA 22015
(703) 413-5769
daniel.r.curry@lmco.com



Julius (JR) Rigole
Senior Manager, Army Aviation Programs
2121 Crystal Dr
Arlington, VA 22015
(703) 413-6992
julius.a.rigole@lmco.com



Grady King
Senior Manager, Army Aviation Programs
4800 Bradford Dr. NW / Bldg 406
Huntsville, AL 35805
(256) 217-6704
grady.s.king@lmco.com



Dave Cooper
Business Development
PO Box 31598
Clarksville, TN 37040
(972) 467-7411
david.f.cooper@lmco.com

Lockheed Martin Sensors & Global Sustainment (S&GS)

www.lockheedmartin.com/en-us/index.html



Lockheed Martin Sensors and Global Sustainment is a global security and aerospace company engaged in the research,

design, development, manufacture, integration, and sustainment of advanced sensor systems, products, and services.



Donald T. Bolling
Director, Business Development - Advanced Targeting Systems
5600 Sand Lake Road MP-416
Orlando, FL 32819
(407) 356-5395
donald.t.bolling@lmco.com



Mason W. Thornal
Senior Manager, Strategy & Business Development, Advanced Programs
5600 Sand Lake Road MP-416
Orlando, FL 32819
(407) 356-9990
mason.w.thornal@lmco.com



Jeffrey White
Senior Manager, Strategy & Business Development, Apache Fire Control / Future Vertical Lift
5600 Sand Lake Road MP-416
Orlando, FL 32819
(407) 356-8727
jeffrey.w.white@lmco.com



Timothy R. Cornett
Senior Manager, International Business Development, Rotary Wing Sensors & Missile Systems
5600 Sand Lake Road MP-416
Orlando, FL 32819
(407) 356-6086
timothy.r.cornett@lmco.com

The Marvin Group

www.marvingroup.com



The Marvin Group (Marvin Engineering, Marvin Test Solutions, and Marvin Land Systems) proudly supports the warfighter with integrated weapon systems and electronic test equipment to ensure mission readiness.



Stephen T. Sargeant
Major General, USAF (Ret.)
Chief Executive Officer
Marvin Test Solutions, Inc.

Vice President, Strategic Development
The Marvin Group
Tel: +1 (949) 263-2222

Cell: +1 (310) 912-011

Meggitt Defense Systems

www.meggittdefense.com



Meggitt Defense Systems specializes in the design, manufacture, integration and operation of scoring systems, ammunition handling systems, thermal management systems and components, airborne pods and countermeasures used to support armed forces and defense agencies worldwide.



Derek Foster
Director, Electronic Systems
9801 Muirlands Blvd
Irvine, CA 92618
(714) 875-8441
derek.foster@meggitt.com



Kyle Pattermann
Director, Tactical Systems
9801 Muirlands Blvd.
Irvine, CA 92618
(949) 465-9560
kyle.pattermann@meggitt.com

MILCOTS LLC

www.milcots.com



MILCOTS designs and manufactures rugged flat panel displays and rugged panel PC for military and demanding applications where a harsh environment is standard and long life cycle a requirement.

John Aldon
President
211 Island Road
Mahwah, NJ 07430
(845) 357-6700
john.aldon@milcots.com

Clare Archer
National Sales Manager
211 Island Road
Mahwah, NJ 07430
(845) 357-6700
clare.archer@milcots.com

Moog Inc., Aircraft Sector

www.moog.com/aircraft



Moog offers a variety of engineered support solutions to complement the highly responsive repair and overhaul services provided for our existing products, including obsolescence management, supply chain partnerships, and logistics support.

Jeff Markel
Director, Sustaining Engineering and Modernization
Military Global Sustainment
160 Jamison Road
East Aurora, NY 14052
(716) 725-4874
jmarkel@moog.com

Moog Inc., Power & Data Sector

www.moog.com



Moog Power and Data Sector provides motion and power & data products; slip rings, motors, position sensors, solenoids, fiber optic devices and other products used in EO/IR pedestals, satellite communications, cockpit controls and blade de-ice.

Janet Byrne-Safier
Director
Power & Data Sector
1213 North Main Street
Blacksburg, VA 24060
(716) 687-4059
jbyrne-safier@moog.com

Joe Dascano
Sales Manager
1213 North Main Street
Blacksburg, VA 24060
(540) 443-4303
jdascano@moog.com

Moog Inc., Defense Sector

www.moog.com/defense

MOOG

Moog Defense Sector provides solutions for air, land and sea platforms. Our capabilities include modular, rugged, and affordable weapon stores management systems (SMS) and lightweight HELLFIRE launchers.

Jason Reichard
Director – Integrated Defense Systems
500 Jamison Road
East Aurora, NY 14052
(407) 451-9534
jreichard@moog.com

Tony Avillion
Program Manager – Integrated Defense Systems
500 Jamison Road
East Aurora, NY 14052
(407) 242-0679
tavillion@moog.com

Northrop Grumman

www.northropgrumman.com

THE VALUE OF PERFORMANCE

NORTHROP GRUMMAN

Northrop Grumman is a leading global security company providing innovative systems, products and solutions in autonomous systems, cyber, C4ISR, space, strike, and logistics and modernization to customers worldwide.



Darryl Reed
Director, Army & Special Operations
Account Management
301 Voyager Way
Huntsville, AL 35806
(256) 374-3017
darryl.reed@ngc.com



Brendan Kelly
Director, Future Vertical Lift
301 Voyager Way
Huntsville, AL 35806
(334) 790-1837
brendan.kelly@ngc.com



Dave "Atlas" Dowling
Director, Vertical Lift
Rolling Meadows, IL 60008
(224) 625-4087
david.dowling@ngc.com



Joel Aoki
SOCOM Account Manager
911 Capriccio Lane
Apollo Beach, FL 33572
(931) 320-8730
joel.aoki@ngc.com



Joe Franiak
Navigation Technologist
21240 Burbank Blvd
Woodland Hills, CA 91367
(818) 519-1701
joe.franiak@ngc.com



Kathy Kage
Army Futures Command Account
Manager
Fort Hood, TX 76544
(512) 585-9463
katherine.kage@ngc.com



Christopher Phlegar
Manager EW & Situational Awareness
301 Voyager Way
Huntsville, AL 35806
(224) 200-7778
christopher.phlegar@ngc.com



Bobby Seben
Army Aviation Account Manager
1510 Spinfisher Drive
Apopka, FL 32712
(334) 655-7415
bobby.seben@ngc.com

PCX Aerostructures

www.pcxero.com



PCX Aerostructures is a leading supplier of highly engineered, precision, flight critical aerospace components and complex assemblies for rotorcraft and fixed wing aerospace platforms. Visit pcxero.com.

Jeffrey Frisby
President & CEO
300 Fenn Road
Newington, CT 06111

Trevor Hartman
Vice President - Sales & Marketing
300 Fenn Road
Newington, CT 06111
(860) 594-4388
trevor.hartman@pcxero.com

PHANTOM PRODUCTS, INC.

WWW.PHANTOMLIGHTS.COM



You know Phantom. We build your Phantom Warrior® flashlight and DZ/LZ/PZ lights, among others. Everything is Florida made/designed. We have Molding/CNC machines and a laser engraver—we do it all.



Victoria Mcdermott
Owner
474 Barnes Blvd
Rockledge, FL 32955
(888) 533-4968
vmcdermott@phantomlights.com

PIC Wire & Cable - A Division of The Angelus Corporation

www.picwire.com/



PIC Wire & Cable offers premium interconnect products for advanced electronic defense applications that are engineered to improve electrical performance, reduce loss and weight, increase flexibility and simplify installation.

John Lytle
Global Sales & Marketing Director
N53 W24747 S Corporate Circle
Sussex, WI 53089
(262) 372-5027
jlytle@theangeluscorp.com

Pratt & Whitney

https://www.pw.utc.com



Pratt & Whitney is a world leader in the design, manufacture and service of aircraft engines and auxiliary power units with advanced technology supporting both domestic and international partners, including more than over 30 armed forces around the world.



Mitch Hadad
Associate Director, Diverse Military
Engines Business Development
400 Main Street
Hartford, CT 06118
(860) 557-1275
mitch.hadad@pw.utc.com



Pete Calcasola
Associate Director, Military Engines
Business Development
400 Main Street
Hartford, CT 06118
(860) 557-3674
peter.calcasola@pw.utc.com

Projects Unlimited, Inc.

www.pui.com/



Small Business Electronics & Wiring Contract Manufacturer of circuit card assemblies, box build integration & cable/wiring solutions serving aerospace & defense worldwide. AS9100D, ISO 9001:2015, NADCAP, ITAR & JCP certified.



Jill Alexander
Marketing Manager
6300 Sand Lake Rd
Dayton, OH 45414
(937) 918-2200
alexander@pui.com

QinetiQ North America

www.qinetiq-na.com



QinetiQ North America provides a full range of aircraft armor survivability products for both fixed wing and rotary wing aircraft.



George L. Adamakos
Sr. Business Development Manager
130 Constitution Blvd
Franklin, MA 02038
(781) 790-3575
george.adamakos@qinetiq-na.com

Recoil Logistic Systems, LLC

www.recoil-usa.com



Lightweight, ballistically tolerant extended range fuel tanks. Tanks range in size from 35.5 gallons (134.4 litre) to 850 gallons (3,217.6 litre). Custom tanks and special application tanks fabricated. Special Mission solution consulting.



Joseph Rice
Managing Director
Post Office Box 1365
Grants Pass, OR 97527-0113
(541) 326-1911
joseph@recoil-usa.com



Tanya Wilson
Administrative Director
Post Office Box 1365
Grants Pass, OR 97528-0113
(423) 404-5007
tanya@recoil-usa.com



Jere Bragado
Director - Aircraft Intergration
Post Office Box 1365
Grants Pass, OR 97528-0113
(541) 326-2105
jere@recoil-usa.com

Robertson Fuel Systems

<https://robertsonfuelsystems.com/>



For over 42 years Robertson Fuel Systems continues to be the world leader in the design, development, and manufacturing of crashworthy, self-sealing, and ballistically tolerant auxiliary and primary fuel systems.



Newman Shufflebarger
President
800 W Carver Rd, Suite 101
Tempe, AZ 85284
(480) 337-7050
newman.shufflebarger@robbietanks.com



Chip Lunn
VP, Programs and Marketing
800 W Carver Rd, Suite 101
Tempe, AZ 85284
(480) 337-8801
chip.lunn@robbietanks.com

Rolls-Royce

<http://www.rolls-royce.com/defence>



With more than 16,000 military engines in service with 160 customers in 103 countries, Rolls-Royce is a powerful player in the defence aero engine market. From combat to transport, from trainers to helicopters, our engines and pioneering service solutions ensure that our customers have world-leading engine technology available, whatever the mission demands.



Jason Propes
SVP Business Development, Vertical Lift Markets
450 S. Meridian Street
Indianapolis, IN 46225
(317) 373-8290
jason.propes@rolls-royce.com

Safran Helicopter Engines USA

www.safran-helicopter-engines.com



Safran is the leading helicopter engine manufacturer offering the widest range of engines in the world. Safran

engines power civil, parapublic and defense helicopters for leading helicopter manufacturers.



Norma Lantz
Executive VP, Airframer Sales and Marketing
2709 N. Forum Drive
Grand Prairie, TX 75052
(972) 606-8231
norma.lantz@safrangroup.com



Chris Speer
Vice President, Military Support
2709 N. Forum Drive
Grand Prairie, TX 75052
(972) 606-8288
chris.speer@safrangroup.us

Science and Engineering Services, LLC

www.ses-i.com



An industry leader in the modification and integration of manned and unmanned platforms, aviation training and total fielding solutions. SES offers a turnkey solution with a full spectrum approach that delivers the highest quality product to our customers.



E.J. Sinclair
Chief Executive Officer
248 Dunlop Boulevard
Huntsville, AL 35824
(256) 258-5000
e.j.sinclair@ses-i.com



Skip Sherrell
Vice President, Business Development
248 Dunlop Boulevard
Huntsville, AL 35824
(256) 258-3992
skip.sherrell@ses-i.com

ScioTek

<https://www.scioetek.com/en>



ScioTek has a 35 year heritage of designing and manufacturing the most innovative display solutions for the Aviation, ATC and Defense & Security markets.



Bill Brown
North American Military Business Development and Sales
6650 Sugarloaf Parkway
Duluth, GA 30097
(678) 654-6508
bill.brown@scioetek.com

Shock Tech, Inc

www.shocktech.com



ShockTech designs, manufactures and tests shock attenuation and vibration isolation systems for the most demanding environments. ShockTech provides solutions for your equipment's dynamic protection problems and are experts at quick-turn, affordable results.



Carl Mattaliano
VP of Sales
211 Island Road
Mahwah, NJ 07430
(201) 808-9321
carl.mattaliano@shocktech.com

Sierra Nevada Corporation

www.sncorp.com



Sierra Nevada Corporation delivers customer-focused technologies and best-of-breed systems integrations in the aerospace and defense sectors. Applications span navigation/guidance, communications, electronic warfare and threat detection, cybersecurity, infrastructure protection and commercial space.



Mr. Gregory Cox
Executive Vice President
444 Salomon Circle
Sparks, NV 89434
(775) 331-0222
greg.cox@sncorp.com



Rich Carter
Vice President of Business Development and Technology
18632 Jarkey Drive
Hagerstown, MD 21742
(301) 790-6877
Rich.carter@sncorp.com



Tim Owings
Executive Vice President
4000 Market Street
Huntsville, AL 35808
(301) 790-6857
Tim.owings@sncorp.com



Scott Hasken
Sr. Director, Government Relations
2231 Crystal Drive, Suite 1113
Arlington, VA 22202
(703) 414-5712
Scott.hasken@sncorp.com



Paul Bontrager
Vice President, Government Relations - Army
2231 Crystal Drive, Suite 1113
Arlington, VA 22202
(703) 414-5702
Paul.bontrager@sncorp.com

Sikorsky

<https://insidem.external.lmco.com/home/rms>



Pioneers flight solutions that bring people home everywhere ... every time. Sikorsky helicopters are used by all five branches of the United States Armed Forces, international partners, and commercial operations worldwide.



David "Rum" Morgan
Director, Army and Air Force Strategy & Business Development
300 M Street SE Suite 6900
Washington, DC 20003
(202) 863-3291
david.a.morgan@lmco.com



Jay Macklin
 Director, Future Vertical Lift (FVL)
 Business Development
 5025 Bradford Drive, Building 2, Suite 200
 Huntsville, AL 35805
 (256) 327-5311
jay.r.macklin@lmco.com



Erskine "Ramsey" Bentley II
 Director, Customer Analytics and
 Business Development
 5025 Bradford Drive, Building 2, Suite 200
 Huntsville, AL 35805
 (256) 541-9573
erskine.r.bentley.ii@lmco.com



Mark Riddle
 Senior Manager, Army Strategy &
 Business Development
 300 M Street SE, Suite 6900
 Washington, DC 20003
 (202) 863-3309
mark.a.riddle@lmco.com



Bobby Adkins
 Senior Manager, Aftermarket Strategy
 and Business Development
 5025 Bradford Drive, Bldg 2, Suite 200
 Huntsville, AL 35805
 (256) 327 5311
jay.r.macklin@lmco.com



Ray Gentzyl
 Manager, Army Strategy and Business
 Development
 807 Donnell Blvd, Suite A
 Daleville, AL 36322
 (334) 503 9664
ray.d.gentzyl@lmco.com



Mike Mudd
 Manager, Army Strategy and Business
 Development
 12423 Windmill Cove Drive
 Riverview FL 33569
 (813) 503-1926
mike.g.mudd@lmco.com



Tom Nicolett
 Manager, National Guard Strategy and
 Business Development
 6900 Main St., PO Box 9729
 Stratford, CT 06615-9129
 (203) 386-7222
tom.v.nicolett@lmco.com

Southeast Aerospace

www.seaerospace.com



Southeast Aerospace provides A&B Kits with in-house electrical and structural manufacturing, complete aircraft modifications, component repairs and parts sales. Servicing heavy Turbo Props, light to heavy Jets, and Rotorcraft platforms.

Dave Alderman
 1399 General Aviation Rd
 Melbourne, FL 32935
 (321) 255-9877
dave.alderman@seaerospace.com

Star Aviation, Inc.

www.staraviationky.com



Star Aviation, Inc. is an industry expert in Electronic Wire Interconnect systems (EWIS). We reduce "No Fault Found" (NFF) by addressing intermittence, rehabilitate systems reliability and increase Mission Readiness.

Greig Dean
 9001 W Highway 42
 Goshen, KY 40026
 (502) 241-3072
gdean@staraviationky.com

Stevens Aerospace and Defense Systems

www.stevensaerospace.com



Stevens Aerospace Government Group delivers dedicated solutions in modification, repair & overhaul for government and special operations aircraft. The Government Group focuses on crucial issues for aircraft obsolescence, intelligence, surveillance, reconnaissance solutions. Contact: Jim Williams at (866) 800-6164.

J.B. Brown
 Deputy Government Operations
 600 Delaware Street
 Greenville, SC 29605
 (864) 525-9357
jbrown@stevensaerospace.com

Jim Williams
 Vice President Government Operations
 600 Delaware Street
 Greenville, SC 29605
 (864) 304-1736
jwilliams@stevensaerospace.com

Gene Gunnin
 Vice President Government Programs
 600 Delaware Street
 Greenville, SC 29605
 (864) 361-7579
ggunnin@stevensaerospace.com

David Crowder
 General Manager Donaldson Facility
 600 Delaware Street
 Greenville, SC 29605
 (864) 444-6585
dcrowder@stevensaerospace.com

Strata-G Solutions, LLC

stratag-llc.com



STRATA-G is a wholly owned subsidiary of The Aleut Corporation (TAC), an Alaska Native Corporation (ANC) and Small Disadvantaged Business (SDB). Strata-G's primary operations are located in Huntsville, Alabama offering Design, Engineering, Prototyping, Hardware Manufacturing, and Platform Modernization delivering high quality, rapid response Aviation, Ground, and Unmanned platform systems products and services.



Devin Whitaker
 President & Founder
 2901 Wall Triana Highway, Suite 200
 Huntsville, AL 35824
 (256) 713-0482
devin.whitaker@stratag-inc.com



Beth Whitaker
 Director, Customer Relations &
 Marketing
 2901 Wall Triana Highway, Suite 200
 Huntsville, AL 35824
 (256) 713-0482
beth.whitaker@stratag-inc.com



Scott Harvey
 Executive Director, Business
 Development
 2901 Wall Triana Highway, Suite 200
 Huntsville, AL 35824
 (256) 535-3060
scott.harvey@stratag-inc.com

Streamlight, Inc.

streamlight.com



Streamlight provided DoD aviation with certified tactical, hands free and rescue lighting products using LEDs, commercial batteries and rechargeable platforms; Sidewinder Rescue has Air Warrior approval.

Matt Baker
 Director, Federal/Military
 30 Eagleville Road
 Eagleville, PA 19403
 (610) 631-0600
mbaker@streamlight.com

Sherry Lyons
 Regional Sales Manager, Federal/Military
 30 Eagleville Road
 Eagleville, PA 19403
 (610) 631-0600
slyons@streamlight.com

Summit Aviation

<https://summitaviationmfg.com>



Located in Middletown, Del., Somerset, Ky. and Kernersville, N.C., Summit is an award-winning manufacturer recognized for its outstanding quality, commitment to meeting delivery schedules, sustained high performance, customer satisfaction and robust lean processes.

Justin Cevette
 4200 Summit Bridge Road
 Middletown, DE 19709
 (302) 468-0224
jcevette@summit-aviation.com

Sweeney: An Enerpac Brand

<https://www.enerpac.com/en-us/USProducts>



a Hydratight® brand

Sweeney is a recognized leader in aerospace tooling; providing GSE & torque multiplier products to the Army for decades. Enerpac provides customizable hydraulic tooling; adaptable for any application.

Chris Corcoran
 Sweeney Account Manager - Aerospace & Industrial
 2010 Clermont St.
 Antigo, WI, 54409
 (317) 727-3413
chris.corcoran@enerpac.com

Darin Jerde
Aerospace Vertical Market Sales Leader - Sweeney
2010 Clermont St.
Antigo, WI, 54409
(303) 520-8156
darin.jerde@enerpac.com

Telephonics Corporation

www.telephonics.com



Telephonics is a leader in highly sophisticated surveillance, communications, analysis and integration solutions. Our systems are deployed across a range of landscape applications, providing our aerospace, defense and commercial customers with a tactical advantage in the most unpredictable environments.

Steve Piro
Sr. Director Airborne Intercommunications
815 Borad Hollow Road
Farmingdale, NY 11735
(631) 703-7450
piro@telephonics.com

Textron, Inc.

www.textron.com



Textron is one of the best known multi-industry companies, recognized for its powerful brands such as Bell, Cessna, Beechcraft, Lycoming and many more. The company leverages its global network of aircraft, defense, industrial and finance businesses to provide customers with innovative products and services.



John Lindsay
Director, Washington Operations - Army Programs
1101 Pennsylvania Ave, NW
Washington, DC 20004
(202) 637-3833
john.lindsay@textron.com

Thales

https://www.thalesgroup.com/en



Thales is a global technology leader for the Aerospace, Transport, Defense, and Security markets. Thanks to its 65,000 employees in 56 countries, Thales recorded sales of over \$14 Billion in 2018. With over 23,000 engineers and researchers, Thales has a unique capability to design and deploy equipment, systems and services to meet the most complex mission and security requirements.



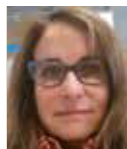
Laurent Ducruet
V.P. Business Development
2733 South Crystal Drive, Suite 1200
Arlington, VA 22202
(202) 341-9111
laurent.ducruet@us.thalesgroup.com



James Sleigh
Program Manager Avionics Solutions
5411 sw Turtle Shell Ln
Palm City, FL 34990
(772) 812-9730
jsleigh@tccus.com



John Daley
Director, Business Development
1444 N. Farnsworth Avenue, Suite #604
Aurora, IL 60505
(630) 499-9029
John.Daley@thalesvisionix.com



Karen Starr
Sr. Marketing & Sales Manager
Campus Thales Bordeaux
75-77 Avenue Marcel Dassault
France
+33 5 24 44 65 45
karen.starr@fr.thalesgroup.com

Tyonek Native Corporation

www.tyonek.com



Tyonek is a high quality manufacturing and services company engaged at every step of the lifecycle of aerospace and defense systems, subsystems and components.



Steve Adlich
President
229 Palmer Road
Madison, AL 35758
(256) 258-6200
sadlich@tyonek.com



Doug Baker
Vice President, Business Development
229 Palmer Road
Madison, AL 35758
(256) 258-6200
dbaker@pclnet.net

United Rotorcraft, An Air Methods Division

www.unitedrotorcraft.com



United Rotorcraft provides innovative aircraft completions, refurbishments, paint, and accessories to meet our customer's unique mission requirements.



Bob Brodin
Director of Government Programs
7301 S Peoria St
Englewood, CO 80112
(303) 256-4187
bob.brodin@airmethods.com



Art Torwirt
Senior Manager of Government Business Development
7301 S Peoria St
Englewood, CO 80112
(303) 749-2806
art.torwirt@airmethods.com



Kurt Mueller
Senior Program Manager
7301 S Peoria St
Englewood, CO 80112
(303) 749-2807
kurt.mueller@airmethods.com

Yulista Holding LLC

www.yulista.com



Yulista is an ANC 8(a) regional corporation providing aviation modernization, maintenance and training solutions to our customers world-wide.....Anytime and Anywhere!



Joseph Parsley
Director, Business Development
631 Discovery Drive
Huntsville, AL 35806
(256) 763-2933
joseph.parsley@yulista.com

Other

Air Evac Lifeteam

www.lifeteam.net



Part of Global Medical Response, the world's largest provider of air and ground ambulance services, AEL offers excellent career options for veterans; pilot, flight nurse, paramedic, mechanic, training, and management.



Janie Foster
Aviation Recruitment Manager
1001 Boardwalk Springs Place,
Suite 250
O'Fallon, MO 63368
(636) 695-5369
janie.foster@air- evac.com



Jerry Mitchell
Director of Maintenance
1001 Boardwalk Springs Place,
Suite 250
O'Fallon, MO 63368
(636) 695-5351
jerry.mitchell@air- evac.com

ALKAN

www.alkan.fr



Excellence in Airborne Carriage Systems for helicopters, combat aircraft, light combat aircraft, maritime patrol aircraft and UCAV.

ABEGG Cyril
CEO
Rue du 8 Mai 1945
94460
France
+331 45 10 86 89
abegg@alkan.fr

GANASCIA Jean-Michel
Sales & Marketing Director
Rue du 8 Mai 1945
94460
France
+331 45 10 86 17
ganascia@alkan.fr

Aviation Search Group

<http://www.aviationsearchgroup.com/>



Aviation Search Group is a direct-hire recruiting firm that has been placing professionals exclusively within the aviation industry for 20 years.

Gary Miner
Executive Director
607 West Main Street
Mount Pleasant, Pennsylvania 15666
(724) 547-7015
gary@aviationsearchgroup.com

AVT Simulation

<https://avtsim.com>



AVT Simulation is an Orlando-based, end-to-end systems integration and full-service modeling and simulation small business. We provide engineering, modeling, support, and database services within the training and simulation industries.



Robert Abascal
Founder and CEO
2603 Challenger Tech Ct.
Orlando, FL 32826
(407) 381-5311 x102
rabascal@avtsim.com



LtCol (Ret) Kyle Crooks
President
2603 Challenger Tech Ct.
Orlando, FL 32826
(407) 381-5311 x106
kccrooks@avtsim.com



COL (Ret) Kevin Vizzarri
VP of Business Development
2603 Challenger Tech Ct.
Orlando, FL 32826
(407) 381-5311 x102
kvizzarri@avtsim.com

CATI Training Systems

www.catinet.com



CATI Training Systems, a leader in innovative Image Generator and Simulation Solutions providing superior training, system hardware integration, software design and development, research support and visual systems solutions since 1997.



Richard Stumpf
President
208 Heritage Way
Ozark, AL 36360
(344) 598-1319
richard.stumpf@catinet.com



Vincent C. Hill
Vice President of Business Development
208 Heritage Way
Ozark, AL 36360
(850) 461-9642
vincent.hill@catinet.com



Rolf Beutler
Vice President of Engineering
208 Heritage Way
Ozark, AL 36360
(334) 598-1319
rolf.beutler@catinet.com



Peter Obear
Manager Software Engineering
208 Heritage Way
Ozark, AL 36360
(334) 598-1319
peter.obear@catinet.com

CTG

www.ctgnow.com



CTG's supply chain solutions increase your readiness. We offer parts sourcing, obsolescence management, counterfeit avoidance and risk mitigation. We are recognized in both Commercial Aviation and Defense industries for award-winning quality and customer service.



Col. Rick Bowyer, USA, Ret.
Executive Vice President, Strategic Business Development
One Odell Plaza, Suite 139
Yonkers, NY 10701
(580) 284-8524
rbowyer@ctgnow.com



Col. Matt Mingus, USA, Ret.
VP, Strategic Business Development
One Odell Plaza, Suite 139
Yonkers, NY 10701
(334) 717-0706
mmingus@ctgnow.com

Dallas Avionics

www.dallasavionics.com



Dallas Avionics — founded in 1973, a Wholesale Distributor of Avionics, Test Equipment, Installation & Pilot Supplies has over 60 years of combined experience in the industry & highest commitment to customer service.

W. Scott Davis
V.P. Sales and Marketing
2525 Santa Anna Ave.
Dallas, TX 75228
(214) 320-9770 / (800) 527-2581
sd@dallasavionics.com

Dan Robinett
Field Applications Specialist, Government Programs
5555 County Road 260
Auxvasse, MI 65231
(573) 826-0076
dan.robinett@dallasavionics.com

DigiFlight Inc

www.digiflight.com



DigiFlight helps customers accelerate mission success with technology solutions that protect our national security. Aerospace Technical & Acquisition, Cybersecurity, Technology Management, Systems and Software Development, Systems Engineering and Test & Evaluation.



Stanford Oliver
President/CEO
8825 Stanford Ave Suite 100
Columbia, MD 21045
(443) 832-1801
stanford.oliver@digiflight.com



Yevette Bratten
Executive Vice President/Chief Strategy Officer/Facility Security Officer
8825 Stanford Ave Suite 100
Columbia, MD 21045
(443) 832-1808
yevette.bratten@digiflight.com



Michael Flowers
Chief Operating Officer
5206 Point Harbor Lane
Apollo Beach, FL 33572
(813) 453-4161
michael.flowers@digiflight.com



Larry Jess
Senior Vice President, Aerospace Group
7047 Old Madison Pike, Suite 350
Huntsville, AL 35806
(256) 694-9695
larry.jess@digiflight.com



Allan H. Lanceta
Vice President, Aviation and Special Operations
7047 Old Madison Pike, Suite 350
Huntsville, AL 35806
cell: (256) 388-9307
office: (256) 801-0727
al.lanceta@digiflight.com



John Haeme
Project Manager, PM Apache NETT
7047 Old Madison Pike, Suite 350
Huntsville, AL 35806
(256) 313-4013
John.haeme@digiflight.com



Scott Chapman
Aviation System Safety
7047 Old Madison Pike, Suite 350
Huntsville, AL 35806
(256) 801-0722
scott.chapman@digiflight.com

Eclipse International

www.eclipse.org



Eclipse International designs and manufactures circuit analysis test equipment, and also offers services related to circuit testing. Our products are used to verify the integrity of wire interconnect systems, electronic enclosures, and more to the DoD/Military, Aerospace, and commercial industries.

Christopher Teal
Marketing Director
265 N. Joy Street, Suite 150
Corona, CA 92879
(951) 371-8008 Ext: 110
ctéal@eclipse.org

Hilton Software

www.hiltonsoftware.com



Hilton Software is the market-leader in development of multi-platform mobile solutions for Commercial and Military operations and is the prime contractor for the Department of Defense Aeronautical Mobile Application.



Hilton Goldstein
CEO and Founder
2730 N University Drive
Coral Springs, FL 33065
(954) 323-2244 Ex 405
accounts@hiltonsoftware.com



Tracy Ellison
Director of Human Resources
2730 N University Drive
Coral Springs, FL 33065
(954) 323-2244 Ex 402
tracye@hiltonsoftware.com



Karla Rivera
Executive Assistant to CEO
2730 N University Drive
Coral Springs, FL 33065
(954) 323-2244 Ex 405
karlar@hiltonsoftware.com

JSfirm.com

<https://www.jsfirm.com/>



JSfirm.com, an aviation job board exclusively serving the aviation industry for decades, is free to jobseekers and a fantastic place for aviation companies to advertise jobs and search resumes.

Jeff Richards
Operations Manager
11350 Cleveland Gibbs Road, Suite 104
Roanoke, Texas 76262
(724) 547-6203
jeff@jsfirm.com

Kellstrom Defense

www.kellstromdefense.com



Kellstrom Defense is a global provider for the sustainment of legacy defense aircraft through OEM strategic distribution, repair services, and engineered products for military transporter, fighter, and rotary wing platforms.

Ruth Garcia
Director of Marketing
100 N. Pacific Coast Highway Suite 1950
El Segundo, CA 90245
(424) 217-1368
Ruth.Garcia@KellstromDefense.com

Meggitt Defense Systems

www.meggittdefense.com



Meggitt Defense Systems specializes in the design, manufacture, integration and operation of scoring systems, ammunition handling systems, thermal management systems and components, airborne pods and countermeasures used to support armed forces and defense agencies worldwide.



Derek Foster
Director, Electronic Systems
9801 Muirlands Blvd
Irvine, CA 92618
(714) 875-8441
derek.foster@meggitt.com



Kyle Pattermann
Director, Tactical Systems
9801 Muirlands Blvd.
Irvine, CA 92618
(949) 465-9560
kyle.pattermann@meggitt.com

QuantiTech, Inc

www.quantitech.com



Provides technical and management support to Government and commercial customers in systems engineering and integration; program and project management; test and evaluation; logistics engineering; safety; business management; and information technology.

Reese Hauenstein
Vice President Army Aviation Systems
360A Quality Circle, Suite 100
Huntsville, AL 35806
(256) 808-4073
michael.hauenstein@quantitech.com

Dean Hutson
Vice President Logistics Engineering & Support
360A Quality Circle, Suite 100
Huntsville, AL 35806
(256) 425-1286
dean.hutson@quantitech.com

Radianc Technologies, Inc.

www.radiancetek.com



Radianc Technologies develops customer-focused solutions in the areas of cyber solutions, systems engineering, prototyping and integration as well as operational and strategic intelligence including scientific and technical intelligence.

Pete Weiland
Executive Vice President - Chief Technology Officer
350 Wynn Dr.
Huntsville, AL 35805
(256) 704-3401
peter.weiland@radiancetek.com

Eric Briggs
Senior Vice President - Engineering Services
350 Wynn Dr.
Huntsville, AL 35805
(256) 704-3401
eric.briggs@radiancetek.com

Tim Tinsley
Senior Vice President - Integration and Prototyping
350 Wynn Dr.
Huntsville, AL 35805
(256) 704-3401
timothy.tinsley@radiancetek.com

Laura Bequette
AVP, Aviation Programs
350 Wynn Dr.
Huntsville, AL 35805
(256) 704-3401
laura.bequette@radiancetek.com

Stevens Aerospace and Defense Systems

www.stevensaerospace.com



Stevens Aerospace Government Group delivers dedicated solutions in modification, repair & overhaul for government and special operations aircraft. The Government Group focuses on crucial issues for aircraft obsolescence, intelligence, surveillance, reconnaissance solutions. Contact: Jim Williams at (866) 800-6164.

J.B. Brown
Deputy Government Operations
600 Delaware Street
Greenville, SC 29605
(864) 525-9357
jbrown@stevensaerospace.com

Jim Williams
Vice President Government Operations
600 Delaware Street
Greenville, SC 29605
(864) 304-1736
jwilliams@stevensaerospace.com

Gene Gunnin
Vice President Government Programs
600 Delaware Street
Greenville, SC 29605
(864) 361-7579
ggunnin@stevensaerospace.com

David Crowder
General Manager Donaldson Facility
600 Delaware Street
Greenville, SC 29605
(864) 444-6585
dcrowder@stevensaerospace.com

Universal Avionics, an Elbit Systems Company

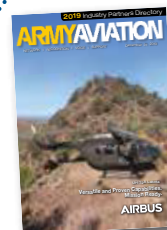
www.uasc.com



Universal Avionics offers Commercial Off-The-Shelf (COTS) upgrades for legacy systems allowing government aircraft to meet critical safety mandates while enhancing mission effectiveness in a very cost effective manner. As the inventor of the first Flight Management System (FMS) and a leader in display technology, Universal Avionics enhances military aircraft capabilities while retaining key legacy mission systems.



Bob Sanchez
Director, Military Programs
3260 E Universal Way
Tucson, AZ 85756
(520) 295-2300
bsanchez@uasc.com



ARMY AVIATION
Magazine's

Industry Partners Directory
Referenced
All Year Long!

An Inflection Point for Army Aviation Science & Technology

By Carvil E. T. Chalk



SIKORSKY-BOEING PHOTO



BELL PHOTO

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

ary transformation of Army Aviation – Advanced Teaming and Air Launched Effects – all while supporting the Future Attack Reconnaissance Aircraft Competitive Prototype (FARA-CP) program.

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

The *Degraded Visual Environment-Mitigation* multi-year demonstration program is evaluating key technologies to enable full spectrum Aviation operations in degraded environments. The three main components of a DVE

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

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

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

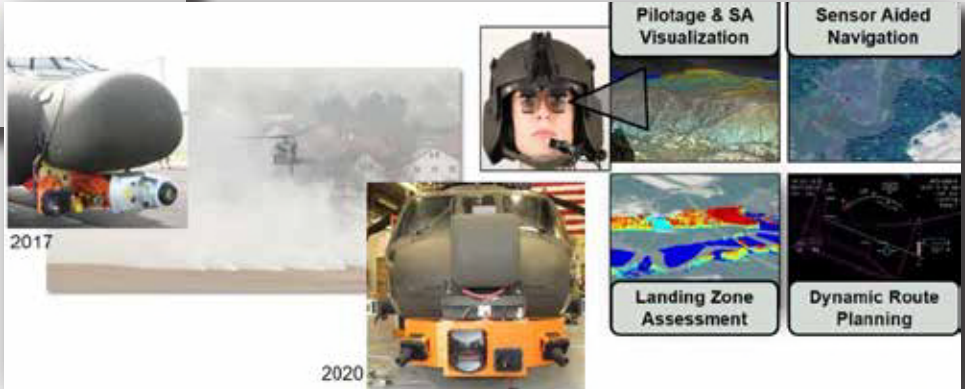


Advanced Teaming and Air Launched Effects

Degraded Visual Environment Mitigation (DVE-M) program

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

While Advanced Teaming emphasizes autonomy and behaviors, the complementary effort, *Air Launched Effects*, brings the air vehicles and payloads to execute these missions. Our S&T effort is focused on tactical-altitude launch of on-demand ALE to provide a range of effects. The air vehicles that support these autonomous engagements comprise ALE that operate as a morphing team to enhance lethality and survivability and enable dominance in the lower-tier aviation domain. ALE will be deployed from FARA and maneuver into the enemy integrated air defense



systems (IADS) domain. Each team member will apply its unique payloads in a coordinated and collaborative fashion for mission success. AI engines will enable individual and team reconfiguration. And when manned systems move into the fight, ALE can provide layered survivability to ensure the lethality of our force and the protection of our greatest asset, the U.S. Army Soldier.

This burgeoning synthesis of air vehicle technologies, open systems, autonomy, and sensor fusion gives us teams of

manned and unmanned platforms that engage the enemy more quickly and exhibit timely adaptability to neutralize threats and waste the investments of our adversaries bringing us victory on the battlefield while conserving our resources and protecting our greatest treasures – liberty and those who defend it.

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

Areté

DVE

Degraded Visual Environment Lidar

Areté's state-of-the-art, MIL-standard, FAA-certified lidar system provides real-time, high-fidelity situational awareness sensor for helicopter operation in degraded visual environments (DVE). This flight-proven sensor offers unprecedented 3D point density, range, and continuously adjustable field of view and scan parameters. DVE uniquely captures and processes full lidar waveforms, enabling novel weak target detection, obscurant characterization, and rejection.



10"x9.5"x12"
30 lbs
250W nominal (400W Max)



POC: James Murray | jmurray@arete.com | (303) 532-8497
Business POC: Jay Rouse | jrouse@arete.com | (571) 255-4035

Copyright © 2018 Arété | All Rights Reserved

Airworthiness Readiness for Future Vertical Lift

By Mr. Keith R. Darrow



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

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

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

Initiatives

In response, we have initiated several new activities to strengthen AED's

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

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

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

However, as advanced technologies continue to quickly mature toward their readiness for integration into Army

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

Future Attack Reconnaissance Aircraft

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

During the last quarter of calendar

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

Automation & AI

Another ongoing activity is AED's initiative to incorporate greater levels of automation and, perhaps, artificial intelligence into the engineering task management system that undergirds our implementation of the Army's airworthiness process. This effort is es-

sential to our ability to support FVL program schedules with expeditious generation and technical reviews of system-tailored airworthiness qualification plans, airworthiness impact statements, airworthiness releases, airworthiness qualification substantiation records, and statements of airworthiness qualification. In addition to providing the increased administrative agility required to meet demanding schedule expectations, this initiative also establishes a solid foundation for the potential future implementation of military aircraft type certificates.

As you know, leaders of Army Aviation combat units are highly adept at managing operational risks. Likewise, our acquisition program and project leaders are experts at managing programmatic risks in the areas of cost, schedule, and system performance. However, in the airworthiness arena, our mission is oriented toward advising senior Army leaders regarding materiel risks that may affect the flight safety of our current and future aircraft. Particularly within a "schedule is king" environment, it is imperative that AED continues to work closely with the FVL

cross-functional team, acquisition project office system safety managers, and aircraft manufacturers to identify potential materiel risks as early as possible and begin developing well-informed plans to mitigate, and ultimately retire, any associated hazards.

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

Above the Best!

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



**ARE YOU
LOOKING
FOR AVIONICS
SOLUTIONS
YOU CAN
TRUST?**

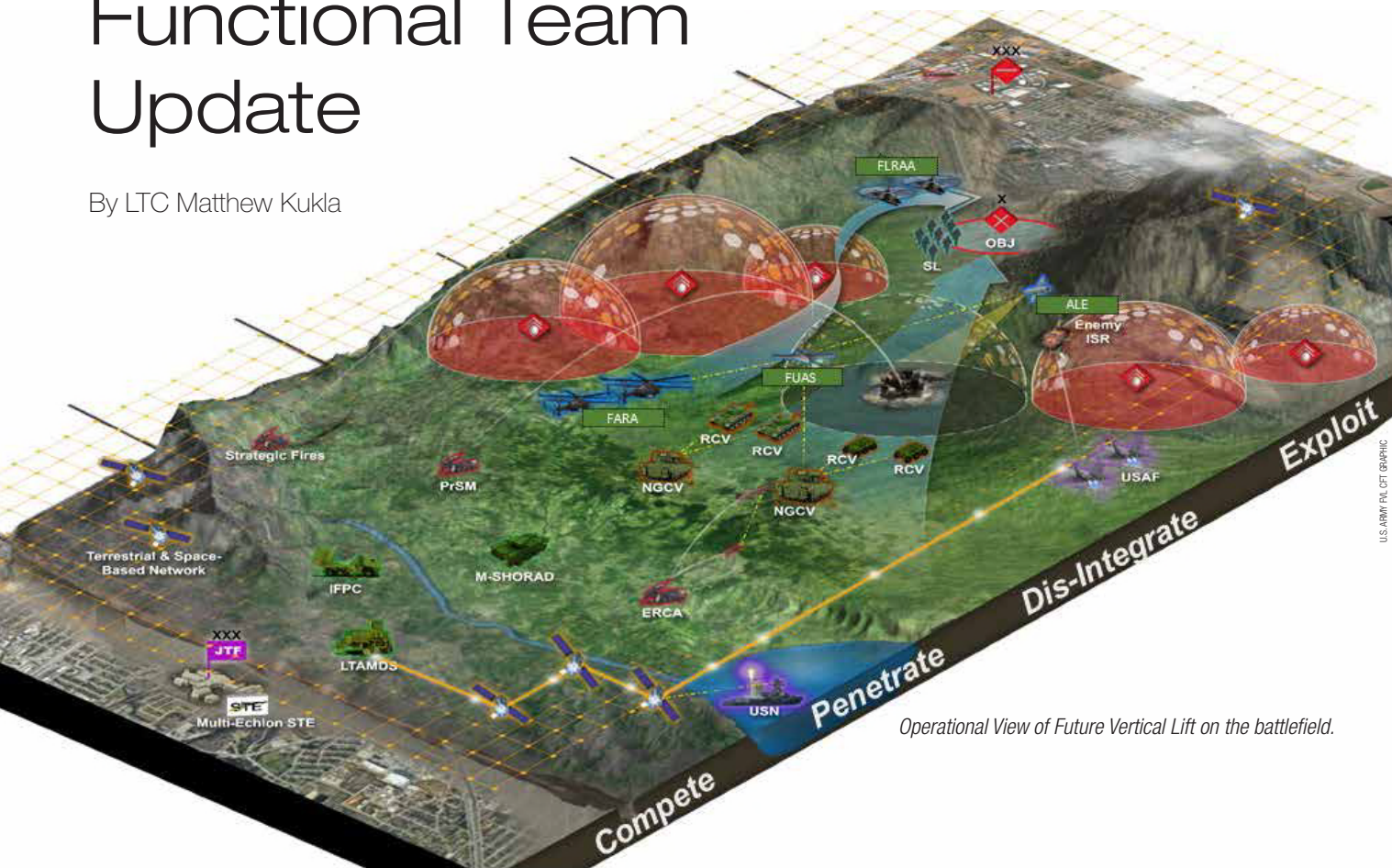
You can count on our scalable and customized avionics solutions to enhance situational awareness and improve cockpit efficiency. Contact us today to learn more about our military solutions at military@cmcelectronics.us

CMC
Electronics

cmcelectronics.us

Future Vertical Lift Cross Functional Team Update

By LTC Matthew Kukla



Operational View of Future Vertical Lift on the battlefield.

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

By now most people are aware of the FVL's four primary lines-of-effort (LOE): Future Attack Reconnaissance

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

This article is not meant to rehash the merits of the primary LOEs, but instead is intended to provide addi-

tional context to FVL capabilities by discussing our additional efforts. These supporting tenets are – reach, lethality, survivability, and affordability.

Reach and Lethality

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

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

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

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

Survivability

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

One aspect of survivability is to break the kill chain early. Giving the enemy few opportunities to acquire, track and engage our forces is principle to increasing our survivability. Simply put – if the enemy munition never leaves the weapon system – we increase the probability of survivability. This

is why the increased speeds, high maneuverability, and agility for FARA and FLRAA platforms are so critical. High speeds coupled with low altitude tactics to hide in the clutter and use the terrain to our advantage are tantamount to survivability. This is not conjecture. High fidelity physics-based modeling against our pacing threat has proven that FVL is highly survivable on the current and future battle fields.

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

Affordability

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

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

at an affordable and efficient operation and support cost.

How are we doing all this?

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

Schedule is King for FVL CFT

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

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



AAAA SYMPOSIA IN HUNTSVILLE

By CW4 Joe Pisano, U.S. Army Retired

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

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

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



Aviation, with a wrap up by the aviation branch survivability branch chief, CW5 James VanMeter.

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

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

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

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

AWARDS

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

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

Test & Evaluation—Mr. Craig Lanphere, PM Joint Air-to-Ground Missile

Technical—Mr. Matthew Lawrence, PM Utility
Rising Professional—Mr. Brian Sullivan, PdM Future Tactical Unmanned Aircraft Systems

Programmatic—MAJ Brian Ehrenheim, APdD Scout Attack

Logistics/Sustainment—Mr. Oswald Ingraham, Jr., PM Apache

Business—Ms. April East, PM Aviation Mission Systems & Architecture

Administrative—Ms. Aimee Ghee, PEO AVN HQ
Acquisition/Contracting—Mr. Vince Dickens, PM Aviation Turbine Engines.

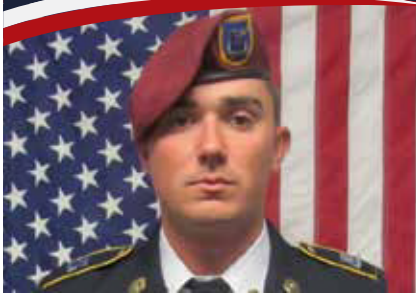
The week's events included an exhibit hall with more than 70 vendors and a mix of over 1,000 military, civilian and industry attendees.

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

2019 AAAA NATIONAL FUNCTIONAL AWARDS

AIRCRAFT SURVIVABILITY EQUIPMENT AWARD

Sponsored by BAE Systems



SPC GARY K. ACTON

COMPANY D, 4TH BATTALION,
160TH SPECIAL OPERATIONS
AVIATION REGIMENT (AIRBORNE)
JOINT BASE LEWIS-MCCHORD, WA

Deployed

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

AVIATION MISSION SURVIVABILITY OFFICER AWARD

Sponsored by VT Miltope



CW4 WILLIAM S. ROTH

HEADQUARTERS AND
HEADQUARTERS COMPANY,
1ST BATTALION, 160TH SPECIAL
OPERATIONS AVIATION REGIMENT
(AIRBORNE) FORT CAMPBELL, KY

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

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

AVIONICS AWARD

Sponsored by Cubic Defense Systems, Inc.



SSG JACOB E. HURLEY

COMPANY D, 1ST BATTALION,
52ND AVIATION REGIMENT
TASK FORCE APOCALYPSE
OPERATION FREEDOM'S SENTINEL,
AFGHANISTAN

Deployed

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

2019 AAAA NATIONAL FUNCTIONAL AWARDS

**OUTSTANDING AVIATION
LOGISTICS SUPPORT
UNIT OF THE YEAR**
Sponsored by AAAA



**COMPANY E, 2ND BATTALION
25TH COMBAT AVIATION BRIGADE
WHEELER ARMY AIRFIELD,
HAWAII**

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

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

**MATERIEL READINESS AWARD
FOR CONTRIBUTION BY AN
INDIVIDUAL MEMBER OF INDUSTRY**
Sponsored by AAAA



**KENNETH QUESTIAUX
BOLT BYTE TOOLS/KENJER
INDUSTRIES
BUTLER, PENNSYLVANIA**

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

**MATERIEL READINESS AWARD
FOR CONTRIBUTION BY A
MAJOR CONTRACTOR**
Sponsored by AAAA



**DYNCORP INTERNATIONAL
HUNTSVILLE,
ALABAMA**

Accepted by Mr. Joe Ford

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

2019 AAAA NATIONAL FUNCTIONAL AWARDS

UNMANNED AIRCRAFT SYSTEMS SOLDIER OF THE YEAR AWARD

Sponsored by General Atomics Aeronautical Systems, Inc.



SFC BRANDON B. VILT

COMPANY D, 326TH BRIGADE ENGINEER BATTALION, 1ST BRIGADE COMBAT TEAM, 101ST AIRBORNE DIVISION (AIR ASSAULT) FORT CAMPBELL, KY

Sponsor Rep: Don Cattell

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

UNMANNED AIRCRAFT SYSTEMS UNIT OF THE YEAR AWARD

Sponsored by Textron Systems



COMPANY B, 101ST AVIATION REGIMENT

101ST COMBAT AVIATION BRIGADE 101ST AIRBORNE DIVISION (AIR ASSAULT) FORT CAMPBELL, KY

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

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

FIXED WING UNIT OF THE YEAR AWARD

Sponsored by CAE USA Defense & Security Systems



TASK FORCE ODIN

BAGRAM AIRFIELD, AFGHANISTAN

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

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

Historical Perspective ►

Reprinted from the August, 1954 Issue
of ARMY AVIATION Magazine



RANDOMS FROM THE EDITOR

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

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

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

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

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

Your editor,
Art Kesten

Thank You to Our Scholarship Fund Donors



AAAA recognizes the generosity of the following individuals, chapters and organizations that have donated to the Scholarship Foundation, Inc. from January through November 2019. The list includes donations received for all scholarships, as well as the General Fund which provides funding to enable the chapter, corporate, heritage and individual matching fund programs as well as national grants. **Every penny donated to the Scholarship Foundation goes directly to a grant as a result of the Army Aviation Association of America subsidizing all administrative costs (minus investment brokerage fees).**

114th Aviation Company Association
 AAAA- 2019 Summit Speaker
 Donation
 Sidney W Achee
 AAAA Air Assault Chapter
 Airbus Group, Inc
 Airbus Helicopters, Inc.
 Khalifa Almeghairi
 AAAA Aloha Chapter
 N. L. Amato
 American Airlines
 Ameripack
 Amy Anderson
 MG (Ret.) Andy & Artie Andreson
 Laura Arena
 AAAA Arizona Chapter
 Mike & Daphnie Arthur
 AAAA Aviation Center Chapter
 Army Aviation Center Federal
 Credit Union
 Army Aviation Publications, Inc.
 Army Otter Caribou Association
 AAAA Badger Chapter
 BAE System
 Charles David Bayless
 Jeff Becker
 Becker's Air Powered Sweeping, Inc.
 Bell
 BG Harry H. Bendorf
 Victoria Bendure
 Jason Benedict
 David Blackburn
 Sofia Bledsoe
 Boeing
 John S. & Linda S. Bolton
 Booz Allen Hamilton
 Mimi F. Boulden
 Bradley S Boyer & Alexandria H
 Boyer
 Terry Branham
 Billy & Glenna Brashear
 Michele Lynn Broshear
 Dan Brown
 Pamet W. Brown
 Ingrid K Bruce
 Cynthia S. Campbell
 Canebrake Club, LLC
 Kelly F Carberry
 AAAA Colonial Virginia Chapter
 Concept Components
 AAAA Connecticut Chapter
 AAAA Corpus Christi Chapter
 AAAA Cowboy Chapter

Davis Aircraft Products Co., Inc.
 AAAA Delaware Chapter
 Donaldson Aerospace & Defense
 Dustoff Association
 Jon C Eidem
 James Emerson
 AAAA Flint Hills Chapter
 Jeffrey & Vanessa Fowler
 Judy French
 Leslie H Gilbert
 AAAA Gold Standard Chapter
 D.R. Haag & D.E. Haag
 James Hamill
 Constance Hansen
 Debra Harlow-Aldecoa
 BG (Ret.) James M. & Joyce L.
 Hesson
 John Hickman
 William Hipple
 Larry D. & Julianne S. Holcomb
 Raquel E. & Terry R. Horner
 AAAA Idaho Snake River Chapter
 Ironmountain Solutions, Inc
 AAAA Jack H. Dibrell Alamo Chapter
 JACS Aircraft Certification Specialist
 Jack A. James
 Judith H. Janowiak
 Cheryl Jensen
 William S. & Sara S. Johnson
 Johnson & Johnson
 K-Con, Inc.
 Charleen Kennedy
 AAAA Keystone Chapter
 Sharon Kleiber
 T Konitzer, TJK Consulting Inc.
 Carl Kreisel
 Scott Kubica
 Ronald V. & Carol J. Kurowsky
 John D. & Kathleen B. LaMoita
 Edward Lewis Landry & Kimberly
 A Jamison
 AAAA Lindbergh Chapter
 AAAA Luther Jones Speakers
 The Luminescence Foundation, Inc.
 Timothy Lunger
 Jodi Lynch
 AAAA MacArthur Chapter
 Daniel T Madish & Elisabeth Madish
 John Maez
 Jolanda Masters
 Paul McCarthy
 Lewis McConnell
 Thomas F. McNamara

Jerry P. Mellick
 AAAA Mid-Atlantic Chapter
 Emily M Miller
 Raymond Milora
 AAAA Minuteman Chapter
 AAAA Mount Rainier Chapter
 S D Mundt & B J Mundt
 Donald Munsch, Munsch & Co.
 Aeromechanics
 Gary N. & Christine A. Nesta
 William Newby
 AAAA North Star Chapter
 AAAA North Texas Chapter
 AAAA Northern Lights Chapter
 Northrop Grumman
 LTC (Ret.) Jerry O. & Vivian A. Obert
 Rudolph & Pamela N. Ostovich III
 The OV-1 Mohawk Association
 Patriot Taxiway Industries, Inc
 Lawrence P. Peduzzi, Peduzzi
 Associates LTD
 Alyssa Perry
 AAAA Phantom Corps Chapter
 Phantom Products Inc.
 LTG (Ret.) William & Marilyn Phillips
 William Phillips
 Piasecki Foundation
 Karissa Poe
 Potomac Knight Chapter, 114th
 Aviation
 Project Manager Apache
 QuantiTech, Inc.
 Marlene Raczkowski
 Ellen Luz Ramil & Manuel B Ramil
 Marc Rassler
 Christie Reyenga
 Roberson Giving Fund, Keith
 Roberson
 Robertson Fuel Systems
 James E. Rogers & Reba A. Rogers
 Safran El. & Def., Avionics USA
 Safran Helicopter Engines
 Safran USA Virginia
 Malinda & Edward Schmidt
 Robert Seigle

Nancy Shaffer
 Shashy Family Charitable Fund
 John Sheard
 Matthew J. Sheedy
 E.J. Sinclair & Susan Sinclair
 Joy Skantz
 AAAA Southern California Chapter
 Evelyn A. Soucek Trust
 Steven M Soucek & Chandra L
 Soucek
 CPT (Ret.) Barry Speare
 Laura Steele
 David John Stock II & Jennifer
 Lynn Stock
 Strata-G Solutions, Inc.
 System Studies & Simulation, Inc.
 Masaki Sudo
 Roy Sullivan
 Tactical & Survival Specialties, Inc.
 AAAA Tarheel Chapter
 Team Apache
 Tee It Up for the Troops, Inc.
 AAAA Tennessee Valley Chapter
 AAAA Thunder Mountain Chapter
 AAAA Thunderbird Chapter
 Tier 4 LLC
 COL (RET) Harry Townsend & Diana
 L Townsend
 John Vannoy
 Vantage West Credit Union
 Gail Vergez
 Vertex Aerospace
 Veteran Guardian
 Vietnam Helicopter Pilots Association
 AAAA Voodoo Chapter
 AAAA Washington Potomac Chapter
 Timothy Wooldridge
 Wreaths Across America
 Charles E. Wright & Jessica L.
 Wright
 AAAA Wright Bros. Chapter
 Shelley Yarborough
 Michael Younce
 YPO Fairchester Gold

New Scholarship Awardee Announced



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

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



AAAA

NETWORK | RECOGNITION | VOICE | SUPPORT



AAAA Chapter Affairs By LTC (Ret.) Jan Drabczuk

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



CHAPTER COURTESY PHOTO

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



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

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

Storied History and Esteemed Chapter Members

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

The MRC has been a chapter rich in

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

Mount Rainier Chapter Annual "Summer Special Guest Speaker" Series

For the past three summers, the chapter has maintained an active "Chapter Member Professional Development" focus that included quarterly events like "Aviation Trivia Night" and their annual summer Army Aviation Special Guest Speaker event to both inspire and solidify their chapter members' oath to the profession. In September 2017, the chapter had COL (Ret) Bill Reeder, an acclaimed author ("Through the Valley:

My Captivity in Vietnam") and POW/MIA survivor. In August 2018, Medal of Honor recipient COL (Ret) Bruce "Snake-6" Crandall of "We were Soldiers once, and young" fame and then recently in August 2019 when former Army Captain/MTP and current Senior Vice President of the fifth largest air carrier in the U.S., Alaska Airlines, Constance von Muehlen spoke to inspire current members of the Mount Rainier Chapter.

On the Horizon for the Pacific Northwest

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



Summary

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

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

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

ARMYAVIATION MAGAZINE
PHOTO CONTEST
 Horizontal Photo Submissions Due 1/10/20

LT STEVEN R. CLEPPE

Open to all AAAA Members
 Contest Rules: ARMYAVIATIONmagazine.com

AAAA Chapter News

Bavarian Chapter Oktoberfest Trip



CHAPTER COURTESY PHOTO

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

Idaho Snake River Chapter Golf Tourney

On September 23rd, 2019, the Idaho Snake River Chapter held its Annual AAAA Golf Tournament. The event was held at The Club at Spurwing in Meridian, ID. 30 teams (120 players) participated in the event to include sponsors and it was a tremendous success for the chapter. The course provided amazing support for the event while the sponsors unselfishly do-



CHAPTER COURTESY PHOTO

nated to the chapter which allowed them to more than double the proceeds from previous years. Special thanks to everyone who participated in this event.

Lindbergh Chapter Scholarship Fundraiser Golf

The Lindbergh Chapter held its 2019 Scholarship Fund Raiser Golf Tournament at the Falls Golf Club in O'Fallon, MO on



CHAPTER COURTESY PHOTO

Sept. 15, partially subsidized by AAAA National. 36 players had a good time, and were kept supplied with water, Gatorade, adult beverages from Anheuser-Busch, and plenty of healthy snacks. The day ended with an awards ceremony where prizes were awarded for first, second, and third place, as well as longest putt, longest drive, and three

closer to the pin. There was a special award to Steve Snow from Donaldson Aerospace who scored a Hole-In-One. A raffle was held in conjunction with a buffet dinner where the prizes were awarded. The tournament raised \$11,000.00 for the AAAA Scholarship Fund.

So. Cal. Chapter Supports Archangels



CHAPTER PHOTO BY LOUE THE LENS

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



AAAA Membership Update By CW4 Becki Chambers

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



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

PHOTO BY MICHAEL ARDWIN, LANSING

This reason is what motivated CW2 Elizabeth Kruchek to join.

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

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

Other than Joni, Elizabeth had never known anyone that flew for a living. Joni has a daughter in the Navy, and she suggested to Elizabeth that she look into it. One day, Elizabeth finally went to talk to a Navy recruiter who had her

fill out a questionnaire. Upon a quick review, he told her she was "too short to be a pilot" and said he was not going to submit her application. Elizabeth was appalled because #1, she was already a pilot, and #2, she had never been told she was too short to do anything!

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

After completing military flight school, Elizabeth spent a summer working her way through the rest of her civilian flight ratings. She applied for and flew Lear 35s for an Air Ambulance company. Elizabeth had the opportunity to fly internationally as well as across oceanic territory (with horrible radios!)

The Lear 35 was prone to maintenance problems, so she learned quickly to react calmly and analyze malfunctions. After the air ambulance job, she decided to give the airlines a try. She was hired on with PSA and has been flying the CRJ 200/700/900 throughout the eastern U.S. It has been a dream come true for her inner travel addict!

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

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

CW4 Becki Chambers
AAAA Vice President for Membership



New AAAA Life Members

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

New AAAA Members

- Air Assault Chapter**
CW3 Michael Brown
1SG Alvarran Edwardo
SSG Timothy Hecker II
WO1 Ian B. Owings
- Arizona Chapter**
Lou Amadee
SGT Elijah A. Cabrera
SSG Thomas J. Callahan
Cole A. Jackson
David Laureanti
Christina C. Luna
- Aviation Center Chapter**
CPT Jacob Allen
2LT Edwardo S. Alviso
2LT Andrew Ashley
WO1 Timothy Ashworth
2LT Kenneth C. Balding
2LT Caleb Baldwin
WO1 Danielle Benedict
WO1 Corey m. Bigelow
WO1 Christian Blackman
2LT Thomas Brennan
WO1 Joshua S. Britten
WO1 Logan C. Brown
2LT Sarah G. Chamberlin
WO1 Matthew G. Clark
2LT Ryan Cristiano
WO1 Wayne C. Cunningham
2LT Crystal DeLaRocha-Duarte
WO1 Danielle Diaz
WO1 Thomas Erb
CW2 Thomas Etchison-Flynn
2LT Joshua M. Fernquist
WO1 Austin C. Fierro
WO1 kasey w. goeken
CW2 Lindsey Greene
WO1 Ian Gurnee
2LT Hayden H. Hayner
WO1 Dylan T. Izbicki
WO1 Timothy c. Jackson
2LT Matthew Kim
2LT Megan R. Kinsey

- WO1 Joseph Krol IV
WO1 Daniel N. Lasal
1LT Michael B. Leinen
2LT Andrew D. Lekowski
2LT Mikayla L. Leroy
2LT Gabrielle Lovell
WO1 Benjamin R. Magee
WO1 Anthony F. Manzi
WO1 Sarah Miller
WO1 Stephen Morgan
WO1 Travis A. Negron
WO1 Rachyl Nelson
2LT Sutton B. Norris
WO1 Cameron E. Olson
2LT Kenji R. Onaka
WO1 Jason Payne
2LT Mason Poythress
WO1 Reed M. Pringle
WO1 John Puchalsky
2LT Guilherme R.dos Santos
WO1 Adam Roszkowski
Ronald Wayne Skinner
WO1 Ryan Smedile
WO1 Zacory Spivey
2LT Jeremy T. Stanley
2LT Andy Wang
WO1 Aaron Weier
2LT Abigail M. Wingfield
WO1 Olin Wise
- Battle Born Chapter**
SGT Corey A. Cheatham
- Big Sky Chapter**
WO1 Patrick A. Rickard
Central Florida Chapter
LtCol Thomas Anderson
TJ Anderson
Jon C. Sutter
- Connecticut Chapter**
CW4 Robert L. Dotolo, Ret.
Abbey Letts
- Delaware Valley Chapter**
CW2 Bryan Barabas
Chris Ericksen
Jennifer Gruce
Jerome Lokken
Tim McMullen
Tom Sharp
Brian B. Tallman
Paul Warren
Jeff K. Woods
- Frontier Army Chapter**
Lee Johnson
- Gold Standard Chapter**
SFC Kathryn Beauchamp
CW4 James E. Kuipers, Ret.
SGT Nathan D. Verhey
Great Lakes Chapter
SSG Martin Anderson
1LT Emmanuel Ayala
WO1 James L. Barksdale
SGT Derrick Bimer
SGT Jordan Bulterna
SGT Andrew Burton
CPL Todd Carlisle
CW2 Brian Chambers
SGT Ashley Corey
1LT Eduard Cruz
SSG Genival Dasilva
SGT Brian Deforest
CW2 Jeffery Dixon
SPC Kyle Fosgate

- CW2 Michael Goebel
SGT Taylor Hagerty
SGT Dalton Hamilton
CW2 Geoffrey Horvath
SPC Matthew Milbourne
CW2 Jordan Murdock
CPT George Olszewski
SGT Greg Paggeot
WO1 Sarah Paulian
CPT Dustin Pawloski
SPC Kameron Peel
SGT David Rathbun
CPT Stephen Ronan
SSG Erick Shaw
SGT Joseph Suchowolec
CPL John Tiefenbach
CW2 Kyle Zimmerman
CW3 Jason Zylstra
Greater Atlanta Chapter
PV2 Caitlin D. Cushenberry
Tom Pagano
- Grizzly Chapter**
SSG Vergia M. Farrow
SPC Jesse Gomez
- Iron Mike Chapter**
WO1 Philip Nixon
- Mid-Atlantic Chapter**
1LT Andrew Krevetski
Marcus Reddy
Jerico Sabas
- Mount Rainier Chapter**
Lance John Demeter Jr.
CW3 Flore Flux
PV2 John E. Henricks
CW4 Roby Jorstad
- North Texas Chapter**
William H. Bowman
CPT Jessie Guajardo
James C. Herron
David Rogers
Jerry M. Schneider
COL Chris C. Seymour
Pete Shultz
David M. Vella
- Oregon Trail Chapter**
2LT Julia Bush

- Prairie Soldier Chapter**
PV2 Mario Luis Olvermays
- Rio Grande Chapter**
WO1 Raymon E. Gragg
- Southern California Chapter**
PV2 Ryan M. Wang
- Tennessee Valley Chapter**
Pamela Lane
WO1 Daniel M. Neglia
- Washington-Potomac Chapter**
SPC Matthew R. Ashbrook
WO1 Amanda Cahill
CSM Michael R. Dudley, Ret.
Matthew Laws
- Wright Brothers Chapter**
WO1 Alexander C. Taipale
- Zia Chapter**
PV2 Zackary Rio Cordova
- No Chapter Affiliation**
Margit Burnett
Jim Carothers
Kelley M. Cox
CW2 Brandon W. DeArmond
WO1 Paula B. Fonseca Rojas
2LT Dawnnie Fuentes
LT Barry L. Ruchty
Bob Savitsky
WO1 Zachary T. Scott
CPT Deborah Sherrick Lopez
Kevin Sprouse
CW3 Byron A. Todman

Lost Members

Help AAAA locate a lost member on this list and receive a FREE one month extension to your AAAA membership.
PFC Anthony Aleman
CPT Robert S. Boham
Mr. Harold V. Bowie Jr.
MAJ James E. Bruckart
SPC Brett Christopher Butler
E. W. Cavanaugh

- LTC Richard G. Cercone Jr.
LTC Tzu-Shan Chang
COL James A. Coar, Ret.
SPC Derrell L. Coats
MAJ Harry L. Connors Jr. Ret.
Mr. Bruno Cussigh
SGT Travis Bonham Darnell
CW3 Matthew John Decker
Pamela Lane
2LT Arthur W. Galloway
Michael F. Glass
MAJ Gregory W. Glover
LTC William T. Goforth
Mary H. Gorman
COL Gerhard Granz, Ret.
Trevor Harker
COL Jose L. Hinojosa, Ret.
SFC Carroll Elmo Hinson V
COL Eldon H. Ideus, Ret.
CW4 Delbert Jackson, Ret.
MAJ Gregory R. Jenkins
MAJ David A. Jobe
LTC Peter D. Kowal
Beth N. Kramer
CW3 Vladimir Kultschizky
CW3 Timothy J. Larz
MSG David W. Little, Ret.
SPC Pablo C. Lopez
CSM Vernie Nance, Ret.
Fred A. Newcomb
SFC Henry R. Rathbone, Ret.
Brendon A. Roan
SPC Cameron B. Rumbo
LTC Martin Scheld
Thomas R. Schiltz
LTC Jerry D. Scott
SPC Jeremy L. Sharkey
SPC Shelton T. Shia
Jeremy Smith
MAJ James F. Speelman
LTC Friedrich Stern
WO1 Armando B. Torres
Kevin L. Tucker
Rose Weast
Nadia O. Whatley
SSG Johan G. Zarae

AAAA Member Discounts

Take Advantage of Savings!

Visit — quad-a.org — Log in — Click “My Discounts”



AAAA Family Forum

An Update from AUSA's Senior Leaders Town Hall By Judy Konitzer



U.S. ARMY PHOTO BY GET DANA CUPE

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

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

During "The Family Forum Army Senior Leaders Town Hall," The Honorable Ryan D. McCarthy, Secretary of the Army; GEN James C. McConville, Chief of Staff of the Army; and SMA Michael A. Grinston, Sergeant Major of the Army, shared their philosophy and responded to questions from the audience, as well as from other venues. They collectively agreed that "our Army is people!" and "providing a quality of life that is commensurate with the quality of services our soldiers, families, civilians, retired, and veterans provide is what allows us to ensure readiness, modernization, and reform." 60 % of Active Duty Soldiers have families, and based on surveys, it was noted that

spousal support is a good predictor of a Soldiers intention to stay in the military. So, five top priorities this year are housing, health care, childcare & youth services, spouse employment, and PCS moves.

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

Staff had candid conversations with CEO's of privatized companies to discuss what they needed to do to honor their contracts and fix the problems.

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

Military Treatment Facilities (MTF)



Give the Gift of a College Education



Cody L. (2013 Scholarship Recipient)

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

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



Donate Today!

CFC #10516

The 2020 AAAASFI Program will open January 6

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



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

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

Spousal employment issues have gained increased attention with many spouses needing to supplement their family's income as well as professional spouses seeking the ability to use their skills. Currently there are more programs in place for portability of licenses and reimbursement for fees required. And

cutting through bureaucracy and red tape to properly address resumes for federal and NAF jobs can be achieved at any ACS Employment Readiness Section. Additionally, there is also more flexibility in recognizing and validating home based businesses on post especially for childcare providers.

Summer is the peak season for **PCS moves**, but many contractors have not been doing the job they are being paid for. More trained inspectors using standardized checklists have been hired to validate carrier services and rank order them based on surveys. If a servicemember is assigned a company from a lower tier they can refuse and

request reassignment. Other initiatives being considered are allowing Soldiers to make career choices based on stabilizing in one location and simplifying reimbursements for DITY moves.

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

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

UPCOMING EVENTS

JANUARY 2020

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

MARCH 2020

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



Order of St. Michael and Our Lady of Loreto Inductees

Bavarian Chapter

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



CW4 Brian Gaston was inducted into the Bronze HOSM in recognition of 16 years of service to Army Aviation as a UH-60 pilot-in-command, instructor pilot, instrument

examiner, standardization pilot, and Aviation JMRC OC/T. He deployed twice to Iraq, once to Afghanistan, and flew as a MEDEVAC pilot-in-command out of Camp Humphreys in Korea.



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

Idaho Snake River Chapter



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



Award Nominations Are Open NOW!

Recognize Our Soldiers !!!

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



AAAA National Awards

Presented at the Annual Army Aviation Mission Solutions Summit
Suspense: January 1

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

AAAA Hall of Fame Inductions

Presented at the Annual Army Aviation Mission Solutions Summit
Suspense: June 1

All AAAA Nomination forms are available on the AAAA Website:

quad-a.org

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

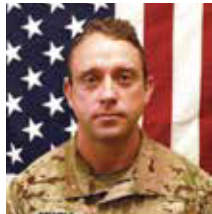


FALLEN HEROES

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

OCONUS

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



CW2 Knadle



CW2 Fuchigami

Killed were:

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

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

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

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

AAAA Awards



Order of St. Michael Inductees

Gold

COL Ellis W. Golson, Ret.

Silver

LTC Daniel S. Artino

LTC George W. Benter, Ret.

LTC Christopher M. Chung

CW5 Jon V. Corey

CW5 Ryan W. Dechent

CSM Archie S. Deese

CW5 Steve A. Donahue Jr.

CSM Geraldo Gonzalez

COL John Wilhelm Jones

LTC Michael Lanzafama

CW5 Stephaine Ostrowski

CSM Reginald Thomas-

Bronze

CPT Brian Alliston

CPT Scott Betancourt

SFC Brandon Burns

SFC Erik Burns

CW3 Janoi Cabrera

1SG Ronney E. Copes Jr.

CW3 Daniel P. Dahl

CW5 Michael C. Eger

1SG Justin J. Fajardo

SFC Palm L. Forward

CW3 Christopher K. Fyffe

1SG Joshua D. Gary

CPT Jared Grubbs

CPT Travis A. Haigler

CW2 Rebecca C. Harrison

CW4 (R) James D. Knight

Walter A. Lopez

SFC Trent Lyles

SSG Roberto Manzanaras

COL (R) Ralph R. Myers Jr.

MAJ Christian M. O'Leary

CW3 Clifford R. Owens

CW2 Nicholas P. Peterson

MAJ Stephanie M. Price

CW4 Chad J. Queen

SFC Ronaldo A. Racoma

CW3 Joel Ramos

CPT Douglas Raymond

CW5 (R) Timothy W.

Roberts

CW3 Joshua R. Robinson

1SG William D. Romanoff

CPT Christopher Rosel

MAJ Joseph A. Sinkiewicz

CPT Matthew Taylor

CPT Merritt W. Thomas

CPT Brent Vann

CW5 Michael D. Walsh

SFC Cameron Warren

1LT Thomas J. Westall

CPT Kenneth Willard



Our Lady of Loreto Inductees

Carmen M. Eicher

Sarah Frost

Stephanie Gannon

Janice Miller

Kathi Walrath

Lisa Wess

NCO of the Month

Grizzly Chapter

October 2019 -

SSG Vergia M Farrow

Solder of the Month

Grizzly Chapter

October 2019 -

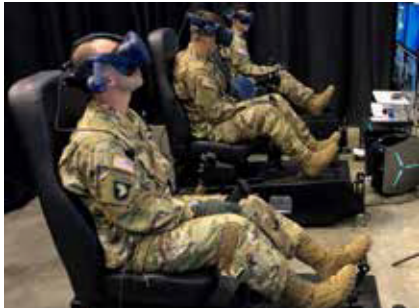
SPC Jesse Gomez



Industry News *Announcements Related to Army Aviation Matters*

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

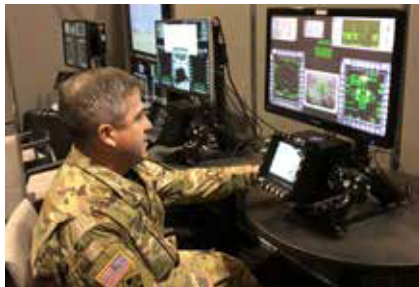
Army Chooses Ryan Aerospace To Provide Simulators



RYAN AEROSPACE COURTESY PHOTO

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

AVT to Provide Apache Gunnery Trainer to USAACE



AVT COURTESY PHOTO

AVT Simulation was awarded a contract in October to provide three Apache Gunnery Trainers (AGT) to the U.S. Army Aviation Center of Excellence at Rucker, AL for validation. Developed from previous AH-64 collective trainers sold internationally, refined to support the Air Cav Leader's course and prototyped for the Synthetic Training Environment's (STE's) point of need requirement, the AGT is a front seat AH-64 desktop trainer that fits in an airline friendly case that is no more than

50lbs. Included features are: Switchology, Top Gun Scoring Gunnery, Free play scenarios that are linkable easily allowing for attack weapons team engagements, and courseware of selected Aircrew Training Manual tasks. Delivery is to be completed by April 2020.

Bell Joins Army Partnership for Youth



BELL COURTESY PHOTO

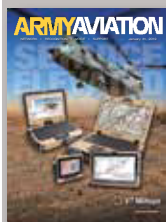
MG Frank Muth, commander of U.S. Army Recruiting Command's Partnership for Youth Success (PaYS) Program and Mitch Snyder, president and CEO, Bell, sign an agreement on Nov. 11, 2019 during a Veterans Day ceremony at the Bell Fort Worth headquarters. PaYS helps prepare active-duty soldiers for careers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

Advertisers Index

Air Evac Lifespan.....	11
AIRBUS Helicopters.....	1
Arete.....	65
Arnold Defense.....	13
BAE Systems.....	37
Bell Helicopter Textron Inc.....	7
CATI Inc.....	39
CMC Electronics.....	67
Coastal Seat Cushions, Inc.....	39
Collins.....	92
Crestwood Technology Group (CTG).....	91
DynCorp International.....	25
General Atomics Aeronautical Systems, Inc.....	35
King Aerospace.....	19
L-3 Wescam Communications.....	29
L-3Harris Technologies.....	5
MD Helicopter.....	17
Meggitt Defense Systems.....	9
Phantom Products, Inc.....	27
Robertson Fuel Systems, L.L.C.....	21
Science and Engineering Services, SES, Inc.....	2
SKEDCO, Inc.....	30
Standard Aero.....	15
Telephonics Corporation.....	41
Tyonek.....	31
Vinnell Arabia.....	42
Yulista Holdings LLC.....	23

ARMY AVIATION

Upcoming Special Focus



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



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

Contact:

Bob Lachowski or
Erika Burgess

AAAAindustry@quad-a.org

203.268.2450

ARMYAVIATIONmagazine.com

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

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

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



AAAA Legislative Report

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

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

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

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

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

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

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

Coal or NDAA?

Last month we optimistically wrote about a stop gap funding measure signed by the President to give Congress more time to get their ducks in a row and pass a legislation to fully fund the government. The time ran out shortly before the time of this writing and thus, another stop gap funding measure was passed to provide more time. The detriment of a Continuing Resolution to our Army Aviation enterprise has been discussed at length and Congress has once again prolonged our uncertainty in funding and policy. When you read this at Christmas, we can only hope that Congress's heart grew two sizes bigger and our Christmas stockings are full of funding. Two staffers, one from the House Armed

Services Committee and one from the Senate Armed Services Committee stated off the record that they are feeling more optimistic that they will get this legislation done by the end of the year. Additional signals from the press indicate the same thing, but the risk we face is the day to day political impasses on Capitol Hill that plague our enterprise.

What's the Hang Up?

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

Skinny NDAA?

What is meant by a "skinny'd" down version of the NDAA? It's hard to look at any legislation that authorizes \$738B as "skinny". That's where we remind our reader base that the big difference between the NDAA and the Defense Appropriations legislation is the fact that the NDAA contains a tremendous amount of policy provisions that "authorize" the DoD to do certain things. As said, one of the major hang ups is the appetite to have policy provisions that authorize

the DoD to fund portions of the border wall. Because there are highly contentious issues like this in the pending legislation, the Senate (SASC) is proposing a skinny'd down version of the NDAA that strips all contentious issues from the legislation so that lawmakers from both the House and Senate can agree to pass the legislation. Senator Inhofe (R-OK), Chairman of the SASC is proposing they prepare for this if they run out of time. HASC Chairman Smith opposes this measure and contends they should negotiate and come to a bi-partisan solution that includes policies that have been in work for this law for over a year. It's hard to say what will happen in the month of December, but the end of the year is quickly approaching, and Congress has passed an NDAA for 58 straight years. It's a high stakes game of chicken and no one really cares if the Democratic held House or the Republican held Senate wins the game. The loser already in the perpetual cycle of stop gap funding measures and Continuing Resolutions is our Army Aviation enterprise.

AAAA National Executive Board Nominations

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



People On The Move

Transfer of Authority



U.S. ARMY PHOTO BY SFC JOSEPH KNOCH

Demon Brigade Transfers Authority to Marne Air

COL Michael S. McFadden, Commander of the 3rd Combat Aviation Brigade (3rd CAB), greets a Polish Armed Forces Officer at the Combat Aviation Brigade, 1st Infantry Division (1st CAB) to 3rd Combat Aviation Brigade (3rd CAB) Transfer of Authority (TOA) ceremony,

Nov. 1, 2019, Illersheim, Germany. 3rd CAB, from Hunter Army Airfield, GA will be working with NATO allies and partners such as Poland, during their nine-month rotation in support of Atlantic Resolve. The ceremony also marked the end of a nine-month rotation for 1st CAB Soldiers out of Fort Riley, KS.

FY 2019 Major Army Competitive Categories Selection Board

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

- Seq #
- 0613 Adams, Jeremy M
- *** Anderson, Brian C
- 0783 Bell, Elizabeth M
- 0527 Blair, Matthew L
- 0884 Brady, James R
- 0340 Bramel, Michael C
- 0369 Bremer, Charles C
- 0343 Bryan, Luke A
- 0702 Bujewski, Kurt M
- 0721 Caffery, William J
- 0709 Carlson, Steven J
- 0741 Cavallo, Mark E
- 0712 Cheben, Landon K
- 0211 Considine, Matthew
- 0457 Cormier, Stefan J
- *** Daker, Zachary D
- 0703 Derosa, Alexander

- 0491 Dotson, Brandon N
- *** Durham, Dallas T
- *** Eadie, Alexander J
- 0234 Escalera, John A
- 0697 Fischer, Alan S
- 0782 Flett, Kevin G
- 0971 Fox, Richard R
- *** Freyou, Robert K
- 0743 Gill, Andrew J
- 0701 Griffith, Gregory S
- *** Hedgecock, Nathan C
- 0581 Heiner, Joshua S
- *** Holcombe, Christen
- 0487 Hollowell, Michael
- *** Hoyt, Evan D
- 0725 Hudson, Lewis C
- 0606 Hurst, Michael A
- 0873 Hutchinson, Samuel
- *** Irwin, Jay P
- 0354 Klobucar, Jeffrey T
- 0383 Knef, Bryant P
- *** Lanclos, Jacen P
- *** Liesenfelt, Megan J
- *** Lijja, David J
- *** Lock, Marisa C
- *** Mackenzie, Andrew M
- 0944 Macwillie, Donald M
- 0733 Maddy, Craig A
- 0490 Mainwaring, Jeffrey
- 0185 Marsh, Frank G
- 0732 Mason, Michael C
- 0764 Maughan, Braden D
- 0749 McDermott, Kyle C
- *** Mize, Loren T
- 0720 Mobley, Edwin D
- 0251 Moncrief, Scott D
- 0430 Munera, Kathryn J

- 0347 Muneramolina, Juan
- 0704 Murphy, Arthur J II
- 0295 Murphy, Derek P
- 0866 Nguyen, Roddy S
- 0724 Nulk, Matthew P
- *** Pearsall, Robert C
- 0592 Pruitt, Kimber L
- *** Purser, Justin R
- 0740 Rangitsch, Phillip
- *** Raymond, James D
- 0410 Risner, Joshua J
- *** Roynon, Taylor J
- 0458 Schreckenbach, Mike
- 0797 Simpkins, Christopher
- 0460 Skilling, Ross M
- 0769 Small, William R
- 0689 Smith, Porter N
- 0349 Snyder, Charles D
- 0285 Talarico, David L
- 0929 Tauzer, Bryan J
- 0753 Thayer, Chad A
- 0351 Thompson, Cody R
- 0855 Tippens, Kevin J
- *** Trussell, Shahn R
- 0614 Turns, Robert E
- 0631 Ulises, Ryan J
- 0309 Unrath, Austin
- 0314 Vann, Brent Lesley
- 0715 Vichinsky, Alexander
- 0236 Wellman, Gregory T
- 0494 Wheeler, Corey M
- 0483 Wiley, Joseph Brent
- 0538 Winter, Justin Gust
- 0700 Zapcic, Andrew M

*** Merit selection

Advanced Individual Training (AIT) Graduations

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

AH-64 Attack Helicopter Repairer (15R)

- Class 032-19**
- PV2 Walley Howard King, III - DG
- PVT Barkley Symone
- PV2 Caraway Nathan
- PVT Dickson Camaryn
- PV2 Evans Logan
- PV2 Harrison Parry
- PV2 House Bobby Jr.
- PV2 Jimenez Angel
- PFC Omalin Jesus
- PV2 Roginski Travis
- PFC Uher Kimberly
- Class 519-19**
- PVT Jake Six - DG
- PVT Jordan Leckie
- PV2 Allen Manley
- PV2 Antonio Mosqueda
- PFC Jeffrey Rodriguez
- PV2 Christopher Segura
- PV2 Christian Ward
- SPC Cory Williams
- SGT Caimen Willson
- SPC Rojas Zafrá

Continued next page

People On The Move

Flight School Graduates

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



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

33 Officers, October 24, 2019

Commissioned Officers

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

Warrant Officers

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

58 Officers, November 7, 2019

Commissioned Officers

- 2LT Lara, Jonathan M. -DG
- 2LT Benagh, William E. - HG
- 2LT Cochran, Jacob A. - HG
- 2LT Orgeron, Michael J. - HG

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



FSXXI-OCT 24



FSXXI-NOV 7

- 2LT Sullivan, Colin D.
- 2LT Tavano, Tyler S.
- 2LT Valentine, Christian J.
- 2LT Winski, Kathryn A.
- Warrant Officers**
- WO1 Aumen, Luke M. - DG
- WO1 Dehn, Jeremy J. - HG
- WO1 Gazdayka, Robert M. - HG
- WO1 Humphrey, Scott J. Jr - HG
- WO1 Lloyd, James L. - HG
- WO1 Atha, Jordan L.
- WO1 Barnard, Jung M.
- WO1 Bartolo, Jonathan E.

- WO1 Brunson, Dwayne D.
- WO1 Capitanelli, Nicholas M.
- WO1 Crocker, John R.
- WO1 Desy, Bryce B. *
- WO1 Durand, Josh D.
- WO1 Gudroe, Devan C.
- WO1 Ho, Ryan T. *
- WO1 Hunter, Dean R. *
- WO1 Johlfs, Brock J.
- WO1 Karabatsos, Jeremy M.
- WO1 Lockert, John B.
- WO1 Morehart, Joshua J.
- WO1 Petker, Nathanael P.

- WO1 Potts, Alexander J.
- WO1 Pronto, Brian J.
- WO1 Quintana, Everett M.
- WO1 Rebecca, Jacob M.
- WO1 Riddick, Spencer D.
- WO1 Rodriguez, Alberto L.
- WO1 Shattuck, David M.
- WO1 Tremblay, Tanner A.
- WO1 Wagoner, Brittany M.

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

AIT Graduations

Continued

Class 033-19

- PV2 Sean Hulsen- DG
- PV2 Muhammad Abdulqabid
- PV2 Ujwal Basnet
- PV2 Justin Dimaano
- PV2 Justice Fowler
- PV2 Bryce Graves

- PV2 Justin Hall
- PV2 Lemmerick Hooker
- PV2 Mitchell Hurd
- PV2 Matthew Mixon

Class 034-19

- PFC Cesar Nievesperez - DG
- SGT Jacob Agosto
- SPC Chance Gaudin
- PV2 Drake Newcomb
- PV2 Sean Norfleet

- PFC Cha Sepulveda
- PV2 Joshuaa Serrano
- PV2 Jermiah Snel
- PV2 Owen Stones
- PV2 Israel Velazco
- PV2 Adrian Vidaurri
- PV2 Carlos Walsh
- Class 035-19**
- PV2 Rylan Merchen - DG
- PV2 Calvin Avedi

- PV2 Cory Carpenter
- PV2 Cassidy Foley
- PV2 Javier Galindoy
- PV2 Jonpaul Harden
- PFC Colin Hayes
- PV2 Adam Keener
- PV2 Christopher Manzano
- PFC Sonatane Mau
- PV2 Mashaud Mcclarin
- PV2 Jonas Santaella

Class 520-19

- PV2 Jared Joseph Price - DG
- SPC Masami Masami
- PV2 Tyler Newton
- PV2 Dominic Rodriguez
- PV2 Damian Sanjustic
- PV2 Branden Seigl
- PV2 Absalom Smith

Continued next page



People On The Move

AIT Graduations

Continued

PV2 Dahlton Stack
PV2 Austin Stone
PV2 Kendell Stpeter
PV2 Joseph Stroup
PV2 Paul White

Class 036-19

PFC Jae Young Kim - DG
SGT Khalifa Al Ajmi
PV2 Richard Carranza
PV2 Alec Coopman
PV2 Joel Copeland
PV2 Steven Dalton
PFC William Epps
PV2 Jonathan Irizarry
PV2 Hunter Johnson
PV2 Kristopher Krumbiegel

Class 037-19

PV2 Elijah Rangel-DG
PV2 Gallage Lerronpeiris
PV2 Melvin Mendezcruz
PV2 Adrian Nieves
PV2 Le Schneider
PV2 Nicolas Swank
PVT Odane Terrylonge
PV2 Jordan Transou
PV2 Nicholas Yip

CH-47 Medium Helicopter Repairer (15U)

Class 028-19

PV2 Garrett R. Tester - DG
SPC Alex Emanue C. Gonzalez
SPC Shannon Kate Drzyzga
PV2 Sebastian N. Gonzalez
PV2 Jacob Thomas Gorman
SPC Lane Garrett Hanna
PV2 Alec Lee Henderson
PV2 Cody Herbert
PV2 Graham Stribling

Class 029-19

SPC Sky Borne Okimoto - DG
PFC Christopher Alan Cook
PFC Michael R. Escobosa
PFC Ricardo Moises M. Vargas
PV2 Zackery Alan Marshall
PV1 Jean Russell Mayola
SPC Christopher T. Morris
PV2 Bryan Patrick Richey
PV2 Joseph E. Santillan
PV2 Conner Lee Shuck

Class 030-19

PFC Francis-Scott P. Paras - DG
PV2 Vivianne Jade Atencio
SGT Isaac Anthony Cantu
SPC Brandon A. Caylor
SPC Larry Dwayne Gavlick
SPC Jordan Scott Hutchinson
PV2 Jace Michael Kendle
SPC Houston Adam Martin
SPC Jacob Allen Wadsworth
Class 031-19
PV2 Zacariah D. Hodgskiss - DG

SGT Omarie Bashar Burton
SPC Austin Kai Craig
PV2 Dashawn Antwone June
SPC Christopher J. Kurtz
PV2 Joseph K. Nwithukia
SPC Gregory Oversby
PV2 Miguel Romerofranco
SPC Michael Douglas Sparks

UH-60 Helicopter Repairer (15T)

Class 069-19

SPC Kelly Susan Funk - DG *
CPL Nicholas David Bernier
PV2 Cassandra Elaine Berner
SPC Keziaanne Downing
PFC Alexander Fleet
PFC Franky Marie Montijo
PV1 Joel Villa
PV1 Richard Allen Wait
PV1 Donte Williams, Jr
SPC Tylor Woodard
PV2 Terry Austin Wunker

Class 070-19

PV2 Mathew Scott Young - DG
PFC Blake Lee W. Arnold
SPC Joshua M. Bannister
SPC Conner Cheyn Cook
PV2 Dakota Glenn Fulton
PV2 Christopher E. Humphreys
SPC Rory Logan Kennedy
SPC Eduardo G. Martinez
SPC Cole Dyllon Mays
PV2 Laquavious D. Robinson
SPC Charles Andrew Wojcik

Class 071-19

PFC Ethan T. Carter - DG
SPC James Oluwatosin Ajala
PV2 Garret Michael Blanton
PV2 Arthur Raphael Ferreira
PV2 Angel Frias-Chavez
PV2 Jade-Lynn Marie Geedy
PV2 Aaron Todd Holliday
PV2 Timothy P. Hurley Jr
PFC Ryan James Newlands
PFC Stephen J. Rutherford
SPC Eric Larmonth Barrett, Jr

Class 072-19

SPC Michael P. Mcginnis - DG
SPC Rowell Abenes Alcalde
SPC Jesus R. Bosquez III
SPC Alexander Grant Coldani
SPC Rodney Joseph Flom III
SPC Skyler Paul Ford
PFC Charles E. Gilbreath
SPC Jesse Hernandez
SPC Ian Patric Jones
SPC Christopher Gary Paine
PV2 Josiah S. Radakovich
SSG Mark Alan Weimar, Jr

Class 073-19

SPC Wesley R. Carrera - DG
PV2 Jomo Kenyatta Binns
PV2 Jeremy N. Cowan
PV2 Joshua Aaron Goetz

PFC Christian Mark Lewis
PV2 Rene Salvador Torres
PV2 Casandra Lee Nardo
PV2 Carrie Michelle Reid
PV2 Kylie Jean Riley
PV2 Dylan Michael Smeltzer

Class 074-19

PFC Levi Grant Scott - DG
SPC Travis Paul Bartels
SPC Keith Allen Bradley
SPC Ethan Jon Clarke
SPC Douglas Jacob Gaham
PV2 Richard Hernandez, Jr
SPC Tanner Thomas Kimball
PFC Andrew David Maresca
PV2 Brian Nyaberi Nyabuto
SGT Isaac Marsalis Ortega
PV2 Kyle James A. Porcaro
SPC Thomas A. Porcaro

Class 075-19

AMN Benjamin Brown
AMN Brendon Connor
AMN Hunter Ford
AMN Sean Healy
A1C Devon Phillips
A1C Sean Purnell
A1C Derek Roth
A1C Nichles Slinker
AMN Christopher Tiller
AMN Dominic Vargas
A1C Henry Wade

Class 076-19

PFC Jace Ailor
PV2 Kevin Bannister - DG
PV2 Tyne Branum
PV2 Kaleb Brown
PV2 Johnathan Davis
PFC Ryan Keech
PV2 Aaron Lawson
PV2 Deronta Moore
SPC Reader Seoighe
PV2 Christian Williams

Aircraft Powerplant Repairer (15B)

Class 012-19

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

Aircraft Powertrain Repairer (15D)

Class 008-19

SPC Matthew A. Isbell - DG

SPC Kameron Alan Kalivoda

Aircraft Electrician (15F)

Class 015-19

PV2 Geoffrey C. Karr - DG
SPC Oluwasegun N. Fasuyi
PFC Shelby Montana Fitzer
PV2 Jordan Jagino Foster
PV2 Alexis Guerrero

Class 016-19

PFC Richard Kweku Adibefu
PV2 Zachary R. Kennedy Dg
PV2 Raekwon J. Maldonado
PV2 Carter Bradley Mckinney
PV2 Verne Guilliano Mullings
PV2 Drake Robert Noel
SPC Afzal Ataur Rahman
Class 017-19
PV2 Bradley Edward Rathbun
PV2 Nicholas Earl Roy
SPC Phillip Paul Schlabach
Azandrea Kevin Swaby

Aircraft Pnedraulics Repairer (15H)

Class 012-19

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

Aircraft Structural Repairer (15G)

Class 010-19

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

Avionic Repairer (15N)

Class Class 014-19

PV2 Andrew S. Lanier - DG
SPC Anthony P Archuleta
PFC Jeremy Padin Cardona
PV2 Christian F. Garcia
PFC Trey Alexander Hall
PV2 Yeilyn E. P. De La Rosa
SPC Jose Rene Santoscollazo
Class 015-19
PV2 Justin Cervantes

SPC Jason M. Espana
SPC Joel-David Hufstetter
PV2 Michael Calvin Neill
PV2 Junior Evan Renkert
PV2 Kenneth Mark Sjoberg

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

Class 013-19

SPC Kristiana Kenny - DG
PV1 Arndt Nicholas
PV2 Champaco Brian
PFC Corea Raul
PV2 Donnelly Aaron
PV2 Eugene Daniel
PV2 Leveque Wayne
PFC Trigo, Jr Antonio

Class 014-19

PFC Cody Mccullars -DG
PV2 Martinez, li Rosendo
SPC Johnson Jared
PV1 Klunk Austin
PV1 Mcfarland Matthew
PV2 Merkel Ryan
PV2 Ortega Michael
PV1 Rayamajhi Abhinav
SPC Reveron Avila
PV1 Richardson Hunter
SPC Richel Jason

Class 015-19

PVT Richard Aaron Shell-DG
PVT George Angel
PFC Earljosef Babauta
PVT Julia Byrne
PVT Juan Calvillo
PV2 Jorge Carmona
PV2 Nichlas Crowley
PVT Paige Gries
PVT Justin Smith
PV2 Silas Webb
SPC Caille Wells

Class 016-19

PVT Christian Mysak-DG
PFC Charles Edwards
PVT Jazael Favilahernandez
PVT Grant Hockley
SGT Ivan Lopouchanski
SPC Daniel Moreno
SPC Javier Nuno
PVT Brandon Pierremont
PFC Spencer Asher Stoff
PV2 Justin Wesson
PVT Christian Wilkins
PVT Austin Williams

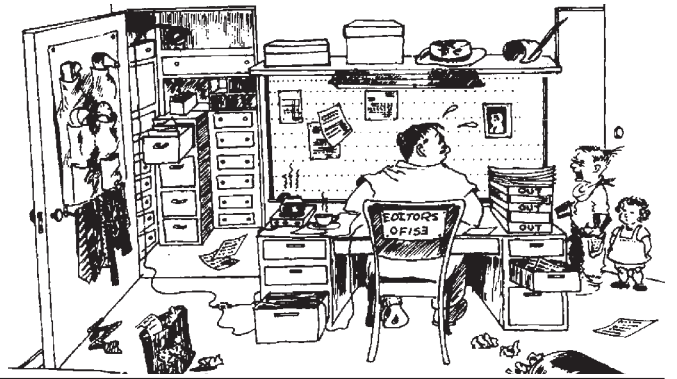
DG: Distinguished Graduate
HG: Honor Graduate

* = AAAA Member
+ = Life Member

Art's Attic

By Mark Albertson

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



25 Years Ago December 31, 1994

Minuteman Chapter

On August 27, 1994, members of the Minuteman Chapter gathered at an airshow held at Westover, MA. Left to right are: CW3 John C. Healey, LTC William H. Smith, CW2 Tim L. Tompkins, Chapter President, CW2 Tom J. Nye, CW2

Terry R. Knight, Terry Shannon Coakley and Lauren Coakley, Coakley, AAAA Executive Director,



Sustaining the CH-47D Fleet.

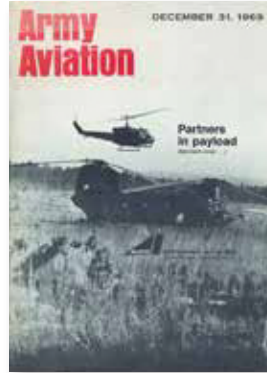
“... Boeing is modernizing seven CH-47Cs

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



Transitioning to the 21st Century

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



50 Years Ago December 31, 1969

Resolution

Whereas, Warrant Officers and Commissioned Officers in aviation units fly side by side and experience the same risks and face the same flight responsibilities, and Whereas, an area of flight pay inequity exists between Warrant Officers and

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



Customer Support

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

Fort Rucker, Alabama

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





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

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

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

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

Army Aviation Hall of Fame

Colonel Nelson A. Mahone Jr.

*Army Aviation Hall of Fame 1992 Induction -
Atlanta, GA*



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

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

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

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

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



CTG[®]

Have Obsolescence and Readiness Challenges? We have solutions.

We'll help you optimize the cost, schedule and performance of your program with our acquisition and supply chain services.

REACTIVE OBSOLESCENCE MANAGEMENT PROGRAM

- Stay in current configuration
- Source hard-to-find and obsolete parts
- Inspect for counterfeit components
- Deliver in less time than some alternative solutions

On average, CTG successfully sources up to 73% of hard-to-find material requirements.

PROACTIVE OBSOLESCENCE MANAGEMENT PROGRAM

Take a data-driven approach to mitigate DMSMS challenges. Our Obsolescence Experts evaluate your inventory against marketplace availability to identify where you may be at risk.



CTG SUPPORTS MULTI-DOMAIN OPERATIONS
AIR, GROUND, SEA, CYBER & SPACE



**FIRST & ONLY
DISTRIBUTOR
TO EARN
CAAP AC7402**

The CAAP (Counterfeit Avoidance Accreditation Program) brings together technical experts from both industry and government for ensuring compliance to standards associated with the prevention, detection, and responses to the threat of counterfeit parts in aviation, space, and defense.

The Army Materiel Command (AMC), Defense Logistics Agency (DLA) and Naval Aviation have benefited from our proven techniques.

CTG has successfully increased overall operational readiness by providing critical material to these locations in support of immediate warfighter requirements.

**CTG IS A CERTIFIED DLA APPROVED
TESTER (QTSL) AND SUPPLIER (QSLD)**

CTG[®]

FROM PARTS TO
PARTNERSHIPS[™]

  **CTGNOW.COM**
914.779.3500 | sales@ctgnow.com

A REVOLUTION IN RESCUE



Pegasus® rescue hoist – setting the new standard

For decades, rescue crews have relied on our Goodrich® rescue hoists to help them save lives. Our new Goodrich Pegasus® rescue hoist brings enhanced performance and a reimagined, modular architecture designed to simplify and reduce maintenance. A single-point payout minimizes load swings, and the new DASH data acquisition system provides detailed insight into mission profile. Those in peril rely on you. You can rely on us.

collinsaerospace.com/pegasus

GOODRICH® PEGASUS RESCUE HOIST

- Builds on legacy of unparalleled reliability
- Introducing the DASH™ data acquisition system for advanced mission insight
- Easily field-serviceable components
- Retrofits to existing helicopter platforms



Collins Aerospace

© 2019 Collins Aerospace, a United Technologies company. All rights reserved.

UTC Aerospace Systems and Rockwell Collins are now Collins Aerospace.