ARMY AVIATION

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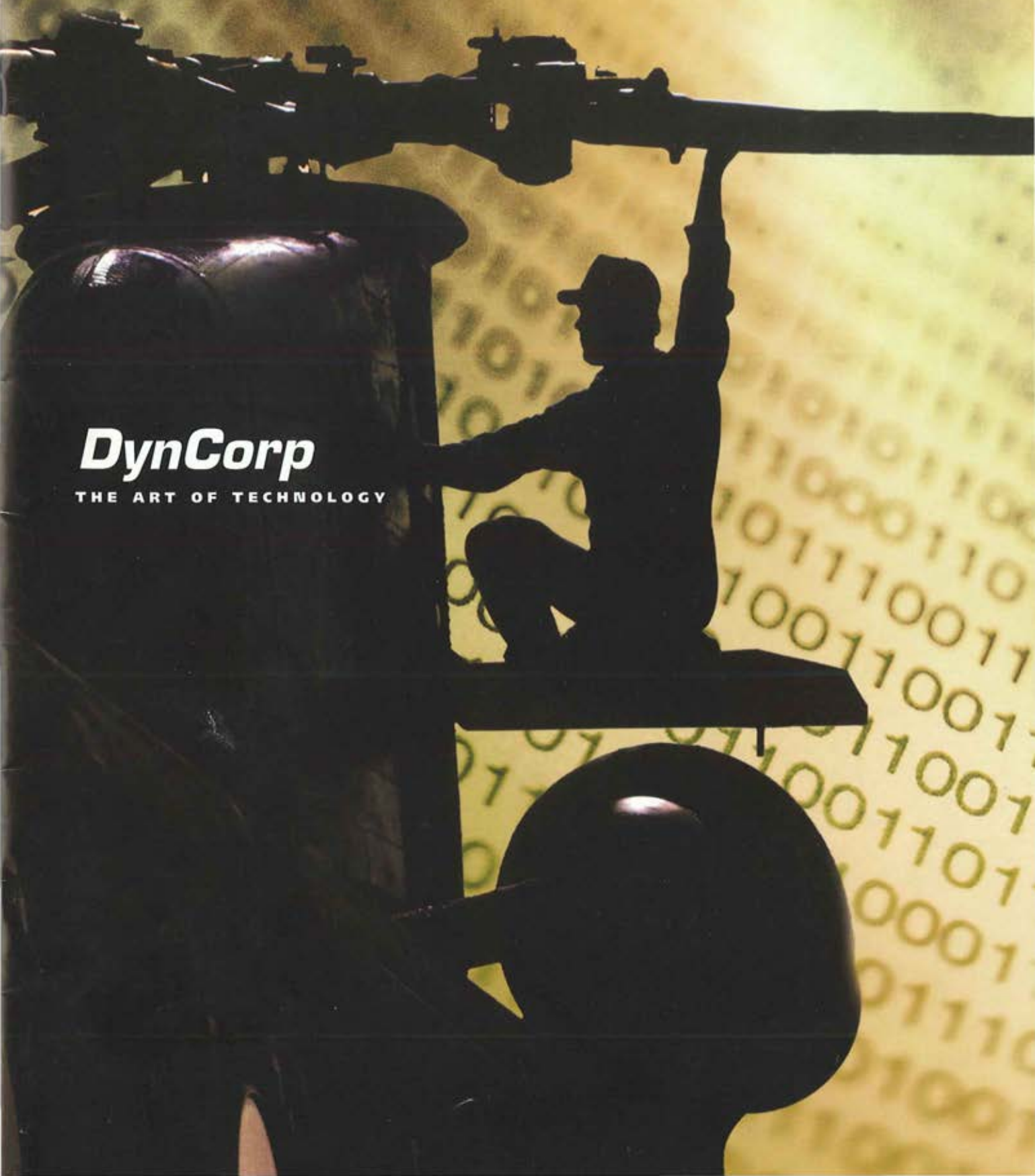

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briefings

The 1999 AAAA Annual Convention will have a different format this year. The convention will open Sunday night May 9, 1999 with an Ice Breaker Reception in the Exhibit Hall and end Wednesday night May 12, 1999 with the formal AAAA Annual Banquet. In order to encourage you to come in early and take advantage of the Saturday night stay for the reduced air fares, there will be a number of activities planned on the weekend. Tours include: the Country Music Hall of Fame, Andrew Jackson's home "The Hermitage", Golf Tournaments on Saturday and Sunday Afternoons, Grand Ole Opry Saturday night, and a Mother's Day brunch cruise on the "General Jackson" show boat. All housing will be in the Opryland Hotel which boasts over 2,500 rooms, twice what AAAA requires. See the center of this magazine for registration forms. The forms are also available on the AAAA home page: http://www.quad-a.org

When Will I Get My Flight Pay Raise?

All eligible aviators will receive the flight pay raise, with backpay; however, it may be as late as March before it is received.

OSD Comptroller and the Assistant Secretary of Defense for Force Management and Policy have told (Defense Finance and Accounting) DFAS to ensure the latest change in flight pay is received by those eligible as quickly as possible. DFAS said the soonest aviators will see the change is in the January-March 1999 time frame. OSD is attempting to accelerate this timeline. Back pay will be effective as of 17 October 1998.

DFAS is working to implement the change as soon as possible. Because the new law changed not only the pay rate, but the way the pay is calculated, (changing TFOS to Aviation Service), the entire program has to be rewritten. This requires a testing phase upon completion. Since DFAS programs for three services, the scope for coordination and implementation is greater than that for the Marines. This may explain, in part, why your Marine counterparts have received the raise and you have not! Check out the PERSCOM homepage at perscom.army.mil/dcsops/aviatpay.htm.

Questions concerning flight pay raises should be addressed to MAJ McClelland, PERSCOM (TAPC-PLP-I) at DSN: 221-5098 or COML: (703) 325-5098.

TEAC, Inc., has introduced a new line of airborne videotape recorders that can be configured to directly time stamp GPS, Zulu or IRIG clocks onto an aircraft's video tape. This allows for exact synchronization of video from multiple aircraft involved in tactical, test or training missions, thereby providing more accurate and thorough debriefings.

Army Aviators Class 53C-L (San Marcos AFB & Ft. Sill, OK). Seeking members for a possible reunion in the fall of 1999. Contact Ed Preisendorfer, 701 Shadow Hills Drive, Grants Pass, Ore. 97526, (541) 955-1064 or Bill McPherson, 1029 Park Dr. #29, Indian Harbor Beach, Fla. 32937, (407) 773-2578.

U.S. Air Force **Maj. Gen. Richard D. Murray (Ret.)** has been named president of the National Association for Uniformed Services. A former commander of the Army and Air Force Exchange Service, Murray has served as a member of the NAUS board of directors, and fully supports the association's military/veteran objectives.

Members of the Army's first AH-64D-equipped unit, the **1st Battalion, 227th Aviation Regiment**, at Fort Hood, Texas, have been certified as combat-ready. The certification followed 15 months of individual pilot and maintenance training at the Boeing Co. facility in Mesa, Ariz., and eight months of intensive company- and battalion-level training at Fort Hood. Boeing is under a five-year contract to produce 232 AH-64Ds through 2002.

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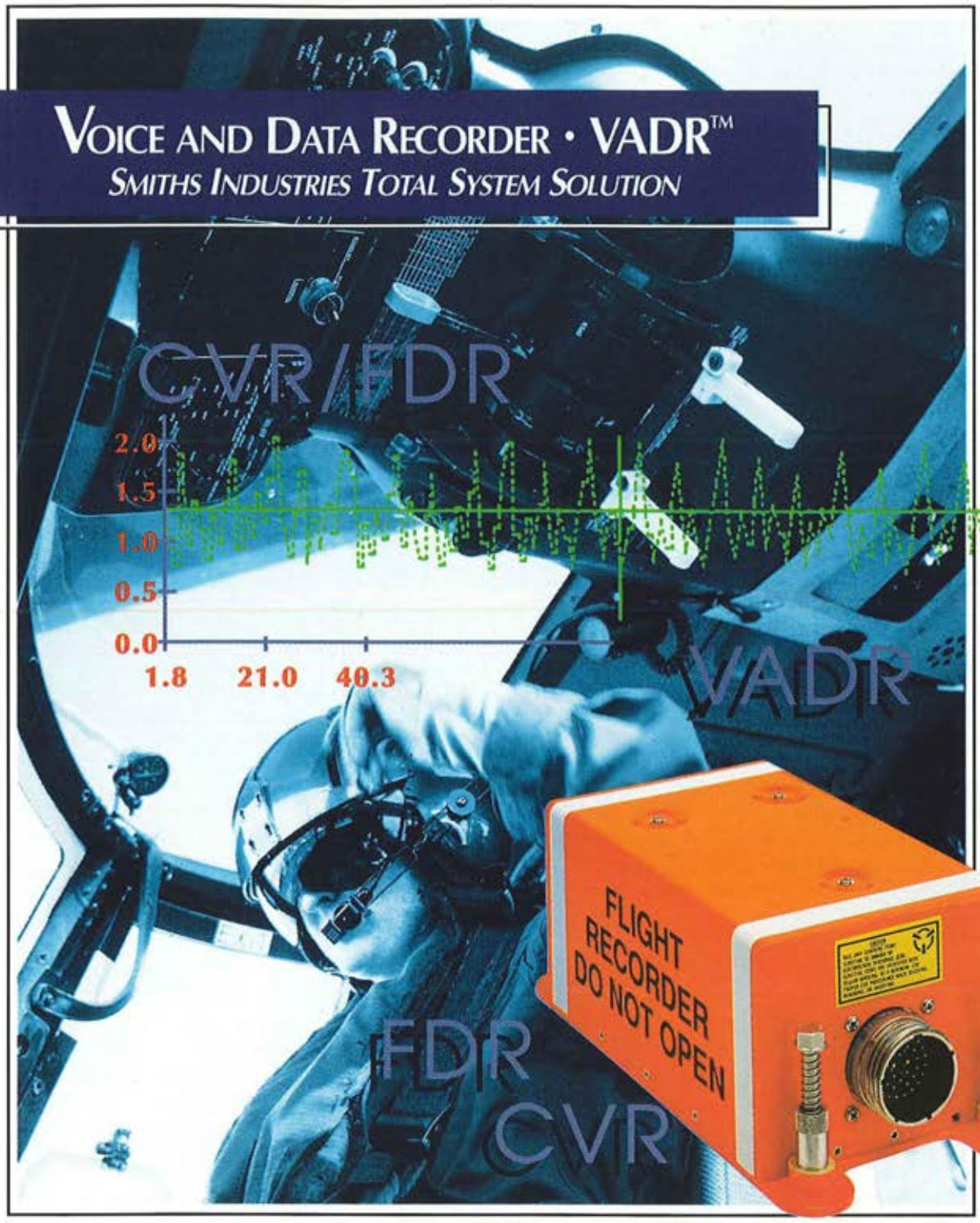

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MAINTENANCE and PRODUCT SUPPORT: *the Keys to Victory*

by Maj. Gen. Anthony Jones

Army aviation continues to support warfighting commands all over the world with a strong, flexible and quick responding deterrent. Army aviation brings lethality, agility and an adept ability to shape the battlefield. Our division and corps commanders are successful on the modern battlefield and in garrison because of our tremendous aviation maintenance organic and external capability. Solid logistical planning and execution were the keys to such successful operations as Joint Endeavor/Guard in Bosnia and Operation Desert Storm in Southwest Asia. Sound aviation maintenance programs can be a challenge in the era of ever-diminishing resources, chronic personnel shortages and high OPTEMPO for extended periods. The warfighters who focus their energy and efforts toward maintenance and product support will fight and win in our nation's next war.

Aviation Maintenance Training

Training the aviation logistical force is a key component of the USAAVNC mission. Our branch is truly unique in the way we train logisticians. The United States Army Aviation Logistics School (USAALS) is at Fort Eustis, Va. Particular to USAALS is the ability to train our combat, combat support and combat service support soldiers of the Aviation Branch. The school is charged with the critical mission of supplying nearly two-thirds of our branch's enlisted personnel systems including all the 67-series MOSs and weapons technicians. The school is also responsible for the training and leader development of our commissioned aviation logistic officers.

Our aviation personnel receive world-class logistical and maintenance training at USAALS. As the home of Army aviation logistics, USAALS offers our soldiers and officers the opportunity to interface with other logisticians throughout the force, thereby providing a learning experience that is unparalleled. Our aviation logistics officers at USAALS are learning the entire logistical support doctrine for Army organizations company/troop through corps. Understanding the habitual relationships and the connectivity links between support organizations is critical to high operational-readiness rates. When our maintenance leaders know how the system works, order-to-ship time on repair parts is reduced, resulting in the right organization with the right tools working on the right aircraft.

USAALS provides leadership and vision in the aviation logistical field as doctrine is developed for America's Army of the future. Understanding the doctrinal relationships between aviation unit maintenance (AVUM), aviation intermediate maintenance (AVIM) and depot organizations and implementing the doctrine into the force of the future is critical to a success of Army aviation. Difficult enlisted maintainer force modernization issues remain for the Army After Next (AAN). USAALS is working to ensure the right mix of NCO rank structure and MOSs is available to support the AH-64D Longbow and the RAH-66 Comanche well into the 21st century.

Aviation Maintenance Branch Initiatives

The AH-64D Longbow will provide better fault isolation of components through computerization. Maintenance data recorders are installed in each aircraft to help maintainers identify problems or trends that lead to aircraft downtime. The Longbow program has implemented several technologically advanced systems. The Individual Electronic Technical Manual (IETM) for maintainers will reduce cumbersome paper in logbooks. The Soldier Portable Computer (SPORT) served as the crew chief's test set for aircraft components. Overall, the Longbow maintenance initiatives have decreased maintenance man-hours to flight hours and increased aircraft availability which will be validated in a field environment with 1st Battalion, 227th Aviation Regiment, at Fort Hood, Texas next month.

The RAH-66 Comanche has several maintenance initiatives that will revolutionize how maintenance is done in the future. The aircraft is programmed to require 2.6 man-hours per flight hour vs. legacy aircraft that now require five to six maintenance man-hours per hour flown. The aircraft requires three MOSs to conduct all maintenance, as opposed to the seven MOSs required for legacy aircraft. Comanche AVIM tasks have been eliminated. Fewer tools will be required to maintain the aircraft. Fault isolation will be far superior to today's aircraft, with improved computerization. Clearly, Comanche's higher aircraft availability and decreased operational and maintenance cost make this aircraft a must as we enter the 21st century.

Certainly, the aviation maintenance challenges we have faced in the past will continue to challenge us in the future. I am confident that the branch can and will continue to meet these challenges as we approach the new millennium. I look forward to hosting our warfighting commanders during the Aviation Leaders Training Conference, Jan. 31 through Feb. 5, here at Fort Rucker. Above the Best!

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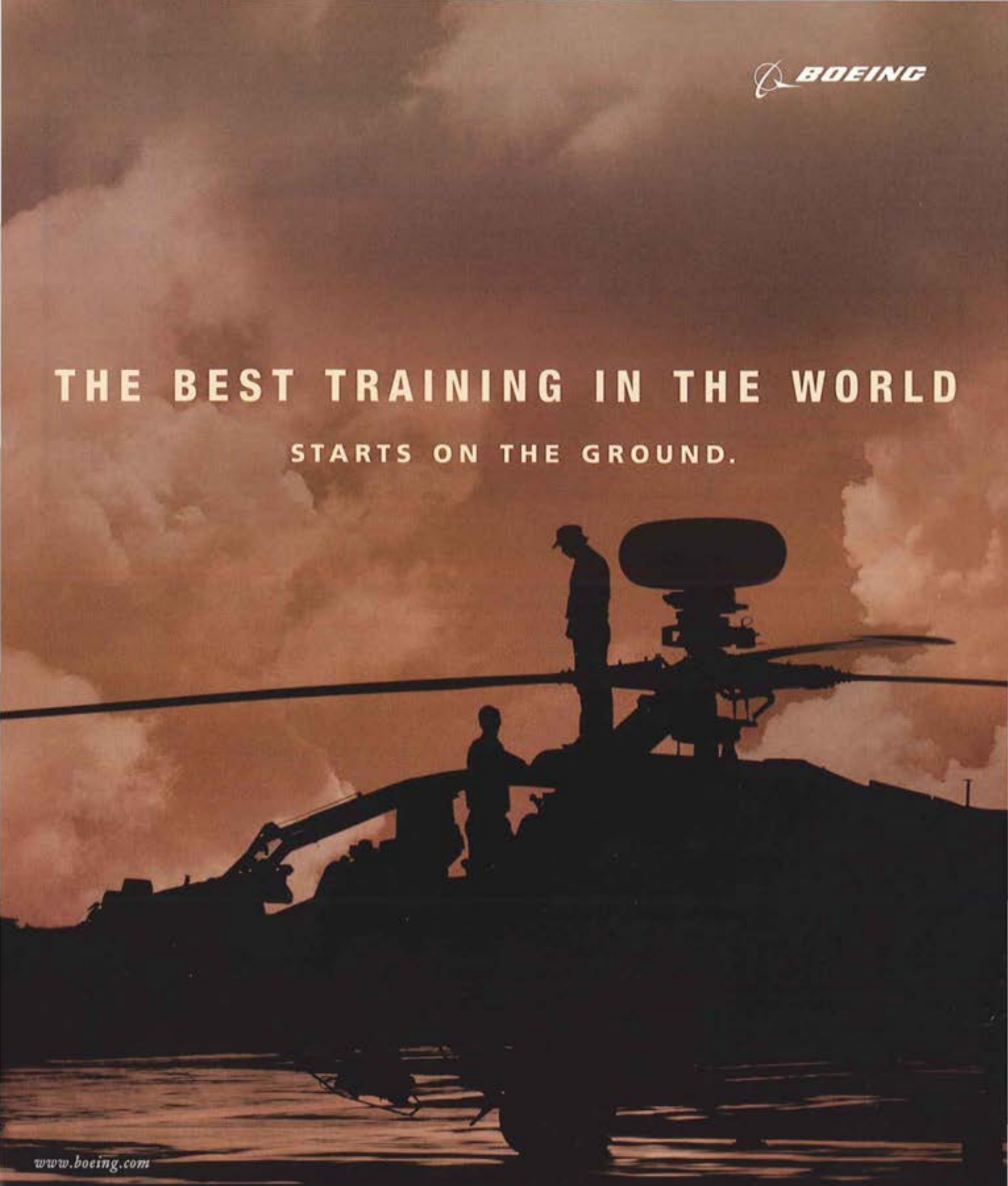
Maj. Gen. Anthony Jones is commanding general of the U.S. Army Aviation Center at Fort Rucker, Ala., and chief of the aviation branch.



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AMCOM

U.S. Army Aviation and Missile Command:

A Status Report

A year ago I wrote about forming the Aviation and Missile Command (AMCOM), and about how our aviation weapon system teams were planning to reduce logistics-operations costs and improve customer-response times.

By Daniel J. Rubery

This year I am pleased to report that those teams are working well and achieving those goals, and also that we've made some product-support and maintenance improvements that will interest the whole community. Combined, the improvements will help us sustain the aviation mission and its critical processes in a rapidly changing world.

Readiness/Airworthiness Profile

Today's world demands smart, cost-effective innovations. We will be challenged, now more than ever, to increase our capabilities and improve our information management so that we can continue to assure future tactical advantages. The demands of the modern battlefield — shoot, move and communicate at unprecedented levels of speed and lethality — require us to sustain our combat power and readiness.

This has been a challenge as a great deal of expertise was lost during the aviation mission move from St. Louis to Redstone Arsenal. It has taken a lot of resource juggling, new recruitment and training — as well as the dedicated support of about 450 technical service contractors who moved with us to Alabama.

We have had some significant challenges in the airworthiness area with two of our primary propulsion systems, the T53 and T700 engines, having experienced conditions that required immediate attention. Failure incidents of the N2 spur gear on the T53-L-13 prompted us to ground the UH-1 fleet in late March. By using an Aviation Vibration Analyzer (AVA), we tested for the vibrations causing the failures. Then, in partnership with AlliedSignal Inc., we developed a coated spur gear that can be installed on non-vibrating engines. This installation permits aircraft to return to flight without restrictions. Aircraft not grounded and with old spur gears, however, must still pass an AVA test every 50 hours. Aircraft with the coated spur gear must pass an AVA test every 150 hours. We have had no spur-gear failures since the engine vibration tests began, about 40,000 flight hours ago.

Our GE T700 series Life Limits Integrated Product Team has been working diligently and has now concluded that no significant impacts to procurement, readiness, logistics or safety confront the community because of predicted lower engine-component lives. In line with that conclusion, we are removing high-time parts, with three goals: manage risk; manage impact to field at acceptable level; and give us more time for further analysis. That analysis includes inspections and testing to validate engineering life predictions and arrive at a new production specification.

Nonetheless, AMCOM has undertaken a number of initiatives in the past year, aimed specifically at continuing our high levels of readiness.

Fixed-Wing Product Manager

The AMCOM Fixed-Wing PM has started installing Global Air Traffic Management (GATM) and navigation safety equipment on RC-12, C-12, UC-35, C-23, C-26, C-20, C-21 and C-37 aircraft. These navigation and safety enhancements — area navigation, traffic alert, collision avoidance and terrain avoidance — will not only bring the Army's fixed wing fleet in to compliance with the Army Aviation Modernization Plan, but will also enhance safety.

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Sikorsky Aircraft selected the BFGoodrich Aerospace standardized New Generation HUMS (Health and Usage Management System) for all Sikorsky S-92 and S-76 models.

The system automatically calculates structural life usage, rotor track and balance adjustments, vibration trending and drive train diagnostics.* The New Generation system also performs many other management, and data collection functions including; fuel management, and power assurance. It also integrates with Cockpit Voice and Flight Data Recorders. The accompanying ground-based station automatically evaluates data collected in flight relating to parts usage, and directs maintenance actions...this offers increased availability, improved maintenance decisions, reduces maintenance costs, plus, provides an early detection of developing parts failures.

This open architecture system was also selected for the U.S. Navy, Marine Corps, and the Coast Guard H-60 family and the CH-53E model under the Integrated Mechanical Diagnostics-Commercial Operations and Support Savings Initiative (IMD-COSSI) program, as well as on the Agusta A109K2 and the Eurocopter AS350 and A355 Series.

*Sensor systems provided in partnership with Vibro Meter, Inc.

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Air Traffic Control Product Office

AMCOM's ATC Product Manager is replacing a variety of legacy ATC systems with three "off-the-shelf" systems: the Air Traffic Navigation Integration Coordination System, the Tactical Airspace Integration System and the Fixed Base Precision Approach Radar. These three systems are more affordable and reliable. A key feature of these new systems is their modular design and contractor-based logistics support.

Depot Maintenance

We expect to complete the refurbishment of 300 UH-60As at Corpus Christi Army Depot, Texas, this month. The UH-60A Refurbishment/Standardization Program brings those aircraft up to the 1985 model configuration, and gives the Army National Guard aircraft that will have no scheduled maintenance for 500 hours. This program incorporates all outstanding Maintenance Work Order Kits and replaces components having less than 20 percent Time Between Overhaul time remaining.

As the refurbishment of 300 UH-60s begins gearing down and nears completion, the CH-47 requirement for overhaul and refurbishment has been growing. We completed 16 aircraft in fiscal year 1995, 20 in FY '96, 21 in FY '97, and 28 in fiscal '98. This overhaul and refurbishment requirement will continue until the Improved Cargo Helicopter program (ICH) appears in FY 2002. Even during the ICH program there will be a CH-47 overhaul and refurbishment requirement. Currently, we predict that requirement to be in the six-to-eight aircraft per year range.

Y2K

Be assured that AMCOM and the PEO Aviation are focused on assuring that the Y2K bug does not impact the weapons systems supported by AMCOM. Countless hours of analysis and live integrated-system testing have been conducted to ensure that our systems will perform as expected next year. In fact, just before Thanksgiving the AH-64A Apache, AH-64D Longbow Apache and OH-58D Kiowa Warrior demonstrated that they can designate, identify and attack targets with their missile systems as well as communicate with the Advanced Field Artillery Tactical Data System and direct the firing of a Multiple Launch Rocket System in the year 2000 and beyond.

Knowledge Asset Management Network (KAMNET)

The Utility Helicopters Project Office (Black Hawk) has taken the lead on a pioneer effort dubbed KAMNET — Knowledge Asset Management Network — which is a searchable and comprehensive, multimedia, technical information library. Via KAMNET, finding, sharing, managing and processing information is only a mouse click away. When fully implemented, KAMNET holds the promise of delivering improved weapon-system readiness as well as improved acquisition and logistics support.

KAMNET, the direct transfer of data from government activities to contractor sites, reduces the replication of stored data, reduces lead times and allows for smaller materiel inventories. Further, the Black Hawk Newsletter appears on KAMNET, complete with video training clips. Not only does KAMNET serve Army aviators, it also serves other customers under the "Team Hawk" umbrella. For example, the Air Force's chief maintenance test pilot recently told us that he uses KAMNET for HH-60G crewmember and maintenance training.

Operating and Support Cost Reduction (OSCR)

FY '98 was a record-setting year for AMCOM's Operating and Support Cost Reduction (OSCR) program. Eleven items were contracted, with savings over 10 years projected to exceed $301 million. The items were AH-64 Improved Tail Rotor Gearbox Output Shaft Lip Seal; AH-64 Tail Rotor Fork Assembly; AH-64 Drive Shaft; AH-64 Main Rotor Drive Shaft Assembly; AH-64 Auxiliary Power Unit Drive Shaft Assembly; AH-64 Tail Rotor Pitch Link; AH-64 Tail Rotor Shaft Assembly; AH-64 Intermediate Gearbox Speedy Sleeve; AH-64 Mast Base Support Assembly; OH-58 Mast Mounted Sight Thermal Imaging Sensor; and CH-47 Battery Improvement.

The OSCR program funds engineering design efforts, reducing secondary item costs while extending item life and improving maintainability. The success of the OSCR program reflects the cooperative efforts of all personnel in AMCOM, the PEOs, PMOs and contractors as well as end users.

Spares

Our Spares Stock Availability rate for the big four — OH-58D, UH-60, CH-47D and AH-64A — Status of Resource Training Systems (SORTS) has increased this year by 10.1 percent, to 79.2 percent. This increase is based on significant efforts by Corpus Christi Army Depot, expedited deliveries from our commercial suppliers, establishing long-term contracts with key vendors and awarding requirement type contracts. This rate increase was also made possible by the cooperation and hard work of the Aviation Teams in the AMCOM Integrated Materiel Management Center (IMMC). Those teams assured that the proper items were procured and overhauled, and that expedited actions resulted in getting the right parts to the right place at the right times. Additionally, our colleagues in the Acquisition Center, Aviation Research Development and Engineering Center and PEO Aviation helped in attaining this increase.

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Logistics Assistance Representatives (LARs)

Logistic Assistance Representatives (LARs) are the most visible interface between AMCOM and customers in the field. The LARs provide the best "real time" information on customer satisfaction and technical problems in a field environment.

As part of an on-going computer upgrade, we recently purchased state-of-the-art laptop computers for use by LARs in the field. Accompanied by high-speed modems and an excellent software package, these machines permit LARs to interface with AMCOM headquarters on a "real-time" basis.

Shared logistics information, enabling quick solutions for our number one customer — the soldier in the field — is now possible with digital cameras and desktop video teleconferencing.

The LARs are AMCOM's front line in providing support to customers around the world. AMCOM will continue to provide the LARs with cutting-edge technology in automation and communications technology. That technology means that AMCOM remains committed to providing its customers with world-class product support.

Contract Field Service Representative (CFSR)

In terms of product support and customer response, no more shining example exists than what happened in August at Camp Stanton, Korea. Specifically, 73-inch rainfall over six days produced floodwaters that inundated five OH-58D Kiowa Warriors. Bell Helicopter Textron's Contract Field Service Representative (CFSR), Mike Van Riper, along with an AMCOM Logistics Team headed by Lt. Col. Jim Weger, worked to recover, salvage and reclaim the flood-damaged birds.

All electronic black boxes had to be removed, cleaned and treated to retard corrosion. This CFSR/AMCOM partnership team worked quickly, saving us several thousand dollars as 80 percent of the boxes were returned to service. Additionally, replacement aircraft were sent to Korea to maintain the unit's readiness. CFSRs are full partners in meeting the readiness challenges you face everyday.

Summary

As the next century dawns, we remain committed to continuing product support and maintenance improvements. The Army has a strategic initiative called "A Revolution in Military Logistics" which envisions new and smarter ways to sustain our weapon systems on future battlefields. Partnerships and outsourcing will become common ways of support. It is AMCOM's challenge as the aviation mission area manager to assure the integration of all these initiatives to help Army aviation sustain its missions and critical processes in a rapidly changing world.

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Daniel J. Rubery is the deputy to the commanding general of U.S. Army Aviation and Missile Command at Redstone Arsenal, Ala.

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Fish or Cut Bait

Fixing Aviation Combat Service Support

By Col. Alfred J. Naigle

The Aviation Branch was established as one of the combat arms (CA) in November of 1983. The new branch pulled the CA and combat service support (CSS) functions out of the other branches and placed them under centralized aviation control. During the 15 years that followed, the branch transformed the career management of aviation officers and soldiers and moved aviation to the forefront of the combined-arms team. The branch would be an unqualified success were it not for the oversight of aviation CSS — a primary function performed by more than 75 percent of aviation soldiers.

Aviation CSS begins with leader development, first in maintenance assignments and then in logistics. From the very beginning, development of a commissioned maintenance officer has been resisted. In early summer 1998, nearly 30 percent of active Army aviation commissioned maintenance officer positions were vacant. In cases where positions were filled, the officer assigned often had no formal training and no previous experience. Officers were, and continue to be, assigned to leadership responsibilities where their functional expertise is less than their subordinates. Under such circumstances, the very best and brightest officer has to overcome leader credibility. Simply stated, aviation is on track to institutionalize inexperienced maintenance leadership in the field. Is it any surprise that there is a general migration away from standardized maintenance policy and practice to embrace commercial alternatives?

> ***"The recent elimination of utility helicopters from the AVIM structure not only impacts on the unit's doctrinal support mission, but also hurts the careers of the assigned pilots."***

Compounding leadership woes is the potential destructive impact of maintenance assignments on an officer's career. Officers serving in maintenance positions, particularly at Aviation Intermediate Maintenance (AVIM) level, are often designated Flight Activity Category 3 (FAC 3) aviators. Category FAC 3 requires aviator currency in simulator. This adds to the unattractiveness of maintenance jobs by preventing officers from gaining flight experience at a time when it is critical for them to remain competitive with their aviation peers. The recent elimination of utility helicopters from the AVIM structure not only impacts on the unit's doctrinal support mission, but also hurts the careers of the assigned pilots.

Officers serving in maintenance assignments lead the largest complement of soldiers within aviation organizations. Yet despite the demanding leadership responsibilities, maintenance and logistics assignments other than command are excluded as branch-qualifying. Assignments in positions that are not branch-qualifying and do not afford officers to build flight experience are detrimental to an aviation officer's career. Serve multiple tours in such assignments and a career may well be over.

The erosion of commissioned officers in aviation maintenance impacts the Army. Outside the aviation community, new and innovative support solutions are being developed to transition the Army to Joint Vision 2010 and Army After Next (AAV). These concepts are being developed without aviation participation. The outcome will be future logistics systems and processes void of any consideration for the Army's most logistics-intense battlefield requirements. The reduction of qualified commissioned maintenance officers creates a shortage of aviation logisticians to interface with Army logistics at higher levels of the Army.

In response to this shortage, requirements for aviation logistics officers are being reduced. Positions historically filled by aviation logisticians, such as the S-4 at aviation battalion and brigade level, have been recoded to accommodate any aviation officer. Positions at U.S. Army Aviation and Missile Command have either been "civilianized" or transferred to the Acquisition Corps. Today, aviation logisticians compete for one colonel-level command and two colonel-level staff positions within the Army. There are no longer any general-officer positions. Loss of critical experience-building opportunities and career-growth potential will exacerbate the shortage in the future.

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domain of warrant officers. There is some truth to this assertion, however the commissioned and warrant officer maintainers have always been a team with distinctly different responsibilities. Commissioned officers have provided leadership and resource-management skills and warrant officers have been the technicians. Together, they leverage unit capabilities to provide an effective maintenance program. To rely exclusively on warrant officers to support the complex systems of today is asking too much. They're not trained like commissioned officers and therefore should not be considered interchangeable with them. The fact is that warrant officers need the senior leadership of the commissioned maintenance officer and logistician to champion CSS and promote the welfare of aviation soldiers. The decline in professional aviation maintenance and logistics officers has probably contributed to the drop in promotion rates for maintenance warrant officers.

Aviation controls the most logistics-intense and costly systems in the Army — approaching 30 percent of the total annual appropriation. Today's AH-64D Apache Longbow, UH-60L and UH-60Q Black Hawk, CH-47D Chinook and OH-58D Kiowa Warrior are complex and expensive systems. The current trend toward system complexity and cost continues under future aviation modernization strategies. When aircraft begin to exceed $20 million a copy and individual components top $1 million, an untrained or inexperienced maintenance officer can exhaust an attack squadron's annual operating budget on just a few bad calls. Shuffle in some mismanagement and increased controlled exchange, and the commander holds a losing readiness hand from which recovery is long and arduous.

There's no room for amateur aviation maintenance officers. And as aviation spearheads industry-leading weapons systems technologies, prognostic tools, information management systems and business applications within the Army, there's no place for amateur aviation logisticians either. Commanders need specialized leaders skilled in managing tightly constrained maintenance resources so they can fully exploit the flexibility and lethality of aviation forces. Aviation officers must be encouraged to enter maintenance and logistics as a profession. In return, the Army must establish a definitive career track that affords professional development and progression. The suggestion that we don't need professional commissioned maintenance officers and logisticians for Army aviation defies common sense and logic. Effective logistics is the keystone of sustaining aviation forces in the warfight.

"The reduction of qualified commissioned maintenance officers creates a shortage of aviation logisticians to interface with Army logistics at higher levels of the Army."

The first 15 years are gone and it's time to fish or cut bait on aviation CSS. Win-win for the Army is a capable maintenance leader in the field and an accomplished senior aviation logistician in the headquarters.

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Col. Alfred J. Naigle is chief of the Aviation Logistics Division in the Office of the Deputy Chief of Staff for Logistics.

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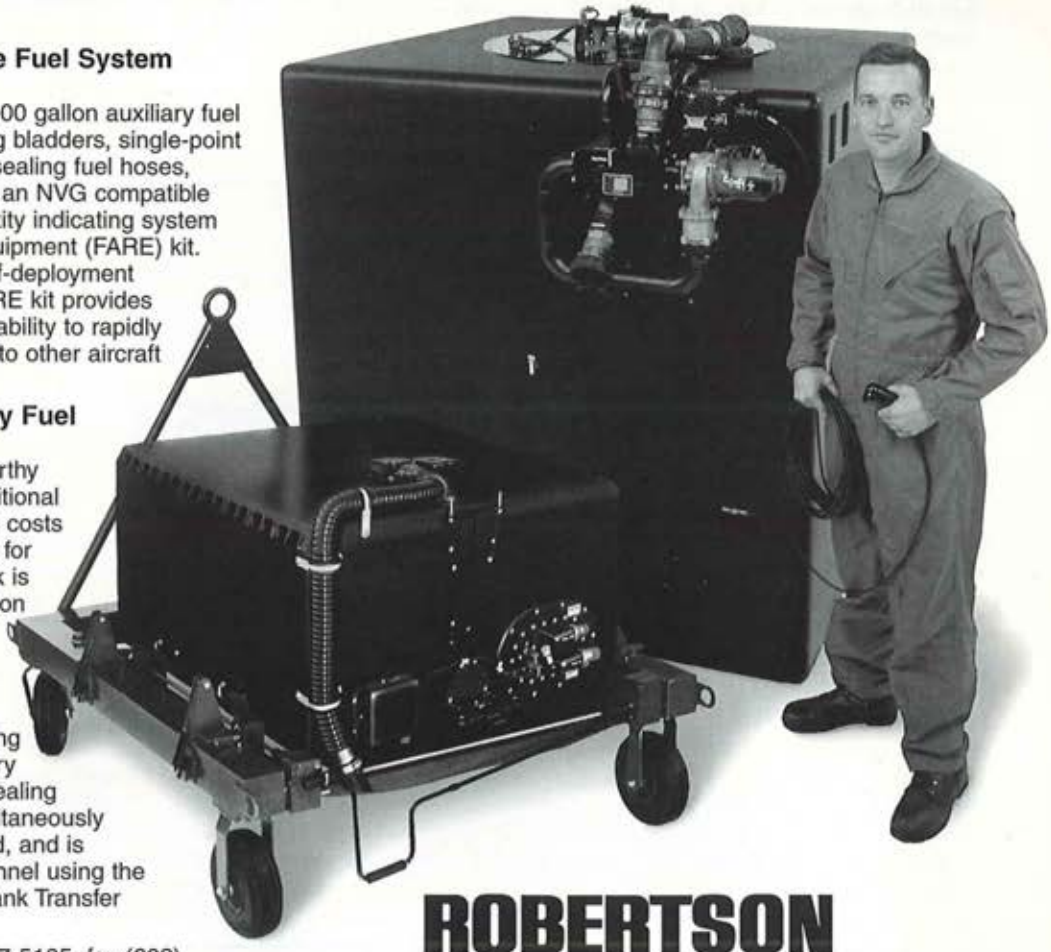

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AVIATION MAINTENANCE PHILOSOPHY:

A Hard Fight for Fighting Smarter

By CW0 3 Rex T. Akins

Aircraft availability should be the utmost priority of any aviation unit. After all, the very existence of the unit revolves around the possession of those aircraft. The "bread and butter" of an aviation squadron or attack battalion is its 24 Apaches. Everything the battalion will be known for will be connected to the operation, the safety, the maintenance, the pilot training, the success or the failure of those aircraft. A higher profile of attention is hard to find when you own a national asset that is one of the Army's strongest combat multipliers at $15 million per copy — when it's working!

From AH-1 Cobras to AH-64 Apaches, a disappointing reality of these acquisitions is that there does not appear to have been a real commitment to concurrent life-cycle funding for continued training operations in a peacetime environment. The success of the Apache in Operation Desert Storm is a tribute to the airframe and its capabilities in a harsh environment. Giving credit where credit is due, though, 24-hour maintenance operations and carte blanche in obtaining supplies is not a bad way to go; but such operations are not commensurate with budgetary, life-cycle funding in peacetime. The point is, it took an intensive effort to keep the Apache in the battle, not only because of the environmental conditions, but also because the level of complexity in the airframe requires it!

This is not to deny that there have been some outstanding accomplishments in the aviation maintenance communities all over the world. The units that have met and exceeded Department of the Army standards and goals while being deployed or involved in combat, and even those who have an accelerated OPTEMPO and do it all as a FAD 3 unit, are to be commended. A possible common ingredient within all those units is the enforced, supported and resourced commitment to maintenance that went well beyond lip service and thunderous paper promises. There must be a realization of counting the costs for this commitment weighed against the tragic costs if you do not.

One of the costs is putting maintainers on or around an airframe with the purpose of maintaining it. This requires either large numbers of maintainers or fewer maintainers giving more direct, productive man-hours applied to maintaining airframes. We have neither. Just for a comparative analysis with the other branches of the military, a study was conducted a few years ago that revealed the number of maintainers that were actually assigned to aircraft maintenance per airframe. This was not an "apples and oranges" comparison, because the differences of complexity between an F-16 or an F-14 and an AH-64A/D are inconsequential.

The Air Force led the maintenance initiative with well over 20 maintainers per airframe, with the Navy devoting around 15 per airframe. The Army came in a distant and disappointing third with about three per airframe. This result is often rationalized with the statement "we do more with less," which naturally ends with the "logical" expectation of doing everything with nothing.

Doing business with humans on any given day reveals an almost endless list of non-MOS distractions — some are true concerns and needs, most are not. Many of the daily "duties" devote much time and critical manpower to tasks that cross MOS lines. For example, we cannot possibly expect already overworked MOS-trained maintenance personnel to perform adequately as security forces. It is inevitable that both requirements will be dangerously compromised. There seem to be innumerable opportunities to assign irreplaceable maintainers to trivial, insignificant taskings that pale in comparison to the importance of being part of the team that keeps an Apache on the battlefield.

Our maintainers are special individuals who have demonstrated the desire and ambition to work on aircraft. Yet we dampen their enthusiasm by the ways in which we use them. There is very little job performance motivation for them since there is no pride of ownership and little opportunity to improve through training. This kind of treatment is demoralizing and affects retention rates. Do we have a system in place that detects the personal problems that we have induced before they become undetectable flight safety problems on an airframe?

Studies have shown that we are left with about one third of our available man-hours for direct, productive

aircraft maintenance. In other words, only about two days a week or about three hours per day are available to maintain aircraft. With DA-directed cuts in maintainers, increases in OPTEMPO and deployments, and the imposed distractions/taskings taking the use of maintainers away from their MOS training, is there any wonder why technical proficiency and manpower have diminished to the point that we must struggle to maintain aircraft availability? This suggests that we are attempting maintenance with roughly the same ratio of maintainers per complex airframe as we had when we were flying much simpler aircraft — and that there are now arguably more distractions to further diminish these ratios.

Obviously, the aircraft are getting the "leftovers" in training priorities. We must uphold the concept that maintenance is training in every respect. It must be something that is planned, managed and supervised like the other training issues discussed in weekly training meetings. Like all other military skills, maintenance requires proficiency, practice, supervision and doctrine. It requires changes and improvements over time, especially with technological advancements. Experienced maintainers are valuable teachers, mentors and irreplaceable repair resources. But, most importantly, maintaining is a perishable skill. Reacquaintance with an aircraft once or twice a week with a seldom-used toolbox will never qualify as training.

The investment the Army has in training aviation maintainers is substantial. When these maintainers are unable to do their job proactively, exercising preventive measures, the costs to repair more advanced and severe faults become even higher. If the Army maintainer is unable to make these repairs, outside sources are called in (higher levels of maintenance or civilian contractors) which can vary in cost to the unit and to the Army by as much as three times the cost of what we already pay the maintainers. This is not to mention the cost savings that could have been realized had the deficiency been caught and corrected earlier. In addition to the economic costs, what value can be placed on the loss of availability (FMC rates) on that airframe? Does your augmenting maintenance resource (AVIM, civilian contractors) have the same maintenance priorities you do? We suffer from the inability, as the supported AVUM unit, to control the resources of an AVIM because they do not belong to the aviation brigade. In most cases, their priorities are not aligned with your demands and their agendas do not involve your aircraft. We should collocate and consolidate maintenance resources in a unified effort to increase efficiency and reduce costs. Eliminating the AVIM level of maintenance and bringing those resources and capabilities to the AVUM level would go a long way to increasing efficient production.

While the P4-T2 micro-management technique has proved adequate for the shop and individual maintenance task, it does not provide the answers to our much larger problems. For the larger perspective of macro-management issues, we need what I call The Five Tenets of Aviation Maintenance. These five fundamental resources that are necessary to perform aviation maintenance are:

1. A sufficient number of maintainers to perform aviation maintenance jobs on demand. (If you are going to consistently take maintainers away from the hangar and their aircraft, then send more maintainers so we can cover all those non-MOS related tasks. Otherwise, allow them to do what they are trained to do in their MOS. The experts must be available!)

2. Opportunity to do the work required by the nature of the task, and to do it effectively and safely. (Do not consume a maintainer's prime work time with other "equally important" tasks and then release them after they are tired and hungry to do aviation maintenance.)

3. A supply system that works. (Put simply, the Army's supply system is broken! The whole system works well if you are the only deployed unit in the world with the highest demand and everybody else in the Army gives up what they have to support you. A system with enough spares to meet current demands would be nice. An alternative would be to implement more direct exchange repair sites or to simply repair them on site.)

4. Quality tools for quality people doing quality repairs. (No maintenance can be performed without the total support of a quality tool supplier and the funding to ensure there are useable, special tools to perform all jobs on an airframe.)

"The investment the Army has in training aviation maintainers is substantial. When these maintainers are unable to do their job proactively, exercising preventive measures, the costs to repair more advanced and severe faults become even higher."

5. Ground support equipment (GSE) seems to be an area that is doomed to neglect. It would be pure speculation on my part to explain the shortages that exist by design (MTOE) in thinking that it is no longer important to be well equipped with well-maintained GSE. Being "authorized" only one of anything (tools or GSE) that requires calibration, periodic downtime for services, or is susceptible to failure or breakage is usually like not having any at all! Having only two is not much better — Murphy's Law is alive and well in aviation maintenance.

There are three general ways to perform maintenance on complex equipment: proactive maintenance, reactive maintenance and crisis management. Proactive maintenance, the only true maintenance-management technique, requires anticipation, prevention, planning actions and contingencies, awareness and conscientiousness — a truly preemptive approach to maintenance issues employing forward thinking. Reactive maintenance only requires that there is an ability to notice or recognize a previously unnoticed fault and then to find the resources to repair it in a reasonable amount of time.

Crisis management is the "fire-fighting" approach to maintenance that has only to deal with the consequences of inactive management — true neglect, indeed.

Our primary goal in this quest for success should be our desire to fly the most capable and safest aircraft in the world. We could be losing sight of the standards that constitute the criteria for capability and safety. Does the concern for the maintenance of our aircraft represent the value that we place on the pilots who fly them and the missions they must execute? Monetary costs are many times presented with subjectivity and bias, depending on command climate and goals, budgetary constraints and congressional politics. These costs should be of little consequence in the attainment of our goals and should not compromise our standards of quality.

The actual cost we must face is the price of breaking up the maintenance team and its purpose. What do we expect from our maintainers, considering what consumes their time? What do we expect from the aircraft we are putting in the air when our maintainers are not spending that "quality time" with those aircraft? I am afraid our leaders are assuming that maintenance just happens. We have rationalized positive results about these operations and now we are faced to argue these problems against the record of our "successes." How do we convince our leaders to take proactive, positive steps in making corrections to intangible problems that are seldom realized and so easily misunderstood?

As conscientious managers and supervisors it is our goal to improve conditions, streamline operations, reduce ineffectiveness, raise efficiency, cut costs, be innovative and develop initiatives to "work smarter, not harder." These are responsibilities that should not be blindly accepted or taken lightly. We now work and struggle in a severely crippled and compromised operation that does not begin to remain in contact with the reality of what is required to safely and effectively conduct aviation maintenance. Albert Einstein said, "The significant problems we face cannot be solved at the same level of thinking we were at when we created them."

We must begin with the acknowledgment that problems do indeed exist. These problems are systemic to the Army and exacerbated by individual units. We must realize the dangers of perpetuating policies put in place with inadequate prior analysis of their ultimate effects. It is difficult to make an informed decision concerning policies without consulting the subject matter experts.

We are the fortunate recipients of aircraft that were originally "over-designed" well enough that if we just prevent abuse and our own inadvertent damage, the aircraft will keep most of the important parts intact. The aircraft continue to fly with unknown maladies from the results of insidious, negative trends of detection, because we are failing to look closely at what we do and how we do it. How much longer can we do this? Lest we forget, catastrophes continue to happen, and just because you have not had one lately does not prevent you from having one in the future. All the accomplishments of the past do not mean a thing if the way we've been doing business kills someone tomorrow. We cannot allow a body count to be our only incentive for change. Reactive maintenance and reactive handling of issues has gone on long enough. Seize the initiative to be proactive.

A smarter team, a smarter fight!

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CW0 3 Rex T. Akins is an AH-64A maintenance officer/test pilot in Co. A, 1st Bn., 501st Avn. Regt.

Aviation Branch Career News

The condensed lists presented below were extracted from PERSCOM's Web site. For up-to-the-minute news and the full text of the items extracted here, please refer to the PERSCOM Aviation Branch online newsletter at www-perscom.army.mil/ opmd/ avnews.htm and PERSCOM's "What's New" section at www-perscom.army.mil.

* = AAAA Members

FY98 Colonel
Army Competitive Category Promotion Board Results

PROM SEQ#	NAME	BR
370	Acker, Christopher*	AV
181	Adams, Gregory A.*	AV
163	Andrews, Kurt A.*	AV
319	Barclay, James O.*	AV
210	Bendyk, John C.*	AV
374*	Birmingham, Robert*	AC
257	Burnett, Thomas, R.*	AV
375*	Burnham, William L.*	AV
264	Clark, Julius E.*	AV
57	Considine, Timothy*	AV
342	Davis, Walter L.*	AV
194	Durso, Joseph A.*	AC
35	Finehout, Arthur W.	AV
28	Foxx, Ronnie Lee*	AV
138	Francis, Thomas G.	AV
45	Gerblick, Thomas H.	AV
62	Jenkins, Donald W.	AV
31	Lawrence, Geoffrey*	AV
74	Lloyd, Karen D.	AV
356	MacDonald, John A.*	AV
189	Masi, Ralph J.	AV
361	Mason, Bradley J.*	AV
306	McCurdy, Craig P.*	AV
262	McWethy, Robert W.*	AV
256	Morehead, Edwin C.*	AV
397*	Mudd, Michael G.*	AV
350	Pate, David Staplet*	AV
236	Petree, Neal C.*	AV
179	Richardson, Robert*	AV
149	Scherrer, Kevin G.*	AV
235	Schnibben, John H.*	AV
305	Summers, Kim L.*	AV
52	Townsend, Robert N.*	AV
247	Walker, Harold G.*	AV
248	Wiecks, Thomas W.*	AV

*Below the Zone

AVIATION LOGISTICS:

A Break From The Past

by CWO 4 Ronald W. Durant

In order to keep pace with the long-range strategies of the Army and Army aviation, aviation logisticians must continually reassess how they support aviation warfighters. That support must keep pace with the tempo of weapon system design and operations. Support capabilities and infrastructure must be sufficiently defined to allow the path of new designs to intersect with the support systems upon which they rely. However, to optimize development, both must also be allowed to evolve independently of each other. Simply put, the evolution of weapon technology and combat doctrine should not be restricted by an unchanging logistics system.

Conversely, the evolution in logistics must not be restricted by weapon technology and existing doctrine. Traditionally, logistics development has followed the warfighter's doctrine. However, today's advances in technology can lead combat and doctrine developers to expand their vision and operational capabilities. Logistics leaders must be conscious of this capability and be prepared, on occasion, to "take the point" in these developmental efforts.

Current aviation maintenance procedures are practiced from standards established circa 1940 to 1950. Likewise, supply is represented by a myriad of automated systems that follow the paths of older manual processes. Existing and emerging technologies will allow diverse, in-depth applications that can be applied to these two areas. Accordingly, aviation logistics must emphasize the application of digitization and automation to increase the efficiency and responsiveness of aviation maintenance and supply procedures. However, we must let technology dictate the procedures and policies. Merely molding new technology to old methods forfeits much of the advantage that could be derived from the technologies' application.

While cockpit displays and electronic equipment have improved operational effectiveness in the last two decades, aviation logistical improvements have not kept pace. Technology has advanced in both feasibility and cost-effectiveness for logistical procedures. Sensor capabilities have increased while sensor cost, weight and size have decreased. This also applies to the capability to monitor and record sensor data. Such trends offer new ways to conduct future maintenance by enabling aircraft to capture, report and record data in revolutionary ways. The result enables a corresponding synchronization of several Army objectives: embedded diagnostics, prognostic capability, anticipatory logistics, total asset visibility and reduction of total ownership costs.

With the help of software algorithms, anticipatory logistics will become the daily tool of unit maintenance managers. Information technology will provide the ability to know and predict the disposition and condition of aircraft, tools, parts and equipment, as well as the ability to understand the cause and effect of aircraft technical problems. This will afford commanders the opportunity to accurately tailor their aviation support. Readiness will no longer be a "snapshot in time" as real-time data is available throughout the support-and-command hierarchy. Aircraft readiness can be accurately forecasted and support assets shifted to counter anticipated problems. This information will precisely complete the logistics variable for the combat aviation commander. The ability to predict logistical needs, and to accurately surge support assets when needed, will give aviation enhanced combat sustainment power as maintainers will have the right part, at the right time, at the right place.

Digitizing and integrating all levels of aviation logistics enhances performance at each level, but the largest dividend is in the ability to implement comprehensive trend analysis from collective data. Statistical processes will permit the capability to understand the "how and why" to problems and successes. This supplies the "when, where and what" for solutions to problems, or to exploit success. With proper analysis, the information can reveal progressively better serviceability criteria for accepting or rejecting parts in the field and at the wholesale level. Life-cycle times can be assessed and assigned based on the environment in which the component operated and by actual individual aircraft operating conditions. Periodic and phase aircraft inspections and other preventative maintenance can be reduced or eliminated based on the same parameters.

Many changes are required to optimize the benefits delivered by the technical evolution of aviation logistics. Implementing new technology to increase combat effectiveness means nothing without a corresponding implementation of the infrastructure and the processes necessary to support the technology. It is vitally important that aviation logistics develop symmetrically with weapon technologies, operational strategies and support entities. However, it is of little concern as to which one leads the way.

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CWO 4 Ronald W. Durant is a project officer for the Aviation Logistics Planning Group, U.S. Army Aviation Logistics School, Fort Eustis, Va.

AAAA Honors Excellence in Material Readiness

The recipients of AAAA's Material Readiness Awards were recognized at the 25th AAAA Joseph P. Cribbins Product Support Symposium, sponsored by the AAAA Tennessee Valley Chapter, Jan. 27-29, in Huntsville, Ala.

Outstanding Aviation Logistics Support Unit of the Year

The Germany-based 7th Battalion, 159th Aviation Regiment, has been named AAAA's Outstanding Aviation Logistics Support Unit of the Year.

The 443-member unit – a forward-deployed Aviation Intermediate Maintenance (AVIM) battalion assigned to U.S. Army, Europe's 7th Corps Support Group within 3rd Corps Sprt. Command – provides AVIM, backup Aviation Unit Maintenance (AVUM) and Class IX (air) support to V Corps aircraft wherever they may operate. The battalion also manages more than 80 Raytheon Corp. contract field team personnel who augment the Corps' maintenance capability.

The 7th Bn., 159th Avn.'s principle customers are the 2nd and 6th Squadrons, 6th Cavalry, of the 11th Aviation Regiment; the 5th Bn., 158th Avn. Regt., of the 12th Avn. Bde.; and the 421st Medical Bn. The "Dragons" of the 7th Bn., 159th Avn., also provide backup support to the 1st Armored Division's 127th Avn. Sprt. Bn. (ASB), the 1st Infantry Div.'s 601st ASB and the 1st Military Intelligence Bn. In all, the Germany-based Dragons – Headquarters and Hqs. Detachment and Co. A are in Illesheim, while Co. B is in Giebelstadt – support 328 AH-64, CH-47, UH-60, OH-58 and C-12 aircraft operating in Germany, Hungary, Bosnia, Croatia, Italy and Cyprus.

To support the aggressive flying-hour programs of their 11th Avn. Regt. and 12th Avn. Bde. customers during the award period, the Dragons' Co. A completed 21 AH-64 phased inspections, while Co. B completed 30 UH-60 and eight CH-47 phased inspections. In addition, the battalion's AVIM companies completed 9,250 aircraft maintenance work orders while consistently exceeding a 90 percent production rate. The battalion also continued to play an integral role in supporting the lease of 12 AH-64s to the Royal Netherlands Air Force's 301st Sqdn., completing more than 200 aviation maintenance work orders during fiscal year 1998. The Dragons recently revised a support plan that will allow the unit to perform three RNAF phases during FY 99.

Given the variety of missions and the number of operations in which the Dragons were engaged during the award period, the unit's safety record is indeed a testament to the professionalism and dedication of its members. Battalion accident-prevention efforts ensured that no lives or equipment were lost and that there were no serious injuries, and produced a 28 percent reduction in recordable ground accidents and a 75 percent reduction in the number of lost work days from the previous year.

The professionals of the 7th Bn., 159th Avn., clearly provided unfaltering support to V Corps aviation units – as well as to CONUS-based and foreign aviation units. Their example is one to which all Army aviation units can aspire.

Outstanding Individual Contribution to Material Readiness

William J. Barron Jr., the AEPCO, Inc., team leader for AH-64 Apache Longbow Maintenance Trainers in the Training Device Section of the Apache Attack Program Manager's Office at Redstone Arsenal Ala., has been tapped as AAAA's outstanding individual contributor.

A retired Army CWO 4 and former AH-64 pilot and maintenance officer, Barron brought nearly 10 years of Apache and 20 years of maintenance

experience to bear in providing technical and logistical support for the development and integration of the Longbow Integrated Training Device Suite (LBITDS) program. Moving on to become team leader for the Longbow Maintenance Trainers (including the Airframe, Engine and Drivetrain Systems Trainer and the Multiplex, Avionics Visionics, Weapons and Electrical Systems Trainer) he devised a way to provide parts to The Boeing Co. that made the Longbow Training Device Suite contract more affordable.

One of Barron's major accomplishments during the award period was the organization and shipment of millions of dollars' worth of Government Furnished Equipment (GFE). Working extremely long hours, he visited units, depots, training schools and crash sites to evaluate excess and salvageable GFE that could be used in the training devices. He then shipped useable GFE to Boeing's Mesa, Ariz., facility. Barron's efforts and innovations led to a $61 million cost avoidance for the Army — the difference between the contractor's proposal and the final contract price — which allowed the Army to procure a Collective Training Device.

Barron's individual contributions to the Army's material readiness were undoubtedly significant, and his dedication and accomplishments will ensure a first-class training system for present and future Army aviators.

Contribution By A Major Contractor

The Sikorsky Aircraft Corporation has won the 1998 Material Readiness Contractor of the Year Award for its outstanding contributions to the material readiness of the Army National Guard.

Sikorsky was recognized for its development and fielding of 500-hour UH-60 inspection teams to provide on-the-job training and preventive maintenance assistance to states fielding the Black Hawk for the first time. During the award period the company also supported first-time UH-60 user states with roving avionics technical assistants, who provided their expertise as required. In addition, Sikorsky also assisted with no-cost software setup and integration of the Electronic Subsystem Test Set at the Missouri Aviation Classification Repair Activity Depot (AVCRAD), enabling the AVCRAD to undertake UH-60 stabilator amplifier repairs without having to return critical components to Sikorsky's production facility.

Material Readiness Team Award

The 1998 recipient of AAAA's Material Readiness Award for an Industry Team, Group or Special Unit goes to DynCorp's Fort Hood, Texas, Support Division. The organization provides aircraft maintenance, ground equipment maintenance, aviation supply logistic support, and maintenance and supply training to III Corps and Fort Hood, the 21st Cav. Bde. and selected Texas-based Army Reserve units.

The primary factor in the Support Division's receipt of the award was the manner in which it executed the pre-induction and acceptance programs for the AH-64D Apache Longbow. Beginning in 1997 the organization was tasked to expand the current mission envelope to include pre-induction inspection and repair maintenance of A-model Apaches selected for factory upgrade to D-model Longbow configuration.

The Support Division established the necessary program and initiated a comprehensive process to track all

How did we get here?

by Joseph P. Cribbins

On the approaching occasion of the 25th Joseph P. Cribbins Product Support Symposium, I was asked to give you a few words on the history of the event.

Having reached that age where one has, "increasingly visual memory of things that did not happen quite that way," I consulted with young Paul Hendrickson to make sure that the Product Support Symposium (PSS) story is told with reasonable accuracy.

On September 27-28, 1973, the first Product Support Symposium (PSS), was established by Mr. Paul Hendrickson, a key civil service member of the Directorate of Material Management, in the U.S. Aviation Systems Command, (AVSCOM), and the president of the AAAA Lindbergh Chapter, St. Louis, MO. Working with Paul were George Dellapa, deputy director of material management, AVSCOM; and Perry Craddock, a retired Army aviator, then working for Bell Helicopter. The establishment of the PSS was particularly appropriate at that time as it was at the end of the Vietnam War and the Army had learned a great deal about supporting Army aviation. The symposium provided a question and answer forum to discuss with industry what needed doing to improve the Army aviation support system.

About the time the Product Support Symposium concept was getting under way, Don Luce arrived in St. Louis as representative of Lycoming and he and Paul took over the Lycoming office, providing administrative support. I had been consulted about the concept and became the moderator. The first two or three years were held in the King Henry VIII motel in St. Louis with sparse attendance. As a result, Paul generated the idea of giving industry awards, which have been very well received over the years.

Somewhere along the way, Don had the idea of calling it the Joseph P. Cribbins Product Support Symposium. I had no idea until I saw the next flier. Since I was trying to bow out as moderator, due to press of activity in the Pentagon, it was a complete surprise — I "had been had!!"

Although a couple of years were missed over the years, the PSS improved with increasing attendance and interest. In the late '80s and early '90s, Ken Kellogg took over the event. He was ably supported by Norb Patla, Bob Vlasics and a team of wonderful ladies, especially Susan Werkemeister, Anne Cantebury, Susan Barnes and Nancy Vermillion, who devoted so much of their time to provide administrative support.

As I am sure you all know, AVSCOM became ATCOM and eventually U.S. Army Aviation and Missile Command when most of the predecessor activities moved down to Huntsville during 1997. The first PSS in the new location occurred in January 1998 under the leadership of the then Tennessee Valley President Mike Boyd. In fact, St. Louis stalwart Nancy Vermillion came all the way down from St. Louis to help out with this first event at Huntsville!

Now under the leadership of Chapter President Brig. Gen. Joe Bergantz, Mike Boyd has retained the chores originally assumed by Paul and Don and held by Ken Kellogg for many years. There is no doubt that in the next 25 years this event will continue to benefit our Army by stimulating dialogue among acquisition corps, industry, maintainers, and logisticians and by cutting through the red tape to support the greatest soldiers on earth.

associated costs, including those for repair parts and for man-hours expended during repair. The significant benefits of this effort included major cost savings to the Army, allowing the 21st Cav. Bde. to make use of flyable aircraft for training while awaiting induction delivery, and the on-schedule delivery of all 31 upgrade-candidate aircraft for factory induction.

The Longbow program was not the only area in which the DynCorp Support Division excelled. During the award period a process the organization originated to evaluate the condition and reparability of serviceable/repairable parts provided a cost avoidance of $40 million and returned hundreds of high-dollar repairable parts to the supply system. Other significant cost avoidances were realized through component repairs, the innovative use of existing processes, the recovery and filtering of ground vehicle fuel to allow its reuse, and the effective management and efficient utilization of HAZMAT resources.

Contribution By A Small Business Organization

This year's winner of the AAAA Small Business Material Readiness Award goes to U.S. Helicopter, Inc., of Ozark, Ala. A contractor to U.S. Army Aviation and Missile Command for the depot-level refurbishment and modification of UH-1 helicopters for the active Army, the National Guard and the State Department, the company distinguished itself during the recent Safety of Flight grounding of all UH-1H Hueys.

Despite the grounding and the resultant nonavailability of government-furnished flight safety parts, U.S. Helicopter was able to continue the refurbishment of UH-1H aircraft without contractor delays. From Nov. 1, 1997, through Oct. 31, 1998, the company refurbished and returned Hueys to the National Guard within four months of their arrival at the U.S. Helicopter facility, thereby bettering the contract-required time by more than 30 percent and establishing an estimated savings to delivery orders of more than $560,000.

The Nature of Our Business

Conducting simultaneous major support operations in two theaters requires leaders and soldiers to balance multiple priorities to maintain the focus on the nature of our business: success in combat.

by Lt. Col. Jim McGaughey

In late November 1996 the 127th Aviation Support Battalion completed its year-long deployment to Bosnia. The deployment had taken its toll — the battalion was tired. The high OPTEMPO and the associated readiness concerns had consumed everyone, 24 hours a day, seven days a week, for almost 12 months. It was time to reconstitute soldiers, families and equipment.

The battalion was comfortable that, having just returned from supporting the historic Implementation Force (IFOR), any mission to redeploy to Bosnia would be squashed immediately. In fact, many soldiers would jokingly ask, "What are they going to do — send me back to Bosnia?" There were so many other units who hadn't "been there and done that."

So in January 1997 the 127th ASB and its customers (the 1/1 Cavalry Squadron and the 4th Aviation Brigade of the 1st Armored Division) settled back into Germany and began focusing on rebuilding perishable technical competencies, individual and crew combat skills, staff skills, training readiness and maintenance management systems. The goal was to regain the combat efficiencies that were degraded after the long deployment to Bosnia.

However, missions to support brigade operations in Bosnia, Macedonia and Africa — coupled with CMTC, gunnery and warfighter support — consumed the calendar and leaders' focus for the next six months. Despite real-world mission distractions, the battalion's performance — and more importantly, its customers' exceptional performance in the divisional warfighter exercise — showed that, in spite of everything else, the officers and NCOs had succeeded in improving individual and collective warfighting skills.

In May of 1997 PowerPoint slides indicating that the 1st Armd. Div. was being earmarked to return to Bosnia in September 1997 as Task Force Eagle (TFE) began to circulate. That informal process also provided the first indication that the 2nd Armd. Cav. Regiment would be attached to the division as part of the NATO Stabilization Force (SFOR). As the battalion was soon to find out, the 4th Avn. Bde. would form the core of an aviation task force that would include elements from the 1st and 2nd battalions, 501st Avn., and the 4/2 Avn. Sqdn. from the 2nd ACR. It was clear, even without an order, that if the 127th ASB's customers were going back to Bosnia, so would the battalion itself. It would be a deployment that would last until June 1998.

The mission goals of the deployment were to:

- Plan, coordinate, and execute combat service support, including direct-support maintenance, AVIM, and CL II, III, IV, IX (air and limited ground) supply support to the 1st Armd. Div./Multinational Div. (North) elements and attachments operating on Eagle Main or Comanche Base supporting SFOR and the NATO Land Component Command (LCC) mission.
- Plan, coordinate, and execute the CSS for the 4th Avn. Bde. and 1/1 Cav. elements remaining in Central Germany.
- Maintain viable rear detachment, staffed to manage and care for battalion soldiers and families remaining in Germany

Throughout mission preparation and during the entire deployment, the 127th's soldiers and leaders steadfastly focused on leading, caring, maintaining and training. The stellar results of the battalion's efforts in support of SFOR operations, both in Bosnia and Germany, earned them their second nomination for

an Army Superior Unit Award in as many years.

LEADING

The 1st Armd. Div. DISCOM commander had the unenviable task of determining how to provide support to all of the base camps within the U.S. sector of Task Force Eagle (TFE). He decided to attach the AVIM Company from the regimental support squadron to the ASB and give the 127th the total logistical support mission for over 80 customers on Eagle and Comanche Bases in the Tuzla Valley.

Additionally, he attached a medical platoon to run clinics on Eagle Base and Camp Caisson, water teams to operate the reverse osmosis water purification units (ROWPUs) on Camp Bedrock, a corps direct-support maintenance platoon to supplement capabilities on Eagle Base, and numerous civilian contractors to augment organizational maintenance and supply capabilities.

The 127th established a cohesive, mission-focused task force in Bosnia that included almost 420 soldiers assigned or attached from 10 companies and five battalions. In all, the 127th ASB deployed the bulk of the battalion headquarters, the Headquarters and Supply Company (HSC), and Co. B. Furthermore, approximately a third of Co. A (the AVIM company) deployed and joined HHC, 159th AVIM, from Fort Polk, La., to meet the Aviation and Supply Support Activity (SSA) mission requirements. At the same time the battalion established a robust rear detachment with the remaining soldiers to sustain company and battalion mission support requirements in Hanau, Germany.

CARING

Unequivocally, leadership challenges were mitigated by the quality of soldiers assigned. Throughout the deployment, the command continued an aggressive rear detachment information campaign to ensure soldiers and their families knew what was going on. The emphasis on the family support group (FSG) allowed each company to build and sustain a cohesive FSG structure — one that continued to nurture the respect and participation of the battalion's families. High morale speaks volumes for the effectiveness of FSG programs and every battalion soldier knew that his family was being taken care of. Leaders continually emphasized their commitment by regularly rotating back to Germany to conduct family information briefings, providing timely information, calming rumors and answering questions. The focus on supporting both the mission and the families proved to be a force multiplier for the command.

The battalion included all soldiers from the attached units into the FSG programs, mailing newsletters to their families and embracing their participation in all activities. Emphasis on pregnant-soldier counseling programs, hospital-liaison relationships, welcome wagons, monthly "theme" social functions and numerous outings all strengthened the command climate.

The command group set the example in treating every soldier with dignity and respect, ensuring they all understood they were important members of the team. Every opportunity to leverage the professional, personal and financial benefits of the deployment was pursued in effort to develop leaders to their fullest potential. Highlights included rotating company command, platoon leadership and staff officer assignments, continuing newcomer briefings, monthly command information briefings, junior officer biweekly breakfasts, weekly maintenance officer mentoring sessions and aggressive "walk-about" programs.

Command emphasis for "powering down" authority with responsibility was key to inculcating soldiers with confidence in their technical abilities and professional competencies. That faith was evidenced as junior leaders developed and executed an internal rotation policy — allowing the junior officers and NCOs to provide input into personnel replacement and management decisions that could affect the battalion's ability to continue support. It was also evident in the discipline and responsibility demonstrated by every officer, NCO and soldier. That discipline allowed the battalion to live in tents for over eight months, work in a field environment, maintain force protection, conduct convoys and other mission support tasks — all without losing a soldier or suffering a serious loss of property.

MAINTAINING

The unique composition of the battalion task force, with soldiers assigned and attached from different companies and battalions from both USAREUR and FORSCOM, created opportunities and challenges. The leaders prioritized aggressive customer support that allowed soldiers to accommodate over 80 different customers. The focused, customer-oriented approach to support aggressively attacked readiness impactors — insuring that diagnostics were accurate, that parts were requisitioned and that the AMC/DLA community was enlisted to expedite deliveries whenever possible. Companies merged SOPs to standardize differences in operational procedures, then developed plans and orders that allowed them to support any tactical contingency or emergency.

The soldiers formed a team of proud professionals that:

- sustained the 72 helicopters 5 to 10 percent above DA readiness averages;
- maintained almost 1,100 customer vehicles, trailers and generators above 96 percent FMC;
- maintained organic equipment readiness above 97 percent FMC;
- completed almost 1,500 DS jobs and just under 180 services;
- treated more than 5,600 medical and dental patients;
- issued almost 2.3 million gallons of fuel;
- completed more than 1,100 fuel samples;
- purified more than 9.5 million gallons of water; and
- finished more than 2600 AVIM work orders, including eight phases and almost 30 PPMs on the OH-58D Kiowa Warriors.

The heart of the battalions operation was the ability of the supply personnel (with the assistance of 16 Bosnian contracted civilians) to con-

tinue to process requisitions and deliver parts — they processed over 75,000 requisitions and over 90,000 MROs while breaking down approximately 830 ALOCs, flatracks, and containers — all while transforming the SSA into an efficient, professional operation.

It is important to note that team-building initiatives were not only centered on ASB operations in Bosnia. The officers, NCOs and soldiers remaining in Germany continued to provide outstanding support to the residual elements of the 4th Avn. Bde. and the 1/1 Cav. The rear detachment prioritized sustainment mission capabilities, ensuring that customers were provided with seamless AVIM, DS Maintenance, and Class II, III, IV, VII and IX direct supply support. Highlighting their contributions was the outstanding execution of the support mission for the 1/1 Cav. CMTC rotation. Although more than half of the battalion to include all primary staff officers was deployed, the remaining battalion officers and soldiers became the leadership catalyst for a composite DISCOM/COSCOM task force that sustained cavalry readiness above 94 percent throughout their CMTC rotation.

Training

Perhaps the 127th's greatest challenge was to infuse personal risk management and situational awareness into the soldiers as they deployed to Bosnia. The fact that the battalion task force was able to rotate more than 700 soldiers into and out of the theater without an accident or loss of life speaks volumes of its procedures.

Throughout the deployment, the 127th ASB continued to conduct weekly training meetings, allowing leaders at all levels to immediately assess and retrain METL-deficient areas. The battalion developed and initiated sponsorship programs for newcomers that quickly indoctrinated them to the discipline and standards expected. The emphasis on discipline and training allowed them to man six guard points per day, protecting over 2 km. of perimeter without a single breach. The aggressive support philosophy necessitated that they establish viable cross-training programs - taking advantage of shops (soldiers) with little or no mission backlog — expanding and sustaining perishable diagnostic skills and increasing productivity. Throughout the deployment leaders continued to emphasize regulatory, recurring training requirements, professional and personal schooling, individual and crew served weapons qualification, and PT. Their dogged perseverance to training ensured that the 127th ASB redeployed to Germany knowing their weaknesses, and having a plan in place to achieve their customary high training standards.

Their Herculean efforts set an azimuth for the battalion that continues to allow it to exceed established individual and collective training standards, renewing their confidence to support simultaneous operations and succeed in combat. After all — that's the nature of our business.

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Lt. Col. Jim McGaughey is the deputy inspector general for V Corps. He commanded the 127th ASB supporting IFOR and SFOR.

arrivals/departures

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The Modular Army Aviation Maintenance Facility: A Proposal

by Sgt. Ruppert Baird

"Sgt. Dzychowicz" had been in Korea only four months, yet he was already familiar with the effort required to pack up his shop and move out to the field. The brigade commander had set a standard of two hours to be ready to move, and unit personnel felt proud of their ability to be loaded and have their convoy staged in almost half that time, though for the life of them they couldn't understand why they had to sit and wait for the rest of that hour to move out (rumor was that the staff couldn't keep up with the troops)!

Pains had been taken to construct equipment such as cabinets and shelves so that they could be safely, efficiently and easily loaded. In many cases additional tools and publications had been procured, scrounged, pilfered or stolen (pick your preferred term) by unit personnel to ease the process of loading out. Dzychowicz had made sure everything was numbered and placed in a particular order in his office and shop to ensure that the unit could set things up in the field close to the way they were in garrison.

The soldiers in one shop had even been able to duplicate their work area in a conex and only had to move precision and personal tools into it to be ready to move. They had even constructed a break-down shower from aluminum angle, an old deuce-and-a-half truck fuel tank and a thermostat. Hot showers in the field! Hoo-ah! These guys had it down to an art!

Though Dzychowicz and his unit are fictitious, their portrayal is based on reality and brings out two very important points. The first is that American soldiers are quite ingenious and will find a way to get the job done, and will do it in as much comfort as is physically possible. The second is that they spend too much time finding those ingenious ways to do the job.

The U.S. Army has spent literally billions of dollars to train and equip its troops, and to develop and field equipment that will give soldiers the ability to win anywhere, anytime. Yet the Army has come up short in ensuring its soldiers can transition smoothly from the garrison to the field environment. This is especially true in Army aviation.

Units may take from as little as an hour or two to several days to deploy. Realistically, units should be able to pack up and be on their way in less than an hour. This is especially true in such environments as Korea or Southwest Asia, where the enemy is literally just minutes away.

The Army's aviation facilities are built on the same concept as all other military or civilian aviation facilities: place your buildings adjacent to an air strip and work out of those buildings. The buildings contain shops, offices, storage areas and all the amenities one needs to maintain and fly aircraft. And while the Air Force will fly and fight from fixed facilities during war (as will the Navy, from shore bases or ships at sea), the Army's doctrine, unfortunately, is that it won't fight from fixed facilities. Nearly all the Army's tactical unit training is conducted in field environments, reflecting the philosophy of training the way we fight. With this in mind, isn't it time to change the Army's thinking on hangar and facility design?

Today's hangar design is based on the premise that units will work, fly and fight from them. Separate offices with stairways and long, thin hallways with small doorways make it difficult at best to move heavy boxes, shelves, field desks, foot lockers and the like. Such obstacles can make deployment a slow, nerve-wracking and sometimes dangerous process.

Many units ease this process by moving portable shops, conexes, and milvans into or next to their hangars. This alleviates many of the problems for shops and support platoons and units, but does little to help those on the technical side of the house. It also opens up

the probability that certain critical items may be exposed to the weather — a situation that should be avoided as much as possible.

Production and quality-control sections and nearly all line units will have to pack up what they own and move it to trucks to prepare for deployment. Inevitably, some vital piece of equipment will be left behind, leading to the waste of valuable time and manhours that could be used on other tasks.

The answer is not just to equip all sections with portable shops — although that could be an effective stop-gap — but rather to completely redesign Army aviation's maintenance concepts and facilities as a whole system, instead of as separate pieces and functions.

The first component of this new system, obviously, is the hangar. Most of the basic components required to implement this new concept are in most of the hangars currently in use by Army aviation: NATO-type power outlets and grounding points for shops, and so on. So these ideas and designs are already in place.

Differences in the new design would be that only four walls would be required for the new design, instead of the multitude now found to divide and sub-divide the hangar into offices and shops. Roll-up doors would be installed at a height ensuring access to all but the Army's tallest vehicles on at least one, but preferably two or three, walls. Of course, the fourth wall would be facing the flight line, as it does now. This would allow easy vehicle movement of shop sets into and out of the hangar.

Each shop could be one of the standard designs in use today. Besides shop sets, conexes and milvans could be used until a standard shop/office set design is implemented *[see illustration at right]*. A few additions and modifications to the shop would add to the convenience and combat readiness of the unit. For example, a rack for carrying camouflage netting and poles at the top of the shop would hasten the set-up and camouflaging of the shop and equipment in the field.

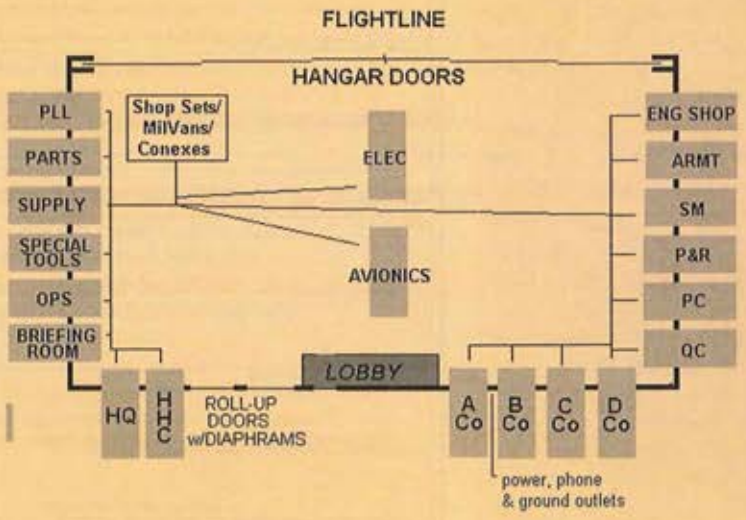
Each section (or company) in the company (or battalion) would have a shop. Each shop would house all required equipment and would be capable of break down and preparation for movement within fifteen minutes, without the unit having to carry a single item from the shop. Each unit would tow its shop with its assigned vehicle, and personal equipment would be placed in the vehicle as it is now. Built-in, or modular, shelving and cabinets, secured within the shop, would allow the unit to literally be maintaining aircraft within minutes of arrival at the field site.

With the fluidity of modern battles, just the task of breaking down and redeploying on what well could be a daily basis makes a new maintenance facilities concept of this sort imperative.

Deployment and redeployment of units in Operations Desert Shield and Desert Storm bear out the importance of this idea. With the Army's current system, it is doubtful that many aspects of aviation maintenance were performed "by-the-book," during the Gulf War. With the demands of such moves as were performed by the 101st Aviation Brigade during the conflict, the ability of undoubtedly professional and dedicated unit personnel to find the right tool or TM for the job 100 percent of the time was doubtful, at best.

The physical, professional and technical demands on aviation soldiers in the field, combined with constant movement on the modern battlefield to support ground forces, will quickly lead to exhaustion, or at a minimum the dulling of wits of all involved. The likely increase in non-combat injuries and deaths, and the resulting reduction in combat capability, is senseless. With a modular hangar/maintenance support system in place, the demands placed on the soldier during deployment will be reduced, increasing the soldier's ability to fight and maintain the Army's aviation assets in all environments. The Modular Army Aviation Maintenance Facility will be a combat multiplier.

PROPOSED MODULAR ARMY MAINTENANCE FACILITY



Each entrance will have roll-up doors, with diaphrams, to ensure an environment seal around each shop. The lobby will house a "lounge" area for soda and snack machines, pay phone, etc., as well as to provide a convenient area for guard duty. Shops will have connections for outside and generator power, grounding and phone/modem lines, which

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Sgt. Ruppert Baird is a member of the South Carolina Army National Guard's Company B, 1st Battalion, 151st Aviation.

5 Tips for Efficient Company Training Meetings

by Capt. Darren Mingear

Do you find it time consuming and difficult to get organized for your company training meetings? Are your training meeting records a pile of unreadable notes? Do your training meetings frequently last more than an hour? Do your company leaders get what they need from your company training meetings?

Your company training meeting should be the most important meeting you attend all week; it requires your complete focus to do it right. This article — used as a supplement to TC 25-30 — will help you make your company training meetings more manageable and efficient. I presume you have assessed your METL and platoon critical tasks as well as your command training guidance and long- and short-range training calendars.

• **TIP 1:** Use a detailed training meeting worksheet *[Figure 1]* to get organized.

Figure 1 is my interpretation of the guidance in TC 25-30 and various other sources. It is a great way to complete your preparation quickly and thoroughly. My company

A COMPANY "ROGUES" TRAINING MEETING WORKSHEET **WEEK 19 9 FEB 98**

(Reference: TC 25-30)

ROLL CALL (1 min): CDR, 1SG, PLs, PSGs, Training, Standards, Safety, and SMEs
REVIEW COMPLETED TRAINING (20 min)
PLATOON LEADERS' ASSESSMENT (8 min):
Individual Flight Training:
Collective Flight Training - *Impact on Platoon Critical Task List:*
OPD/Pilots Brief:
Scheduled and Opportunity Training:
Scheduled Training not Completed, Impact, and Rescheduling Plan:
FIRST SERGEANT AND PLATOON SERGEANTS' ASSESSMENT (7 min):
Sergeant's Time:
NCOPD:
Scheduled and Opportunity Training:
Scheduled Training not Completed, Impact, and Rescheduling Plan:
TRAINING and SAFETY OFFICER'S ASSESSMENT (4 min):
Individual Statistics Update (1 min):
Range Update (1 min):
School Completions (1 min):
SAFETY ISSUES (1 min):
COMMANDER'S ASSESSMENT (2 min):
Impact of Completed Training on METL:
Strategy to Improve or Sustain Training:

has used this helpful tool for over a year. It is an ever-changing document, growing with the needs of the company.

● **TIP 2:**

Get the training meeting worksheet to your company leaders early enough for them to prepare. If your company leaders are not prepared, the assessment phase will run well over the allotted time. Because everyone is using the same format, all will quickly record notes for each section on page one.

● **TIP 3:**

Try to stay within the one-hour objective timeline. This makes the training meeting predictable and more useful. Unfocused discussion leads to long unproductive meetings. Let's face it, your audience is usually daydreaming after an hour if they are not participating in a discussion that involves them.

● **TIP 4:**

Fill out as much of page two (of Fig. 1) as possible before the training meeting. This saves a great deal of time. You and your company leaders must complete "Week T7 and Requested Future Training" after the assessment phase to ensure you are training identified weak areas. Weeks T1-T6 may also need adjustment after the assessment phase, depending on the "Impact of Completed Training on METL." Weeks T1-T6 are each allotted five minutes for discussion, but you will probably spend most of your time on weeks T1 and T2, since they are more tangible.

● **TIP 5:** Use Fig. 1 as a contract with your company leaders, a training schedule outline for the training officer or NCO, and a record for command inspections. Your company leaders will never again have to decipher your "chicken-scratch," because they will have their own organized notes of the meeting. They will coordinate and execute the training as planned without you having to micro-manage details at the last minute.

I hope this will help your company as it has mine. The key to successful training is thorough preparation and coordination. Our fine soldiers deserve this and expect you to give it to them. Remember:

"Soldiers want to do what the boss wants done — and if they do not, it is because he has done something wrong, because he did not communicate his desires." — Gen. Bruce C. Clark

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Capt. Darren Mingear is commander of Co. A, 1st Bn., 10th Avn. at Fort Drum, N.Y.

NEAR-TERM TRAINING (30 min)	
Pre-Execution and Resource Checks (Schedule Changes, TEOs Prepared, AARs Reviewed, Trng Area Confirmed, Transportation Coordinated, Cls I Requested, Risk Assessment Completed?):	
Week 20 (5 min): FOCUS- ROGUE WRENCH WEEK PL/PSG/1SG/CDR-VEHICLES AND ACFT INDIVIDUAL TRNG, NVG CUR RL PROG-BETTENCOURT, COURTLAND, BUSBOOM PIC-LODGE,VANDERBERG	QTB OPD-FORMS & RECORDS (BCI)-BN STANDS, HGR CLSRM NCOPD- MIL JUSTICE-1SG, HGR CLSRM SGT TIME- MAP READING-GILCOTT, HGR CLSRM
Week 21 (5 min): FOCUS-1 PLT STX, RL PROG, PIC TNG 1 PLT STX (AREA RECON/HSTY ATK)-ATHEY, 10 FEB, TA19B RL PROG-BETTENCOURT, COURTLAND, BUSBOOM PIC EVAL-LODGE PIC PREP-VANDERBERG	 OPD-AAAR-ESHBAUGH, HGR CLSRM NCOPD- NCOERs-1SG, HGR CLSRM SGT TIME- CTT-BN, BTA
Week 22 (5 min): FOCUS-ARMS, ATK NAV CRS, RL PROG, PIC TRNG ATK NAV COURSE-BN, R5201 RL PROG-BETTENCOURT, COURTLAND PIC PREP-VANDERBERG DES CHK RIDES	 OPD-WPNS SYS (50 cal)-ARMT B CO, HGR CLSRM NCOPD- REUP-1SG, OFFICE SGT TIME- LAND NAV COURSE-FIFE, LIGHT FIGHTERS
Week 23 (5 min): FOCUS-DRAG MAINT WK, GNRY TEST, COC INVNTRY PL/PSG/1SG/CDR-VEHICLES AND ACFT COC INV-MINGEAR/NUGENT, 9-13 MAR, SEE SCHEDULE HGST, THREAT, DRAGON TESTS TOP CREW ARMAMENT COMPETITION	 OPD- WPNS SYS (RKT)-ARMT C CO, HGR CLSRM NCOPD- HAND RECEIPTS-1SG, HGR CLSRM SGT TIME- M16 MARKSMANSHIP/M18 EMPLY-MEJIAS, HGR CLSRM
Week 24 (5 min): - FOCUS-BN GNRY TAB III-IV, VII-VIII	COMMANDO PEAK AMCB-BETTENCOURT, BDE OPD-N/A NCOPD-RNG NCOIC PROCEDURES/PCI-1SG, OFFICE SGT TIME-M249/M203/AT4-EZELL (MEJIAS), HANGAR
Week 25 (5 min): - FOCUS- M16 RNG, M9 M16 RNG-ATHEY/ FIFE, 23-24 MAR, RNG 41A/B M9-ALL OFFICERS, 1SG, RNG TBD	 OPD- THREAT EQUIP/DOC-S3, CLSRM NCOPD-WEIGHT CONTROL PROG-1SG, OFFICE SGT TIME- AGPU/BENCH STOCK-NELSON, HANGAR
SHORT-RANGE TRAINING (7 min)	
Calendar Review: AS OF 9 FEB 98 FEB -N/C MAR-N/C	 APR-N/C MAY-N/C
Week 26 And Requested Future Training: - FOCUS-Commando Peak, COC INV COMMANDO PEAK-BETTENCOURT, 2 ACFT DAY-4 ACFT NIGHT COC INV-MINGEAR/NUGENT, SEE SCHEDULE	A&P Trng Course-Girouard, Hangar 28-31 MAR 1700-2100 OPD-NVG MESSAGES-B CO, HANGAR CLSRM NCOPD- SGT TIME-
CONCLUDING COMMENTS (2 min)	
REVIEW THIS WEEK'S TRNG	DARREN D. MINGEAR CPT, AV Commanding

WILL AIRPOWER, SPECIFICALLY HELICOPTERS, REPLACE TANKS IN 2010?

by Maj. John W. Blumentritt, USAF

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"Flying tanks" have long been objects of speculation.[1] Some U.S. Department of Defense officials are questioning if, by 2010, joint force commanders should replace conventional tanks by employing "sophisticated attack and supporting helicopters"[2] to dominate force, time, and space. The potential outcome could be that joint force commanders, by employing these helicopters decisively, would cause tanks to become obsolete memories.

Are tanks going to be memories in 2010? This study proposes that yes, tanks may be memories in 2010, but in the form of bad memories to an enemy who confronts them.

Helicopters will not replace tanks in 2010. Tanks are not only compatible, but also unique, integral parts of the dominant maneuver vision as outlined in *Joint Vision 2010*. Instead of attempting to employ helicopters as "flying tanks," Joint force commanders should use helicopters as airpower assets, thus allowing them to operate in their full multidimensional perspective.

Airpower proponents predominately advocate that war has been fundamentally transformed by the advent of the airplane.[3] Air Force Doctrine Document 1 states that given the right circumstances, airpower can dominate the entire range of military operations in the air, on the land, on the sea, and in space.[4] Although this information is more far-reaching than the helicopter-tank issue, it is important to explore because helicopters, regardless of service component, are forms of airpower.

Airpower literature, overwhelmingly dominated by U.S. Air Force fixed-wing professionals, does not frequently espouse the helicopter. In addition, Army helicopters are normally not included in the air apportionment process or air tasking orders.[5] Helicopters, however, are ideally suited for rapid reaction in close, deep, or rear operations.[6] Despite the Army's reluctance to lose control of one of its most important maneuver assets to the Joint Force Air Component Commander (JFACC),[7] helicopters are capable of joining fixed-wing counterparts as airpower assests.

Airpower & Landpower Doctrine

Landpower proponents do not disagree that airpower is important. They are more concerned, however, with sustained presence on the ground. The U.S. Army publishes, "U.S. land forces provide the most visible, sustained foreign presence on the ground, 24 hours a day, person-to-person, cooperating, sharing risks, and representing America."[8] In addition, in his article, "The Future of Armored Warfare," U.S. Army Lieutenant Colonel Ralph Peters argues, "The ... dynamics of battle will demand grounded systems for many years to come."[9] Lastly, the U.S. Army and Air Force has developed "flyaway packages" tailored to airlift significant combat power to a theater within a short time. For example, one package consists of 14 M1A1 tanks, 15 Bradley Fighting Vehicles, and 335 soldiers, all ready to move within 48 hours of notification.[10] While the specifics on these packages are not significant, these examples illustrate the commitment the U.S. Army has on quickly placing people and heavy equipment on the ground.

Are helicopters simply support tools for tactical occupational forces, or can they be used as significant airpower assets at the tactical, operational, and strategic levels of war? The literature varies. For example, in the article, "American Armor in the Ground War Against Iraq," a firsthanded account of armor operations during the 1991 Gulf War, Gregory Smith does not mention airpower or attack helicopters,[11] despite the fact they supported the armor advance.[12] Perhaps Smith regards their role as support for the offensive forces, similar to the also unmentioned, but equally necessary logistic assets. Further research, however, indicates helicopters have built strong reputations as airpower assets. U.S. Army AH-64 Apache helicopters disabled Iraq's early warning radar during the opening moments of the 1991 Gulf War, allowing coalition airplanes to pour into Iraq undetected.[13] Both airpower and landpower literature supports having helicopters, but confusion exists on whether Joint Force commanders should replace tanks with them, or employ them as airpower assets.

Unfortunately, *Joint Vision 2010* does not clear up this confusion. For example, it states that by 2010, there should be less need to mass forces physically. Later, however, it notes there will still be a need for "boots on the ground" in many operations.[14] With the importance the U.S. Army gives to moving large amounts of armor into theaters, "boots on the ground" logically includes accompanying "treads on the ground".

Officials assigned to the Future Concepts Division of the Joint Warfighting Center, who write supporting concepts for *Joint Vision 2010*, are searching for clarification on this issue. They are concerned tanks may not be consistent with the concept of dominant maneuver as found in *Joint Vision 2010*. Dominant manuever calls for "decisive speed and tempo" to apply overwhelming force to enemy centers of gravity. They are questioning if the land force of the future should rely on advanced, heavily armed helicopters to replace the relatively slow tank to fulfill the concept of dominant maneuver. An official from this organization writes:

"transporting tanks to a contingency takes a lot of time, and once there, they don't move very quickly. It seems that specially equipped helicopters, flown by experienced crews, could accomplish this mission. Using information superiority, sophisticated helicopters armed with advanced weapons may be the attack forces of the future. Supporting helicopters could have infantry inside to land after an attack and do a quick "mop up" and then withdraw. Other helicopter forces could (or would) attack the enemy as vulnerabilities arise."[15]

This study makes the assumption that these "sophisticated helicopters armed with advanced weapons" are current helicopter airframes, and not limited to just U.S. Army attack helicopters. These helicopters, referred to as "flying tanks," could be AH-64 Apaches, enhanced H-60 Black Hawks, or even specially armed CH-47 Chinooks. Helicopter design and type is less important to the joint force commander than techniques of employing these assets at the operational and strategic levels of war.

The Geostrategic Environment

To understand the synergistic relationship between airpower, helicopters, and armor, one must first understand the geostrategic environment land forces of the future will operate in. During the Cold War, the U.S. Army was relatively certain what the threat was and from where it would come. Had the Soviets invaded Western Europe in 1989, the U.S. Army, consisting of 800,000 troops armed with thousands of tanks and helicopters, would have countered them.[16] This massive force, coupled with strong sister-service partners and formidable allies, effectively served as a deterrent.

In addition, the disintegration of the Soviet Union decreased the threat that limited conflicts around the globe could ignite a world war between superpowers. Unfortunately, the end of the Cold War also resulted in a new and expensive security challenge. Rogue nations, now unrestrained by a coercive superpower, tend to be more willing to use force within and across borders.

Between 1950 and 1989, the U.S. Army participated in 10 major deployments, but from 1990 to 1996, the U.S. Army deployed 25 times.[17] Most of these commitments called for soldiers to be on the ground, directly interfacing with the civilians and/or military involved in the crisis.

The full spectrum of Army capabilities may be required to prosecute diverse missions, ranging from disaster relief, through military operations other than war, to perhaps global war within the next decade.

Some of these missions will be best suited for airpower and helicopters, while tanks may best accomplish others. Most should be accomplished by a synergistic combination of the two, based on their capabilities and limitations. As the characteristics of helicopters and tanks are explored, the following recurrent theme occurs: helicopters cannot in some cases, and should not in others, replace tanks.

Keep Tanks

Tanks do not normally operate directly at the operational and strategic levels of war, however, they are an indirect means to that end. Joint force commanders can exploit the tank's capabilities, many of them not shared with helicopters.

First, tanks are the backbone of ground forces, and ground forces hold ground. Tanks, in mass, can demolish pockets of enemy resistance as they move forward. Many experts feel that airpower, unlike troops and tanks, cannot hold ground.[18]

History documents that control of the land often requires seizing it from opposing ground forces. For example, the October 1993 Battle of Mogadishu was fought under conditions that "begged for armor."[19] The commander, based on operational security concerns, had earlier requested U.S. armor capabilities, but instead, armed helicopters and AC-130 gunships were used, with disastrous results.[20]

Without armor, U.S. forces had no way to rescue the survivors of this battle, and had to organize an ad hoc extraction force using Malaysian and Pakistani tanks.[21]

Many examples of helicopters failing to control the ground occurred during the Vietnam War. The "flying tank" concept is similar to the "search and destroy" tactics employed by Army Aviation in southeast Asia. Airmobility allowed the swift relocation of forces by leapfrogging them over obstacles on the ground.[22] The problem with this, however, was that once the helicopters left, the Vietcong would reemerge, move back into the villages, and regroup unopposed. Army Colonel Delbert Bristol, a Vietnam veteran, said in an interview, *"I still think that the Army exists to seize and hold terrain. To a certain degree you have to stay on the terrain in order to do that, and I think to that degree we may have erred a little bit in our conduct of the Vietnam War. More than a little bit."*[23]

Normally, helicopters do not dominate the land or hold ground by flying overhead or firing weapons. Ground forces, supported by armor, are much more suited to these tasks. Helicopters could not replace ground forces and tanks in Vietnam or Somalia. They will not replace tanks in 2010.

Second, tanks are very powerful symbols and useful instruments of war and diplomacy, throughout the spectrum of warfare. Many feel it was the thousands of allied tanks rolling forward that made Saddam Hussein abandon Kuwait in 1991, not the helicopters flying around.[24] Airpower probably killed more Iraqi troops, but the dominant images of the Gulf War were tanks rolling into Kuwait City amid cheering, flag waving, Kuwaiti citizens. On the lower end of the scale, helicopters flying over rioting mobs during the 1992 Rodney King crisis did not effectively control crowds. Forces on the ground, backed by armor units and supported by helicopters, stopped rioters in Las Vegas, Nevada, from encroaching into crowded tourist areas.[25] Although this particular example is a domestic and tactical police issue, it provides a superb example of how leadership effectively employed powerful symbols to control behavior and hold ground. Tanks have historically carried political messages throughout the levels of war.

A third capability of tanks, unlike helicopters, is their ability to operate in bad weather. High winds, severe turbulence, extremely low clouds, poor visibility, and freezing rain may slow down tanks. These conditions, however, may render hundreds of helicopters throughout the theater completely ineffective. For example, the U.S. Navy prohibits all UH-1N helicopters from flying during any icing conditions.[26] Since icing can occur throughout an entire theater, this common winter event would be significant, since all "flying tanks" with this limitation would be unusuable. Bad weather may bog down tanks, but tanks are still less susceptible to adverse

weather than helicopters.

A fourth tank capability is that of the crew. Tank operators are less expensive to train, easier to replace, and not as endurance limited as pilots. An after-action report, published after a recent division advanced warfighting experiment, highlighted this endurance issue. In this report, a Cavalry officer writes, "*... need more crews than aircraft. Endurance of the airframe was greater than the crew endurance.*"[27] This is in contrast to the Smith article, where he describes a continuous armor advancement through Iraq over several days, stating, "*There was to be no rest for the battalion.*"[28]

Operational airpower artists understand that airpower cannot be sustained in this way, and must be scheduled properly to ensure continuous operations. Helicopters, limited by both equipment and crew, cannot operate like tanks nor could they have replaced them in the armor assault of Iraq.

Replace Tanks?

Helicopters are oppressive weapons. They can get into the fight quickly, and once there, accomplish a myriad of different missions. Perhaps it is these superb capabilities that, unfortunately, gave birth to the idea of "flying tanks." Critics of tanks could counter-argue many of the previous points, or even create new arguments for replacing tanks with helicopters.

First of all, one could argue that it is simpler and quicker to get helicopters into a theater than tanks. For example, a C-5 transport aircraft can move one M1 tank,[29] or four H-60 helicopters.[30] In addition, many helicopters can self-deploy. Enhanced by air-refueling capabilities, many helicopters can fly to a fight thousands of miles away, then be ready to fly combat missions upon arrival. Tanks normally move via ship, and are not suited to administratively traverse great distances to fight.

Although these facts are true, two issues negate this argument. First, if helicopters will be ineffective in a crisis that requires armor, such as the battle of Mogadishu, it is not logical for a joint force commander to use them just because they arrive first. He should select the proper tools that do the job effectively. As for the speed of arrival issue, "flyaway packages," coupled with numerous pre-positioned ships filled with equipment, change the way the U.S. Army views deployment.[31] If a joint force commander needs tanks, the U.S. logistic system is set up to get them to him in a hurry.

A second argument could be that helicopters are more mobile than tanks. Helicopters can circumvent threats, fly over terrain, and easily transit between ships and the shore. Unlike tanks, helicopters can exploit elevation. Unencumbered by terrain, helicopters can quickly move to different locations within the theater. Tanks are much more geographically challenged than helicopters. Rough terrain, swamps, rivers, and other obstacles, easily circumvented by helicopters, must be negotiated by tanks. Since tanks move slower than helicopters, critics could argue they are not consistent with the concept of dominant maneuver, as found in *Joint Vision 2010*.

There is no argument that helicopters are more mobile than tanks. However, even if traversing ground is difficult, it is still necessary. U.S. Army General Robert R. Williams, on discussing airmobility operations in Vietnam, points out the difficulty of land warfare. He writes, "*You have to fight it down in the muck and the mud at night, and on a day-to-day basis. That's not the American way and you are not going to get the American soldier to fight that way.*"[32]

Although General George Patton understood the difficulties of land warfare, he also realized the importance of holding ground. His resourcefulness, leadership style, and tenacity made the seemingly impossible happen. In the book *Nineteen Stars*, Edgar Puryear writes. "*(General Patton) did everything possible to get his Army to drive, drive, drive. A town that could not be captured swiftly was by-passed, to be strangled to death while his troops pressed after the quarry, like hounds baying for a kill.*"[33]

In both these historical examples, commanders had very mobile airpower assets, but that did not equate to control of the ground. Today, the United States has firm control of the air over Bosnia and Iraq, however, that control is not wholly relevant to actions on the ground.[34] In 2010, helicopters may be moving quickly over contested settlements or terrain, however, "boots and treads" will be fighting and holding ground below them.

As for the dominant maneuver issue, operational artists must understand decisive speed and tempo do not equate to miles per hour. Tank commanders must coordinate on the proper speed and tempo to achieve the decisiveness sought by joint force commanders. For example, open desert warfare may require a swift armor assault, while combat in an urban setting may call for a relatively slow, methodical armor advance. Helicopters may move faster than tanks; however, if flying over the enemy is not effective, then it is not decisive, nor does it affect the tempo, and it dominates nothing.

A third argument "flying tank" proponents could make is that tank warfare is synonymous with bloody attrition warfare while airpower is not. For example, helicopters began attacking targets in Iraq and Kuwait on 17 January 1991, while coalition land forces did not cross the Saudi-Iraq border until 24 February.[35] Perhaps this delay was due to the vulnerability of ground forces, the likelihood of attrition warfare, and the theory that U.S. attrition rates would drain the will of the American people. Saddam Hussein felt this way. He told a U.S. Ambassador on 25 July 1990, "*Yours is a society which cannot accept 10,000 dead in one battle.*"[36]

This argument makes three assumptions: tank warfare is synonymous with attrition warfare; the goal of war is to avoid bloodshed; and "flying tanks" will accomplish that goal. If these assumptions were true, Joint force commanders would undoubtedly replace tanks with helicopters.

Reality, however, is not that simple. In On War, Clausewitz described the reality of warfare, "*Kind-hearted people might of course think there was some ingenious way to disarm or defeat an enemy without too much bloodshed, and might imagine this is the true goal of the art of war. Pleasant as it sounds, it is a fallacy.*"[37]

First of all, land warfare and tanks do not hold the monopoly on attrition warfare. For example, one could argue strategic bombing in World War II degenerated into attrition warfare, as did helicopter operations in Vietnam. Clausewitz negates the second assumption in this argument by pointing out that avoiding bloodshed is not the goal of war. Lastly, since military objectives make up the goals of war, helicopters are suited well for some, while tanks are suited better for others. This argument, supported by faulty assumptions, does not support replacing tanks with helicopters.

A fourth argument could assert that since helicopters are more flexible than tanks, helicopters should replace them.

For example, some helicopters can deliver ordnance behind enemy lines one day, then provide close air support to friendly forces the next. MH-53J Pave Low helicopters led AH-64 Apache attack helicopters to targets, flew rescue missions, and searched for mobile Scud launchers.[38] Not all "flying tanks" could do all these missions, but when compared to tanks, helicopters offer many more options.

Taking this argument one step further, one could comment that because of the helicopter's speed and flexibility, Joint force commanders do not have to limit employing them at just the tactical level of war. Since it is argued that airpower is inherently a strategic force,[39] and helicopters are forms of airpower, many helicopters can conduct operations that have operational or strategic effects. For example, helicopters could conduct preparations for a major operation, normally classified as operational fires,[40] in the form of early destruction of enemy airfields and aircraft on the ground. Unlike helicopters, tanks are not suited to instantly operate at the operational and strategic levels of war. Tanks are normally in tactical units, designed to fight through enemy forces in an effort to position themselves for decisive, strategic operations.[41] In this example, helicopters are more capable than tanks.

If "flying tanks" could do all these missions throughout the tactical, operational, and strategic levels of war, in addition to effectively replacing tanks, Joint force commanders would surely select this economically advantageous option. Reality, however, negates this "helicopters can do it all" argument.

The first part of this argument assumes helicopters can effectively replace the mission of tanks, an issue previously negated. The second part of this argument asserts that "flying tanks" could also be effectively employed as airpower assets. To understand why they cannot requires a discussion on both helicopter aerodynamics and command and control.

First, high performance helicopters, defined by superior maneuverability and agility, fly faster, turn sharper, ascend and descend quicker, and evade threats better than heavier helicopters.[42] In addition, British tank expert R. M. Ogorkiewicz, argues for the development of thicker tank armor to defeat new anti-tank threats, resulting in a weight of approximately four metric tons per square meter.[43] This is too much weight for a helicopter. These details may be immaterial to joint force commanders, but the message they illustrate is critical. Put simply, high performance helicopters, equipped with the armor and modifications to make them "flying tanks", are no longer high performance helicopters. In this configuration, these sluggish helicopters could not be exploited to their full potential as airpower assets. "Flying tanks" would lose their unique ability to strike operational and strategic targets in threatened areas. Lieutenant Colonel Peters warns: "*A very real danger ... is asking any system to do too many things, resulting in a system that does nothing especially well.*"[44]

The second issue that corrupts this "do it all" argument is command and control. "Flying tanks" would most likely be owned or parceled out to armor commanders, thus unavailable for full exploitation as airpower assets. Joint force commanders should use helicopters as forms of airpower, versus tethering them to armor units as "flying tanks."

The importance of unity of command and unity of effort, coupled with the realization that helicopters will not reach their full potential unless allowed to operate in the full multidimensional perspective, are reasons why.

Conclusion

Tanks will remain formidable weapons until at least 2010. Tanks are consistent with dominant maneuver, specifically decisive speed and tempo, as directed by *Joint Vision 2010*. Their symbolic presence, ability to demolish enemy resistance, and hold ground effectively, makes them decisive. Miles-per-hour does not equate to decisiveness.

Joint force commanders should not use helicopters to replace tanks. Tanks provide "boots on the ground" presence throughout the spectrum of warfare. To best support ground forces, agile and maneuverable helicopters should be used in synchronization with other airpower assets to provide close air support, air interdiction, or any other missions more suitable to their capabilities. It would be dangerous to parcel out helicopters to armor commanders, thus making them unavailable for exploitation as powerful airpower assets.

Recommendations

First, this research supports the recommendation that joint force commanders should not replace tanks with helicopters. Helicopters can supplement, augment, and support tanks; however, they are not able to replace them. The geostrategic environment of 2010 will call for soldiers to be on the ground, directly interfacing with people involved in the crisis. Unlike helicopters, tanks will provide a "boots on the ground" presence throughout the spectrum of warfare. As U.S. Air Force Colonel Richard Szafranski highlights in his article "Twelve Principles Emerging From Ten Propositions," "*Airpower can blow a door off of its hinges, but, unlike a simple soldier or marine, airpower cannot see what is behind the door.*"[45]

Secondly, since tanks are necessary, armor units must receive the support they require to get into the fight. For example, staffs must work out the logistics of moving ample numbers of tanks into the theater, then establish and protect healthy logistics trails. "Flyaway packages" and prepositioned ships are invalidating the paradigm that it takes too long to get tanks into a theater. Joint force commanders must understand that if they need tanks, they should request them, and then let the logistics system go to work.

Third, operational artists must understand that decisive speed and tempo is not defined in miles per hour, but instead as the appropriate speed and tempo required to be decisive. The concept of "flying tanks" is similar to what the military used in Vietnam. In Vietnam, helicopters had greater speed than ground forces, but this speed did not affect the tempo or the decisiveness of those operations. This is a complex concept, and one that should be articulated, published, then disseminated by the Joint Warfighting Center in a future *Joint Vision 2010* supporting concept publication.

Will tanks be memories in 2010? Perhaps a potential adversary will understand and remember these powerful symbols can be deployed within hours anywhere in the world. Perhaps he will ascertain they will dominate his land, despite the weather or terrain. If this rogue leader understands tanks will be used against him, in combination with fixed-wing and helicopter assets, perhaps he will be dissuaded from even initiating hostilities. If deterrence fails, Joint force commanders can unleash an overwhelm-

ing force of tanks upon this enemy. Following the conflict, tanks will indeed become fresh and impregnable memories in the minds of the international community.

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Maj. John W. Blumentritt flew H-3 "Jolly Green Giant" combat rescue helicopters in Japan and Alaska, and activated the first HH-60 Pave Hawk combat rescue squadron at Nellis AFB, Nev. He deployed to Kuwait 18 months later to provide combat rescue coverage to aircraft flying over Iraq. After Kuwait, he flew missions for the rescue squadron at Keflavik Naval Air Station, Iceland. He then moved to Hurlburt Field, Fla., to fly MH-60G special operations helicopters. He is now attending the U.S. Naval War College in Rhode Island, and following that, will attend the School of Advanced Airpower Studies, Air University, Maxwell AFB, Ala.

mailbox

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Dear Editor:

I read with interest the article by Lt. Col. James W. Kelton on whether Army aviation needs 15D aviation logisticians. I also went on-line and read the AOC 15D White Paper on the Aviation Proponency website. It is exciting to see that Aviation Branch has turned the corner on its philosophy on 15D/90 aviation logisticians. The White Paper raised a number of questions concerning the complexity of the Army's logistics system, qualifying 15D officers as MTPs and opportunities for battalion command.

The White Paper stated, "The complexity of current logistics systems demands specialists ... ." It also stated, "Numerous AOCs in various branches suffer the same problems of a system that produces "generalists." This leads to the question, "Is our current logistics system too complex?" Initially the question looks absurd, but if other branches find the need to train specialists, what does it say about the complexity of our logistics system?

It is truly exciting to see the reinstitution of the MTPC as part of the 15D officer-education system. Being able to test fly an aircraft lends credibility to the aviation logistician among his/her commissioned officer peers and especially the warrant officer community; it is their bonafides. One area the White Paper didn't address was whether the 15Ds that didn't get to attend MTPC due to the premature turn off of training seats will be programmed to attend in the future. The several years when "true" 15Ds weren't produced leaves a possible gap in our talent base.

The article and White Paper pointed out the fact that there are more battalion-command opportunities now than there were, say, 15 years ago. That is outstanding! Also, the opportunity to show our branch logistics proficiency as a commander of a FSB, MSB, etc., truly shows our ability as a member of the combined arms team. The command opportunity does raise two concerns. First, for an aviator to receive a FSB, MSB, etc., command, will our brethren in other logistic branches "desire" the opportunity for one of theirs to command a DASB?

Second, even though the opportunities for command have increased, the number of qualified personnel may not. It is an unwritten fact today that an officer will not be selected for battalion command if he/she is not a CGSC resident course graduate. The FY '97 CGSC selection board (Aug.-Sep. '97) only selected four 15D/90 officers from all four year-groups considered. One year does not make a trend, but if this occurs in a number of consecutive selection boards the population of 15D/90s to choose from for these battalion commands will decrease.

This low selection rate also sends a message to our young 15Ds that the dream of battalion command is almost non-existent. And why aren't more 15D/90s selected for resident CGSC? There are many variables to this question, but the one that leaps out is that 15D/90 officers are not receiving the quality of senior-rater comments that their 15B peers are on the critical company command OER.

As a 15D company commander, either AVUM or AVIM, looks at his/her rating scheme, it is extremely rare that they see a fellow 15D as their senior rater. The senior rater is usually a 15B aviator or an officer from another logistics branch. The White Paper stated that, "Some senior leaders have a bias against the 15D career path," and "this may be a lack of correct information or a bias due to a personal experience." It added, "Aviation Branch must do a better job at marketing AOC 15D" especially to battalion and brigade Pre-Command Courses. If not, will we in the aviation community have to choose 15Bs or other FA90 officers to command 15D/90 battalions?

The Army Aviation magazine article and the Aviation Proponency White Paper are good news stories for aviation branch and aviation logisticians.

Maj. Sharm Kuch
Clarksville, Tenn.

Dear Editor:

The letter "Who Cares About..." in the August/September issue certainly addresses a systemic problem at most of the Army's flight simulator facilities. CWO 4 Gary Helmer is correct in his statement about DES not having any say in job classification. They probably don't get involved in writing job descriptions for the training specialists at the facilities either.

The one thing that DES and each MACOM aviation office can and should get involved with is the validation of these job descriptions. As the flight simulators and the personnel working at the simulator facilities make up a huge portion of our aviation resources, these facilities must be fully assessed during Aviation Resources Management Surveys (ARMS) conducted at each installation.

This problem is real and cannot be overlooked any longer. The flight standardization chain is broken and immediate steps must be taken to fix it. I can't imagine any commander who wants anyone training his aviators who is not validated as an IP/IE and not in an Aircrew Training Program. Training and readiness is at issue here.

Name Withheld By Request

Dear Editor:

Your article on "Change of Command" in the Nov. 30 edition of ARMY AVIATION was a little confusing. The article, in the first paragraph, said Jones is a major general but the initial caption calls him a brigadier general. ... [*In addition*], the article never mentioned the change of command date.

I was an Army aviator from 1950 to 1966 when the Army, as a whole, thought of Army aviators as being out of step as officers. Many senior officers advised me to get out of flying if I wanted a successful career. I could go on but hopefully things have changed. I do, however, think the Branch idea is idiotic — having a mixture of combat arms and non-combat all in one branch. The non-combat units should belong to other branches.

Sincerely,

Dr. James Scudder,
Troutdale, Ore.

At the date of the change of command, Sept. 23, 1998, our new branch chief was a brigadier general (promotable). Maj. Gen. Jones actually was promoted one month later on Oct. 27, 1998. We apologize for any confusion the different references to Maj. Gen. Jones' rank may have caused.

Editor in Chief

Army Aviation Loses Key Leaders

"Father of Airmobile Operations" Dies at 89

Retired Gen. Hamilton H. Howze, whose innovations in Army aviation doctrine formed the basis for modern airmobile operations, died Dec. 8 in Fort Worth, Texas.

A decorated World War II combat commander and former cavalry and armor officer, Howze during the early 1960s presided over the Tactical Mobility Requirements Board which became better known as the "Howze Board." Under Howze' leadership the board established a new ground-combat doctrine which integrated large numbers of helicopters into the Army's existing structure, vastly improving the Army's ability to move troops and equipment on the battlefield. Proved under fire in Vietnam, air mobility became the foundation of modern U.S. Army aviation.

Howze was born at West Point, N.Y., on Dec. 21, 1908, while his father was commandant of cadets at the U.S. Military Academy. Upon his own graduation from West Point in 1930 Howze was commissioned a second lieutenant of cavalry. In the years before World War II he saw service in the Philippines and at posts in the United States, and following the outbreak of war became an armor officer. He served with distinction in the Mediterranean theater of operations, both as a staff officer in the 1st Armored Division and, ultimately, as commander of both the 13th Armd. Regiment and Combat Command Alpha.

After the war Howze filled several important and increasingly senior positions, eventually commanding the 82nd Airborne Div. and XVIII Abn. Corps. In 1955, having become a rated fixed- and rotary-wing pilot, he became the first director of Army aviation. Following his presidency of the Tactical Mobility Requirements Board, Howze was posted to Korea as commanding general of the Eighth U.S. Army, commander in chief of the United Nations Command and commander of U.S. Forces, Korea.

Following his 1965 retirement from active duty Howze joined Bell Helicopter as vice president for product planning, a post he held until his retirement in 1971. He also served as AAAA's national president from 1967 to 1969, and retained an active interest in all aspects of Army aviation.

Howze is survived by his wife, Mary; two sons, Henry and William; four grandchildren; and five great-grandchildren. Mrs. Howze requests that expressions of sympathy be sent to Army Emergency Relief, the Army Aviation Scholarship Foundation, or other appropriate charities.

Army aviation pioneer Lt. Gen. George P. Seneff Jr. (Ret.) died Dec. 2 at the age of 82.

A 1941 graduate of the U.S. Military Academy at West Point, N.Y., Seneff saw World War II combat duty with 14th Armored Division in Europe. In 1956 he became an Army aviator and, as chief of the Air Mobility Division in the Office of the Chief of Staff for Research and Development, initiated development of both the UH-1 and the CH-47. He went on to command the 11th Air Assault Div. (Test) and in 1965 became chief of Army aviation, a position which allowed him to play a vital role in the Army's acquisition of the AH-1 Cobra attack helicopter.

Seneff's service in Vietnam included time as an aviation advisor to the South Vietnamese government, and as commander of the 1st Aviation Brigade. In the latter position he was instrumental in developing the tactics and techniques used by Army aviation forces in Vietnam. He later commanded the 3rd Inf. Div. in Europe, III Corps at Fort Hood, Texas, and 5th Army at Fort Sam Houston, Texas. He retired from active duty in 1974.

Survivors include his wife, Frances; a daughter and son-in-law; and three grandchildren.

PHILOSOPHY OF COMMAND

The following was written by Brig Gen. Seneff in 1966, while he was commanding the 1st Aviation Brigade in Vietnam.

Philosophy of Command

A World War I division commander whom I knew fairly well, and who was a great gentleman and fine commander, said to me one evening in 1945, "I have finally come to realize that the only way to be a good commander in wartime is to be a first-class SOB."

I have thought this statement over many times in the past 20 years because it has had a very special lesson for me. I know, thanks to excellent hindsight, that he was voicing his disappointment that others whom he had led - and who were not as high principled and devoted to duty as he was - had let him down, with unnecessary cost in life and with damage to the furtherance of the effort.

Nicholas Monsarrat, in his superb accounting of human relationships in wartime, "The Cruel Sea," traces the development of the same philosophy in the words of a British corvette commander: 'At the beginning, there was time for all sorts of things - making allowances for people and joking, and treating people like sensitive human beings, and wondering whether they were happy, and whether they liked you or not. ... But now ... the war has squeezed out everything except the essentials. You can't make any allowances now, you can't forgive a mistake. The price may be too high. ... It's too serious now for anything except a 100 percent effort ... a 100 percent toughness."

This is a point in the philosophy of leadership with which successful combat leaders have always had to come to grips: You can't afford to be a "nice guy" if this means letting standards of training and performance slip, because in a combat situation slippage means death.

Now the point of all this, as far as we aviators are concerned, is that we are always

in a combat situation - because we are always fighting the sky; which with great impartiality, as we all know, can be intensely beautiful and serene one moment, but which can kill you (and the people you're responsible for) deader than a mackerel the next.

I've personally investigated a lot of accidents in the past few years and I've read the reports on a lot of others. In 90 percent of the really nasty ones I've seen — where people were killed or maimed or burned — regardless of the immediate cause of the accident, command supervision had a lot to do with allowing it to become a nasty one as opposed to just resulting in bent equipment. The guy's emergency procedures weren't good enough, or he tied it up, or he just wasn't sufficiently well trained to cope with the situation that confronted him.

Practice Often Avoided

There is a tremendous tendency in this business to avoid practicing the hairier aspects of our operations, such as short-field work, night-and-day formation work, night confined-area operations and living at low altitude. This is a natural tendency because, in itself, practicing means exposure and exposure can lead to what we are trying to avoid. It can build up accident rates which, when they become high, reflect poorly upon command.

Nonetheless, it is only through diligent and unceasing practice of these aspects of the game that our people become good enough at them to perform them safely, or at least with minimum risk. Good aviation organizations, just like good organizations of any other sort, have proven time and again that they can do it safely and effectively. They gained this capability by unceasingly diligent practice and training.

Intelligent Planning Needed

I must emphasize that they didn't get this way overnight, nor did they start off by tackling the most difficult facets of operations on a large scale on the first day. They built up to it gradually by making sure first that their people as individuals were trained and standardized and that they knew what they were doing, leading them very gradually up the stairs of difficulty, in balance with demonstrated capability.

For example, you teach people how to avoid wires by having them fly low and learning to recognize the signatures that indicate wires, but you don't let them leap into this without looking. You work your way into it gradually by having an experienced instructor pilot aboard, by working down to low altitude from a somewhat higher altitude (say 50 to 100 feet), by the use of carefully surveyed courses which the IP has taken the precaution to fly at reasonable altitude on any given morning before taking students out, to insure that some knucklehead hasn't strung a new wire up between a couple of trees during the night. In short, you teach this by taking an intelligently planned approach.

But the big thing is that you make the approach, and you make your people do it and you make them practice. You drill them on emergency procedures and teach them all the tricks that your older hands can give you until you can tell yourself truthfully that your people are trained and are capable of coping with any situation that is likely to confront them. On emergency procedures, a good tip an Air Force friend passed to me was that of having the approved emergency procedure for one of the likely emergencies for the aircraft owned by the unit thoroughly reviewed by a different member of the organization every morning at the preflight briefing.

The challenge lies with you. If, after an accident, you can tell yourself, "I have done everything within my power in training, in maintenance and in discipline to prevent this," then you are a good commander. If you can't, you aren't. One word about who is a commander — we all are. We have battalion commanders, company commanders, platoon leaders, and section and team leaders. We also have aircraft commanders. If you are the lowest-ranking guy in this business, you are still, if you're commanding an aircraft, responsible for the airplane and the lives of other people who might happen to be aboard.

Finally, a word about the first paragraph of this dissertation: Don't get me wrong, I don't think you really have to be an SOB in order to accomplish the desired results. You have to lead — preferably by example. Precisely how you do it is a matter of your personality, the organization and the situation. Some of the best leaders I have ever known have been very pleasant people, but they very pleasantly insisted on extremely high standards. How you achieve them is secondary. Just make sure you do — you are preparing your people for combat in a dangerous game.

Maj. Gen. John H. Stanford

Retired Maj. Gen. John H. Stanford — former deputy commanding general of the U.S. Army Aviation Systems Command — died in Seattle, Wash., on November 28 following a seven-month battle with leukemia. He was 60.

During his 30 years on active duty Stanford held a variety of important posts. In addition to his tenure at AVSCOM, Stanford served as executive secretary to Secretary of Defense Caspar Weinberger from November 1981 to June 1984. His last assignment was with the U.S. Transportation Command (TRANSCOM), at Scott Air Force Base, Ill., where he oversaw Operation Desert Storm plans and programs. Following his retirement from active duty, Stanford became a county manager in Fulton County, Ga. He became the Seattle superintendent of schools in July 1995 — a position he held until his death — and had delivered the education address to the Democratic National Convention in Chicago, August 1996.

Stanford was buried in Section 7A of Arlington National Cemetery on Friday, Dec. 4. His wife, Patricia, received the flag covering his casket from Army Chief of Staff Gen. Dennis J. Reimer.

Donations in Stanford's memory may be made to: The John Stanford Endowment Fund for Seattle Schools at the Alliance for Education, 500 Union Street, Suite 300, Seattle, WA 98101 (20) 343-0449; or The Fred Hutchinson Cancer Research Center, 1100 Fairview Ave N., Seattle, WA 98019 (206) 667-4902.

AAAA NEWS

NEW MEMBERS

ALOHA CHAPTER
HONOLULU, HI
SPC Ronald G. Hulgan
LTC Robert W. McWethy
CW4 Scott R. Mullins

ARIZONA CHAPTER
MESA, AZ
Mr. Jon P. Rogers

ARMADILLO CHAPTER
CONROE, TX
CPT Michael D. Blomquist
MSG Larry D. Lacey
MSG Thomas B. Parton
2LT Jaird M. Schiffman
CPT Craig D. Schwab

AVIATION CENTER CHAPTER
FORT RUCKER, AL
WO1 Jennifer N. Alexander
CPT David K. Almquist
2LT Scott A. Bacco
WO1 Mark C. Bevelander
CPT William P. Brown
Mr. James E. Chadwick, Jr.
WO1 Matt J. Cummings
WO1 Paul A. Dulfer
2LT Stein W. Edwards
WO1 Terry R. Galella
WO1 Gavin W. Glasenapp
WO1 Bruce N. Harrison
CPT(P) Michael Hedegaard
WO1 Michael E. Horne
2LT Keith B. Hume
WO1 MatthewHutchason
2LT Matthew C. Johnson
WO1 Adam E. Jones
2LT Harry H. Jones
2LT Spencer T. Kympton
CW3 Clint G. Logwood II
WO1 Michael J. McDaniel
CPT John W. Merrihew
CW3(P) Chris C. Miller
CW3 Robert L. Morriss
WO1 Patrick K. O'Neill
CPT Edward Pregana
WO1 Jeffrey T. Raglan
WO1 Shannon Rainwater
CPT John D. Ring
WO1 Sal A. Santopietro
WO1 Edward J. Schemper
CPT Jon D. Shafer
MAJ Jannik Skov
WO1 Robert S. Slider
2LT David H. Szymanski
CPT Clint D. Tabor
CW4 Howard Tatum, Ret.
2LT Johnny Taylor II
WO1 Todd A. Towers
WO1 Stanley A. Turnage
2LT Victor B. Ward
2LT John S. Woo

CENTRAL FLORIDA CHAP.
ORLANDO, FL
Mr. Robert Abascal

COLONIAL VIRGINIA CHAP.
FORT EUSTIS, VA
Mr. Ned Bothe
SFC David Mackey
SSG Randell D. Ranson
SSG Robert E. Rayburn
SPC Chad D. Simpson
SSG David L. Stone
CPT(P) Chris F. Wolfe

INDIANTOWN GAP CHAPTER
INDIANTOWN GAP, PA
CW3 John L. Fritsch, Jr.
LTC William W. Spalding
CW4 Robert H. Tenney

LEAVENWORTH CHAPTER
FORT LEAVENWORTH, KS
MAJ David M. Fee

LINDBERGH CHAPTER
ST. LOUIS, MO
CW3 Alfred R. Reed, Ret.

MONMOUTH CHAPTER
FORT MONMOUTH, NJ
Mr. Joseph R. Onufer
Ms. Nancy Santos
COL Patrick Thornton, Ret.
Mr. Francis J. Van Syckle

MORNING CALM CHAPTER
SEOUL, KOREA
CW2 Ray Freeman

NARRAGANSETT BAY CHAP.
N. KINGSTOWN, RI
CW3 David W. Curtis
SGT Arthur R. Guertin
CW2 Kristian Holmsen
2LT(P) James F. Maloney
CW2 Jeffrey M. Read
CW2 Frank J. Thoman

SOUTHERN CALIFORNI CHAP.
LOS ANGELES, CA
Mr. Edward C. Schlatter

TALON CHAPTER
ILLESHEIM, GERMANY
MAJ David M. Constantine
CSM Larry Jeffcoat

TENNESSEE VALLEY CHAP.
HUNTSVILLE, AL
Mr. Stanley E. Cagle
Mr. Jack Conway
1LT Stacy J. Craig
Mr. Gil Edmondson
Mr. Philip S. Freeze
Mr. Larry Fulton
Mr. Murray Hillman
Mr. Tom Houser
Mr. Milford Howard
COL Jeff Jeffrey, Ret.
Mr. George Kitchens
Mr. Norbert R. Kniepp
Mr. George Laslo
Mr. Joseph Lujan
SPC SaffiatuMansaray
Mary Ann Meyer-Schuck
Mr. Gabe Nieto
Mr. Matthew D. Rainey
Mr. Bill Reichert
Ms. Elaine M. Rucker
Mr. Paul D. Smith
Mr. Bob Tomblin
CW5 Allen L. Trivitt
Ms. Irma L. Tuder
SGT Carlos M. Varon
Mr. Bernard L.J. Verdier
Mr. Jim Ware
Ms. Tricia Webb
Ms. Anita B. Williams

WASHINGTON-POTOMAC CHAPTER
WASHINGTON, DC
CPT Gary T. Holzwarth
Mr. Jack Paul

MEMBERS WITHOUT
CHAPTER AFFILIATION
4 Lyndon J. Doyle, Ret.
1SG E.M. "Marty" Neal
WO1 Alexander Roy
CW4 Richard J. Schiffli

Tennessee Valley Chapter

The Tennessee Valley Chapter recently recognized the 22 corporate sponsors for the Chapter's membership drive. Their contributions provided a complimentary social, catered by Bubba's C great food! The social was held at the Von Braun Center and followed by a Channel Cats Hockey Game. The drive resulted in four new industry memberships and some 20 new individual memberships. Each sponsor was presented with a framed certificate by the Chapter's president, Brig. Gen. Joe Bergantz.

The Tennessee Valley Chapter's corporate sponsors were: AC, Inc.; AEPCO, Inc.; Analytical Services, Inc.; Avion, Inc.; Bell Helicopter Textron; Boeing Sikorsky; Camber Corp.; CASA, Inc.; COBRO Corp.; Coleman Research; DATA, Inc.; DCS, Inc.; DRC, Inc.; EER Systems, Inc.; LME, Inc.; Mevatec Corp.; Nichols Research; Semcor; System Studies and Simulation, Inc.; Sikorsky; Veridian; and Westar Corp.

Channel Cats Hockey Team President Matt Ingram and General Manager Jean-Marc Plante present a Channel Cats hockey jersey to Tennessee Valley Chapter President Joe Bergantz.

1998 AEC Symposium

The 1998 Army Aviation Electronic Combat (AEC) Symposium, November 17-19, 1998, at Gibbs Hall Officer's Club, Fort Monmouth, NJ, once again brought together the Research and Development, Acquisition, Trainer, User and Industry communities to cuss and discuss avionics and Aircraft Survivability Equipment (ASE).

Spl. Daniel E. Blackburn
1998 AAAA Avionics Awardee

Co-sponsored by the AAAA Monmouth Chapter, the Association of Old Crows as well as the Communications and Electronics Command (CECOM), Fort Monmouth, NJ, and PM AEC, Huntsville, AL, the event featured classified and unclassified professional sessions under the theme, "Aviation Electronics: Making the Difference."

The keynote address was delivered by the Army Aviation Branch Chief, MG Anthony R. Jones. The professional program featured speakers from the U.S. Army Aviation and Missile Command PMs. Mr. Larry Johnston, PM AEC, was the MC for the event and overall program chairman.

The Wednesday evening banquet featured two AAAA functional award presentations: the 1998 Avionics Award and the 1998 ASE Award. These were presented by LTG Paul J. Kern, Military Deputy Assistant Secretary of the Army for Research, Development, and Acquisition. The ASE awardee was CW3 Michael A. Strieber, HHC, 160th Special Operations Aviation Regiment (Airborne). Mr. Mike Hallissy from Lockheed Martin Fairchild Systems, the award's sponsor, helped in the presentation. CW3 Strieber was the coordinator for all 160th SOAR(A) participation in support of USSOCOM and other DoD sponsored threat exploitation testing efforts. Mr. Bob Coleman of Cubic Corporation (sponsor for the Avionics Award), helped in the presentation to Specialist Daniel E. Blackburn, B Company, 6th Battalion, 101st Aviation Regiment, Fort Campbell, Kentucky. Specialist Blackburn was recognized for his expertise in command and control console maintenance and operations, which enabled the 6-101st to flawlessly execute several exercises and operational deployments, including Southern Watch in Kuwait.

A principal value of these AAAA symposia is to bring together people that don't ordinarily interact, encouraging dialog and the identification/ resolution of issues. This event was no exception as there was a lively exchange during the question and answer session. Many of the Electronic Warfare Warrant Officers from the Army National Guard, Army Reserve, and the active Army were able to ask questions and make their concerns known to the program managers and the Aviation Center key personnel. The Aviation Center and PEO Aviation and AMCOM will continue to work with HQDA, TRADOC and FORSCOM to resolve these issues.

Special thanks are due to our host, MG David R. Gust and CECOM. Further, Mr. Neil Terjesen, the O'Club manager, went above and beyond the call!

Maj. Gen. Anthony R. Jones, commander of the U.S. Army Aviation Center and Fort Rucker, Ala., presented **Vice Chief of Staff of the Army Gen. William W. Crouch** with the Order of Saint Michael, Bronze Award, during a recent Pentagon office call. Crouch, who retires this month, has served the Army and the nation for more than 35 years and has been vice chief of staff since September 1997. The Order of Saint Michael, a joint award of AAAA and the U.S. Army Aviation Center, recognizes individuals who have significantly contributed to the promotion of Army aviation in ways that stand out in the eyes of the recipient's seniors, subordinates and peers.

U.S. Flag to Be Presented to All Future Retirees

Section 644 of the fiscal year 1999 National Defense Authorization Act (P.L. 105-261) requires that a U.S. flag be presented at no cost to service members of the Army, Navy, Marine Corps, Air Force and Coast Guard on their retirement from active duty. This provision applies to releases from active duty on or after Oct. 1, 1998.

Legislative Scorecard for the 105th Congress

The following list covers issues addressed during both the 1997 and 1998 sessions of the 105th Congress, but it's not intended as a complete enumeration of either recent accomplishments or legislative goals of The Military Coalition (TMC) for next year. In compiling this quick overview, we've surely omitted some significant issues. But it's the summary, rather than the specifics, that we think illustrates both the progress that's been made and the important work that remains to be done.

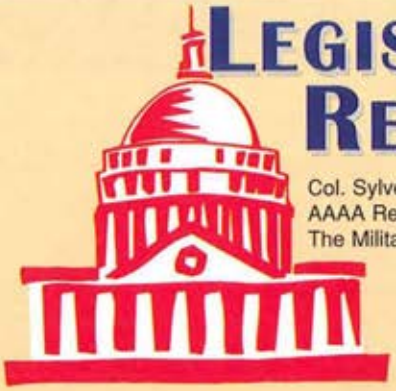
Similarly, we don't mean to offer this as a list of TMC accomplishments. While we worked hard on all of these issues, the successes required the combined efforts of the 27 associations of The Military Coalition and other organizations, hundreds of thousands of individual members, the Defense and service staffs and leadership, and the hard work of many individual legislators and staffers, particularly the leaders and staff members of the Senate Armed Services and House National Security Committees.

Successes:

- Won 10-site test of Medicare subvention.
- Won 6-10 site test of FEHBP-65.
- Authorized additional pharmacy/Tricare test options for Medicare-eligible.
- Implemented retiree dental plan and Reserve dental plan.
- Established "forgotten widows" entitlement to minimum SBP annuity.
- Restored survivor annuity for previously eligible widows who lost second spouse.
- Doubled commissary access for Ready Reserve and "Gray Area" retirees.
- Established "30-year paid-up SBP" authority (albeit delayed until 2008).
- Won full-comparability 3.6 percent active/Reserve pay raise for 1999.
- Defeated arbitrary CPI/COLA cuts proposed by Boskin Commission.
- Avoided "flat dollar COLA" proposed by "Blue Dog" legislators.
- Increased GI Bill education benefits by 20 percent.
- Authorized window of opportunity to exit SBP participation.
- Provided 33 percent increase in Family Separation Allowance.
- Preserved the NOAA Commissioned Officer Corps.
- Defeated Senate proposal to means-test Medicare Part B premiums.
- Overcame budget-driven proposal to close 36 commissaries.
- Authorized military ID cards for all "gray area" Reserve widows.
- Expanded veterans preference and appeals rights.

Unfinished business for the 106th Congress (1999 and 2000):

- Improve TRICARE reimbursements and claims processing to attract quality providers.
- Make the TRICARE Prime fee structure more comparable with civilian HMOs.
- Push to expand Medicare subvention nationwide and FEHBP-65 worldwide.



Col. Sylvester C. Berdux, Jr., Ret.
AAAA Representative to
The Military Coalition (TMC)

- Repeal the REDUX retirement system applicable to post-1986 service entrants.
- Enact active/Reserve pay raises to reduce the cumulative gap compared to private sector pay growth.
- Accelerate implementation of 30-year paid-up SBP from 2008 to 2003.
- Phase out the SBP benefit reduction for survivors 62 and older.
- Improve alignment of force structures with service missions to improve quality of life, retention and readiness.
- Enact VA Medicare subvention.
- Reduce the retired pay offset for VA disability compensation recipients, starting with the most severely disabled.
- Repeal unfair provisions of the Former Spouse Protection Act.

TMC is maintaining constant vigilance against:

- Perennial COLA threats.
- Efforts to privatize commissaries or eliminate the CONUS subsidy.
- Degradation of retention and readiness via erosion of active-force compensation.
- Attempts to equate retirement/disability compensation with unearned entitlements.
- Foot-dragging on the nation's obligation to meet the health-care needs of all uniformed services beneficiaries, regardless of age, status or location.

Identification of 6 to 10 Sites for the FEHBP-65 Test

TMC is continuing to press the Department of Defense (DOD) in its efforts to select the FEHBP-65 test sites by February 1999 in order to get the test implemented by January 2000. We want to avoid any foot-dragging on DOD's part which could delay the start date into the year 2001. Accordingly, TMC has met twice and corresponded with Dr. Sue Bailey, assistant secretary of defense for health affairs, to express our continued interest in DOD's efforts to select the sites.

Military Coalition Welcomes AFSA

I'm pleased to report that TMC's ranks swelled in November with the addition of the Air Force Sergeants Association (AFSA). AFSA represents more than 155,000 current, former and retired Air Force enlisted members, including National Guard and Reserve personnel. TMC participation now embraces a total of 27 military and veterans' associations.

New Chapter Officers

Aviation Center:
1st Lt. Derrick Jee, V.P. Programs.

Iron Eagle:
Col. Christopher L. Sargent, President

Jack Dibrell-Alamo:
Maj. Matthew B. McGee, V.P. Enrollment

Mid-America:
Capt. Jay D. Offenberger, President; Capt. Michael G. Collins, Sr. V.P.; 2Lt. Dianna S. Burrow, Secretary; 1Lt. John L. Doeller, Treasurer.

Pikes Peak:
Capt. Patrick C. O'Brien, Treasurer.

Virginia Military Institute:
Col. Norman M. Bissell, Ret., President; Cdt. Karen M. Zeliznak, Sr. Vice President; Cdt. Andrew J. Modisett, Secretary; Cdt. John F. Ferguson, Treasurer; Cdt. Megan Wendy Foscue, VP Programs; Cdt. Sherri L. Sharpe, Secretary, VWIL; Cdt Janet V. Kreckman, 1st Vice President, VWIL; Cdt. Edwin L. Clarke, Vice President; Cdt George A. Esteve, 1st Vice President.

AAAA Soldiers of the Month

A Chapter Program to Recognize Outstanding Aviation Soldiers on a Monthly Basis

SPC Saffiatu K. Mansaray
November 1998
(Tennessee Valley Chapter)

AAAA NCO of the Quarter

A Chapter Program to Recognize Outstanding NCOs on a Monthly Basis

Sgt. Carlos M. Varon
2nd Quarter 1998
(Tennessee Valley Chapter)

New AAAA Life Members

Maj. Michael E. Bobeck
Maj. David G. Bridges
CWO 3 Keith D. Genter
Maj. Mark O. Jensen
1Sgt. Gerd A. P. Kiggne, Ret.
CW0 2 Gregory G. Kulick
CWO 3 William E. Kranz, Ret.
Lt. Col. R. D. McVey, Ret.
Capt. Patrick J. Mullin
Mr. Alec John Newcomb
Maj. Alan D. Smith, Ret.
1Lt. Christopher C. Vine

New AAAA Order of St. Michael Recipients

Randolph W. Jones (Gold)
Maj. Gen. Daniel J. Petrosky (Gold)
Maj. Gen. Walter H. Yates, Jr. (Gold)
Lt. Col. Wilfred F. Brown (Bronze)
Robert C. Cole (Bronze)
Spec. First Class Robert G. Foster, Bronze
CSM James O. Jackson (Bronze)
CSM Keith C. Klaehn (Bronze)
Lt. Col. Christine B. Knighton (Bronze)
John L. Little (Bronze)
Maj. Edward J. Murphy (Bronze)
CWO 4 Norman Schnellbacher (Bronze)
CWO 5 James F. Wise (Bronze)

Aces

The following members have been recognized as Aces for their signing up five new members each.

Mr. James G. Aderholdt
Maj. Paul G. Belobrajdic
Col. Norman M. Bissell, Ret.
Mr. John R. Chapman
Mr. William J. May, III
Ms. Catherine C. Roache

New AAAA Industry Members

Logistics, Engineering & Environmental Support Services, Inc.

MEVATEC Corporation

In Memoriam

Mr. Leonard E. Yates

chapter corner

Corpus Christi Chapter

The Corpus Christi, Texas, Chapter continues to maintain an average membership of approximately 300. The Chapter is also continuing its efforts to educate Navy aviators (the Chapter is located aboard a Naval Air Station) about Army aviation, and has hosted joint meetings with the Naval Helicopter Association.

In addition to our annual scholarship program, we have this year continued a tradition of recognizing "super achievers" at our awards luncheon. Awards were presented to the Employee, Organization and Volunteer of the Year, as well as to other outstanding individuals.

The Chapter is again actively supporting a variety of community-service activities, including Operation Paint Brush (painting and restoring low-income housing), Operation Christmas Spirit (visiting and supporting local nursing homes) and the March of Dimes Walk-A-Thon.

Our numbers may be small, but our hearts aren't. We extend an open invitation to anyone that might be interested in joining us!

- **Feb 1-9, 1999.** Aviation Leaders Training Conference, Fort Rucker, Ala.
- **Feb 12.** AAAASFI Executive Committee Meeting, Arlington, Va.
- **Feb 13.** AAAA Awards Selection Meeting, Arlington, Va.
- **April 26-29.** Cargo Helicopter Users Conference, Sparkman Center, Huntsville, Al. Lodging at Holiday Inn Research Park. Contact Patty Barron (256) 313-4409; e-mail: barronp@peoavn.redstone.army.mil.
- **May 9-12.** AAAA Annual Convention, Nashville, TN.

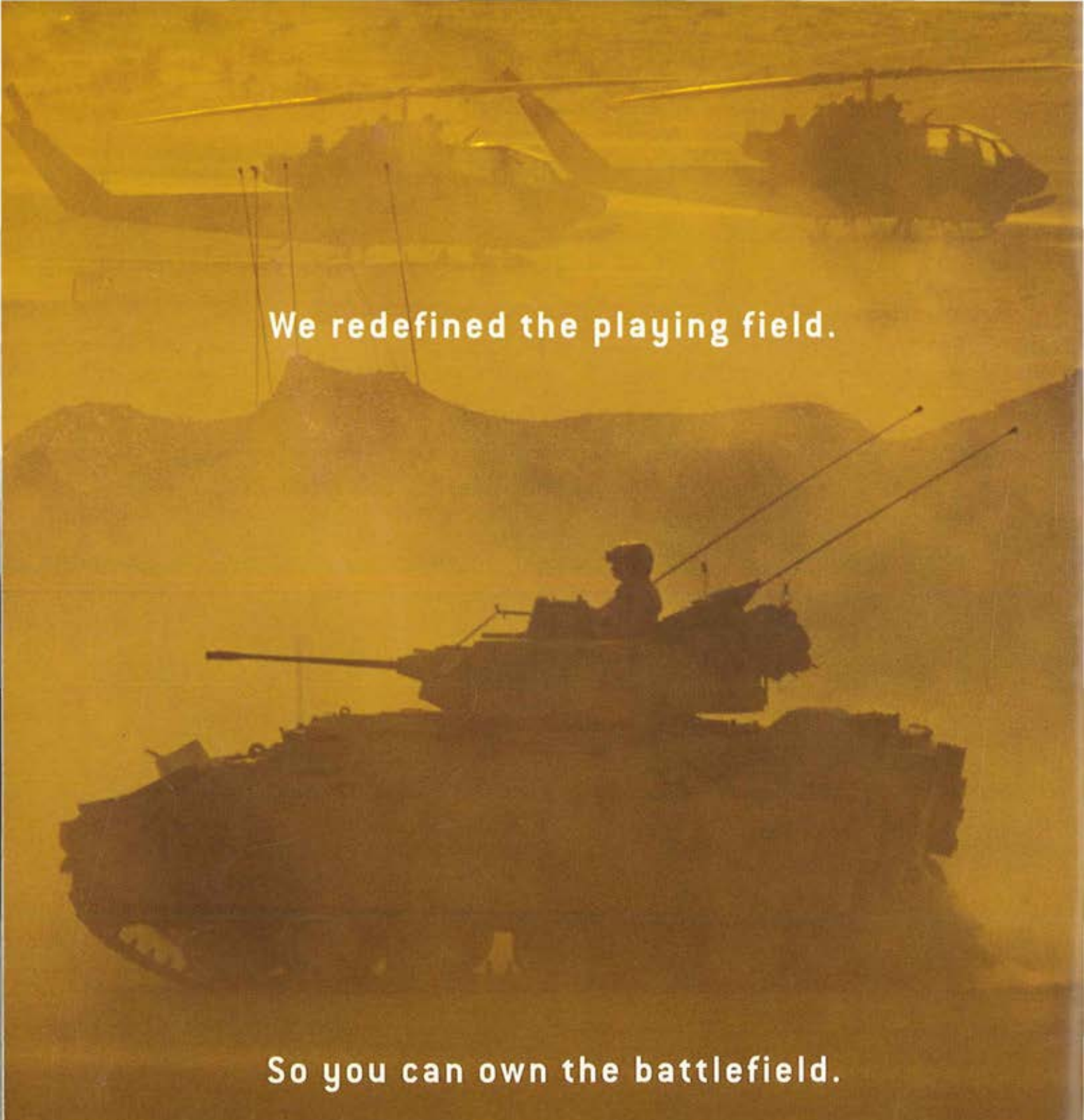
Colonial Virginia Chapter John L. Shipley, associate director of technology applications in the U.S. Army Aviation and Missile Command's Aviation Research, Development and Engineering Center at Fort Eustis, Va., recently presented the Order of Saint Michael (bronze award) to Col. Waldo F. Carmona, commander and director of the Aviation Applied Technology Directorate at Fort Eustis. Carmona, a dual-rated master aviator with more than 7,000 flight hours in some 150 aircraft, was recognized for his dedicated support to Army aviation in the field.

Passing on the recognition, Carmona then presented the Order of Saint Michael (silver award) to retiring CWO 5 Richard G. Johnson. A dual-rated master aviator with 8,000 flight hours and nearly 1,900 combat flight hours, Johnson was honored for his meritorious service in a variety of key Army aviation positions.

John L. Shipley (left) presented the Order of Saint Michael (bronze award) to Col. Waldo F. Carmona during a recent ceremony at Fort Eustis.

Carmona then presented the Order's silver award to retiring CWO 5 Richard G. Johnson (right), as Johnson's wife, Barbara, looked on.

(U.S. Army Photos by Ronald Bowman)



WELCOME TO TODAY'S JOINT FORCES WAR ZONE. A place where secure, interoperable voice and data communication make the difference between complete confidence and total confusion. Our modular communication systems dramatically boost critical information transfer, bridging the communication gap between fielded systems and the future digital battlefield. With beyond-line-of-sight connectivity to the tactical internet that provides a critical link from the decision maker to the warfighter. Across platforms. Across forces. Across the spectrum of existing global communication systems, including the 8.33 kHz European standard. With a future-proof design for ensured growth. So take control. Open a line to us today. Because behind battle lines, secure communication is your lifeline.

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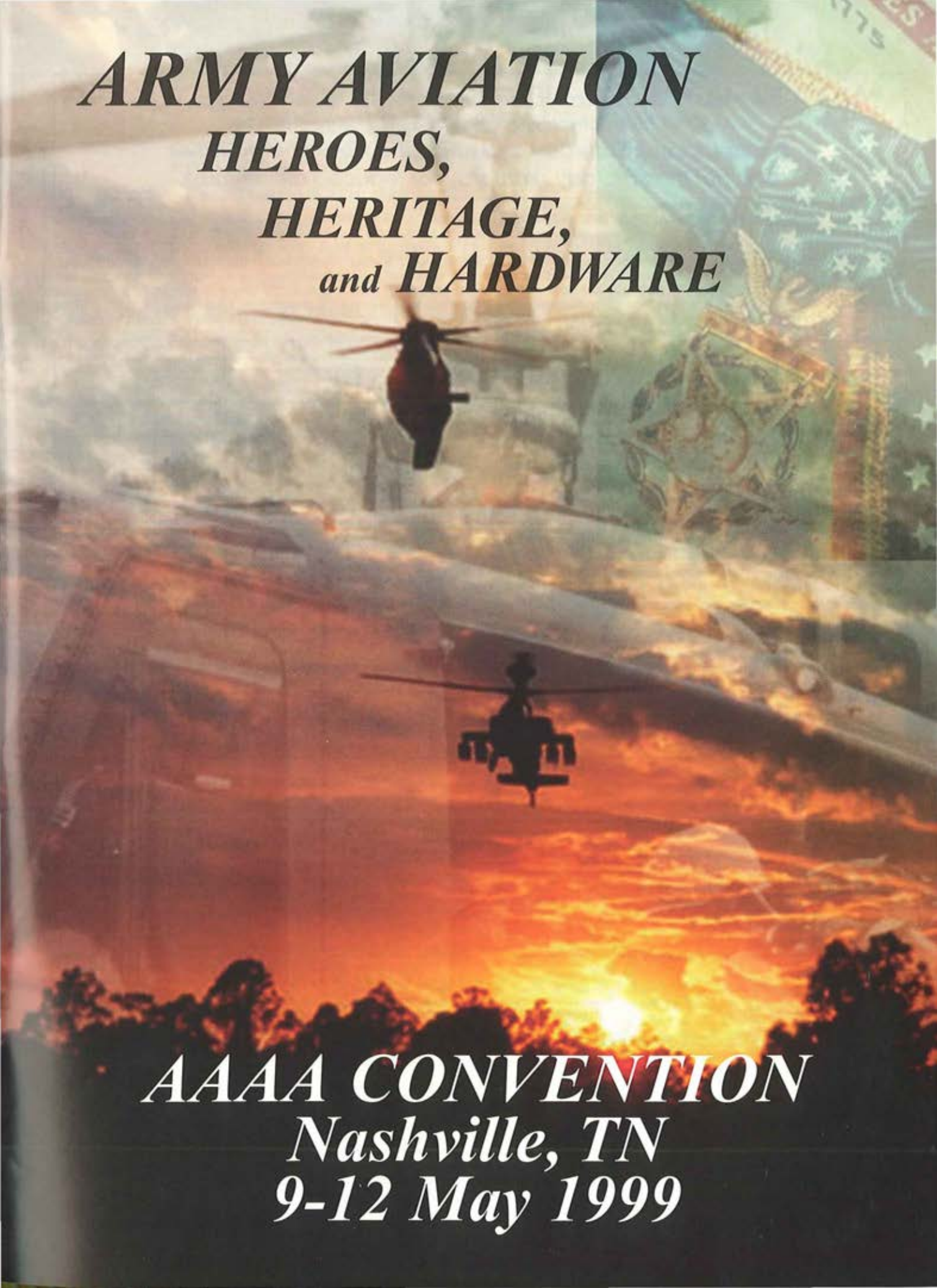
ARMY AVIATION
HEROES,
HERITAGE,
and HARDWARE
AAAA CONVENTION
Nashville, TN
9-12 May 1999

AAAA FAMILY WEEKEND PROGRAMS & SPOUSE TOURS

AAAA Annual Convention ● Nashville, TN ● May 9-12, 1999

Arrive Friday & Saturday and enjoy the weekend activities plus get the Saturday night stay for reduced airline fares.

I plan to attend the **1999 AAAA ANNUAL CONVENTION**. The Tour Registration Deadline is **FRIDAY, APRIL 2, 1999**. After this date there is no guarantee for event availability. A confirmation will be mailed to you and should be considered your receipt. Buses will leave from a departure point printed on your **confirmation.** All prices are inclusive of tax and gratuities. There will be NO REFUNDS or TICKET EXCHANGES after a ticket has been purchased. Tickets may be picked up at the Opryland Special Events Desk in the AAAA Registration Center. Opryland Special Events is not responsible for any tickets not picked up. Opryland Special Events reserves the right to cancel an event due to lack of minimum attendance. All tours must have not less than twenty (20) participants. In the event of tour cancellation, your money will be refunded in full AFTER the Convention. Please review the Schedule of events for a description of each tour. PRINT OR TYPE all information and make checks payable to Opryland Special Events in U.S. Dollars. Please complete and return this form to Opryland Special Events at the above address. **Do not return this form to the AAAA.**

EVENT NAME	DATE & TIME OF EVENT	COST PER PERSON	QUANTITY	TOTAL COST
The Hermitage Tour, Home of Andrew Jackson (Including transportation; not including lunch)	Sat., May 8, 1999 9:00 a.m. - 12:00 p.m.	$22.50	#_____	$
Inside Music City Tour (Including transportation; not including lunch)	Sat., May 8, 1999 1:30 p.m. - 4:30 p.m.	$23.00	#_____	$
Grand Ole Opry Early Show (Not including transportation)	Sat., May 8, 1999 6:30 p.m. - 9:00 p.m.	$20.00	#_____	$
Grand Ole Opry Early Show (Including transportation)	Sat., May 8, 1999 6:30 p.m. - 9:00 p.m.	$23.50	#_____	$
Grand Ole Opry Late Show (Not Including Transportation)	Sat., May 8, 1999 9:30 p.m. - 12:00 a.m.	$20.00	#_____	$
Grand Ole Opry Late Show (Including Transportation)	Sat., May 8, 1999 9:30 p.m. - 12:00 a.m.	$23.50	#_____	$
Mother's Day Brunch and GEN. Jackson Showboat Cruise (Including brunch, entertainment and show & 3-hour river cruise; **NOT INCLUDING** transportation)	Sun., May 9, 1999 11:15 a.m. (Boarding) 3:00 p.m. (Return)	$19.00 Adult $11.50 Child over 3 yrs $ FREE Child 3 yrs & under	#_____ #_____ #_____	$ $
Mother's Day Brunch and GEN. Jackson Showboat Cruise (Including brunch, entertainment and show & 3-hour river cruise; **INCLUDING** transportation)	Sun., May 9, 1999 11:15 a.m. (Boarding) 3:00 p.m. (Return)	$22.50 Adult $15.00 Child over 3 yrs $ FREE Child 3 yrs & under	#_____ #_____ #_____	$ $
Green Hills Shopping Mall Spouse Tour (Including transportation; not including lunch)	Mon., May 10, 1999 9:00 a.m. - 1:00 p.m.	$ 8.00		$
Historic Franklin Spouse Tour (Including transportation; not including lunch)	Tue., May 11, 1999 9:00 a.m. - 1:00 p.m.	$20.00		$
		TOTAL AMOUNT ENCLOSED		$

NAME (FIRST, MI, LAST)

HOME MAILING ADDRESS OR NAME OF COMPANY, FIRM OR UNIT

STREET ADDRESS OR P. O. BOX NUMBER

CITY STATE ZIP (IF U.S.) (OR COUNTRY)

OFFICE TELEPHONE NUMBER FAX TELEPHONE NUMBER

If you have special needs/disabilities, please describe below so that we may plan appropriately:

Return this form with a check in US Dollars payable to Opryland Special Events to:

Opryland Special Events, 2800 Opryland Drive, Nashville, TN 37214

For information, call: (615) 871-6885

Call Opryland International Travel at (800) 677-9526 (FAX: (615) 871-5794) for your travel arrangements.
Please use the Official Housing Form to make your housing arrangements.

regform.c91

AAAA ANNUAL CONVENTION SCHEDULE OF EVENTS

MAY 9-12, 1999 • OPRYLAND HOTEL • NASHVILLE, TENNESSEE
"ARMY AVIATION: HEROES, HERITAGE & HARDWARE"

Enjoy Nashville!
Arrive Friday and Saturday
and enjoy
AAAA Family Weekend Events
plus
get your Saturday night stay
for reduced airline travel!

Saturday, May 8, 1999

0800-1700 AAAA Registration Center Open

0900-1200 The HermitageTour

The Home of President Andrew Jackson - Set on more than 600 acres of rolling middle Tennessee countryside, The Hermitage offers a commemorative tribute to one of America's most admired Presidents and great military heroes, Andrew Jackson. Many original furnishings, countless personal items, and beautiful landscaping and gardens are kept much as they were when the Jackson family lived. Andrew Jackson died in 1845, but his spirit lives on amid the green fields and stately cedars surrounding this historic 19th century plantation. After touring the Hermitage, you will drive by the Tulip Grove Mansion and the Two Rivers Mansion, stately antebellum homes.

1300-1800 AAAA Air Assault Chapter Golf Tournament

1330-1630 Inside Music City Tour

There is no better way to discover Music City than to travel to the world-famous Music Row. Start your tour at the Country Music Hall of Fame and Museum with more than 60 years of fascinating history. From Elvis' Gold Cadillac to Garth Brooks' signature cowboy shirt, the museum offers a rare glimpse at some of the industry's most valuable treasures. See an actual live recording session in the oldest remaining studio on Music Row, the RCA Studio B, where famous entertainers such as Elvis, Dolly and Johnny Cash have recorded! While on this tour, see such exciting points of interest as TNN, CMT, historical Second Avenue, Fort Nashboro, and the Wildhorse Saloon. After touring Music Row, you will drive by Nashville's beautiful state capitol, the historic Parthenon, the famous Union Station, and the newly renovated Ryman Auditorium.

1830-2100 Grand Ole Opry Show
& 2130-2400 (Two Showings)

With new super stars and legends, the Grand Ole Opry is celebrating 70 years of radio broadcasts heard across the country every Friday and Saturday night. The star studded line-up includes Country Music Hall of Fame members like Little Jimmy Dickens and Hank Snow, great artists like Alan Jackson and Vince Gill, and hot newcomers like Hal Ketchum and Alison Krauss.

Sunday, May 9, 1999

0800-2000 AAAA Registration Center Open

0800-1800 AAAA Tennessee Valley Chapter Racquetball Tournament

1115-1500 General Jackson Day Cruise

Enjoy a Mother's Day Brunch aboard the General Jackson, a 300 foot, 4-story, musical showboat, that glides gracefully along the Cumberland River. From strolling musicians, entertainers and lavish stage productions to the simple pleasures of the gentle waters lapping against the hull with the melodious rhythm of the churning paddlewheel, a cruise on the General Jackson carries a grand tradition of paddle wheel entertainment that is sure to float through your memories for years to come.

1300-1800 AAAA Air Assault Chapter Golf Tournament

1530-1730 National Board Meeting

1645-1730 Awardee Briefing

1730-1800 Exhibit Managers Briefing & Reception
(By Invitation Only)

1800-2000 President's Reception & Opening of Exhibits

The AAAA President's Reception will officially commence the AAAA Convention. Food concessions and cash bars will be open.

Monday, May 10, 1999

0700-1700 AAAA Registration Center Open

0745-0845 Eye-Opener Refreshment Break

0745-0845 Speakers Breakfast

0800-1700 Press Room Open (Sponsored by GE Aircraft)

0845-1030 Professional Sessions

0845-0900 MG John D. Robinson, Ret.
AAAA President's Welcome
0900-0930 MG Anthony R. Jones, Aviation Branch Chief
0930-1000 MG Robert T. Clark, CG, 101st Airborne Div.
1000-1030 Keynote Address
GEN Dennis J. Reimer, Chief of Staff, USA

0900-1300 Spouse Tour - Green Hills Shopping Mall

You'll find a wide array of one-of-a-kind specialty shops at the Green Hills Shopping Mall that include Accente', Ann Taylor, Brooks Brothers Cache', Harold's, Laura Ashley, The Museum Company, The Nature Company, Wentworth Gallery, Talbot's Kids, Nine West, Crabtree and Evelyn, The Body Shop, Eddie Bauer, and Williams-Sonoma. The Mall at Green Hills offers visitors the most exciting, distinctive shopping in the region.

1030-1500 Exhibits Open (Cash Bars & Concessions Open)

1030-1500 PERSCOM Career Guidance

1230-1400 AAAA Annual Meeting & Luncheon

The President's Annual Report, the National Elections, and the presentation of AAAA's Membership Awards.

1500-1600 Professional Session Breakouts

- The History of Air Assault
  MG Robert T. Clark, CG, 101st Airborne Div
- U.S. Astronaut Program
  LTC Nancy J. Currie
- Integration of Virtual & Constructive Simulations/Simulators to Achieve Readiness
  BG William L. Bond, CG, U.S Army Simulation & Training Command (STRICOM)
- ASE - Answering the Mail from the Field
  Mr. Larry Johnston, AEC PM
- Special Operations Aviation
  COL Howard W. Yellen, Cdr., 160th SOAR
- Marketing Yourself for a Second Career
  COL Jerry Crews, Ret., TROA

*Speakers Are Invited - Speakers Are Not Confirmed

AAAA, 49 Richmondville Ave., Westport, CT 06880 •Phone: (203) 226-8184 • FAX: (203) 222-9863 • E-MAIL: aaaa@quad-a.org

AAAA CONVENTION AIR ASSAULT CHAPTER "CAPTAIN'S CHOICE" GOLF TOURNAMENT SATURDAY & SUNDAY AFTERNOON, 8-9 MAY 1999 NASHVILLE, TN

The AAAA Air Assault Chapter has arranged a Captain's Choice Golf Tournament for the afternoon of Saturday and Sunday 8-9 May 1999 in conjunction with the AAAA Annual Convention, 9-12 May 1999 in Nashville, Tennessee.

Arrangements have been made with the Opryland Hotel's Springhouse Golf Club, which is a stop on the Senior PGA Tour, for a Captain's Choice Tournament. One flight per afternoon is scheduled with a 1300 start. Each flight can support 110 golfers. The cost for this year's tournament is $75.00 per player, which includes green fees, carts, guest amenities, shoe care, and prizes (1st, 2nd, 3rd, longest putt/drive, etc.). Space availability will be on a first-come, first-filled basis. Please note that Springhouse Golf Club is a spike-less facility. Springhouse will replace guests' metal spikes with non-metal versions at NO CHARGE. If you have metal spiked shoes, please arrive at least 30 minutes prior to tee-time to allow staff time to change your spikes.

The Springhouse Golf Club at Opryland is a Scottish Links style course designed by former U.S. Open and two-time PGA Champion Larry Nelson. The layout was sculpted amid limestone bluffs and native wetlands. There are five teeing areas on each hole allowing a course as long as 7,007 yards or as short as 5,126 yards of outstanding golf.

Your earliest possible response is greatly encouraged to ensure tournament success. The first 200 paid responses will be accepted. Please specify Saturday or Sunday flights. Please include your established handicap or, if none is established, include your normal score for 18 holes.

Your reply to the following is requested no later than 1 April 1999. Payment is due with the application and is fully refundable until 1 April 1999. Please return this application with your check, payable to the Air Assault Chapter, AAAA, and return to: Air Assault Chapter, AAAA, ATTN: COL Paul Soderlund, Ret., 209 Dover Road, Clarksville, TN 37042. Those interested in sponsoring a hole at the tournament, or for general sponsorship information, contact COL Soderlund at 931-647-6516, Fax 931-647-3743.

---------- (Detach and return to address below) ----------

I would like to play in the 1999 AAAA Air Assault Chapter Golf Tournament.
I prefer: _____ Saturday Group; _____ Sunday Group; _____ No preference.
My handicap is _____; No handicap, but my general score is _____.
____ Yes, I would like information about sponsoring a hole during the Golf Tournament.
____ Yes, my local AAAA Chapter would be interested in information about sponsoring a hole and providing a Chapter Team to compete against other Chapters for a "Chapter Golf Championship".

AAAA Chapter Name: _____
Your Name: _____
Address: _____
City, State & Zip: _____
Telephone (including Area Code): _____ FAX: _____

Return this form with CHECK to:
Air Assault Chapter, AAAA, ATTN: COL Paul Soderlund, Ret., 209 Dover Road, Clarksville, TN 37042;
Tele: (931) 647-6516. Make checks payable to: Air Assault Chapter, AAAA.

golfform.c92

AAAA ANNUAL CONVENTION SCHEDULE OF EVENTS

MAY 9-12, 1999 • OPRYLAND HOTEL • NASHVILLE, TENNESSEE
"ARMY AVIATION: HEROES, HERITAGE & HARDWARE"

Monday, May 10, 1999 - Continued

1600-1700 Scholarship Board Meeting
1900-2100 National Board Dinner
2100-0100 AAAA Chapter Receptions A MOST IMPORTANT AND UNIQUE PART of every AAAA Annual Convention, Chapters do their utmost nightly.to top one another in providing their own brand of hospitality, entertainment, food, and beverages for all AAAA Convention attendees

Tuesday, May 11, 1999

0800-1700 AAAA Registration Center Open
0800-0900 Eye-Opener Refreshment Break
0800-1700 Press Room Open (Sponsored by GE Aircraft)
0800-0900 Speakers Breakfast
0830-1300 Spouse Tour - Historic Franklin
Nowhere are the elegance and individualism of Southern tradition more apparent than in the Victorian and turn-of-the-century buildings of Franklin's historic district. Visit the Carter House, one of the state's colorful historic landmarks built in 1830 by F.B. Carter. The Carter House commemorates one of the most significant battles of the Civil War, the Battle of Franklin. Also you will visit the Carnton Mansion, built in 1826 by Randal McGavock shortly after his term as Mayor of Nashville. This late-classical plantation house was the scene of important social and political gatherings.
0900-1100 Professional Session
Operations & Training Panel: The Current & Future Role of our Army Aviation in Combined/Joint Operations - A Commander's Perspective
Chairman: MG Anthony R. Jones
Panelists: LTG John M. Keane, Deputy CINC, US Atlantic Command, LTG William F. Kernan, CG, XVIII Airborne Corps, LTG John W. Hendrix, CG, V Corps, LTG Leon J. LaPorte, CG, III Corps, LTG William M. Steele, CG, USA Combined Arms Center.
1100-1500 Exhibits Open (Cash Bars & Concessions Open)
1100-1500 PERSCOM Career Guidance
1200-1300 Professional Luncheon
• Recognizing the Aviation Soldier•
Speaker: SMA Robert E. Hall, Sergeant Major of the Army
1500-1600 Professional Sessions:
Army Aviation Heritage Panel
Panelists: LTG Robert R.Williams, Ret., 1942 thru Korea; LTG Harry W.O.Kinnard, Ret., Vietnam; MG George W. Putnam, Jr., Ret., Vietnam; MG Thomas W. Garrett, Desert Storm
1600-1700 Professional Sessions
Combined Arms Training Strategy Panel
Chairman: MG Anthony R. Jones, Branch Chief.
Panelists: MG Bryan D. Brown, CG, JSOC, BG Richard A. Cody, ADC(M) 4ID, BG Stephen J. Ferrell, Dir., Plans, US Space Cmd, BG Gene M. LaCoste, ADC(S), 82d AB, BG John M. Curran, ADCS, Training, U.S. Army Training & Doctrine Command (TRADOC), COL(P) Virgil L. Packett II, ADC(S), 101st AB, BG Dell L. Dailey, Chief of Staff, USSOCOM, BG Craig D. Hackett, ADC(O), 25ID(L), MG Roger C. Schultz, Dir., Army National Guard, MG Thomas J. Plewes, Chief, Army Reserve.
1900-2100 AAAA 40-Year Member & Cub Club Dinner
2100-0100 AAAA Chapter Receptions
A MOST IMPORTANT AND UNIQUE PART of every AAAA Annual Convention, Chapters do their utmost nightly to top one another in providing their own brand of hospitality, entertainment, food, and beverages for all AAAA Convention attendees.

Wednesday, May 12, 1999

0730-1600 AAAA Registration Center Open
0730-0900 Eye- Opener Refreshment Break
0745-0900 First Light Breakfast
(By Invitation Only)
Speaker: LTG Paul J. Kern
Military Deputy to the ASARDA
0900-1100 Professional Sessions
Hardware Panel
GEN Johnnie E. Wilson, CG, USA Materiel Command (AMC), LTG John M. McDuffie, J-4, Logistics, JCS, MG Emmitt E.Gibson, CG, USA Aviation & Missile Command (AMCOM), MG James R. Snider, PEO Aviation, BG Robert E. Armbruster, Deputy for System Acquisition, AMCOM, BG William L. Bond, CG, USA STRICOM, BG Joseph L. Bergantz, PM Comanche
1100-1600 Exhibits Open (Cash Bars & Concessions Open)
1100-1600 PERSCOM Career Guidance
1200-1300 Professional Luncheon
• Leader Development for the 21st Century•
Speaker: GEN John N. Abrams, CG, TRADOC
1330-1600 Professional Sessions: Aircraft Briefings
1330 - 1400 AH-64A/D
COL Howard T. Bramblett, PM Apache
1400 - 1430 CH-47-F
James Caudle, PM Cargo Helicopter
1430 - 1500 UH-60A/L
COL Thomas M. Harrison, PM Utility Helicopters
1500 - 1530 OH-58D
LTC James E. Weger, PM Scout/Attack Product Office
1530 - 1600 Comanche
BG Joseph L. Bergantz, PM Comanche
1745-1900 AAAA Banquet Ticket Pickup
1800-1845 AAAA Banquet Reception
1900-2200 AAAA Awards Banquet
Guest Speaker: To Be Announced
National Unit & Individual Awards Presentations
Seating at this formal Banquet is reserved. Please note any special seating requests on the Advance Registration Form. Every attempt will be made to comply with your request. Your table number will appear on your Banquet ticket. We ask that you sit at the table where you have been assigned in consideration of the other attendees.

*Speakers Are Invited - Speakers Are Not Confirmed

AAAA, 49 Richmondville Ave., Westport, CT 06880 •Phone: (203) 226-8184 • FAX: (203) 222-9863 • E-MAIL: aaaa@quad-a.org

OFFICIAL HOUSING FORM
AAAA ANNUAL CONVENTION
Nashville, TN — May 9-12, 1999

 # N-AAAOA

RETURN THIS OFFICIAL HOUSING FORM TO:
If MILITARY/DAC: Mail or FAX this form to the AAAA National Office, 49 Richmondville Avenue, Westport, CT 06880; FAX: (203) 222-9863.
If INDUSTRY/CIVILIAN: Mail this form directly to the hotel.(See Address Below.)

The AAAA will not accept housing reservations by phone. The Official Housing Form must be used. Please print all information. I understand that to receive a room at AAAA Convention rates, I must register for the professional sessions or exhibits or attend one of the functions of the AAAA Annual Convention. Room requests will be processed on a first-come, first-served basis starting on **January 15, 1999**. The Housing Deadline is **Friday, April 2**. Room requests received after **Friday, April 2** will be honored on a space-available basis. Please confirm your special needs directly with the hotel to which you have been assigned. If you have any questions, please contact the AAAA National Office at (203) 226-8184. **NOTE: For Military/DAC housing, this Housing Form will NOT be processed by the AAAA National Office unless accompanied by a completed AAAA Registration Form.** Military/DAC room rates apply only to Active Army and DAC personnel and to those Reserve Component and retired AAAA members who are **NOT** in the current employ of defense contractors or suppliers on a full-time, part-time, or consulting basis while attending the AAAA Convention.

RANK/GS GRADE _____ NAME (FIRST, MI, LAST) _____

HOME MAILING ADDRESS OR NAME OF COMPANY, FIRM OR UNIT _____

STREET ADDRESS OR P. O. BOX NUMBER _____

CITY _____ STATE _____ ZIP (OR COUNTRY) _____

OFFICE TELEPHONE NUMBER _____ FAX TELEPHONE NUMBER _____

E-MAIL _____

① ARRIVAL DATE _____ ARRIVAL TIME _____ NO. NIGHTS _____ DEPARTURE DATE _____

② Check the appropriate box below. Please note that if you work for a Defense Contractor on a full-time, part-time, or consulting basis while attending the AAAA Convention, you are NOT eligible for the Military/DAC rate even if you are Retired Military. Rates are subject to local taxes.

☐ INDUSTRY/CIVILIAN: **Return this form directly to the hotel!**

☐ $159 Traditional Single or Double ☐ $189 Garden Terrace Single or Double

Opryland Hotel (Headquarter Hotel)
2800 Opryland Drive, Nashville, TN 37214; Tel: (615) 883-2211; FAX: (615) 871-5728

☐ MILITARY/DAC: **Return this form to the AAAA!**

☐ $91 Traditional Single or Double ☐ $121 Garden Terrace Single or Double

Return this form to the **AAAA National Office, 49 Richmondville Avenue, Westport, CT 06880-2000**; Tele: (203) 226-8184; FAX: (203) 222-9863. Please make any and all reservations changes directly with the hotel **AFTER** receiving notification from the AAAA. For government personnel on orders, the hotel will honor the 1999 government per diem of $72.00 inclusive of tax for Nashville. In order to receive this rate, you MUST present a valid military ID and a copy of your orders at the time of check-in.

Opryland Hotel (Headquarter Hotel)
c/o AAAA, 49 Richmondville Avenue, Westport, CT 06880; Tel: (203) 226-8184; FAX: (203) 222-9863

---

③ Please Check One Box: ☐ Single Occupancy ☐ Double Occupancy ☐ Other: _____

④ Print or Type the Names of All Persons Sharing Your Room Excluding Yourself:
1. _____ 2. _____ 3. _____

⑤ Please Check One Box: ☐ King Bed ☐ Two Double Beds
NOTE: Bedding Preference cannot be guaranteed. Please confirm your preference at check-in.

⑥ ☐ Please Guarantee My Reservation with the Following Credit Card:
☐ MasterCard ☐ VISA ☐ American Express ☐ Diner's Club ☐ Other (Specify): _____
Credit Card Number _____ Expiration Date _____
Signature of Cardholder _____
☐ Please Guarantee My Reservation with the enclosed check equal to one night's stay.

NOTE: Reservations must be guaranteed by deposit equal to one night's stay. Please obtain specific reservation/cancellation policies from the hotel.

Call Opryland International Travel at (800) 677-9526 (FAX: (615) 871-5794) for your travel arrangements.

AAAA ADVANCE REGISTRATION FORM

AAAA ANNUAL CONVENTION

May 9-12, 1999 ● Opryland Hotel ● Nashville, Tennessee

I plan to attend the **1999 AAAA ANNUAL CONVENTION**. The Advance Registration Deadline is **FRIDAY, APRIL 2, 1999**. If time permits, Advance Registration forms received after April 2 will be processed; otherwise, they will be held for Onsite Registration. Advance Registrations will not be processed unless accompanied by full payment of fees. I understand that I may receive a full refund of my registration and function fees if requested by phone call or written notification to AAAA made on or before **FRIDAY, APRIL 16, 1999**. Government fees apply only to Active Army and DAC personnel and to those Reserve Component and retired AAAA members who are **NOT** in the current employ of defense contractors or suppliers on a full-time, part-time, or consulting basis while attending the AAAA Convention. I understand that if I select the Government category and am not eligible, I will be charged for the difference in fees. Please PRINT OR TYPE all information and make checks payable to AAAA. Please complete and return this form to AAAA at the address below.

RANK/GS GRADE _____ NAME (FIRST, MI, LAST) _____

HOME MAILING ADDRESS OR NAME OF COMPANY, FIRM OR UNIT _____ ARE YOU A U.S. CITIZEN? ☐ YES ☐ NO

STREET ADDRESS OR P. O. BOX NUMBER _____

CITY _____ STATE _____ ZIP (IF U.S.) (OR COUNTRY) _____

OFFICE TELEPHONE NUMBER _____ FAX TELEPHONE NUMBER _____ SOCIAL SECURITY NUMBER _____

JOB TITLE AND AFFILIATION _____ IS YOUR UNIT OR FIRM EXHIBITING? ☐ YES ☐ NO

E-MAIL _____

RANK (IF APPLICABLE) & NAME FOR BADGE _____

UNIT/FIRM NAME FOR BADGE _____

CITY & STATE (IF U.S.) OR CITY & COUNTRY (IF NOT U.S.) FOR BADGE _____

SPOUSE'S NAME (IF ATTENDING) _____

IF YOU'RE NOT AN AAAA MEMBER JOIN AAAA NOW & PAY THE MEMBER RATE!	DAY OF EVENT	GOVT. AAAA MEMBER OR SPOUSE	INDUSTRY AAAA MEMBER OR SPOUSE	GOVT NON MEMBER OR SPOUSE	INDUSTRY NON MEMBER OR SPOUSE	ITEM TOTAL	OFFICE USE
① BADGE FOR PROFESSIONAL SESSIONS	Mon-Wed	☐ $20 ①	☐ $60 ①	☐ $50 ①	☐ $90 ①	$_____	_____
② PRESIDENT'S RECEPTION/EXHIBITS GRAND OPENING	Sun	☐ $ 0	☐ $ 0	☐ $ 0	☐ $ 0	#_____	3_____
LUNCHEON & ANNUAL MEETING Speaker: MG John D. Robinson, Ret., AAAA President	Mon	☐ $ 20	☐ $ 20	☐ $ 20	☐ $ 20	$_____	4_____
LUNCHEON Speaker: SMA Robert E. Hall, Sergeant Major of the Army	Tue	☐ $ 20	☐ $ 20	☐ $ 20	☐ $ 20	$_____	7_____
LUNCHEON Speaker: GEN John N. Abrams, CG, USA TRADOC	Wed	☐ $ 20	☐ $ 20	☐ $ 20	☐ $ 20	$_____	10_____
③ AWARDS BANQUET Guest Speaker To Be Announced Presentation of AAAA National Unit & Individual Awards SEATING REQUEST _____	Wed	☐ $ 30	☐ $ 60	☐ $ 50	☐ $ 80	$_____	11_____
AAAA ANNUAL DUES (IF JOINING NOW) * $14 rate for Full-Time Students, Enlisted, WO1s, GS-8 DACs & Below, Wage Board 12 DACs & Below		☐ $ 21*	☐ $ 21*			$_____	

METHOD OF PAYMENT: MasterCard VISA American Express Diners Club Personal Check Business Check TOTAL $_____

CREDIT CARD NUMBER _____ EXPIRATION DATE _____

CARDHOLDER NAME AND SIGNATURE

① Spouse Badge for Professional Sessions is complimentary. ② Free to all AAAA attendees and spouses; Advance Registration requested for planning purposes.
③ Reserved Seating; Formal/Black Tie; Military Blues/Mess Jacket. Seating requests cannot be guaranteed.

Call Opryland International Travel at (800) 677-9526 (FAX: (615) 871-5794) for your travel arrangements.
Please use the Official Housing Form to make your housing arrangements.

AAAA, 49 RICHMONDVILLE AVENUE, WESTPORT, CT 06880 •PHONE: (203) 226-8184 • FAX: (203) 222-9863 • E-MAIL: aaaa@quad-a.org