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The next triennial induction for the Army Aviation Hall of Fame will occur in the spring of 2001. Nominations are currently open for the ballot that will be distributed to all AAAA members in the Fall of 2000. Nominations should be postmarked no later than July 1, 2000. Contact the national office for details at (203) 226-8184.

During the recent AAAA Annual Convention in Fort Worth, Texas, the AAAA donated \$10,000 on behalf of its members to the World War II Memorial to be built on The Mall in Washington, D.C. We have had a number of inquiries from AAAA members asking how they may also donate directly to this cause. You may make a donation by calling (800) 639-4992. You may also connect to their website: www.wwillememorial.com or send a check made out to the "WWII Memorial Fund" to: National WWII Memorial, 2300 Clarendon Blvd., Suite 501, Arlington, VA 22201.

In October 1999 the U.S. Army Reserve Command activated the 7th Battalion, 158th Aviation Regiment, a new CH-47 unit, at Fort Hood, Texas, with one platoon located at Fort Carson, CO. The unit is searching for quality personnel to fill Troop Program Unit (TPU) vacancies, as well as full-time military technician and full-time Active Guard and Reserve (AGR) jobs at both locations. For further information, contact SSG Monte Schrader at (254) 690-8554, for Fort Hood, and SFC Paul Montez at (719) 574-9562 for Fort Carson.

Maj. Layne Merritt, an experimental test pilot with the Aviation Technical Test Center at Fort Rucker, Ala., has been named the Army's Military Tester of the Year. As one of only a few dozen experimental test pilots in the Army, Merritt has pushed the edge of the envelope on the CH-47 Chinook helicopter on several occasions, according to officials of the U.S. Army Test and Evaluation Command. He has flown the CH-47F as high and as fast as it can fly and lifted as much weight as it can carry, and is also known for flying a CH-47D helicopter, equipped with a developmental engine, to lift a sling-loaded M-198 Howitzer.

A 40-member Army team from Joint Task Force-Bravo assisted Costa Rica's counter-narcotic police in eradicating almost 1.3 million marijuana plants during a "Central Skies" mission that swept through the country's Talamanca Valley in early March. The team, dubbed "Task Force Enabler," helped Costa Rica's Public Security Ministry's Special Support Police. The U.S. team provided command and control and crucial air support, flying three UH-60 Black Hawks and a CH-47 Chinook out of the Puerto Limon Airport on the Caribbean coast. Experts from JTF-Bravo trained the Costa Ricans to rappel from helicopters, climb down from the Chinook in a device named the Jacob's ladder and be extracted by a cable called SPIES—Special Patrol Infiltration/Exfiltration System. By mission's end, the Black Hawks had flown a total of 75.5 hours and the Chinook 26.7 hours.

The 4th Infantry Division at Fort Hood, Texas, has deployed 23 soldiers and three UH-60A Black Hawk helicopters to Bosnia for an eight-month rotation. The detachment will fly VIP missions around the Balkans from a base in Sarajevo, and consists of pilots, crew chiefs, heavy-wheeled vehicle mechanics, flight operation specialists and aviation maintenance specialists drawn from the 1st and 2nd battalions of the 4th Aviation Regiment. The detachment will also operate two VIP-configured Black Hawks that are already in Bosnia.

Raytheon Aircraft has won a \$11.4 million U.S. Army Aviation and Missile Command contract for two special mission Beech King Air B200 aircraft. The machines, designated C-12R/AP, will be fitted with Zeiss camera systems and used for aerial mapping and photography. The first aircraft is scheduled for delivery in the spring of 2001, and the second for several months later.

DRS Technologies' DRS Optronics unit has received a \$6.5 million contract from Electro design Manufacturing Inc. to build components and assemblies for the ground-launched TOW missile system in association with an Army Foreign Military Sales program. DRS will produce TOW optical sight sensors and M-83 TOW traversing units. Initial deliveries are set to begin in 2001 and continue into 2002.

The FAA has approved a Bell Helicopter main gearbox planetary pinion gear repair developed by RTS Rework Inc. The repair reportedly improves the gearbox's performance by enabling the planetary pinion gear to operate more smoothly, more quietly and more reliably than gears overhauled by traditional procedures. The firm has also developed an FAA-approved turbine turboshaft gear and gear shaft inspection and repair process that allows RTS to return to service more than 65 percent of the T-53-series turbine gears and gear shafts processed through its repair complex.

Briefings continued on page 36

on the cover

Paid Advertisement. CH-47D Chinooks will continue to meet the U.S. Army's heavy lift requirements for several years, and 2003 will mark the first deliveries of the CH-47F, which will enhance the Chinook's lift capabilities while reducing operational and support costs for the life of the newly modernized fleet. At a minimum, the CH-47F program will keep Chinooks in U.S. Army service through 2033. Photo by Bob Ferguson. *Caption provided by advertiser.*

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AVIATION MODERNIZATION STRATEGY — 2000 AND BEYOND

PART I - MATERIEL

By Maj. Gen. Anthony Jones

"Under current modernization plans, older obsolescing aircraft will remain in the inventory into the foreseeable future ... Warfighting, training, logistical support, and operating and support costs are impacted by the presence of these legacy systems."

— 1998 Army Aviation Modernization Plan

The excerpt above, from the concluding section of the 1998 Aviation Modernization Plan, acknowledges the difficulties facing aviation under previous strategies and current force designs. Previous plans left critical operational, training and safety concerns unresolved, and failed to address timely divestiture of legacy AH-1, OH-58 and UH-1 aircraft. The relevance of the 1998 plan has been overtaken by changes in Army doctrine, organizational requirements and emerging priorities. These changes justified a complete re-evaluation of aviation modernization across doctrine, training, leader development, organizations, materiel and soldier programs. The 2000 Aviation Modernization Plan represents the culmination of this effort and provides the Army's commitment to aviation as an essential component of future combat operations.

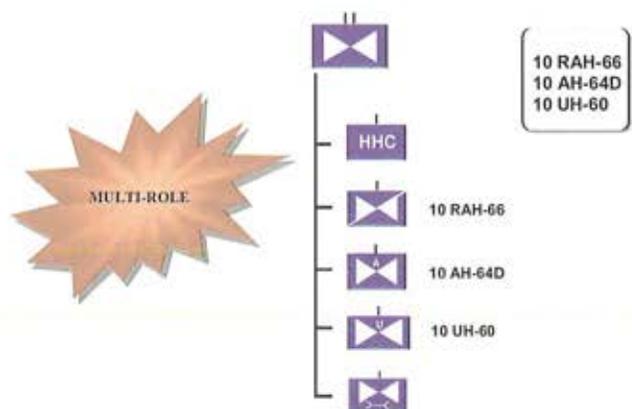
The 2000 Aviation Modernization Plan lays out modernization requirements in a phased approach over the near, mid and far terms. The near term focus sets the conditions for modernization. Phase II aligns the force with the organizational and operational concept — standing up "multifunctional battalions."

MODERNIZATION PLAN - PHASED STRATEGY

- **Phase I – Set Conditions**
 - Leader Development
 - Fix Warfighting Deficiencies
 - Divest Legacy Systems
 - Recapitalization: Aircraft & Simulations
- **Phase II – Align Force with O&O Concept**
 - Interim Force - Sustain Warfight
 - Implement Combined Arms Training Strategy (CATS)
 - Continue Doctrine and TTP Development
- **Phase III – Full Spectrum Capable Force**

The interim/transitional force envisioned in this phase is the first step toward the objective structure and a means to accelerate the retirement of legacy aircraft (OH-58C, AH-1 and UH-1). Achieving the objective force is only possible if RAH-66 procurement stays on schedule, additional TH-67s are procured in the near-term and additional UH-60s are procured in the mid- to far-term. Failure to procure additional utility aircraft beyond the POM will require significant risk in the sustaining accounts (operational readiness floats, repair cycle floats, attrition replacement aircraft) and inability to fully resource the reserve component (RC) utility structure.

A NEW BUILDING BLOCK



The transitional force will begin taking shape as AH-64As and OH-58Ds fill the new multifunctional battalions (discussed below) in lieu of Comanche. The goal is to immediately retire all AH-1s and to retire OH-58Cs and UH-1s no later than the fiscal year 2004 timeframe. The product is a strategy that departs from the "business-as-usual approach."

Army aviation's organizational solution to meet future mission demands is called the Multifunctional Battalion (MFB). This basic building block at both division and

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corps includes a balanced mixture of attack, reconnaissance and lift aircraft. While the concept of multiple aircraft types in the same unit is not new to aviation, it is a deviation from the homogenous organizations of the current force structure. The MFB will possess full-spectrum capability to rapidly deploy and conduct Army single-service and joint operations from major-theater-of-war conflicts to small-scale contingencies and humanitarian relief efforts.

Unlike current aviation battalions, the modular MFB is capable of detaching a company-sized task force capable of autonomous operations, while the parent unit operates in a split-based manner from a distant location. Personnel have been added to facilitate 24 hour, split-based and/or autonomous operations, and to enhance mission planning and supported-unit operations. Additional Prescribed Load List (PLL), avionics and armament parts and equipment have also been added to support split-based operations.

As the MFB is composed of multiple aircraft types performing a wide variety of missions, it will produce leaders who are experienced in many aspects of aviation employment compared with the previous Aviation Restructure Initiative battalion. Leader development will be expanded to prepare aviation leaders for the diverse challenges found in these battalions.

The Army vision requires a "strategically responsive" force that is dominant across the full spectrum of operations. Future aviation doctrine, while not losing sight of the ability to fight and win a major theater war, must orient towards tactics, techniques and procedures for full-spectrum operations within the context of a redesigned aviation force structure. Coupled with this new emphasis, doctrine will continue to work ongoing initiatives that include the integration of Force XXI digitization into doctrine, increased focus on aviation operations in an urban environment, and the reversal of trends identified at the combat training centers.

Another essential component of aviation modernization is the implementation of Flight School XXI (FS XXI). The goal of FS XXI is to realign flight training to meet warfighting requirements by producing aviators who arrive at their initial duty stations basic-mission qualified, proficient in their go-to-war aircraft, and ready to begin unit training. FS XXI will reduce the duration of flight school by an average of five weeks and increase flight time in go-to-war aircraft by approximately 50 percent. Implementing this strategy eliminates UH-1 and OH-58C training aircraft, returns instructor pilots to the field and leverages simulator potential.

This modernization strategy does little to impact materiel requirements as outlined in previous plans. It moves aviation toward a four helicopter opera-

tional fleet, continues to reduce the numbers and types of fixed wing aircraft, and calls for a single (TH-67) Initial Entry Rotary Wing (IERW) trainer.

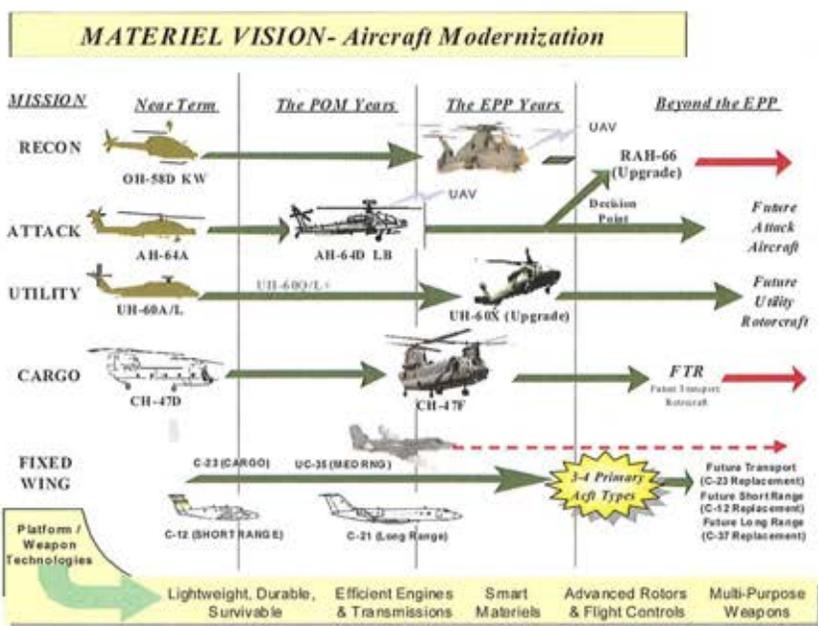
The RAH-66 Comanche remains Army aviation's highest priority. The RAH-66 introduces major technological advances in the acquisition and processing of battlefield information, rotary-wing aircraft signature reduction and logistical support features. As one of the key systems of the joint digital battlefield, Comanche will provide accurate and timely response to the tactical commander's firepower or combat information needs

Future aviation doctrine, while not losing sight of the ability to fight and win a major theater war, must orient towards tactics, techniques and procedures for full-spectrum operations within the context of a redesigned aviation force structure.

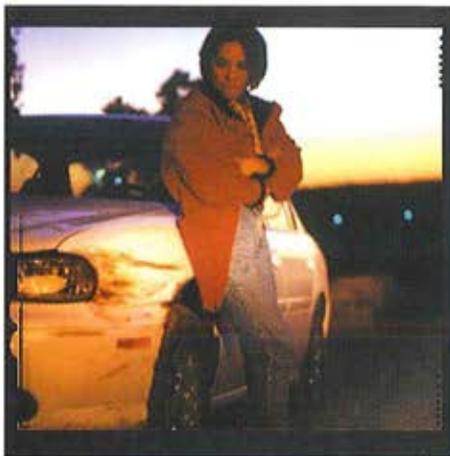
and security for the fast-paced, transitional forces of the future. The force protection provided by Comanche is critical to meet far-term requirements, which emphasize total-force integration, speed and range of maneuver.

The AH-64D Apache Longbow is a key element of the Army's "maintain combat overmatch" objective. It provides unprecedented survivability, firepower and capability to fight worldwide, day or night, in adverse weather and on obscured battlefields. This plan calls for conversion of all AH-64As to the AH-64D Apache Longbow configuration. Priority upgrade requirements to the AH-64D fleet include second-generation FLIR, modern aircraft survivability equipment, digitization, and reliability/sustainability improvements.

The UH-60 Black Hawk remains the foundation of the Army's utility-helicopter force. UH-60L procurement is currently programmed to continue until FY 05,



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leaving a shortage of more than 300 UH-60s to fill force requirements. The UH-60Q, a UH-60A upgraded with modern avionics and medical equipment, is programmed to begin in FY 02. This aircraft will provide first-to-fight units with the world's most advanced battlefield medical-evacuation helicopter. Recapitalization of the UH-60A fleet to the UH-60L+ configuration, programmed to begin in FY 03, will insert modern avionics, improve lift and extend aircraft life.

The CH-47F Chinook sustainment program includes an engine upgrade and the CH-47F recapitalization of the CH-47D. These efforts substantially improve CH-47D lift capabilities, insert digital capabilities and extend aircraft

life by approximately 20 years. The engine upgrade will be applied fleet-wide to restore lift capabilities lost through years of aircraft weight growth due to modifications/engineering change proposals. The CH-47F modifications are expected to be applied to 300 of the 431 aircraft in the fleet.

The objective of fixed-wing modernization is to reduce the fleet to five standard platforms for short-, medium- and long-range utility, cargo, and special electronic missions aircraft (SEMA) requirements.

Aviation modernization also occurs in vital Supporting Programs that provide essential hardware, support equipment, and the new technologies required to modernize and digitize the force. Aviation's primary digiti-

MOD PLAN continued on page 27

Aviation's Piece of the NCOES



In the next few issues I'd like to talk about what happens behind the scenes in the aviation branch. It is important for everybody in our field to know what keeps the branch rolling. There are many superheroes who work countless hours to provide the best possible product for our soldiers. This article features a few who work to sustain and improve Army aviation's piece of the Noncommissioned Officer Education System (NCOES). By doing so, they help the Army to nurture and keep a strong, healthy NCO

corps capable of leading our aviation soldiers. This is their story.

The U.S. Army Aviation Center (USAAVNC) Noncommissioned Officer Academy's mission is to produce technically and tactically proficient NCOs who are dedicated, physically fit and motivated. The academy also develops and manages programs of instructions and training plans; provides operational support for noncommissioned officers and civilian employees; and provides for the health, welfare, morale and safety of all cadre, students and civilians.

The Fort Rucker NCO Academy trains students in the 93P and 93C Advanced Noncommissioned Officers Course (ANCOC) and the 93P, 93C and 68N Basic Noncommissioned Officers Course (BNCOC). The academy also trains the 67/68 Career Management Field ANCOC, except the 68K ANCOC, which is taught at Fort Eustis, Va. Professional NCOs on the academy's staff represent each of the MOSs taught here.

CSM David B. Rabon leads the NCO Academy as its commandant. His assistant commandant is 1SG Robert D. Sparks Jr.

The academy separates into two branches that act as one team, the 93 series and the 67/68 series. Master sergeants, with small group leaders falling under their respective chiefs, manage these branches. In addition, the academy has two other offices on its staff, the Operations Section and the Developmental Cell. The Operations Section functions with a minimal staff as both an S-1 and S-3 shop, with additional supply duties. The Developmental Cell develops and manages all of the aviation-common and MOS-specific lesson materials.

Small-group leaders (SGLs) are the hub of the NCO Academy. They are responsible for training, mentoring and coaching, including the physical fitness and the welfare of each of the students assigned to the small group. SGLs evaluate and develop leadership traits in each of their students. SGLs also evaluate their soldiers' ability to perform such hands-on evaluations as performing risk assessments, conducting physical-fitness training and teaching lessons in the small-group process.

Students receive training in three phases: Common Leader Training (better

known as Common Core), Aviation Common and MOS specific. All training at the academy is done through the small-group process. This process uses the students' individual experiences and puts the students into an environment where they can learn from each other with the aid of the SGLs.

The U.S. Army Sergeants Major Academy at Fort Bliss, Texas, is the proponent of the Common Core lesson material, which means that the training received by aviation branch soldiers during this phase is the same training that every NCO gets Armywide. During this phase of instruction students learn about such topics as troop-leading procedures, battle-focused training, noncommissioned officer evaluation reports (NCOER), rifle marksmanship and a variety of other common-area subjects. This phase of instruction is under revision and will be changed during fiscal year 2001.

The students next receive training in common aviation skills. During this phase they learn such tasks as convoy operations, unit status reporting and opposing forces. They also learn military history with an emphasis on aviation and the NCO corps.

Training specific to the students' MOSs constitutes the third phase. Students go through training selected by a critical-task selection board, which meets every two years. The board, made up of noncommissioned officers from the field, updates training to ensure that it is current and needed.

Final training culminates all previous phases. Students are put to the test by performing 13 common leader combat skills (CLCS) in a field environment. The students also spend three days in the Brigade/Battalion Simulator (BBS), where they are required to "fight" a motorized rifle regiment using the proper doctrine. This battle is fought off an operations order developed by the students on their own.

The newest training being implemented at the academy is a BNCOC-level 40-hour block of instruction on safety. This training does not certify the students with an A2 additional skill identifier, but it does give them the ability to go back to their home stations and assist safety officers with their duties.

We are also trying to implement at the academy an Airframe and Power Plant License program. This program will assist 67/68 CMF soldiers in getting an A&P license or a portion of it. This program is being worked with the Aviation Proponency Office.

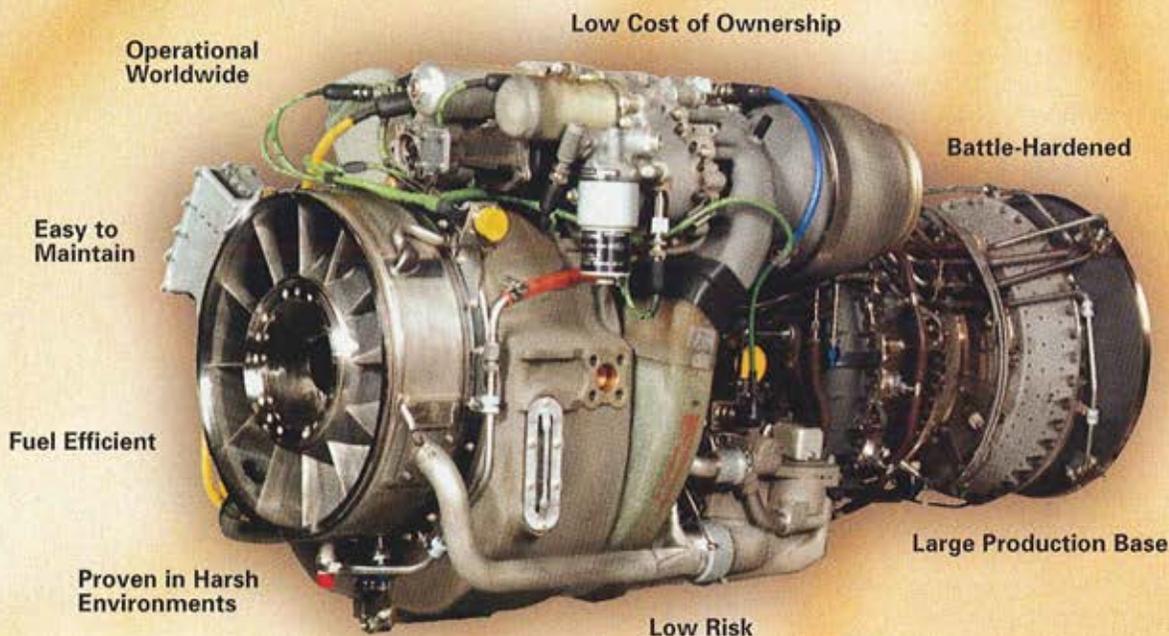
The noncommissioned officer corps for aviation is strong and will continue to lead this branch for many years to come. "Above the Best."

For more information about the academy, please visit us at <http://155.147.98.10/ncoa/nco%20academy.htm>



CSM Edward Iannone is the aviation branch command sergeant major at Fort Rucker, Ala.

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UPDATE

COMANCHE

by Mr. Frank E. Wallace and CWO 4 Ken Shannon

COMANCHE TO ENTER EMD

The Comanche program is scheduled to enter the Engineering Manufacturing Development (EMD) phase of the acquisition process this summer after successfully completing the demonstration/validation (D/V) phase. During the recently completed D/V phase the Army designed, built and tested two prototype helicopters that demonstrated unprecedented performance and agility. The Comanche was the first all-composite helicopter ever built.

The D/V phase of the program focused primarily on designing and testing the all-composite air vehicle, and on expanding the performance and handling characteristics. In addition to prototype development the Army also focused on developing the enabling technologies for the Comanche "next generation" mission equipment package (MEP).

MISSION EQUIPMENT PACKAGE

Full-spectrum military dominance during the 21st century will require complete mastery of the electromagnetic spectrum. Our entry into this arena is best demonstrated with the RAH-66 MEP, which will allow Comanche pilots to see first, shoot first and communicate with joint and combined forces, all while evading the most sophisticated threats.

The MEP continues to be the heart and soul of the Comanche. Technological advances in sensors and computing power will provide our pilots with battlefield advantages never experienced until now. Realities like sensor fusion, digital maps, cognitive decision aids and navigation accuracy set the Comanche apart from any fielded or future system.

The key word here is realities. Demonstrated successes with the



Electro-Optical Targeting and Designation System (EOTADS) and Night Vision Pilotage System (NVPS) validate Comanche's advanced technology concepts. The EOTADS successfully passed all Milestone II evaluation criteria. This was not a simulation but rather an actual EOTADS performing to standard in a minimum resolvable temperature test. The promising results from this test have enabled accelerated Forward-Looking Infrared (FLIR) activities for the optics and other sensor electronics.

Another successful test involved the NVPS turret mounted on an AH-64 Apache. After several flight hours and multiple pilots it was obvious to all involved that second-generation FLIR offers a quantum leap in visual quality over legacy FLIR systems. The ability to see wires, small tree limbs and other small obstacles under poor FLIR conditions was

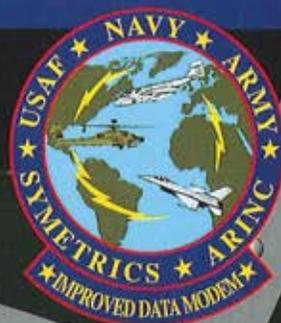
proof enough that Comanche's ability to operate in difficult weather conditions is a real capability.

More exciting news came in early April from our Comanche radar test. Although official results are not yet releasable, preliminary data indicate an extremely capable system. Add sensor fusion to Comanche radar and EOTADS and what the Army has is a weapons platform that truly provides unprecedented situational awareness.

THE PATH AHEAD

Comanche's MEP not only benefits from the horizontal technology integration of evolutionary systems discussed above, but also introduces revolutionary new initiatives. Most notably, the MEP includes a battlefield-wide view of systems architecture. It connects the aircraft to the crew and the crew to the unit, and allows the battle flow to cross the entire network (air-

How do you command on a digital battlefield?



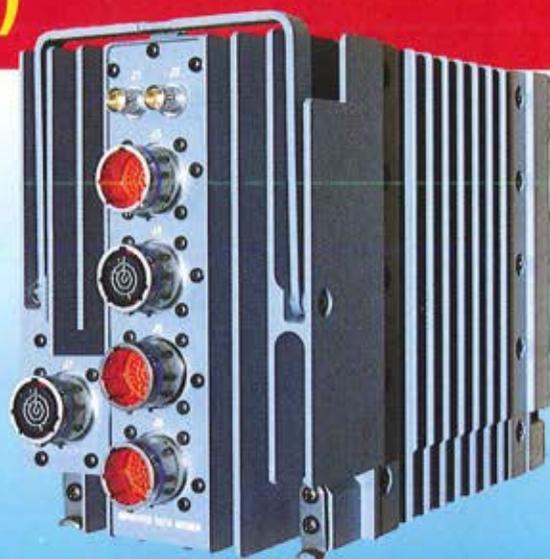
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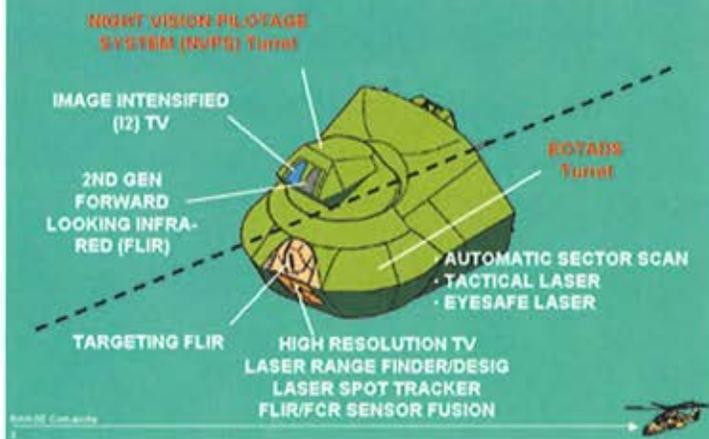
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ELECTRO-OPTICAL TARGET ACQUISITION DESIGNATION SYSTEM (EOTADS)



COMANCHE CREW STATION



craft, tactical internet and Army Battle Command System).

Each subsystem is integrated within the whole with a common language and cognitive set of pre-programmed outcomes. For example, the MEP may be able to determine that the Comanche has been detected, locate the threat, recommend proper offensive or evasive action, and send

a spot report to higher headquarters — all in microseconds. The MEP can review each of these actions and update recommendations to the crew as conditions change.

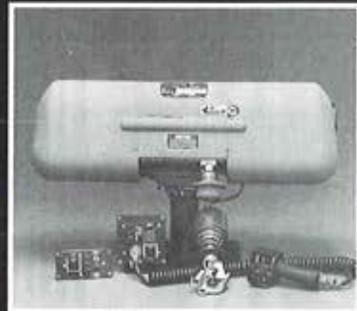
What we have is a top-to-bottom system focused on warfighting. The system is predicated on the notion that warfighting will change rapidly. Thus, Comanche MEP is constructed

with versatility and flexibility as part of the design. We await the ingenuity of the Army aviator to exploit this new technology.



Mr. Wallace is Project Manager and CWO 4 Shannon is Executive Officer, Mission Equipment Package, Comanche PMO, Redstone Arsenal, Ala.

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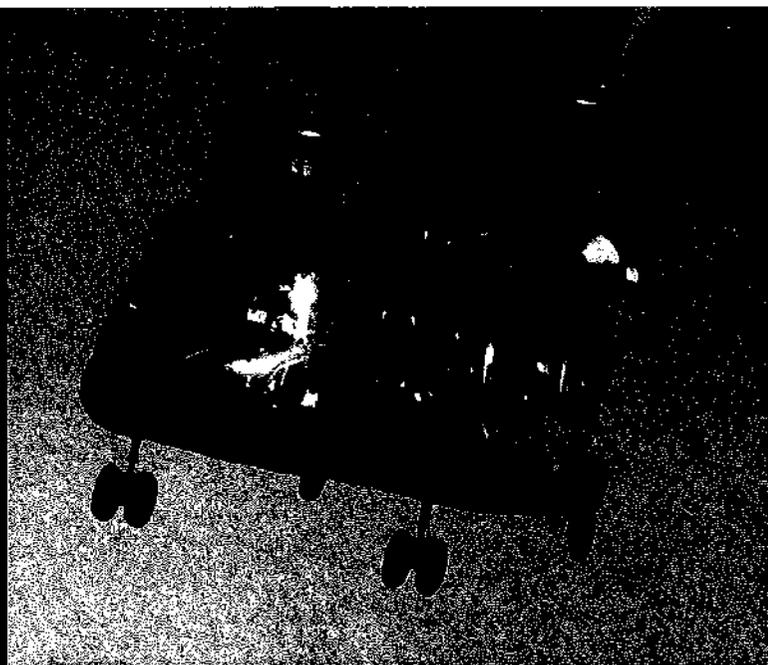
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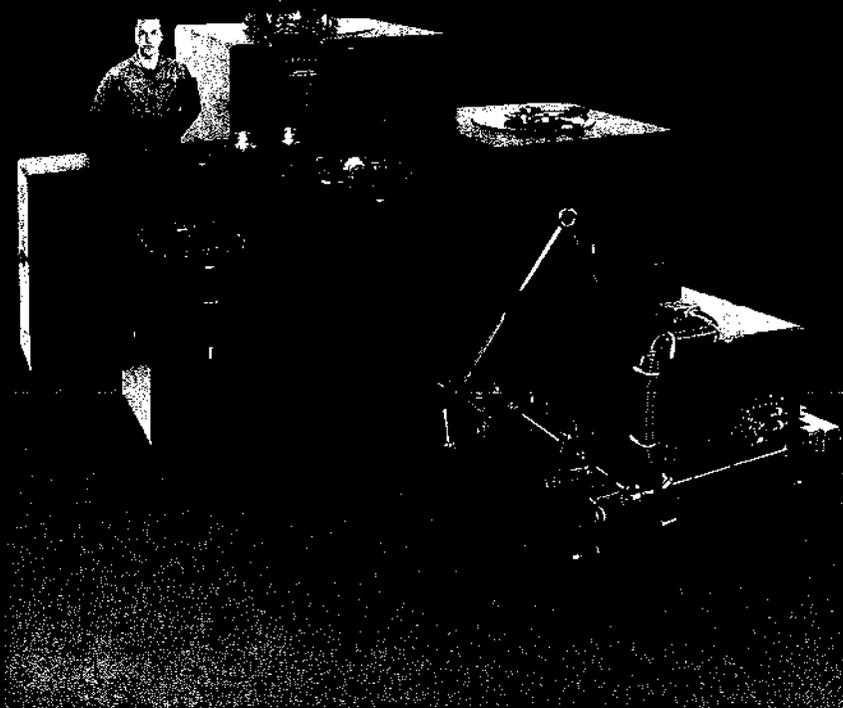
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UH-60 Utility Helicopter Program

The Army's

By Col. Thomas M. Harrison

The Utility Helicopters Project Management Office (UHPMO), part of U.S. Army Aviation and Missile Command's (AMCOM) Deputy for Systems Acquisition, remains the Army Materiel Command's sole Acquisition Category (ACAT) I Program. Our functional divisions — business, technical and logistics management, as well as the project manager and deputy — exist to support the Utility Helicopters Assistant Project Manager-led product lines. These are UH-60 production and fielding, readiness and sustainment, modifications, MEDEVAC/Q, modernization and UH-1. A review of each product defines the state of utility helicopters as the Project Office executes its portion of the Army Aviation Modernization Plan.

The UH-60 Black Hawk is in its 24th year of production via the fifth multi-year contract, a firm fixed-price award to Sikorsky Aircraft. Current government-furnished equipment includes General Electric engines, Honeywell auxiliary power units and U.S. Army Communications-Electronics Command-managed radios. Preparations for a sixth multi-year, multi-service (Army and Navy) contract are underway to provide a means to continue procurement. Twenty-nine aircraft were produced in fiscal year 1999 and 19 aircraft will be produced this fiscal year. Significant emphasis is being placed on Foreign Military Sales growth.

Thirty-four aircraft were fielded in FY 99 and 10 UH-60Ls were fielded in the first two quarters of FY 00, including the last UH-60Ls scheduled for the active component. Forecast procurement will be fielded to the Army National Guard. As of March 1, 2000, 1,506 Black Hawks requiring sustainment were in Army inventory.

In FY 99 the UH-60 fleet once again exceeded the Department of the Army's mission capable (MC) objective rate, achieving 83 percent. While this is good news, a more detailed examination identifies a downward trend in fleet readiness from FY 98 through the first part of FY 00. In part, the lower rates are a reflection of an aging "A" model, greater operational tempo and, possibly, a secondary impact of UH-1 groundings. For these reasons, HQDA, AMCOM

and Corpus Christi Army Depot (CCAD) are energizing on condition maintenance efforts, with a growth path to Black Hawk recapitalization and modernization.

In the last year the UHPMO conducted four Team Hawk (joint and international H-60 action team) conferences, 12 site visits and the UH-60 User's Conference. Maintenance trainer and flight simulator upgrades continue with U.S. Army Simulations, Training and Instrumentation Command (STRICOM) and the U.S. Army Aviation Logistics school (USAALS). The Army Aircraft Readiness Management System (AARMS) and Knowledge Asset Management Network (KAMNET) experienced significant growth and acceptance.

"The Utility Helicopters Project Management Office ... remains the Army Materiel Command's sole Acquisition Category (ACAT) I Program"

Between March and May 2000, the AARMS readiness-reporting system will team with a new logistics analysis capability, Post Fielding Support Analysis (PFSA), developed by the Logistics Support Activity (LOGSA) with AMCOM IMMC support, to conduct a validation at Fort Campbell, Ky. The results will determine whether the system may be expanded to the Defense Logistics Agency (DLA) and other commodity commands, retained, modified or deleted by the utility helicopter PM.

Other successes in utility helicopter readiness and sustainment included the use of General Electric's Six Sigma and Sikorsky's Center for Unequaled Reliability Excellence (CURE) processes to standardize problem-solving techniques. Notably, the most recent UH-60 Safety of Flight (SOF) message was issued in January 1998, a truly significant achievement. Beyond sustainment, fielded aircraft are also modified.

The assistant program manager for modifications (APMM) is tasked with coordinating the integration of airframe modifications to the UH-60 fleet that are precipitated by operational requirements documents, Black Hawk Improvement Process selection or mandate. The APMM

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ensures modifications satisfy technical and operational requirements, are logistically supportable and are affordable. PM UH does not generally manage the modification equipment package, but does manage interface control and aircraft modifications to support the equipment. The APMM also ensures that modifications are consistent with modernization strategies.

The primary objectives in evaluating potential modifications are reducing weight, space and power consumption while enhancing mission effectiveness, lowering life cycle cost, improving safety, and increasing reliability, availability and maintainability.

Some current aircraft modifications include Crashworthy External Fuel System, Sealed Lead Acid Battery, ARC-220 and Air Warrior. The APMM is also the focal point for several unique Black Hawks, including search-and-rescue aircraft for the Alaska National Guard; Fire Hawk for dedicated National Guard aircraft; electronic warfare; and the Army Airborne Command and Control System (A2C2S).

The APMM is also Black Hawk's focal point for a crashworthy, ballistically tolerant external fuel system under a cooperative research and development agreement between Robertson Aviation and AMCOM's Aviation Applied Technologies Directorate. The system's modified tank has completed a drop test and a crash test. The system will convert to a suction transfer (from the current pressurized transfer) and modify the Auxiliary Fuel Management System.

MEDEVAC/Q is managed separately from modifications. UH-60Q continues to progress and will be type classified shortly. The four UH-60Qs (an "A" with "Q" package) operated by the Tennessee National Guard have accumulated more than 1,000 flight hours [see the article in the February Army Aviation]. They have proven to be durable and well designed.

The UH-60Q demonstrated its prowess in a 1998 operational test and continued their successful real-world employment in 1999. Follow-on component-level testing continues to close technical test items. The UH-60Q technical baseline is being applied to production UH-60Ls in accordance with congressional direction. In 1997 the Army was directed to procure "four production UH-60Qs." Those aircraft are now on contract to be delivered in late 2000 as

HH-60Ls. Work on a Q medical trainer will begin this year. The UH-60Q cockpit and Medical Mission Equipment Package (MEP) are key parts of the Modernized Black Hawk baseline.

The Director of Combat Developments (DCD) at Fort Rucker, Ala., developed the UH-60 Helicopter Modernization Operational Requirements Document (ORD) using a U.S. Army Training and Doctrine Command (TRADOC) Integrated Concept Team. Parallel with ORD evolution, the UHPM chartered a Utility Helicopters Fleet Modernization Study, chaired by a General Officer Steering Committee (GOSC). This study concluded in January 1999 and recommended a two-tiered modernization approach. TRADOC approved the ORD, which reflects the tiered approach, in January.

Tier one of the modernization program is commonly known as UH-60L+ and begins in FY 00 with an integration and qualification phase. The UH-60L+ addresses tier-one ORD requirements of service-life extension, digitization, improved lift and reduced O&S costs (over UH-60A models). Tier two is called the UH-60(X). The UH-60(X) will incorporate emerging leap-ahead engine technology and improved drive-train components to meet tier-two ORD requirements of greater lift and range and improved O&S costs versus the UH-60L.

The UHPM, TRADOC community and DA staff are now working toward a milestone decision in FY 00. Following the milestone decision, AMCOM envisions award of an integration and qualification contract to Sikorsky. A key component of the effort will be a depot partnership study to determine the best use of industrial assets in modernization and recapitalization.

As we modernize Black Hawk we will phase out an older asset, the venerable UH-1 Iroquois. The UH-1 fleet has entered the final life-cycle stage. The Army has decided to divest the remaining Hueys, an intention announced by HQDA via message 062035Z Mar 00. The Army goal is to divest all UH-1s by the end of FY 04 and sustain the minimum number of aircraft possible in the interim. Execution planning is underway. We will address known propulsion and airframe issues to insure the continued safety of residual aircraft while we dispose of the others. To facilitate divestiture decisions, we are evaluating the potential outsourcing of some TDA missions.

UHPM's business strategy prioritizes modernization by leveraging modifications and MEDEVAC/Q efforts; stages production continuation; continues R&S; and retires the UH-1. The utility helicopter fleet flies well in excess of 40 percent of the Army's rotary-wing hours, and is posturing to continue that effort and modernize/recapitalize itself to remain relevant in a transforming and transformed Army.

Col. Thomas M. Harrison is the Project Manager, Utility Helicopters, at Redstone Arsenal, Ala.

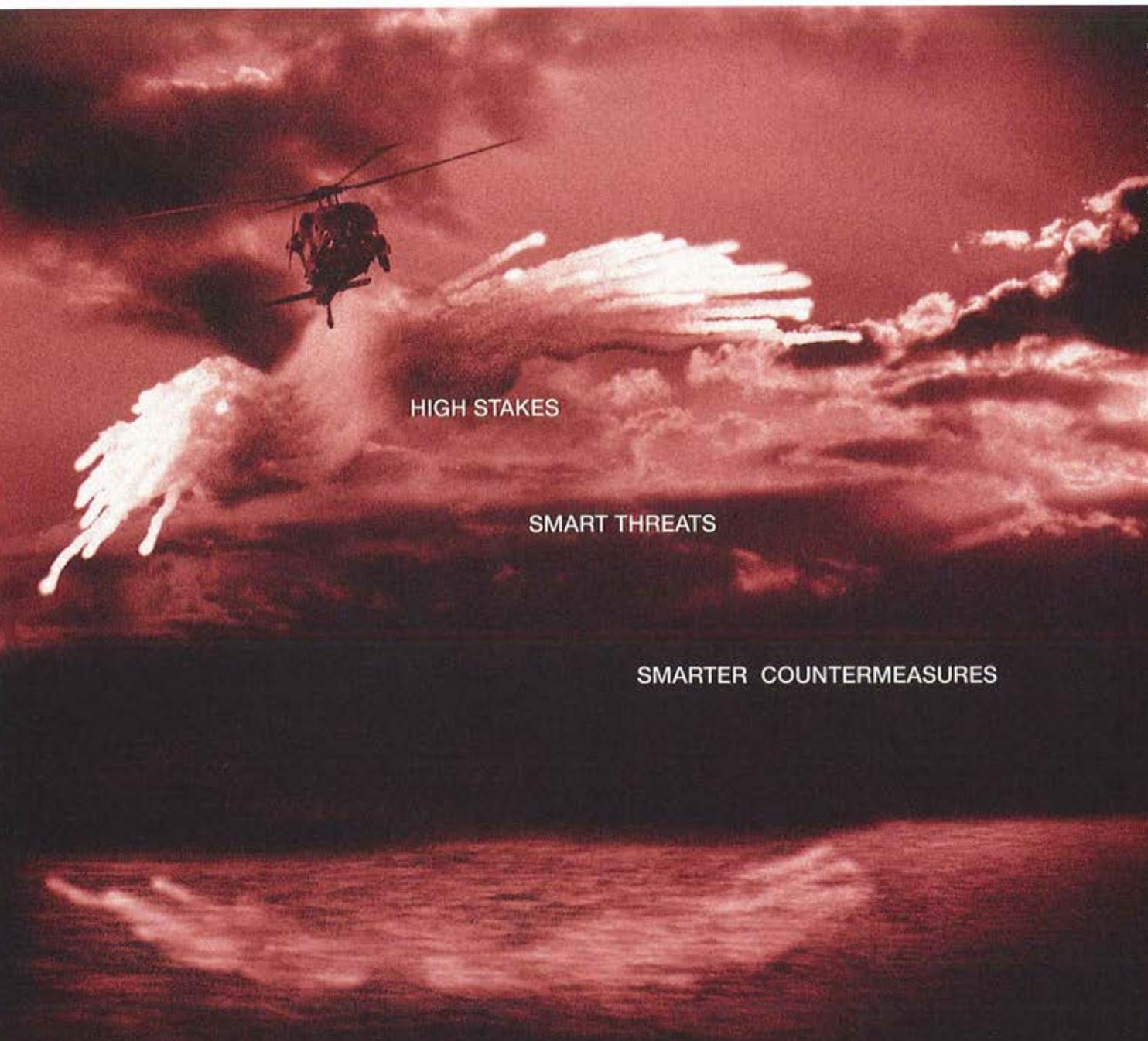
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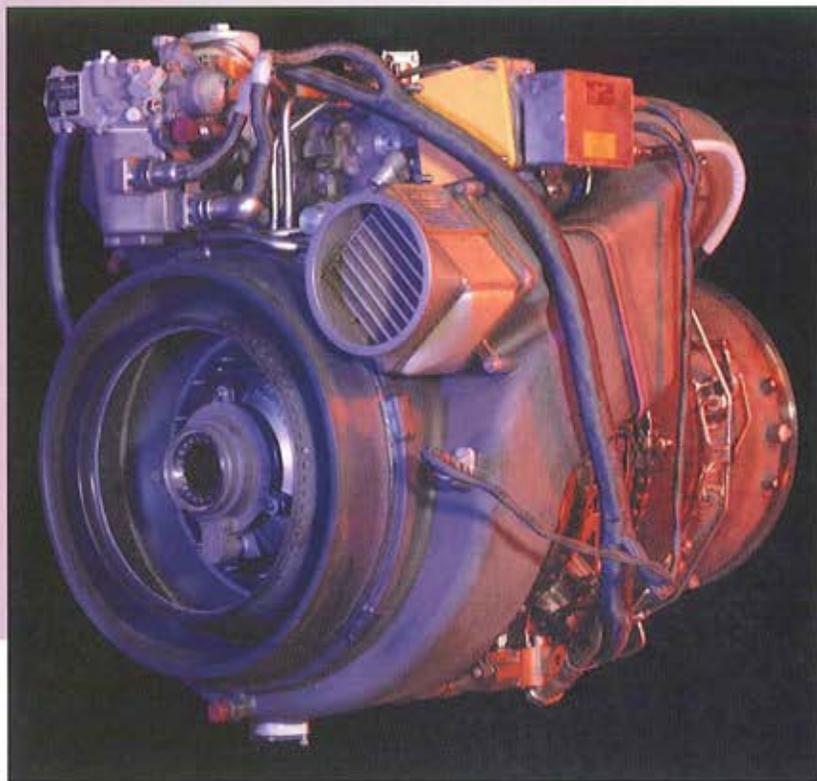
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BAE SYSTEMS

The Comanche Helicopter T800 ENGINE PROGRAM

By Jimmy C. Hill



The T800 engine for the RAH-66 Comanche helicopter is being developed as government-furnished equipment under a separate contract from the air vehicle.

The first phase of engine development began in 1985 and concluded in 1992 with the delivery of a military qualified baseline engine designated the T800-LHT-800. The second phase of engine development began in 1993 in response to a Comanche requirement change that added a radar system to the aircraft while maintaining the vertical-rate-of-climb requirement. This phase, scheduled to be completed by the end of October, will result in the delivery of a growth engine with a 12-percent increase in installed shaft horsepower.

The prime contractor for the T800 is the Light Helicopter Turbine Engine Company (LHTEC). LHTEC is a partnership between Rolls Royce Allison in Indianapolis, Ind., and Honeywell of Phoenix, Ariz. LHTEC annually manages more than \$21 million worth of contracts with 87 vendors in 20 states in support of the program. These vendors provide a variety of engine components, in addition to engineering and testing services.

Challenges

Controlling T800 program costs while maintaining delivery schedules continue to challenge the Army and the prime contractor. Frequent management visits to sub-vendors and constant attention to cost and schedule variances help to keep the program on track.

In an effort to increase the production base for the engine the Army and the engine contractor have been actively pursuing other domestic and foreign customers for the baseline engine. Although only limited orders for the engine have been received thus far, it is anticipated that once the Army accepts the engine into its inventory the number of both domestic and foreign customers will increase.

A Military and Commercial Solution

Since the Army decided in 1992 not to buy the original baseline engine for any military application, a unique development approach has been taken for the growth engine contract. In addition to meeting Comanche requirements for a more powerful engine, this approach was designed to help offset the engine contractor's original investment costs and also provide the contractor with the means to sell a commercial variant of the engine. It was agreed that the Army would contract for both an airworthiness release to support Army flight testing and a Federal Aviation Administration (FAA) certification to support commercial development and sales. This development approach provides a potential long-term payback to the Army in terms of significantly reduced production and support costs resulting from leveraged commercial sales and activities.

However, a significant challenge in this program is managing the development and test activities required to simultaneously obtain military qualification and FAA certification while balancing the available resources to stay within the program's established cost, schedule and performance parameters. This has required frequent adjustments to priorities and schedules, as well as the use of a comprehensive risk-management program. It also has required some difficult decisions on when and where to apply scarce resources, and when to stop pursuing technical solutions that drive program cost and schedule variances. Maintaining open communications with the contractor and making timely decisions to mitigate these potential cost and schedule variances have been crucial to the success of the program.

Downsizing

Workforce downsizing is a fact of life for military organizations and private industry. As both Rolls Royce

and Honeywell continue to downsize and balance their technical skills, the biggest impact to the T800 engine program is a shortage of critical resources, especially experienced engine-controls engineers. Both partners face tough competition from defense and non-defense industries for these limited resources. Despite concerted efforts to locate and hire these critical individuals, the shortages continue and this remains a risk area for the program. It is increasingly apparent that the effects of downsizing will continue to be a difficult challenge for the program even into the next phase of development.

Benefits

Despite the challenges the T800 program faces, there are some significant potential benefits to be obtained from this type of concurrent development effort. These benefits include:

- Potential savings in scarce non-recurring research and development dollars realized from piggy-backing testing and other concurrent development activities;

the Comanche prototype aircraft at the Sikorsky Flight Test Facility in West Palm Beach, Fla. First flight of the Comanche with the growth engines is currently scheduled to occur in January 2001.

The engine program is scheduled to enter its final phase of development, preproduction qualification (PPQ) at the end of fiscal year 2000. The PPQ contract award is planned for November 2000 with a period of performance extending through December 2006. The primary purpose of the PPQ is to support the Comanche Air Vehicle Engineering, Manufacturing, and Development (EMD) program. Planning for PPQ is being performed using the Army alpha contracting approach and the use of a dedicated server as the central repository for contractual documentation helps to fulfill the requirements for paperless contracting mandated by a Department of Defense Reform Initiative.

The primary objectives of the PPQ program are to:

- conclude final redesign requirements stemming from ongoing testing activities not finished under the current

Baseline Engine Applications



- Potential savings in recurring and O&S costs associated with greater economies of scale when buying components, parts and spares achieved by maintaining the commonality of components between the military and commercial engine variants; and,
- Potential savings in procurement and production costs resulting from improvements in the production learning curves for the engine and its components.

What's Next?

Under the current contract, seven growth flight-test engines are scheduled to be delivered to the Army beginning next month. Four of these engines will replace the baseline engines currently flying in both of

contract by late FY 01;

- take delivery of 34 preproduction configuration engines during FYs 03-04;
- obtain a military qualification for the engine by mid FY 04; and,
- support Comanche flight testing and initial operational test and evaluation during FYs 04-05.

Finally, the engine program expects to award a low-rate initial production contract in mid-FY 04 to support Comanche initial fielding in early FY 07.



Jimmy C. Hill is the Product Manager for the T800 engine program at Redstone Arsenal, Ala.

OH-58D UPDATE

KIOWA WARRIOR

By Lt. Col. William M. Gavora
and Mr. Jack Lundy

The OH-58D Kiowa Warrior is the Army's lightly armed and rapidly deployable reconnaissance helicopter, and its first digitized aircraft. Originally a product of the Army Helicopter Improvement Program (AHIP), the OH-58D first flew in October 1983 and first deliveries to field units began in September 1985. With its distinctive mast-mounted sights (MMS), advanced optics, electronics, integrated avionics and weapon systems, the Kiowa Warrior gives commanders a potent, dynamic capability to conduct decisive and successful operations. The aircraft has three distinct missions: armed reconnaissance and security; target acquisition and designation; and light attack.

The Kiowa Warrior is currently in the sustainment phase of the acquisition lifecycle. Production was completed in October 1999, though the aircraft is presently undergoing Safety Enhancement Program (SEP) modifications. Specifically, these modifications are a new Rolls Royce-Allison C30R3 engine with Full Authority Digital Electronic Control (FADEC); Improved Master Control System Processor Units (IMCPUs); Improved Data Modem (IDM); Single-Channel Ground/Air Radio System-System Improvement Program (SINCGARS-SIP); crashworthy seats; and Cockpit Air Bag Systems (CABS).

Installation of the FADEC R-3 Engine reduces rotor droop by 77 percent; doubles engine time between overhauls (TBO); increases high-altitude, hot-day power by 20 percent; and improves engine reliability. The IMCPUs, IDMs and SINCGARS-SIP radios have improved data capture and processing, and will, after installation of the next generation of software (CDS4), allow the Kiowa Warrior to



communicate digitally in a joint variable message format (JVMF) over the tactical internet.

The Kiowa Warrior program has had many accomplishments during the past year. First and foremost, Kiowa Warrior is the highest OPTEMPO aircraft in the Army, and maintains the highest Operational Readiness (OR) rates (86 percent) as well. This is a testament to the hard work and dedication of Kiowa Warrior aircrews and maintainers assigned to all divisional cavalry squadrons, light division attack helicopter battalions, and armored cavalry regiments in the continental United States and around the world.

As mentioned earlier, production of the Kiowa Warrior was completed last October. The last unit to be fielded — the 1st Battalion, 25th Aviation Regiment — is scheduled to complete its training and redeploy to Hawaii this month. The first lot of 28 SEP aircraft has been completed and fielded at Fort Hood, Texas, and Fort Carson, Colo. Modification and fielding of Lot II is currently in progress with the 1st Bn., 82nd Avn. Regt., at Fort Bragg, N.C., which is currently receiving the new aircraft. A Lot III contract for 22 aircraft has recently been signed. The SEP, a \$42 million a year program, is currently only funded through fiscal year 2005. This leaves 117 of 387 aircraft unfunded.

During 1999 the Scout-Attack Helicopter Product Management Office applied for and received \$6 million under the Pentagon's Commercial Operations and Support (O&S) Cost Savings Initiative (COSSI) Program to reduce Kiowa Warrior O&S costs and weight. The PM office has teamed with the Aviation Applied Technology Directorate (AATD) at Fort Eustis, Va., and with the EFW Corporation in Fort Worth, Texas, to develop lighter and more reliable aircraft systems. Among the solutions we're examining are lightweight color multi-functional displays, lightweight Hellfire missile launchers and a single weapons systems stores box. Our goal is to reduce aircraft weight by 300 to 400 pounds in order to improve operational and autorotational characteristics, as well as to increase reliability and lower support costs.

In October 1999 a 22-member Kiowa Warrior General Officer Steering Committee (GOSC) unanimously agreed to accept the recommendations of a PM-sponsored Kiowa Warrior study initiated in June of that year. The GOSC had previously agreed that the aircraft would be in the Army's inventory for quite some time (until 2024 at the time); that the aircraft had been neglected; and to work together to build

OH-58D Update cont'd. on pg. 26



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The UC-35 and Army Fixed-Wing Aviation

By Capt. Matthew Jones and CWO 5 Barry Penny

With the Army's role in our national military strategy changing from a forward-deployed force to a CONUS-based, force-projection army, fixed-wing aviation has been challenged to provide the force with a fast and efficient medium-range (500-1,800 nautical mile) transport.

This aircraft must provide the Army with an all-weather transport for commanders, their staffs, and critical equipment and parts. The Army's Modernization Plan and Fixed-Wing Investment Strategy identified the need for an airframe capable of rapid, worldwide self-deployment, while continuing to provide for cost-effective, intra-theater missions ranging from support-and-stability operations to wartime operations. With the Army downsizing and operating under severe budget constraints, this airframe had to be capable of getting the decision makers and their staffs to the right place in the shortest possible amount of time with the greatest efficiency.

The C-12 Huron has been the work

horse of the fixed-wing fleet since the 1970s. Originally intended to perform the Army's short-range mission (up to 500 nautical miles), the C-12 is routinely tasked to undertake missions in excess of 1,000 miles. Although the C-12 has been a very reliable airframe it lacks the range, speed and efficiency to optimally perform the medium-range mission. Additionally, the Army's C-20 long-range transport jets have proven to be too expensive to routinely perform the medium-range mission. A new aircraft was needed to fill the void. The gap between the operating capabilities of the C-12 and C-20 were bridged in 1995 when the Fixed Wing Product Management Office chose the Cessna UC-35 as an answer to the Army's challenges. Greater operating capabilities, along with low acquisition and maintenance costs, made the UC-35 an immediate hit with the fixed-wing community. The UC-35 has proven to be cheaper and more reliable than the C-12 when performing missions of more than 300 nautical miles. Twenty UC-35s have been fielded so far, with an approval to field a total of

67 to support the Army's medium-range requirement.

Additionally, the immediate success and value of the UC-35 has prompted studies into the feasibility of replacing the C-12 with the UC-35, or another similar commercial aircraft, for the Army's short/medium range mission. A key factor in the ability of the UC-35 and other Army fixed-wing aircraft to fulfill their missions in the future will be their ability to conform to Global Air Traffic Management (GATM) procedures. The purpose of the GATM program is to preserve operational readiness and Department of Defense (DOD) access to global aviation routes into the 21st century by equipping military aircraft to meet the emerging requirements of the worldwide air-navigation system. The International Civil Aviation Organization (ICAO), Federal Aviation Administration (FAA) and other civil aviation authorities plan to implement new air traffic management architecture to relieve the tremendous strain on the current air traffic control (ATC) system.

It is intended that the GATM group of technologies, also referred to as Communication, Navigation, Surveillance/Air Traffic Management (CNS/



ATM) in civil aviation, will ultimately provide the means to achieve dynamic routing and overall safer, more reliable training, and safe recovery of assets. Dynamic routing means that aircraft would no longer have to use prescribed tracks and airways but would be free to select flight paths optimum for their missions. Although civil aviation authorities cannot mandate system capability for the military, commanders will have to deal with civil air traffic services, and may need to receive data feeds from FAA and other civil aviation authorities as a means of exchanging time-critical flight information and of monitoring flight operations.

Failure to equip military aircraft for civil compliance would have a significant operational and organizational

impact on ground commanders, forcing aircraft to fly non-optimum/longer routes and altitudes, resulting in increased flight times, increased fuel consumption and decreased payloads. Delays in delivery of combat troops and equipment, as well as delays in arrival of combat forces, may weaken a theater commander in chief's (CINC's) posture during the critical first days of an operation. Additionally, training and training-support missions will be excluded from affected airspace result-

ing in critical training deficiencies.

To avoid these and other difficulties the Fixed Wing Program Manager plans to modernize aircraft to meet existing and emerging GATM requirements. The UC-35 is an example of the avionics-modernization effort. The A-models that are currently fielded are receiving an avionics upgrade that will bring the aircraft into compliance with near and mid-term GATM requirements. This upgrade is scheduled for completion by September 2000. The first UC-35Bs - scheduled for delivery in December 2000 - will be GATM compliant when they are delivered to the Army.



Capt. Matthew Jones and CWO 5 Barry Penny are assigned to the Fixed Wing Product Office at Redstone Arsenal, Ala.

a consensus on a vision and strategy for the future. Based on an agreed-upon vision — keep the Kiowa Warrior safe to fly and maintain existing battlefield capabilities — a five-part strategy was agreed to:

- First, the GOSC agreed to support completion of the SEP program for all 387 aircraft.
- Second, it directed the initiation of an engine barrier filter program because Kiowa Warrior engine performance and life have been deteriorating due to the inability of the current Inlet Particle Separator (IPS) to remove airborne particles from the air.
- Third, the GOSC supported continued efforts to digitize the aircraft to allow it to communicate in a JVMF format over the tactical Internet.
- Fourth, the committee directed the PM to address Mast Mounted Sight (MMS) obsolescence. Currently, the MMS consumes almost half of all O&S costs of the Kiowa Warrior and a proportionate share of maintenance time as well. The PM is investigating a number of alternatives, including procurement of a new sight (the Navy Thermal Imaging Sight System (TISS) which is lighter, has similar but newer components including third-generation forward-looking infrared, can be equipped with the Switchable Eye-safe Laser Rangefinder/Designator, and increases Mean Time Before Failure five-fold.
- Fifth, the GOSC supported the procurement of additional MILES-AGES or similar kits for training. The PM is currently teaming with the Army's Simulation, Training and Instrumentation Command to make this a reality.

The OH-58D Kiowa Warrior carries a variety of weapons, including Hellfire, Air-to-Air Stinger, 2.75-inch rockets, and .50-caliber machine guns. The aircraft enjoys the highest operational readiness rate of any air-

craft in the Army's inventory. It is quickly deployable, reliable, versatile, lethal and capable, and is currently making a difference in support of the Army's vital role of peace-keeping operations worldwide. Initiatives such as those outlined above will enable the Kiowa Warrior to respond even more effectively to global requirements.



Lt. Col. William M. Gavora is the Product Manager in the Scout/Attack Product Office at Redstone Arsenal, Ala. Mr. Jack Lundy is the Deputy Product Manager.



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zation thrusts are toward programs that enhance planning; situation awareness; joint/long-range communications; command and control; airspace management; logistical responsiveness; and operational tempo.

Logistics modernization focuses on digitization and automation initiatives to improve diagnostics/functionality and to automate routine maintenance and logistics procedures. Air traffic services modernization replaces old, outdated equipment with smaller and lighter digital systems. Aircraft survivability equipment programs seek to provide countermeasures ahead of advances in threat air defense capabilities in an integrated approach, which improves effectiveness and aircrew situation awareness. Weapons modernization programs are focused on addressing Hellfire missile shelf life problems and weapon system deficiencies as aviation missions and threat armor systems continue to evolve. Aircrew Integrated Systems modernization is focused on providing a mission tailorable aircrew ensemble which integrates components to improve safety of flight, crew survivability and efficiency.

Battlefield digitization and modernized system fielding increase the criticality of a concurrent Training/Simulation Strategy. This strategy complements aircraft modernization by harnessing computer technology for the appropriate integration of live, virtual and constructive simulation to train and sustain combat ready crews and units. Central to this strategy are three non-system training devices: Aviation Combined Arms Tactical Trainer (AVCATT-A), Homestation Instrumentation System (HSI) and Aerial Weapons Scoring System (AWSS). Fully funding efforts to maintain currency between fielded systems and the training devices

they replicate is critical to training success.

Essential Enabling Technologies in electronics, systems and man-machine integration, advanced air platforms, propulsion systems and "weaponization" provide Army aviation with key capabilities for insertion into current systems or incorporation into next generation/future systems in the mid- and far-terms. These capabilities will maintain aviation's versatility and relevance for Joint Vision 2010 and beyond, providing the bridge from information dominance to full-spectrum dominance.

Under previous modernization plans, older, obsolescent aircraft remained in the inventory into the foreseeable future. This new plan divests legacy systems and modifies force structure to provide multifunctional battalions capable of meeting the needs of emerging Army requirements. The scope of modernization is also broadened to ensure priorities across the DTLOMS are addressed. Priority Army issues are addressed by divesting UH-1/AH-1/OH-58 aircraft, enhancing aviation safety and outlining requirements to solve near-term operational issues. The new strategy will require the Army to make new investments in the near-term to pay the personnel and training bill to equip/man units with modernized aircraft, and continued commitment in the mid- to far-term to enable transition to fully resourced organizations. The payoff of executing this strategy is a force that meets the future needs of the Army.



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

CARGO HELICOPTERS

Paving a Path to the Future

By James Caudle

With the recent release of the new Army Aviation Modernization Plan we, the material developers, have a clear understanding of our customers' future needs. This plan is consistent with the vision provided by our Program Executive Officer, Aviation, Maj. Gen. James R. Snider, directing our design and sustainment efforts on the four aviation platforms — Comanche, Apache, Black Hawk and Chinook — while laying the ground work for the eventual development and fielding of the Future Transport Rotorcraft (FTR). As we look toward fielding Comanche and sustaining and enhancing our critical legacy systems, we must focus our efforts toward a capabilities-based force that ensures full-spectrum dominance, rather than seeking specific hardware solutions.

Within the Cargo Helicopters Project Office we have created a product-oriented organization, as opposed to the traditional functional organizations. We

seek to sustain the current fleet, extend the service life of the aging aircraft, and apply needed upgrades to ensure maintainability and battlefield compatibility. The office is evolving a philosophy of managing cargo helicopters as a "system-level" team, re-engineering the way we accomplish life-cycle management.

The first step in this process is to establish an aircraft system baseline for the fielded fleet that captures and defines what the true costs and cost drivers are to operate the CH-47 worldwide. Once the baseline is established we must have a data-management system that will feed our newly formed customer service and fleet-management cells, enabling us to provide soldiers all the needed logistical elements, based on the ever-changing operational tempo (OPTEMPO).

As we continue our efforts to baseline and manage the fleet, we have also embarked on a path to upgrade the fielded fleet through minor modifica-

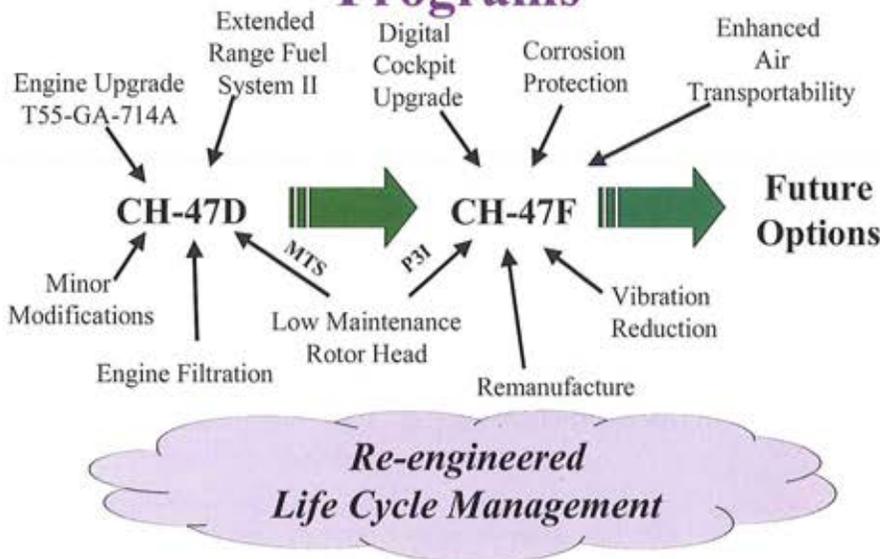
tion programs, culminating in the CH-47F Improved Cargo Helicopter Service Life Extension Program (SLEP). One of our larger modification efforts is the procurement of the T55-GA-714A engine, which affords a 27 percent increase in power with a reduced specific fuel consumption of 5 percent. This much-needed upgrade will be applied to all CH-47s and will began fielding this year.

In addition, the development and procurement of the Extended Range Fuel System (ERFS) finally gives our soldiers a crashworthy internal fuel system that either extends their range or enables them to conduct FAT COW (refueling) operations for other aircraft or forward-deployed ground systems. Beginning this year, all CH-47s will be modified to accept ERFS, with two complete systems fielded per platoon.

And in our continuing effort to reduce the operations and support costs of the aircraft, the Low Maintenance Rotor Head program seeks to replace the oil-lubricated hubs with an improved hub using "dry-film" bearings. This effort is a combined initiative with our partners from the United Kingdom. The program kicked off last year and is well on the way to a 60-percent reduction in parts and a six-fold decrease in material costs, with no scheduled depot overhaul.

The CH-47F Improved Cargo Helicopter is the aircraft that will bridge the gap to the Future Transport Rotorcraft (FTR). Three hundred CH-47Ds were earmarked for the upgrade to extend their service lives until the FTR was available. The Army recognized that to extend the Chinook's service life an additional 20 years would require a detailed remanufacturing program, additional improvements to

Cargo Helicopter Modernization Programs



reduce operations and support costs, and a digital cockpit upgrade to ensure compatibility with the Army's digitization initiatives. The program was formulated based on the success of the CH-47D upgrade, the planned application of demonstrated new technologies, and incorporation and improvement of existing cockpit modifications from our special-operations aircraft.

opportunity to apply cost-effective improvements to enhance performance or reduce the maintenance burden.

For example, corrosion continues to be a problem in the floors of our Chinooks. The Army-Boeing team has selected a new bilge paint that is flexible enough to accommodate the flexing of the airframe. Additionally, while

ing. Airframe tuning involves changing the natural frequencies of the airframe, reducing vibration and reducing responses to rotor forces. To demonstrate the potential benefit, the Army and Boeing entered into a cooperative research-and-development agreement, applying the modification to Bearcat 3. The aircraft demonstrated significant vibration reduction throughout, approaching an 80 percent reduction in one area.

The Chinook cockpit-digitization effort is designed to provide the crew with improved situational awareness and enhance their survivability. The newly designed cockpit will incorporate a 1553 data bus with a modular, open architecture design that ensures growth potential. The cockpit incorporates the Harris digital map into the Rockwell-Collins electronic flight instrument system coupled with smart multi-function displays. Since we are using existing equipment in the cockpit, the challenge here is software. There are software integration labs operating at both Rockwell and Boeing. Software drops one and two were delivered by Rockwell Collins on time. Thus far, no major software trouble reports have been generated. Cockpit development is on schedule.

As you can see, the future of cargo helicopters is bright. We have a team that is focused on providing a combat multiplier that is interoperable, versatile, deployable, survivable and sustainable. From Vietnam to Kosovo, the CH-47 has been the Army's workhorse. It brings to every Army contingency a unique capability that is inherently flexible to meet the soldier's requirements.

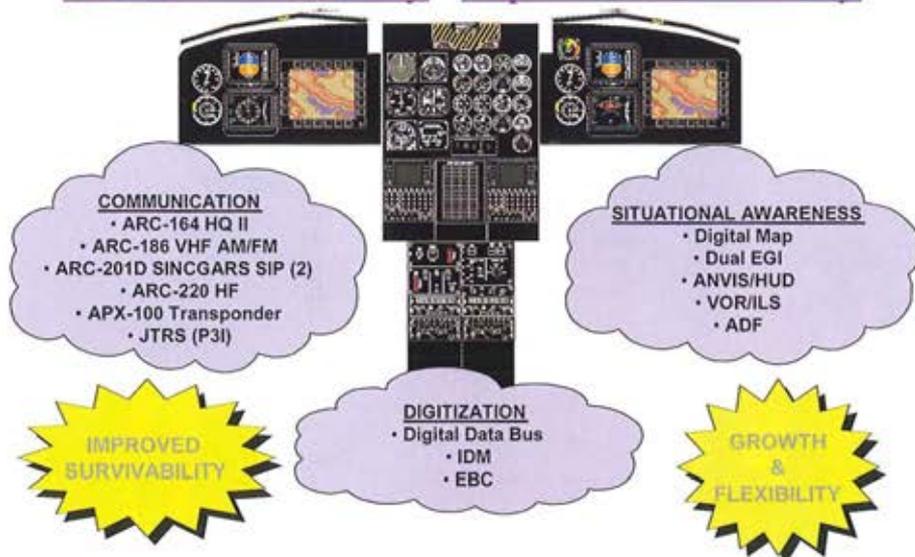
However, if the system is not sustainable, it becomes a burden. We believe that our initiatives and programs to assist our soldiers with the maintenance, sustainment and upgrade of this aircraft will ensure that this true battlefield enabler will be there to ensure full-spectrum dominance.



James Caudle is the Project Manager, Cargo Helicopters, at Redstone Arsenal, Ala.

CH-47F - Cockpit

Common Cockpit Architecture Growth & Flexibility Improved Survivability



The CH-47F is an ACAT I program being managed by Lt. Col. Tim Crosby. Because of its low-risk approach, the program entered the acquisition process at Milestone II, moving directly into Engineering and Manufacturing Development (EMD). Boeing is the prime contractor, with cockpit development being competitively awarded by Boeing to Rockwell Collins. The program is now beyond its critical design review and tracking toward a Low Rate Initial Production decision.

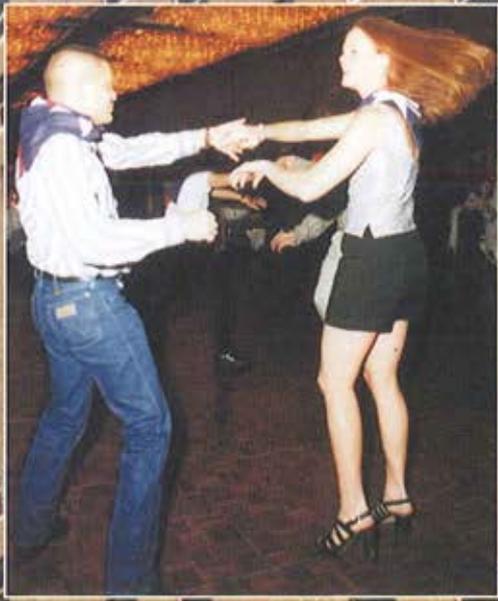
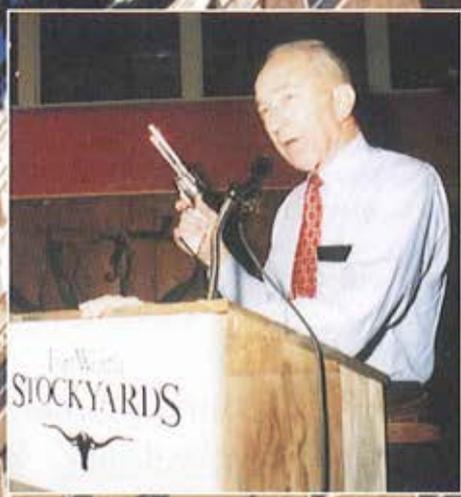
The remanufacturing effort is designed to restore the CH-47 airframe as near as possible to the original life expectancy of 20 years. There is a significant difference between an overhaul that returns an aircraft to service and a remanufacture program that actually extends the aircraft's service life. Having the airframe remanufactured is a prime

reviewing the design, the team sought to reduce the time it takes to dismantle the aircraft for shipment aboard Air Force aircraft. To make a long story short, the team developed a kit — which will be applied to all CH-47Fs — that will enjoy a 58 percent man-hour reduction and a 65 percent time reduction to disassemble and assemble the aircraft. This kit was applied to Bearcat 3, our test aircraft at the Aviation Technical Test Center (ATTC), and these times were demonstrated. In EMD, two aircraft are to be remanufactured. Both aircraft are progressing on schedule through the modification process, with first flight scheduled on aircraft number one in June of 2001.

One of the key cost-reduction initiatives on the CH-47F is to improve subsystem reliability and reduce airframe cracking through airframe tun-

2000 AAAA Convention Highlights

AAAA takes Fort Worth by *Storm*



Thursday, March 30, 2000

The 2000 AAAA Annual Convention Mar. 29-April 1, 2000, will not soon be forgotten. On Tuesday evening, 24 hours before the show was to open, tornadoes struck four of our five AAAA hotels and missed the Fort Worth Convention Center by less than 100 meters. Although there were four fatalities in the surrounding communities, there was no loss of life in the downtown area.



Numerous 30 story buildings lost 50 percent of their glass exteriors. The entire downtown area was sealed off by the authorities until the following noon. Today, one month later, a substantial area of downtown remains cordoned off due to falling glass.

Under the calm guidance (armed and threatening violence!) of AAAA President, Maj. Gen. Carl H. McNair Jr. (Ret.), (facing page, top) AAAA quickly recovered. From the social events and exhibit hall featuring almost 200 exhibits and 11 aircraft depicted on the facing page to the professional program organized by Professional Program Chairman, Maj. Gen. Tony Jones, the event turned out to be a terrific success.



After moving Thursday morning's events to the afternoon the 2000 AAAA Annual Convention opened with Keynote speaker GEN John N. Abrams, (above right), TRADOC commander. He was followed by our 2000 "host", Lt. Gen. Leon J. LaPorte, (above left), CG III Corps & Fort Hood, TX; and Maj. Gen. Tony Jones, the Army Aviation Branch Chief and AAAA Convention Professional Program Chairman, (left) who briefed the latest developments on the Army Aviation Modernization Plan including the restructure of the Aviation Brigades.

The first day wound up with a hard hitting panel (below) presentation chaired by FORSCOM Commander Gen. John W. Hendrix (center) on correcting the record on the



successes of Task Force Hawk last year in Albania. Panelists included, (left to right), Oliver H. Hunter IV, Staff Group Leader, USAREUR, Brig. Gen. Raymond T. Odierno, Director, Force Programs, ODCSOPS, Col. Maj. Gen. Richard A. Cody, Director of Operations, Readiness & Mobilization, ODCSOPS, and Col. Jeffrey J. Schloesser, commander, 12th Aviation Brigade.

Friday, March 31, 2000

Friday opened with the presentation of a check for \$10,000 from the AAAA to Gen. Fred F. Woerner, Jr. (Ret) chairman of the American Battle Monuments Commission to support the construction of the WWII Memorial on the Mall in Washington DC. Also recognized with Gen. Woerner were all AAAA WWII veteran and Cub Club members present. Left to right are Joseph P. Cribbins, James R. Barkley, Arthur H. Kesten, William A. Roehl, Harry W. Townsend, Colin D. Ciley, Jr., Gordon L. Kinley, Russell E. Baugh, Frederick C. Goodwin, Signey W. Achee, John T. Pierce, III, John F. Stacy, Jean L. Chase, James C. Smith (between Woerner and Gen. McNair). Missing from photo but present at convention are William P. Craddock, William H. Harper, Clifford E. Johnson, Jr., William J. Maddox, Jr., A.T. Pumphrey, George G. Tillery and Robert R. Williams.



The first panel of the day was conducted by branch chief Maj. Gen. Jones and dealt with "Ongoing Operations/ Training to Meet the Mission" and included a number of Aviation Brigade commanders. Pictured left to right are Col. Lester D. Eisner, Col. Daniel J. McGraw, Col. Joseph A. Smith, Maj. Gen. Anthony Jones, William Jacobs, Col. Gregory D. Walker and Col. E. J. Sinclair.



Left, the PM briefings were held each day in the exhibit hall in the aircraft area and included PMs for Comanche, UH-60, AH-64, OH-58D and CH-47.

Friday's lunch, "Recognizing the Aviation Soldiers" featured the CSM of the XVIII Airborne Corps, CSM Andrew J. McFowler, who gave a no-nonsense briefing on what the backbone of the force, the enlisted soldier, delivers to the nation.



The day wrapped up with a controversial panel led by former AAAA President Maj. Gen. Ben Harrison (*third from left*), on the state of Army Aviation today and a look at the way ahead by AAAA Senior Executive Associates. Left to right, Gen. Crosbie E. Saint (Ret.), Gen. Gordon R. Sullivan (Ret.), Gen. William R. Richardson (Ret.) and Gen. William G. Tuttle (Ret.).



Saturday, April 1, 2000

The last day of the convention, April 1, began with the First Light Breakfast featuring Military Deputy to the Assistant Secretary of the Army (Acquisition, Logistics & Technology), Lt. Gen. Paul J. Kern.

At the start of the main professional program later that morning, AAAA President McNair presented the AAAA President's Award to AMCOM and its Corpus Christi Army Depot (CCAD), associated RC components and industry partners for their quick action to reverse the recent spate of Apache groundings. Accepting the award on behalf of the team was Maj. Gen. Julian A. Sullivan, CG AMCOM, who then helped

co-chair a panel with PEO Aviation, Maj. Gen. James R. Snider (*center right*). The panel included Mr. Charles Vehlow (*left*), vice president & general manager, Boeing Rotorcraft, The Boeing Company, Mr. Dean Borgman, (*2nd from left*), president, Sikorsky Aircraft, and Mr. John Murphey, (*far right*), president, Bell Helicopter Textron who discussed hardware and acquisition issues.



The Saturday luncheon presentation was delivered by newly elected AAAA National Executive Board Member, Maj. Gen. Raymond F. Rees, vice chief, National Guard Bureau.

The highlight of the convention was, of course, the formal awards dinner on Saturday night. The colors were presented by the Mary Baldwin College Corps of Cadets Color Guard — the only all women's cadet corps in the world and retired by the Virginia Military Institute Color Guard. The banquet speaker was Gen. John M. Keane, vice chief of staff, U.S. Army.



The first award of the evening was the Robert M. Leich Award and was presented to the U.S. Army Scout/Attack Helicopter Product Office, Redstone Arsenal, Ala. The award was accepted by Lt. Col. William M. Gavora (*right*) and Mr. John Guenther, (*left*) from Gen. Keane (*center*).

The Outstanding Aviation Unit (USAR) award was presented to 8th Battalion, 229th Aviation Regiment, Fort Knox, Ky. Accepting the award are Lt. Col. John E. Valentine (*left*) and CSM James H. Robinson (*center*) with his wife Terry (*right*).



The Outstanding Aviation Unit (ARNG) was presented to the 24th Medical Company, Lincoln, Neb., and Topeka, Kan. Accepting the award was Maj. Scott A. Gronewold, commander, and 1st Sgt. Troy Johnson (*not pictured*).

The Outstanding Aviation Unit (Army) award was presented by Gen. John M. Keane (*right*) to 2nd Battalion, 227th Aviation Regiment, Fort Hood, Texas. Lt. Col. Donald M. MacWillie III (*left*) and CSM Jimmy Ruiz (*center*) accepted the award.



The Joseph P. Cribbins Department of the Army Civilian Award was presented to Gerri Shelp, 21st Cavalry Brigade, Fort Hood, Texas. Pictured from left to right are Mr. Joseph P. Cribbins, LCpl Richie Shelp, U.S. Marine Corps, Ms. Shelp's son, Gerri Shelp and Rick Shelp, Ms. Shelp's husband.

The James H. McClellan Aviation Safety Award was presented to CWO 4 Greg S. Schneider, 5th Battalion, 158th Aviation Regiment, Wiesbaden, Germany. Schneider (*second from left*) is pictured here with his mother Carol Schneider (*left*), his wife Tammy (*third from left*) and his father Perry Schneider, (*right*).





The Aviation Soldier of the Year was awarded to SFC William G. Sikes, III, 160th Special Operations Regiment, Fort Campbell, KY. He is pictured at left with his wife Hyona.

The Aviator of the Year award was presented to CWO 3 Daniel R. Zimmermann, A Troop, 2nd Squadron, 6th Cavalry, Illesheim, Germany. He is pictured here (right) with Maj. Gen. Anthony Jones (left).



Finally, AAAA president thanked Gen. Keane for his participation and presented him with the highly coveted "I survived AAAA 2000" T-shirt as a token of his appreciation. The shirts are, by the way, still available for a donation of \$15.00 to the AAAA Scholarship Foundation, Inc. Contact the AAAA National Office for more details. FYI – Video tapes of all the General Session presentations are also available from the AAAA national office.

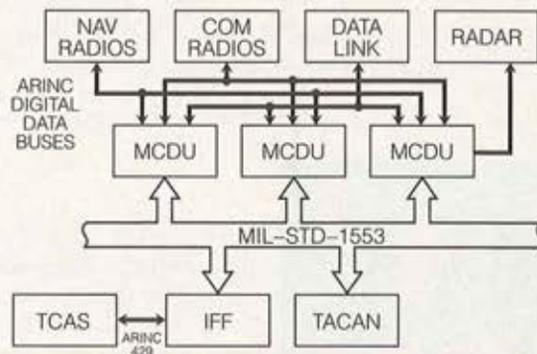


See you next year in Charlotte, N.C., April 4-7, 2001!

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Editor's Note: Army Aviation is seeking good-news announcements of aviation-related professionals who are on the move. If you or your organization have an upcoming change of leadership (at the battalion or squadron level, or higher for MTOE and TDA units), please forward the information to Barbara Ross, care of the AAAA National Office.

Reserve Components

Colonel, RC/APL Promotion Board Results for FY99

Avery, Robert A	AV
Bacon, James D H ●	AV
Bailey, Gregory Paul ●	AV
Baker, Kenneth J	AV
Bean, Robert Andrew Jr	AV
Berkebile, Dan A ●	AV
Bivens, Courtland Clouis III	AV
Chambers, Charles Anthony IV	AV
Council, Terry Ray ●	AV
Erickson, Ernest Tage ●	AV
Gandy, Ernest L	AV
Heinle, Gerald M	AV
Mackey, David Clarence ●	AV
McBride, Kevin R ●	AV
Murphy, Richard Owen ●	AV
Nelan, Daniel J ●	AV
Peterson, Alan R ●	AV
Pultz, Barney ●	AV
Reinke, Robert Jr ●	AV
Shine, Hugh Dunham	AV
Slagen, James A	AV
Starr, David William ●	AV
Stoen, John M ●	AV
Yerrick, Earl Monroe Jr ●	AV

POC for this list is Mr. Doyle Wilson, Reserve Promotions, St. Louis, MO at DSN: 892-1203 or COML: (314) 592-1203.

FY00 Experimental Test Pilot Training Program Board Results

The purpose of ETPTP is to train experienced Army Aviators to become qualified experimental test pilots. The Army currently trains aviators at the U.S. Naval Test Pilot School at Patuxent River, Maryland. Congratulations to the following officers:

CPT John Jones
CPT Robert Kimbrough ●
CPT John Nugent ●
CPT Scott Rauer ●
CPT Kevin Williams ●
CPT David Wolons ●
CW3 Damon Bostick
CW3 Gregg Deetman
CW3 Gregory Lausin

Army Chief of Staff Gen. Eric K. Shinseki has announced the assignment of the following officers:

Brig. Gen. Jesus A. Mangual, from deputy for acquisition and readiness, U.S. Army Soldier and Biological Chemical Command, Natick, Mass., to commander, Defense Supply Center Philadelphia, Pa., with a report date to be determined.

Brig. Gen. Philip M. Mattox, from director of logistics, engineering and security assistance, J-4, U.S. Pacific Command, Camp H. M. Smith, Hawaii, to deputy for acquisition and readiness, U.S. Army Soldier and Biological Chemical Command, Natick, with a report date to be determined.

Senior Service College Slate for Academic Year 00-01

The following officers have been selected to attend Senior Service Colleges in academic year 2000-2001. Congratulations to the following Aviation Officers:

Abramowitz, David ●	LTC	AV	Army
Adkins, Donald M. ●	LTC	AV	Air
Becnel, Wade B. ●	LTC	AV	Navy
Bilafer, George M. ●	LTC	AV	Army
Brodeur, Marc P. ●	LTC	AV	Army
Caram, Michael R. ●	LTC	AV	Army
Cash, Danny N. ●	LTCP	AV	NWC
Cornett, Timothy R. ●	LTC	AV	Army
Crutchfield, Anthony ●	LTC	AV	Army
Cypher, Erickson D.	LTC	AV	Army
Davis, Brooks S.	LTC	AV	Air
Ellers, Conway S. ●	LTC	AV	ICAF
Fant, Michael A.	LTC	AV	Army
Ferrell, Donald M.	LTC	AV	Air
Fox, Ronnie L. ●	COL	AV	ICAF
Grant, Michael O. ●	LTCP	AV	Air
Gulotta, Gasper ●	LTC	AV	Army
Hardy, Kirt T. ●	LTC	AV	NWC
Leyden, Richard G. ●	LTCP	AV	Army
Lovett, Troy L. ●	LTCP	AV	Army
McConville, James ●	LTC	AV	Tufts (Fellowship)
Moentmann, James ●	LTC	AV	Army
Moore, Steven D. ●	LTC	AV	Army
Palumbo, Raymond ●	LTC	AV	Army
Perrin, Mark W. ●	LTC	AV	NWC
Plourd, Patrick N. ●	LTC	AV	Army
Sales, Millard V. ●	LTC	AV	Air
Semmens, Steven ●	LTC	AV	Army
Scott, Jerry D. ●	LTC	AV	AOASF (Fellowship)
Talley, Richard E. ●	LTC	AV	Army
Taliento, Michael J. ●	LTC	AV	Air
Thomas, Kelly J. ●	LTC	AV	Army
Thornal, Mason W. ●	LTC	AV	Army
Young, Thomas W. ●	LTC	AV	Army
Zonfrelli, Michael ●	LTCP	AV	Navy
Crosby, William T. ●	LTC	AC	Air
Grotke, Mark L.	LTC	AC	Army
Heine, Kurt M. ●	LTC	AC	CPDT - Austin
Lake, William G. ●	LTCP	AC	Air
McQuain, Paul M. ●	LTC	AC	ICAF
Pallotta, Ralph G. ●	LTC	AC	Air

● indicates AAAA Member
 Army = Army War College
 Air = Air War College
 Navy = Naval War College

NWC = National War College
 ICAF = Industrial College of the Armed Forces

Col. James H. Pillsbury, from deputy director of logistics, readiness and requirements, J-4, the Joint Staff, Washington, D.C., to commander, Defense Distribution Center, New Cumberland, Pa., with a report date to be determined.

Brig. Gen. James D. Bryan, from director of command, control, communication and computer systems, J-6, U.S. Pacific Command, to vice director, Defense Information Systems Agency, Arlington, Va., with a report date to be determined.

next page ➡

Brig. Gen. Thomas F. Metz, from deputy director for joint warfighting capability assessment, J-8, the Joint Staff, to vice director for force structure, resources and assessment, J-8, the Joint Staff, with a report date to be determined.

Brig. Gen. John R. Batiste, from assistant division commander for maneuver, 1st Cavalry Division, Fort Hood, Texas, to deputy director for joint warfighting capability assessment, J-8, the Joint Staff, with a report date to be determined.

Brig. Gen. Henry W. Stratman, from assistant chief of staff for military operations, SFOR (Sarajevo), Joint Headquarters Centre, Allied Command, Europe, to deputy chief of staff for doctrine, U.S. Army Training and Doctrine Command, Fort Monroe, Va., with a report date to be determined.

Brig. Gen. Eldon A. Bargewell, from commander, Special Operations Command, Europe, U.S. European Command, Germany, to assistant chief of staff for military operations SFOR, with a report date to be determined.

Brig. Gen. Frank J. Toney Jr., from commanding general, Special Operations Command, Central, MacDill Air Force Base, Fla., to commanding general, U.S. Army Special Forces Command, Fort Bragg, N.C., with a report date to be determined.

Brig. Gen. James W. Parker from commander, Special Operations Command, South, U.S. Southern Command, Roosevelt Roads, Puerto Rico, to chief of staff, U.S. Special Operations Command, with a report date to be determined.

Col. Remo Butler from deputy commanding general/chief of staff, U.S. Army Special Operations Command, to commander, Special Operations Command, South, with a report date to be determined.

Col. Leslie L. Fuller from director, U.S. Special Operations Command - Washington Office, the Pentagon, Washington, D.C., to commander, Special Operations Command, Europe, with a report date to be determined.

Briefings continued from page 3

Staveland Instruments has developed a single flaw detector for use in ultrasonic, eddy current and bond testing. The Workstation 2000 detects flaws or cracks, is packaged for extreme military environments and is designed to evolve with technology.

The U.S. Army Special Operations Command has awarded a \$7.5 million follow-on contract to ITT Industries' Avionics Division for the production of 31 High Power Remote Transmitters, which are being installed on MH-47E and MH-60K special operations helicopters. The device operates in conjunction with the ALQ-136A(V)2 pulse jammer and ALQ-162 continuous-wave jammer to form a suite of countermeasures.

The Longbow Limited Liability Co., a Northrop Grumman/ Lockheed Martin joint venture, has been awarded an initial \$25.9 million contract to outfit Republic of Singapore AH-64D Apache helicopters with the AN/APG-78 Longbow multi-role radar system. Deliveries of the radars are scheduled to begin in 2002, in conjunction with the delivery to Singapore of the first Boeing-built AH-64Ds.

ARMY AVIATION



BOOK REVIEW

The Cavalry Trade

by John B. Stockton

Reviewed by Gen. Robert M. Shoemaker (Ret.)

John B. Stockton was a central figure among the handful of officers who led the Army's 1960s drive to exploit the helicopter's potential in ground combat. His fertile brain conceived ideas for employment, training and operational tactics at a galloping pace.

He wrung out these ideas in field experimentation in the 11th Air Assault Division tests from 1963 to 1965, first in command of an assault helicopter battalion and then as commander of the division's air cavalry squadron. When the experimental air assault division was assigned the colors and lineage of the 1st Cavalry Div., Stockton's air cavalry squadron became the 1st Squadron, 9th Cav., and deployed to Vietnam in August 1965. He went on to set the standard and build the foundation for the famous "First of the Ninth," which became the most noted battalion-sized unit of the Vietnam War.

Stockton's fascinating book — a collection of autobiographical vignettes and related essays — shows clearly how his life experiences perfectly prepared him for his role as point man in the development of air cavalry. It was the ideal assignment of a hard-driving and imaginative cavalryman to a mission that demanded innovation, drive and leadership of the highest order. Stockton's personality exemplified the traditional dash, elan and boldness of cavalry.

It must be said that a few of the book's stories seem somewhat incredible. It's a point that Stockton himself addresses in his preface:

"The contents should not be read with a particular eye toward accuracy and veracity. Like almost everybody of my

advanced years, especially those who have led an active life as I have, I tend to exaggerate and embroider and stretch the scenery a bit here and there to produce a more tellable tale. According to my lights, it's a forgivable trespass."

Yet Stockton's legend is so strong, and his verifiable actions so bold and unconventional, that any of the book's stories could be 100 percent true.

Aside from its entertainment and historical value, the book also has application as a leadership text. There is no denying Stockton's success as a battlefield leader. Young combat-arms officers could profit from his account of the training and battle techniques used to develop and employ his units. The stories clearly show why Stockton's troops worshipped him. They also show why his bosses required great finesse to know when to give him slack, and when to rein him in.

For anyone who knew John B. Stockton this memoir will bring back vivid memories of the genius who might well be the father of air cavalry. Yet there is also a tragedy here: It is a tragedy that Stockton's talent and creativity could not have been used by the Army for a full career in the senior officer ranks. We can only guess what the result might have been if this larger-than-life cavalryman had fit better into an institution that has a hard time assimilating "non-standard" people, no matter how talented.

To order this book please send your request to Mrs. Rita Stockton, 555 NE 34th Street #1811, Miami, FL 33137-4057, and please enclose your check for \$25.00 to cover cost and mailing.



ARMY AVIATION mailbox

Share your opinion on matters of interest to the Army aviation community. The publisher reserves the right to edit letters for style, accuracy or space limitations. All letters must be signed and authors identified. The publisher will withhold the author's name upon request. The opinions expressed are those of the authors, and do not reflect the opinion of ARMY AVIATION Magazine. Send letters to AAAA MAIL-BOX, 49 Richmondville Avenue, Westport, CT 06880-2000, Tel: (203) 226-8184, FAX: (203) 222-9863, E-Mail: magazine@quad-a.org.

Dear Editor:

The February article "Sinai Aviators" brought back fond memories of probably the best assignment in the Army. I was the force surgeon in Sinai in 1993 and 1994 and flew many hours in those old Hueys.

Perhaps the hours in NVGs looking at the thousands of stars and satellites overhead — and looking for pinnacles in the low levels of moonlight — were my best memories.

But one thing was very understated: we flew many, many medevacs during my year there. The excitement of flying low level at night, vibrating with top speed, waiting for the Israelis to give us clearance before we violated their airspace (and chanced a missile), landing at Bersheva hospital at a cramped, poorly lit helipad with a critical patient in my care, is hard to beat. I miss the wonderful pilots and crewmembers that shared that space and time with me.

Thanks for a great article.

Col. Glenn W. Mitchell
Command Surgeon
U.S. Southern Command
Miami, Fla.

Dear Editor:

What were we thinking? With the fielding of the Longbow Apache — the most avionics-intensive aircraft in the Army inventory — we decreased the number of avionics personnel that maintain the aircraft. The Apache armament technician's job (MOS 68X) has been expanded to include the aircraft electrician's (68F) and the avionics repairer's (68N) roles. This equates to three MOSs now being handled by one.

The natural progression would have been to increase the authorized number of 68Xs on the MTOE proportional to the number of other technician slots lost (2 68Fs and 3 68Ns), for a total of five. With the added workload and responsibilities it is imperative that something be done to alleviate the heavy burden placed on the 68X MOS. Instead, the aircraft mechanics (67R) increased by 10, but not the 68X. Why stop there? What was the justification?

Though the mechanical portion of the Longbow Apache did not significantly change, the armament/electrical/ avionics portion of the aircraft changed dramatically. Data from one of the two Longbow Apache units indicates that during the past six months there has been a dramatic increase in avionics, electrical and armament problems, while the mechanical problems remain consistent (other than the four SOF and ASAM messages).

All maintenance commanders experience a shortage of armament personnel on a daily basis, even when augmented by our supported AVIM. Supporting aerial gunnery has always stretched the armament platoon, with personnel supporting the FARP working 18-hour duty days and personnel at the hanger conducting unscheduled and scheduled maintenance. Availability of adequate armament personnel is always in question, especially when you add in the Army Crew Rest Program. The armament platoons desperately need additional personnel in order to function effectively on this highly technical and electronically advanced aircraft.

Capt. Darin C. Lewis
CWO 2 Israel Sanchez

Dear Editor,

I would like to make a couple of comments regarding your Flight School XXI article. On the surface, it appears that there are some advantages to the aviation community with the changes implemented by FS XXI. First, by eliminating the UH-1 and the OH-58, the school can combine resources and eventually can save the Army some money (which is hardly ever bad). Also, the new aviator will find himself only having to learn to fly two aircraft, instead of three. Obviously, the time spent getting used to a new aircraft can be used more constructively in their go-to-war (GTW) aircraft. The whole community might be better off with the majority of these changes to the program.

However, I believe the benefits are not without a price. First of all, I am sure basic combat skills (BCS) will be taught somewhere in the course, but the slides don't illustrate their importance. As a graduate of the aeroscout course, I can only hope that our latest aeroscouts will be taught these same BCS during their transition to the GTW aircraft and ACS. Also, if I remember correctly, I received around 160 hours of dual instruction during Initial-Entry Rotary Wing (IERW) training and nearly 60 more in the Kiowa Warrior aircraft transition, for a total of 220 hours. That means a graduate who leaves with 150 hours of flight training will be joining a new unit with 60 to 70 hours less than what has been the standard. That can't be better for the unit or the officer.

I am sure the officer will have more time in his GTW aircraft, and might even be a little more comfortable with his airframe. But let's not kid ourselves, the pilot will not be more experienced than the pilots Fort Rucker is producing now. I am sure that, years ago, when the new pilot had to fly the OH-58 or UH-1 at his first unit, 170 hours was enough to get the job done. That cannot be true today, with more technically demanding aircraft and flight procedures. Pilots will be less experienced and, in the end, will be farther away from becoming RL1s because they will get to their new units with a lot fewer hours in the sky and over the trees.

It appears that we in Army aviation will again use smoke and mirrors to justify fewer training opportunities and less flight time for our younger pilots. I must applaud any effort, however, to return instructor pilots (IPs) to units, increase GTW aircraft instruction time for our IPs (if it is not contracted out), and in the efficiency of getting lieutenants to their first assignments earlier in their careers. Give pilots more hours in total in BCS, ACS and especially in their GTW aircraft with night-vision goggles. I think that is what the field wants and needs.

Sincerely,
Capt. J. Dave Price
Old Fort Ord, Calif.

arrivals/departures

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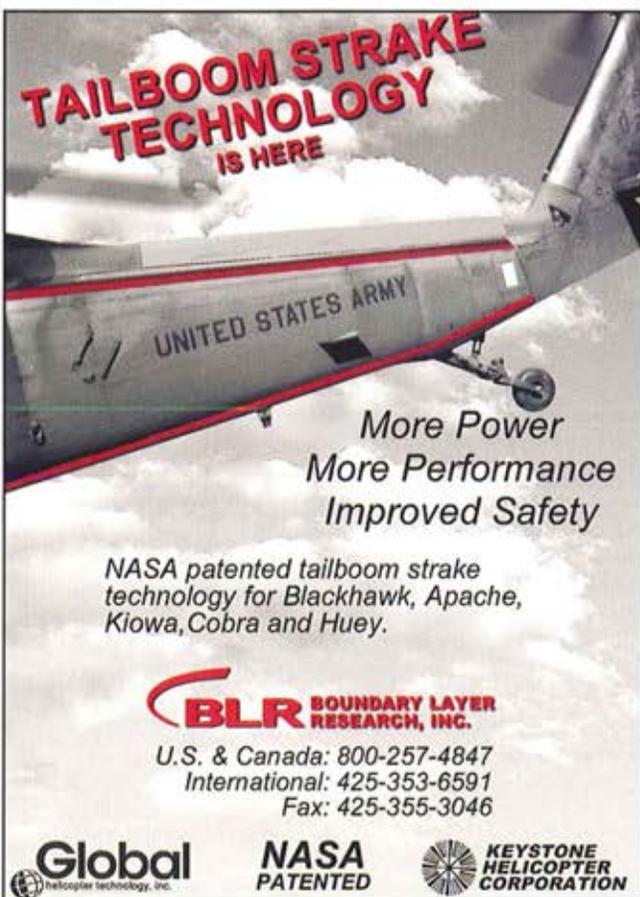
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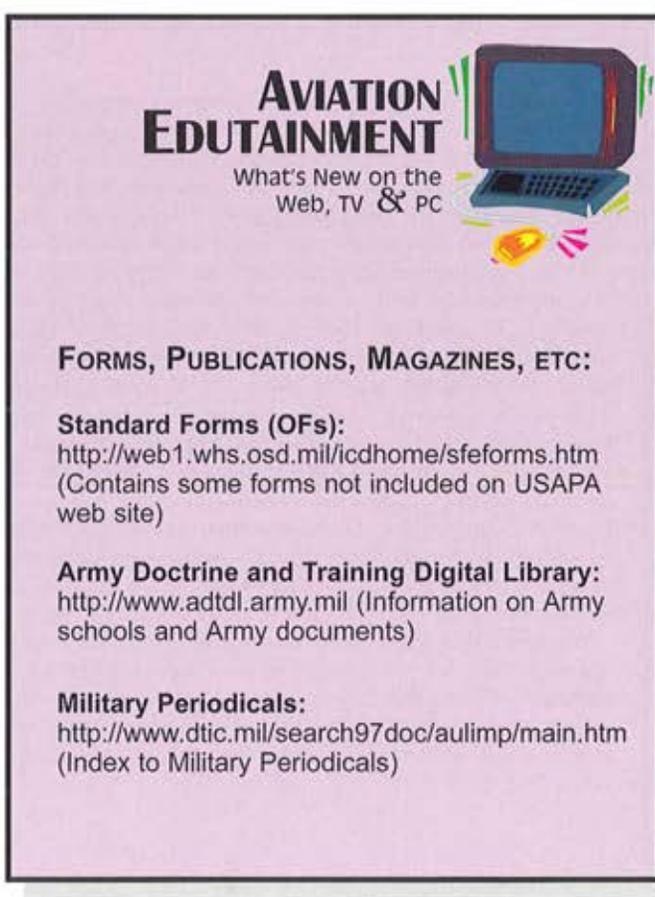
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Help us find our Lost Members. We'll give you an additional month on your AAAA membership free for each member you help us locate. Simply write, call or E-mail us with the Lost Member's current address. AAAA, 49 Richmondville Avenue, Westport, CT 06880-2000. Tele: (203) 226-8184; FAX: (203) 222-9863; E-Mail: aaaa@quad-a.org.

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Animalulu, Ifejika, SPC
Arnold, Richard E., LTC
Berry, Derrel R., SGT
Blunt, James R., MSG
Bolin, Kevin L., SPC
Bradley, Michael J., MAJ
Brautigan, Thomas R., WO1
Brucker, Todd E., CPT
Cassella, Kent P., MAJ

Castro, Rafael A., CSM
Chrzik, John P., SPC
Collins, Jack McRae, 2LT
Concepcion, Liliana, SGT
Coyle, Richard R., 1LT
Cubba, Joseph L., Mr.
Fel, Pablo, SPC
Fischer, Paul F., PVT
Geis, John P., BG
Goad, Jed L., MAJ

Hedgepath, Robert D., WO1
Henderson, Daniele, SPC
Hesse, Robert L., MAJ
Husted, Steven H., WO1
Ince, Nichole C., SPC
Ingold, Julie A., SPC
Jones, Thomas, SPC
Koch, Dustin, SGT
Kragenbrenbrin, Justin, SPC
Landry, Jacob R., 2LT

Lussier, Robert H.E., WO1
Lynes, Jeffrey G., 2LT
Maniscalco, Christopher, 1LT
McGill, Jason M., SPC
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Monllor, Carlos M., SPC
Morris, John A., 2LT
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Plumley, Amanda, SPC

Raush, Mark A., 2LT
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Reynolds, Brent A., WO1
Samora, James, SPC
Smith, Michah, SGT
Smith, Robert J., CW2
Truscott, Thomas H., SSG
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Wagner, Randy D., MW4, Ret.
Wise, Malcolm L., 1LT
Woodson, Marla A., WO1



Heritage Foundation

The recent AAAA Annual Convention in Fort Worth, Texas, was the venue for the presentation of a number of AAAA donations to worthy causes focused on preserving the history of Army aviation. Among them were the Army Aviation Museum Foundation based at Fort Rucker, Ala., and the Army Aviation Heritage Foundation based in Atlanta, Ga.

For many, many years AAAA has provided a \$1 per member contribution to the Army Aviation Museum. This year the amount was \$13,420. Accepting the check (below left) from AAAA President Maj. Gen. Carl H. McNair Jr. (Ret.) (at right) is Lt. Gen. Ellis D. Parker (Ret.), chairman of the Museum Foundation.

For the first time this year the AAAA National Executive Board also

voted to support the Army Aviation Heritage Foundation in a similar fashion. The foundation's mission is to find, restore and fly one example of each Army aviation aircraft. They take these aircraft around the country to airshows such as Oshkosh to help get the Army aviation story out to the public and promote our story through flight demonstrations of aircraft ranging from World War II-era L-4 Cubs through Vietnam-era Caribous and Cobras. Pictured above (right) is Michael J. Brady, president of the Heritage Foundation, accepting a check for \$13,000 from AAAA President McNair.



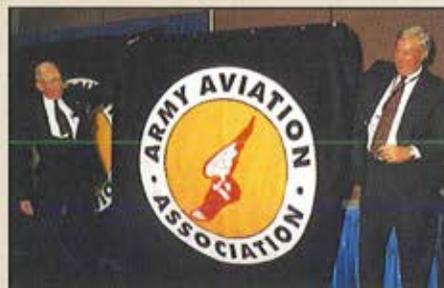
Museum Foundation

1999 TOP GUN AND TOP CHAPTER HONORED

The AAAA Annual Meeting held during the recent convention was the occasion to recognize outstanding achievement in recruiting new members to AAAA and chapter service to their members.

The top recruiter - "Top Gun" - for 1999 was Vice President for Membership of the Morning Calm Chapter, Korea, Mr. John Bae, who gained 693 new members for the chapter. John is pictured (left center) flanked by AAAA Senior VP and Membership Chairman Lt. Gen. Ellis D. Parker (Ret.) (left) and AAAA President Maj. Gen. Carl H. McNair Jr. (Ret.). Bae received an all-expenses-paid trip to the convention for his efforts. Also attending the event were second-place recruiter Mr. William J. Cannon, Aviation Center Chapter (below left) who recruited 611, and SGM Kenneth G. Rich, Colonial Virginia Chapter (left) who recruited 43 and finished fourth. Third-place finisher MAJ John C. Sauer of the Aloha Chapter recruited 78 but did not attend the convention.

The Top Chapter for 1999 was the Huntsville, Ala.-based Tennessee Valley Chapter. This chapter was outstanding in supporting local programs for its members, sponsoring a national event - the Joseph P. Cribbins Product Support Symposium, sustaining a strong Scholarship Awards Program and increasing membership. Accepting the award (above right) is Chapter Senior VP Mr. Mike Boyd, holding up the large AAAA banner the chapter was awarded by AAAA President McNair.



Health Care Strategy

Health care has been the number one issue for both The Military Coalition (TMC) and The Retired Officers Association (TROA) since the concept of Medicare subvention first came on the scene a decade ago. In the face of base closures, downsizing of military medical facilities and a rocky existence for TRICARE, we have consistently fought on three fronts for nationwide subvention, which the Department of Defense (DOD) now calls TRICARE Senior Prime; FEHBP as a high-priority option for Medicare-eligibles, but ultimately for all beneficiaries; and major improvements to TRICARE: We also strongly support a nationwide pharmacy benefit, with no enrollment fee, in effect adding a fourth front to our campaign. TMC has focused much of its attention on Medicare-eligibles — primarily World War II and Korea veterans — because they are the ones experiencing the greatest deprivation by being denied access to DOD's health-care system.

TMC and TROA have worked for years to sustain a solid reputation on Capitol Hill, and we can point with some pride to our contributions to several recent legislative successes — including COLA equity, Medicare subvention and FEHBP tests (which many said were impossible), special pay for the severely disabled, paid-up SBP, REDUX repeal, bumped-up active-duty pay raises and survivor benefits for forgotten widows.

Most of these victories resulted from solid support from the 30 organizations in TMC and other organizations outside of the coalition. Still, health care is the number one issue on your minds, and therefore it is our number one issue as well.

The congressional hearing cycle is already well underway, and predictions are that the House and Senate will attempt to pass their versions of the fiscal year 2001 National Defense Authorization Act (NDAA) before the Memorial Day recess. We have three opportunities in both the House and Senate to help shape the health-care initiatives before the House and Senate engage in conference negotiations to resolve the differences in the two bills. Once conference action begins, the negotiations are normally limited to the scope of the proposals approved in both bills. Currently, the only bills offered by senior Armed Services Committee members are HR 3655 in the House and S 2087 in the Senate [see summaries below]. Both fall far short of the provisions of the top bills TMC seeks.

In the House, the top of the line, no-compromise bill is HR 3573, with HR 2966 a close second. In the Senate, there is no counterpart to HR 2966, but S 2003 is the same as HR 3573. S 2013 has many good features as well. Push for any or all of these bills with your legislators, and if you agree about the special plight of the more than 1 million Medicare-eligibles, put special emphasis in your messages on solving that problem.

The joint chiefs of staff have recommended all of these upgrades, both as a matter of national honor to keep promises to retirees and to ensure that broken health-care promises don't continue to undermine recruiting, retention and readiness. The Clinton administration failed to accommodate those recommendations in its FY 2001 budget submission. Now it's up to Congress to find a way to do it.

Fortunately, there will be opportunities to upgrade the proposal during consideration by the full committee, during action on the floor of the Senate, and during conference negotiations between the Senate and House. I'll give you progress reports on these milestones so you can continue making timely contact with your legislators and urge them to seek inclusion of the more comprehensive features of S 2013 and S 2003.

The following summary provides details of all the health care bills that TMC knows are currently on the table. You will, of course, make up your own minds about these bills, but HR 2966, HR 3573, S 2003 and S 2013 are most likely to produce good results because they set a very high standard.

Health Care Legislation — 106th Congress

The following is a summary of all the current health care bills in numerical sequence in the House and Senate:

HR 113 (Rep. Cunningham, R-CA) would remove current numerical and geographic limits on FEHBP-65 test sites.

HR 205 (Rep. Moran, D-VA) would enable Medicare-eligible uniformed services beneficiaries to enroll in FEHBP on a worldwide basis.

HR 1413 (Rep. Hefley, R-CO) and S 915 (Sen. Gramm, R-TX) would:

- Expand Medicare subvention (TRICARE Senior Prime) to 10 additional locations with full-service military hospitals by Jan. 1, 2001;



LEGISLATIVE REPORT

Col. Sylvester C. Berdus Jr., (Ret.)

AAAA Representative to The Military Coalition (TMC)

- Expand the program nationwide across the remaining TRICARE Prime catchment areas no later than Oct. 1, 2002;

- Make TRICARE Senior Prime a permanent program and allow all TRICARE Prime enrollees who attain age 65 to "age into" TRICARE Senior Prime (currently, only those with military primary care managers are allowed such automatic eligibility).

HR 2966 (Rep. Shows, D-MS) would:

- Permit Medicare-eligible service beneficiaries to either enroll in FEHBP or remain in TRICARE indefinitely;

- Entitle members who entered the uniformed services before June 7, 1956, to fully paid lifetime health care upon retirement; and

- Set FEHBP premiums for post-1956 entrants under the same cost-sharing arrangement as federal civilian employees (government pays 72 percent, beneficiary pays 28 percent).

HR 3565 (Rep. Nethercutt, R-WA) would eliminate co-payment requirements for any enrollee in TRICARE Prime.

HR 3573 (Rep. Shows, D-MS) would:

- Permit Medicare-eligible service beneficiaries to either enroll in FEHBP-65 or remain in TRICARE indefinitely;

- Entitle members who entered the uniformed services before June 7, 1956 to fully paid lifetime health care upon retirement;

- Set the FEHBP premiums for post-1956 entrants under the same cost sharing arrangement as federal civilian employees (government pays 72 percent, beneficiary pays 28 percent); and

- Extend FEHBP to retirees under 65 and their family members.

HR 3655 (Reps. Skelton, D-MO; Abercrombie, D-Hawaii; and Taylor, D-MS) would:

- Expand the BRAC mail-order and retail-pharmacy benefit to all Medicare-eligible uniformed services beneficiaries, with no enrollment fee;

- Make permanent the TRICARE Senior Prime demonstration, effective Oct. 1, 2001, with nationwide implementation by 2006;

- Remove the reimbursement caps initially established in the demonstration program;

- Establish "Medigap" protections to facilitate an enrollee to revert back to Standard Medicare;

- Allow Medicare reimbursement to DOD on a fee-for-service basis;

- Extend the FEHBP-65 demonstration program for one year and allow current test participants to retain permanent FEHBP eligibility after conclusion of the demonstration;

- Remove the requirements for non-availability statements under TRICARE Standard;

- Reduce the catastrophic cap under TRICARE Standard from \$7,500 to \$3,000;

- Eliminate co-payments for active-duty personnel and their family members enrolled in TRICARE Prime;

- Expand TRICARE Prime Remote to active-duty family members; and

- Provide reimbursement for travel expenses incurred by active-duty personnel and their family members who must travel more than 100 miles to obtain specialty care.

HR 3697 (Rep. Vitter, R-LA) would establish a mail-order and retail-pharmacy benefit for Medicare-eligibles, with no enrollment fees.

S 2003 (Sen. Johnson, D-SD) would:

- Permit Medicare-eligible service beneficiaries to either enroll in FEHBP-65 or remain in TRICARE indefinitely;

- Entitle members who entered the uniformed services before June 7, 1956, to fully paid lifetime health care upon retirement;

- Set the FEHBP premiums for post-1956 entrants under the same cost sharing arrangement as federal civilian employees (government pays 72

percent, beneficiary pays 28 percent); and

- Extend FEHBP to retirees under 65 and their family members
- S 2013 (Sen. McCain, R-AZ) would:
- Urge priority enactment of cost-free health coverage for Medicare-eligible service members (and their families and survivors) who first entered service before June 7, 1956;
 - Expand Medicare subvention (TRICARE Senior Prime) nationwide, FEHBP-65 worldwide, and mail-order and retail pharmacy programs worldwide with no enrollment fee and make them permanent, effective in FY 2001;
 - Authorize Medicare-eligible retirees, family members and survivors to choose among enrollment in one of the three programs described above;
 - Eliminate all co-payments and fees for active duty family members enrolled in TRICARE Prime;
 - Authorize enrollment in TRICARE Prime Remote — with no co-payments, fees or deductibles — for family members accompanying active-duty personnel assigned to locations without access to TRICARE Prime; and
 - Establish a nationwide TRICARE Prime enrollment card to facilitate portability of coverage for enrollees who move between TRICARE regions.
- S 2087 (Sens. Warner, R-VA; Lott, R-MS; Hutchinson, R-AR; Levin, D-MI; Daschle, D-SD; and Cleland, D-GA) would:
- Extend the TRICARE Senior Prime, FEHBP-65 and TRICARE Senior Supplemental demonstrations to 2005;
 - Authorize the expansion of TRICARE Senior Prime to all major medical centers;
 - Lift the cap on the number of FEHBP-65 sites, while limiting enrollments to 66,000;
 - Expand the National Mail-Order Pharmacy program to all Medicare-eligible uniformed services beneficiaries (no retail pharmacy benefit);
 - Direct DOD to reduce the current \$200 enrollment fee for the pharmacy pilot program to a lower (unspecified) amount;
 - Implement TRICARE Prime Remote for all active-duty family members;
 - Remove TRICARE Prime co-payments for active-duty family members;
 - Implement TRICARE improvements in claims processing, portability and access;
 - Authorize \$100 million for custodial care (vice the current \$20 million in the DOD budget); and
 - Authorize an internal DOD and independent external study of creating a Military Retiree Health Care Trust Fund (patterned after the Military Retirement Trust Fund) to require DOD to pay future health-care costs and transfer the unfunded liability for those already retired, and funding the health care commitment, to the Department of Treasury to pay off over the course of 30 to 60 years.

Contacting Your Representative and Senators

If you like, TROA has offered its web site to contact to urge your legislator's support. In the left margin of TROA's home page (<http://www.troa.org>) click on "Lobbying Congress — Bills of Interest." Then select HR 2966, S 2013 or other bills you support, and use the buttons at the top to identify the cosponsors and non-sponsors from your state.

Click on the blue envelope to the right of your legislator's name to send an electronic mail message. Or, you can use TROA's toll-free Capitol Hill hot line to contact your legislators by calling (877) 762-8762 and asking the switchboard operator to connect you with your representatives and senators. In fact, why not do both?

Class Act's Day in Court

On March 7 the U.S. Court of Appeals for the Federal Circuit in Washington, D.C., heard oral arguments on the appeal of the Class Act Group's health-care lawsuit against the government. The group is appealing the case's August 1998 dismissal by the U.S. District Court in Pensacola, Fla.

Medal of Honor recipient Col. George Day, USAF (Ret) eloquently articulated the government's obligation to keep its health-care promises for the Class Act Group.

As it happens, an earlier case that day addressed the Drug Enforcement Agency's (DEA) failure to keep its financial commitments to a DEA infor-

mant. After hearing government arguments opposing the Class Act position because recruiter promises weren't binding, one of the judges castigated the government attorney, observing that the government seems to feel no more obligation to military retirees than it does to DEA informants.

On the whole, the court appeared sympathetic to the Class Act case, and with luck the court will render its decision by the end of April. For more information on the Class Act suit contact the Class Act Group at 32 Beal Parkway SW, Fort Walton Beach, FL 32448-5398, call (800) 972-6275, or e-mail lawsuit@emeraldcoast.com

Coalition Testifies on Health Care

On March 2 TMC put its oar deeply into the water at a health-care hearing before the Senate Armed Services Committee's Subcommittee on Personnel.

The 30 associations of TMC were ably represented by Ms. Sue Schwartz, associate director for government relations for the National Military Family Association, and Cmdr. Mike Lord, USN (Ret), executive director of the Commissioned Officers Association of the U.S. Public Health Service. Lord also co-chairs TMC's Health-Care Committee.

The TMC testimony addressed the need for a range of substantial and immediate improvements in DOD's TRICARE programs and particularly the building frustration of Medicare-eligibles who find themselves locked out of uniformed services health coverage. The thrust of the testimony was that the current proposal before the committee (S 2087) inadequately addresses the coverage retirees need and have earned. The bill (S 2087) covers a range of initiatives for active-duty and retired members, but entails far more modest upgrades for retiree care than envisioned in Sen. McCain's S 2013 or Sen. Johnson's S 2003.

By scheduling the four representatives of the Coalition and the National Military Veterans Alliance on the first panel of witnesses, the subcommittee ensured the DOD and service witnesses who followed would hear the associations' concerns.

Armed Services Committee Chairman Sen. Warner emphasized that medical care is the Committee's top priority, and stressed that S 2087 was a "marker" bill that had been introduced primarily to solicit comment. He indicated the committee would be willing to modify and expand S 2087 to better meet the concerns of older retirees if the Senate can identify the necessary funding.

It was all too clear from DOD witness statements during the hearing that DOD remains unwilling to go beyond the current demonstration programs to address the health-care needs of older retirees. The only commitment the assistant secretary of defense for health affairs was willing to make was to expand the FEHBP-65 test to two more sites this year.

Continued administration foot-dragging on this top-priority issue only reinforces what TMC has been saying for some time: we must look to Congress, not DOD, to take the leadership role in fulfilling the lifetime health care promise.

GI Bill Upgrade Sought

The Montgomery GI Bill (MGIB) benefits proposal would peg the monthly stipend to the average annual cost of a four-year public college or university. At present, the MGIB stipend is a static \$536 per month for 36 months of education/training. The total benefit today (about \$19,000) covers only about two years of the cost for a commuter student at a four-year public college, according to the College Board. Under the new formula, the stipend would increase initially to \$975 per month (for a total benefit of about \$36,000) and would be adjusted automatically each year, based on the College Board's index of college costs.

Despite a broad show of support, most in Congress remain skeptical whether the House and Senate Veterans Affairs Committees will be able to find the funding for this aggressive plan, and expect that whatever proposal is approved will likely be considerably more modest.

For TMC, the top funding priority must remain health care, but it is also clear that a significant GI Bill upgrade is long overdue. Historically, the MGIB has been one of the services' top recruiting incentives, and escaping the current recruiting and retention doldrums will require restoring the education value of the GI Bill, in addition to making good on government health-care promises.

New Chapter Officers

Aviation Center Chapter:
Maj. Robert M. Cumbie, VP Scholarship.
Bavarian Chapter:
Lt. Col. Daniel L. Garvey, President.
Iron Eagle Chapter:
Col. Mark S. Landrith

AAAA Soldier of the Month

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

Sgt. Deana L. Ansotegui
January 2000
(Savannah Chapter)

PV2 Brendon P. Thiede
March 2000
(Tennessee Valley Chapter)

AAAA Non-Commissioned Officer of the Quarter

A Chapter Program to Recognize Outstanding NCOs on a Quarterly Basis

Sgt. Veronica Y. Newton
3rd Qtr. 2000
(Tennessee Valley Chapter)

AAAA Distinguished Instructor of the Quarter

A Chapter Program to Recognize Distinguished Instructors on a Quarterly Basis

Ssgt. David S. Lane
2nd Qtr. 2000
(Colonial Virginia Chapter)

New AAAA Life Members

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Capt. Todd X. Bloch
Col. Donald S. Burke, Jr., Ret.
Lt. Col. John Campbell
SGM Jeffrey R. Culp
Col. George F. Francioni, Ret.
Lt. Col. Mark A. Grablin
1Lt. Colby Q. Hammonds
Col. Cecil B. Hengeveld, Ret.
Capt. James R. Kennedy
Capt. Scott A. Kobida
Maj. Jon A. Larsen
Msg. David W. Little, Ret.
Lt. Col. Richard E. MacNealy, Ret.
SSgt. Robert W. Maison
Lt. Col. Stuart A. Miller, Ret.
Sgt. Louis A. Monaco
Col. Stephen D. Mundt
Mr. Donald T. Munsch
Cdt. William Navarro
Maj. Gen. James H. Patterson, Ret.
Lt. Col. Richard L. Peters, Ret.
Capt. Billingsley G. Pogue III

CWO 4 William L. Ruf, Ret.
Capt. Wellington W. Samouce
Cdt. David A. Sarrette
Lt. Col. Kent N. Schvaneveldt
Msg. William E. Siples, Ret.
WO 1 Armando B. Torres
CWO 3 Alphonso Triplett Sr.
Lt. Col. William D. Walsh

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Levi J. Hebert (Silver)
Col. John R. Combs (Silver)
CWO 5 John H. Aberg (Silver)
CWO 4 (R) Jon P. Barker (Bronze)
CWO 4 (R) Brady N. Robinson (Bronze)
Maj. Donald G. Fallin (Bronze)
Capt. Thomas W. Bamford (Bronze)
Capt. Matthew F. Hanson (Bronze)
Maj. Adrian R. Farrall (Bronze)
Lt. Col. Barney Pultz (Bronze)
CWO 5 Delors Ross (Bronze)
CWO 5 Raleigh L. Voight, Jr. (Bronze)
CWO 5 Clifford J. Richmond III (Bronze)
CWO 5 James J. Kriskowski (Bronze)
CWO 4 Peter D. Streker (Bronze)
David E. Boyken (Bronze)
Lt. Col. Yvette J. Kelley (Bronze)
CWO 3 David K. Guarino (Bronze)
CWO 3 (P) John R. McLochlin (Bronze)
Capt. Bernie P. Miller II (Bronze)
Capt. Vicent H. Torza (Bronze)
Sfc. Jade L. Beranek (Bronze)
Maj. Robert L. Douthit (Bronze)
CWO 5 Gary J. Eisenbraun (Bronze)
Maj. Gen. Robert T. Clark (Bronze)
Lt. Col. Mark W. Barfield (Bronze)
Lt. Col. John H. Karaus (Bronze)
CWO 4 Ronald R. Thompson (Bronze)
Lt. Col. John S. Arnold (Bronze)
Lt. Col. Peri A. Anest (Bronze)
1Sgt. Frank T. Vigus (Bronze)
CWO 4 Dale R. Wilcher (Bronze)
CWO 5 Duane M. Moyer (Bronze)
Maj. Kirby E. Luke (Bronze)
CWO 3 Lawrence S. Lutz (Bronze)
Csm. Kenneth R. Barnett (Bronze)
Lt. Col. David S. Long (Bronze)
Maj. Todd M. Huderle (Bronze)
CWO 3 Dan A. Goddard (Bronze)
1st Sgt. Robert A. Fox (Bronze)
Capt. Kevin J. Byrne (Bronze)
Lt. Col. Robert J. Sova (Bronze)
Capt. Jan. B. Laux II (Bronze)
CWO 2 Jay M. Davis (Bronze)
Capt. Jeffrey D. Jack (Bronze)
1st Sgt. Carlos J. Roman (Bronze)
Capt. Lucas B. Rice (Bronze)
Sfc. Mark E. Church (Bronze)
CWO 4 Timothy K. Welsh (Bronze)
CWO 5 John S. Smolka (Bronze)
Capt. Heather M. Throne (Bronze)
Capt. Marc A. Wehmeyer (Bronze)
Maj. John P. Nathe (Bronze)
CWO 3 Damon P. Sanger (Bronze)

CWO 4 Kevin J. Lansdowne (Bronze)
Csm. Byong-Hyon Min (Bronze)
Maj. Steven P. Milliron (Bronze)
Capt. Michael J. Hosie (Bronze)
CWO 3 Shawn J. Hoban (Bronze)
1st Sgt. Dennis L. Middleton (Bronze)
Capt. Paul R. Miles (Bronze)
CWO 4 Francis T. Pollard (Bronze)
CWO 4 Richard E. Eppler, Jr. (Bronze)
CWO 3 John S. Bailey (Bronze)
CWO 3 Joseph K. Bays (Bronze)
CWO 3 Duane G. Crawford (Bronze)
Capt. Marc J. Cummins (Bronze)
CWO 2 Edward J. Ross (Bronze)
1st Sgt. David Vernon (Bronze)
CWO 3 (P) Jeffrey L. Morris (Bronze)
Capt. Grover J. LaPorte, Jr. (Bronze)
Brig. Gen. Robert E. Armbruster (Bronze)
Lt. Col. Ben H. Williams III (Bronze)
CWO 3 Kevin A. Etter (Bronze)
Sfc. David R. Fogg (Bronze)
Ssgt. Daniel A. Price (Bronze)
Sgt. Donald L. Stewart (Bronze)
Sfc. John S. Bell (Bronze)
Sgt. Jeffrey A. Cooper (Bronze)
CWO 3 Wayne M. Durosoko (Bronze)
Maj. Robert A. Eaton (Bronze)
Lt. Col. Gregory P. Gass (Bronze)
CWO 4 Oswald B. Ingraham, Jr. (Bronze)
1st Sgt. William G. MacMillian (Bronze)
Maj. Paul F. Grace (Bronze)
CWO 4 Patrick H. King II (Bronze)
CWO 2 Kris A. Rogers (Bronze)
CWO 4 Gary D. Braman (Bronze)
Lt. Col. Edward R. Stephenson (Bronze)
Maj. Mark T. Calhoun (Bronze)
Lt. Col. Brian L. Thoma (Bronze)
Lt. Col. Jonathan E. Lake (Bronze)
Col. John D. Rosenberger (Bronze)
Col. Benjamin Freakley (Bronze)
Brig. Gen. William G. Webster, Jr. (Bronze)

Aces

The following members have been recognized as Aces for their signing up five new members each.
Lt. Col. Kiyoyuki Takeda, Ret.

New AAAA Industry Members

Aero Simulation, Inc.
Fairfield Aircraft Inc.
Fatigue Technology Inc.
Helipro International
Olympus Corporation
Phantom Products Inc.
Precision Lift Inc.
SEA Wire and Cable, Inc.
Terma Elektronik AS

In Memoriam

Lt. Col. James Buchheister
Lt. Col. Richard A. Humes
Maj. James L. Stowell

AAAA Honorary Member

1st Sgt. Donald A. Buker, Jr. Ret.



Flying Tigers Chapter

Members of the 8th Battalion, 229th Aviation Regiment, (AAAA's Reserve Aviation Unit of the Year) — who call themselves the forward element of AAAA's Flying Tigers Chapter — found time during their deployment to Bosnia to bring a little sunshine into the lives of some local children. The unit's S-3, Capt. Jim Posey, designed a playground that he and other aviators then built for the Bosnian youngsters. Stateside members of the Flying Tigers Chapter did their part by sending three boxes of school supplies to Bosnia for distribution among local schools.

Lt. Gen. William Kernan, XVIII Airborne Corps commander, greets Maj. Gen. James Campbell, 10th Mountain Division and Fort Drum commander, at Wheeler-Sack Army Airfield on March 8. Campbell and more than 300 other soldiers returned after nearly eight months in Bosnia. — *Photo by Spec. W. Wayne Marlow*

North Country Chapter



Col. John W. Oswald Dies at 80

Col. John W. Oswald, a highly decorated Army aviation pioneer and retired Bell Helicopter executive, died April 2 in Fort Worth, Texas. He was 80.

Oswald was born April 20, 1919, in Indiana and enlisted in the Army after graduating from Purdue University. As a World War II liaison pilot he helped develop the tactics and techniques of operating small, fixed-wing observation aircraft over the modern battlefield. He also saw combat in Korea, and after that conflict was instrumental in defining the role of the helicopter in the pre-Vietnam War Army.

Following his 1963 retirement from the Army Oswald joined Bell Helicopter. In 1979 he received a presidential commendation for his work as director of the National Alliance for Business in Fort Worth, which raised money for charities. He was later inducted into both the Army Aviation Hall of Fame and the Fort Worth Aviation Heritage Museum.

Oswald — who is survived by his wife, two daughters and a son — was buried with full military honors April 19 in Arlington National Cemetery.

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Southern California



Members of the Southern California Chapter represented AAAA at the recent Helicopter Association International (HAI) convention, the fifth consecutive year the chapter has carried the AAAA flag at HAI. The chapter members attending were Don Prentiss (VP Programs), William Tresky, Beverly Jones, Jake Benjamin (President) Wayne Wright, Gloria Snyder, John Harris, Hedi Quesenbury and John Quesenbury.

AAA NEWS

NEW MEMBERS

<p>AIR ASSAULT CHAPTER FORT CAMPBELL, KY WO1 Michael J. Dandaneau 1LT Samuel L. DeOrnellas CW2 Collis L. Druley CPT Douglas S. Files SFC Ronald L. Grimard, Ret. 1LT(P) Michael S. McFadden SGT James N. Neel Ms. Sandra Petrochko CPT Brian R. Schaap CS3 Michael J. Simmons CPT Ciro C. Stefano MAJ Gregory E. Stewart CW4 David E. Unruh</p>	<p>WO1 Carl S. Greenwell WO1 Travis W. Grogan 2LT Chad S. Gross PV2 Ruben R. Gutierrez CPT Richard Hadnagy 2LT Mark D. Hall Mr. Tommie A. Harding 2LT Jason D. Henniger WO1 Dan J. Hiestand CW5 Donald R. Howerton LTC Vernon M. Huggins, Ret. WO1 Eric J. Hughes 1LT Jessica A. Jackson 2LT James T. June CW4 Kurt F. Kline 2LT Jeffrey M. Laing SSG Duan M. Lane II 2LT Dave M. Leach WO1 Steve D. Love 2LT Randy L. Lutz II 2LT Joseph Maccari 2LT Shane Manwaring 2LT Brian K. McCort Mr. Donald F. McDonnell WO1 Mark S. McKee 2LT Glenn C. McQuown 2LT Paul B. Mitchell 2LT Wendy K. Moore WO1 Steve T. Morris WO1 Brandy W. Nichols WO1 Jamie M. Niles 2LT Roy L. Nixon, Jr. 1LT Kasey K. O'Reilly 2LT Michael L. Osmon WO1 Gary S.F. Ossinger WO1 Timothy L. Parrish WO1 Shawn M. Patterson WO1 Cheyenne H. Perry WO1 Kathleen B. Poliak CPT Thomas L. Prescott 2LT Catherine K. Proietta 2LT Scott P. Puckett WO1 Trevor R. Reving WO1 Steven G. Rice 2LT Justin C. Rich 2LT Phillip D. Robinson 2LT Martin Paul Saiz 2LT John M. Schmitt 2LT Virginia L. Seigel 2LT Justin J. Shaffer 2LT Isaac S. Sjol CPT Michael K. Slowinski Mr. Charles H. Smith WO1 Ryan M. Smith 2LT Scott R. Smith WO1 Daniel W. Solis WO1 Scott H. Stradley 2LT Monica M. Strye WO1 Samantha L. Taber WO1 Thaver J. Thayer WO1 Eugene S. Thompson IV 2LT Joseph O. Tolentino 2LT Andrew C. Van DeWalle WO1 Eddie J. Walker SPC James L. Watkins WO1 Mitchell C. Watson WO1 James R. Watts 1LT Shane M. Weller WO1 Brent W. Welsch 2LT John P. Wietrick WO1 Anthony E. Wilbert WO1 John I. Williams, Jr. WO1 William M. Williams CPT Kenneth C. Wilson WO1 Robert H. Wilson Ms. Jane D. Wise 1LT Robert G. Wright 2LT Travis Wright WO1 Michael R. Young</p>	<p>CW4 George Q. Dugan MAJ Edward D. Jennings CW3 Phillip M. Miville</p> <p>BIG RED ONE CHAPTER ANSBACH, GERMANY CW3 James P. Campbell 1LT Cameron S. Curtis CW4 Mark M. Murdock CSM Kurt K. Pinero</p> <p>BLACK KNIGHTS CHAPTER WEST POINT, NY Cadet Jennifer C. Gauthier MAJ William D. Kuchinski CDT Povilas J. Strazdas CDT Kyle L. Upshaw CENTRAL AMERICAN CHAPTER SOTO CANO AB, HONDURAS CPT Daniel Y. Morris</p> <p>CENTRAL FLORIDA CHAPTER ORLANDO, FL Ms. Jayne E. Daens Mr. William Grigson Mr. Gregory B. Seavers Mr. Steve Testa Mr. Ronald J. Wimberley CW3 Mark A. Wright, Ret.</p> <p>CITADEL CHAPTER CHARLESTON, SC Cadet Joseph T. Forging</p> <p>COLONIAL VIRGINIA CHAPTER FORT EUSTIS, VA SSG Michael A. Avillion MAJ Clayton E. Brown SSG David S. Lane CSM Willie C. Lucas Ms. Victoria A. Reddell SGM Randolph T. Weaver, Ret.</p> <p>CORPUS CHRISTI CHAPTER CORPUS CHRISTI, TX Ms. Amber D. Johnson Mr. Ray D. Runnels</p> <p>DELAWARE VALLEY CHAPTER PHILADELPHIA, PA SFC Samuel D. McConney Mr. Kenneth Zaccagnini</p> <p>FLYING TIGERS CHAPTER FORT KNOX, KY SPC Branden L. Baer Mr. Hank R. Ballew Mr. Kenneth L. Berry CAPT Peter S. Fedak SSG Maple L. Little</p> <p>GREATER ATLANTA CHAPTER ATLANTA, GA CW3 Leann Fraka PFC Latny L. Llamazales Mr. Mike W. McClanahan</p> <p>GREATER CHICAGO AREA CHAP. CHICAGO, IL MSG Larry E. Hoenig</p> <p>HIGH DESERT CHAPTER FORT IRWIN, CA 1LT Billy J. St. Clair</p> <p>HUDSON-MOHAWK CHAPTER ALBANY, NY SFC Edward C. LaBoda LTC Michael C. Swezey</p> <p>INDIANTOWN GAP CHAPTER INDIANTOWN GAP, PA LTC Bedford F. Boylston</p>	<p>CW4 Joseph G. Francis SGT Noel Toro</p> <p>IRON EAGLE CHAPTER HANAU, GERMANY CW4 Kingsley W. Paquette</p> <p>IRON MIKE CHAPTER FORT BRAGG, NC SPC Wallace C. Andrews SPC Kevin W. Barratt 1LT Matthew P. Cashdollar CPT Larry Iwanski 1LT Jeramie D. Johnson CPT Jason E. Kelley CPT John O. Nugent CW4 David C. Page SFC Randy G. Patterson SPC Damon M. Robinson MAJ Daniel C. Selph CW3 David Williams</p> <p>JACK H. DIBRELL/ALAMO/ FORT SAM HOUSTON, TX CPT Robert P. Anders, Ret. Mr. Mike Carroquilla Mr. Tom Fitzgerald CPT Alvin R. Harris, Ret. Mr. William Havard Mr. Dan Heoger Mr. Thomas Jobe</p> <p>LEAVENWORTH CHAPTER FORT LEAVENWORTH, KS Mr. Randy T. Janssens MAJ Richard A. Pember</p> <p>LINDBERGH CHAPTER ST. LOUIS, MO Mr. Daniel C. Grossman</p> <p>MACARTHUR CHAPTER NEW YORK/LONG ISLAND AREA, NY CW4 David A. Lichtbach</p> <p>MINUTEMAN CHAPTER WESTOVER AFB, MA Ms. Susan D. Gagne Mr. Herb Iburg Mr. Stefan Martan Mr. J. Alex Rawling</p> <p>MONMOUTH CHAPTER FORT MONMOUTH, NJ Ms. Cyndi Carpenter CPT Craig M. Casucci Mr. John C. Dillie CW4 Robert V. Drapala CW3 Scott Franklin CW3 Stuart C. Gillarn Mr. Michael W. Hickman CPT John N. Metzler MAJ Robert F. Vicci LTC Betty J. Wiley</p> <p>NARRAGANSETT BAY CHAPTER N. KINGSTOWN, RI 1SG Donald A. Buker, Jr. Ret. SPC Heather A. Lemme Mr. Takanori Mitsui MAJ Charles E. Petrarca, Jr. SPC Brad L. Welver</p> <p>NORTH COUNTRY CHAPTER FORT DRUM, NY 1LT Michael E. Johnson SSG Howard W. Loken CPT Jeffrey S. Salerno</p> <p>NORTH TEXAS CHAPTER DALLAS/FORT WORTH LTC Gerald S. Coulson, Ret.</p>	<p>Mr. Tony W. Featherstone LTC James W. Hill, Jr., Ret. Mr. Dean Madden Mr. Donald T. McDevitt MAJ Kevin R. Smith LTC Junius I. Tanner, Ret. CPT Richard K. Wright, Ret.</p> <p>NORTHERN LIGHTS CHAPTER FORT WAINWRIGHT/ FAIRBANKS AK CPT Ray D. Kelley CW4(P) Richard J. Rylee</p> <p>OLD TUCSON CHAPTER MARANA, AZ Ms. Celeste L. Freeman CW4 Michael C. Hillwig Mr. Thomas A. Shtogren</p> <p>PHANTOM CORPS CHAPTER FORT HOOD, TX Ms. Doreen M. Almond Mr. Richard I. Brooks III LTC William H. Brown V MAJ Matthew M. Buret 1LT Erick W. Dickens III LTC William R. Fessler, Ret. CW4 Ramiro V. Guerrero, Jr. 1LT Mark E. Herold CW5 Marvin P. Humble MAJ Mark M. Jackson MAJ James D. Joiner SGM Guy R. Niles CW4 Gary L. Reddin CW2 Shawn R. Shevaller SFC Anthony P. Tavernier CPT Michael J. Weatherwax</p> <p>PIKES PEAK CHAPTER FORT CARSON, CO LTC Graham C. Davis</p> <p>RISING SUN CHAPTER CAMP ZAMA, JAPAN CW3 Michael J. Chickilly Mr. Yoshimi Hanazono Mr. Masaki Hattori Mr. Munenori Ishizuka 1LT Noritaka Ito Mr. Hideto Onaya Mr. Kiyomi Takahashi SGT Mechelle K. Vinson Mr. Noboru Yamauchi</p> <p>SAVANNAH CHAPTER FT STEWART/HUNTER AAF, GA SGT Deana L. Ansolegui CW3 David P. Campbell CSM Michael Marquez PFC Brian H. Yeagly</p> <p>SHOWME CHAPTER JEFFERSON CITY, MO CPT William B. Warren CW4 Robert W. Wilcox</p> <p>SOUTHERN CALIFORNIA CHAPTER LOS ANGELES, CA Mr. Ken Chrenow COL James A. DiGiovanna Mr. Terry Eyrolet Mr. Joseph Genchi Mr. Craig Hanes</p> <p>TARHEEL CHAPTER RALEIGH, NC CPT Eric Folkestad</p> <p>TENNESSEE VALLEY CHAPTER HUNTSVILLE, AL SGM Alfred C. Babb, Jr. Mr. Michael E. Baker Mr. Douglas H. Barclay Mr. John B. Bequette Ms. Chandra M. Bizzell Mr. Harold R. Brewer Ms. LaWanna J. Brown</p>
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Mr. Chris J. Lowman
Mr. Frank J. Machi
Mr. Mark M. "Sandy" Morrison
LT James F. Perry
LTC William B. Perry, Ret.
Mr. Jeff Schantz
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ROCHESTER, NY
SGT Laurel J. Turner

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COLUMBUS, OHIO
CW2 Gregory G. Barrow
CW3 Robert W. Bim-Merle III
SGT Gregory L. Branstool
SGT Christopher L. Deem
MAJ Andrew D. Morrow

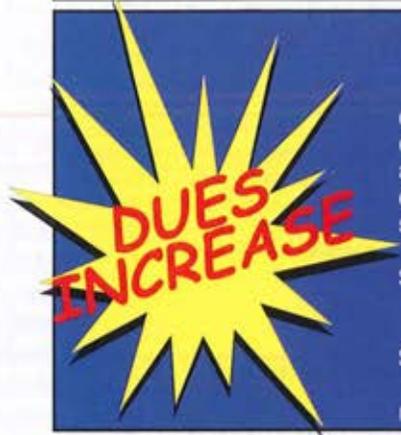
SSG Douglas A. Schmitt
CW2 Eric R. Sullivan

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CPT Stephane JY Beauchemin
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Mr. Hugh Whitfield
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Mr. Edward W. Wolfe, Jr.



ATTENTION AAAA MEMBERS

At the Oct. 11, 1999, AAAA National Executive Board (NEB) Meeting in Washington, D.C., the membership committee reported that a review of the current AAAA membership dues structure had revealed that some classes of dues had not been raised in over 20 years. Specifically, a series of slides comparing the AAAA with like and similar organizations showed that AAAA was consistently among the lowest if not the outright lowest in each category. After considerable discussion centering on the appropriate amount to raise dues, the following dues structure was approved to take effect July 1, 2000.

- Individual dues — Currently \$14 enlisted, WO1s, GS-8 DACs and below, Wage Board 12 DACs and below \$21 all others, to be raised to ... \$15 enlisted, and \$26 other
- Life member Dues — Currently \$300 to be raised to ... \$480
- Industry Dues to be raised from \$300 if company does under \$10M with government, and \$600 if over \$10M with government to be raised to ... \$475 and \$975.

Beat the increase and join AAAA, re-up, or get a Life Membership NOW! The NEB also voted to formally review dues structure every two years from now on.



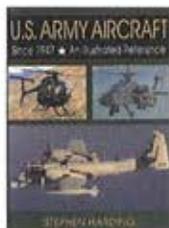
Wright Brothers Chapter

AAAA president, Maj. Gen. Carl H. McNair Jr. (Ret.) (*second from left*), was a featured speaker on Feb. 5 during the Ohio Army National Guard State Safety Standdown Day in Columbus, Ohio. Also pictured (*from left to right*) are CWO 2 Matthew R. Nicol, AAAA chapter president, CWO 2 Sullivan, chapter treasurer, Col. Ceneskie, Ohio SAAO, CWO 3 McDaniels, AASF #2 Safety Officer and 1st Lt. Murphy. This marked the latest effort in McNair's commitment to visit all CONUS chapters during his two year term.



- ☛ **Jun. 30 - Jul. 4.** Vietnam Helicopter Pilots Association (VHPA) 17th Annual National Reunion, Washington, DC. For additional information call Don Joyce, "Gold Eagle 4" (407) 870-5367.
- ☛ **Jul. 21.** AAAA Scholarship Executive Committee Meeting, National Guard Readiness Center, Arlington, VA.
- ☛ **Jul. 21-22.** AAAA Scholarship Selection Committee Meeting, National Guard Readiness Center, Arlington, VA.
- ☛ **Sep. 26-28.** AAAA Avionics Symposium, Ft. Monmouth, New Jersey.
- ☛ **Feb. 22, 2001.** AAAA Joseph P. Cribbins Product Support Symposium, Huntsville, AL.
- ☛ **Apr. 4-7.** AAAA Annual Convention, Charlotte, NC.
- ☛ **May 11-15, 2002.** AAAA Annual Convention, Nashville, TN.

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U.S. Army Aircraft Since 1947

An Illustrated Reference by Stephen Harding

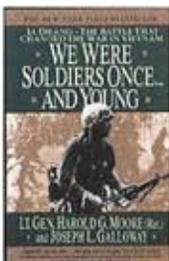
This is the only comprehensive guide to the 124 types of helicopters, fixed-wing aircraft and experimental flying machines used by the U.S. Army since 1947. The author includes information on aircraft serials, markings, weapon systems, operational history and other technical data. Illustrated with more than 220 color and black and white photographs. [Schiffer Publishing Ltd. Size: 8 1/2" x 11", 264 pages, hard cover, ISBN: 9-7643-0190-X].



Black Hawk Down

by Mark Bowden

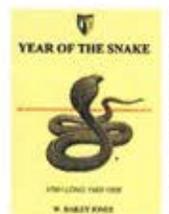
Black Hawk Down is the gripping story of the October 1993 battle in Mogadishu, Somalia. Bowden captures the harrowing ordeal through the eyes and words of the young men who fought the battle, a battle that ultimately led to the posthumous awarding of two Medals of Honor. [Atlantic Monthly Press, hardcover, ISBN: 0-87113-738-0]



We Were Soldiers Once... And Young

by Harold G. Moore & Joseph L. Galloway

We Were Soldiers Once... and Young presents a picture of men facing the ultimate challenge, dealing with it in ways they would have found unimaginable only a few hours earlier. It reveals man's most heroic and horrendous endeavor. [Harper Collins Publishers, Size: 5 1/2" x 8", 483 pages, paperback, ISBN: 0-06097576-8].



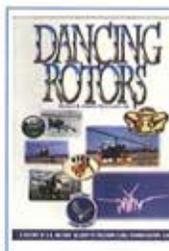
Year of the Snake

One Helicopter Pilot's Story of a Year in Vietnam's Mekong Delta, Vinh Long 1965-1966

By W. Bailey Jones

Based on the author's journal entries, Year of the Snake presents a gripping account of the daily activities of one of the first armed helicopter units to serve in Vietnam. Valuable for its insights on the war, its depictions of early gunship operations and its thoughtful analysis of armed helicopter tactics and techniques,

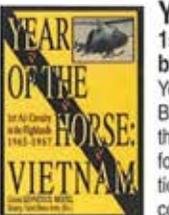
Year of the Snake is both an important historical resource and an entertaining memoir. [Shade Tree Publishers, size: 8.5" X 11", paperback, ISBN: 0-967073-1-6.]



Dancing Rotors

by Harry E. (Ned) Gilliland, Jr.

Dancing Rotors documents the evolution of U.S. military helicopter precision flight demonstration teams from 1948 through 1976. A wealth of very unique helicopter history, heretofore untold, is now within the reach of every helo enthusiast. [Aerofax, Inc., size: 8 1/2" x 11", 483 pages, paperback, ISBN: 0942548-57-4].



Year of the Horse: Vietnam

1st Cavalry in the Highland 1965-1967 by Col. Kenneth D. Mertel (USA, Ret.)

Year of the Horse: Vietnam is the day-to-day story of the 1st Battalion, Airborne, 8th Cavalry Division. Mertel pays tribute to the many acts of heroism of his men, who lived, worked and fought together in some of the world's most inhospitable conditions. [Schiffer Publishing Ltd., Size: 6"x9", 384 pages, hard cover; 59 color photographs, 9 maps; ISBN: 0-7643-0190-X].

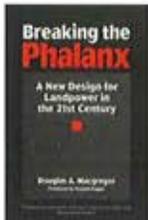


The Forgotten Hero of My Lai:

The Hugh Thompson Story

by Trent Angers

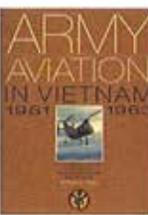
The true story of the Army pilot who refused to participate in a war crime, this book explains Thompson's actions during and after the My Lai massacre. It traces Thompson's life from his birth in Atlanta in 1943, through his adolescence in Stone Mountain, Ga., and his 20 years in the U.S. military, and examines in depth the less-than-honorable way the Army treated him following his courageous stand. [Acadian House, Size: 6" x 8 3/4", hard cover, 247 pages, ISBN: 0-925417-33-5].



Breaking the Phalanx

by Douglas A. Macgregor

This work proposes the reorganization of America's ground forces on the strategic, operational and tactical levels. The analysis argues that a new Army warfighting organization will not only be more deployable and effective in joint operations; reorganized information-age ground forces will be significantly less expensive to operate, maintain and modernize than the Army's current Cold War division-based organizations. [Praeger Publishers, Size: 6" x 9 1/8", paperback, 283 pages, ISBN: 0-275-95794-2].



Army Aviation in Vietnam 1961-1963

An Illustrated History of Unit Insignia, Aircraft Camouflage & Markings by Ralph B. Young

Army aviation came of age in Vietnam and experienced an incredible proliferation of unit insignia and markings on both its fixed- and rotary-wing aircraft. This comprehensive volume surveys the vast array of camouflage schemes and official and unofficial markings that graced Army aircraft during the early years of American involvement in Southeast Asia. Army Aviation in Vietnam, 1961-1963 is a must-have work for any serious student of Army aviation history. [The Huey Company, Inc., Size: 8 1/2" x 11", 124 pages, hard cover and paperback, ISBN: 0-9671980-0-3].

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Nominations are currently open for the ballot that will be distributed to all AAAA members in the Fall of 2000. Nominations should be postmarked no later than July 1, 2000. AAAA National Office for details at (203) 226-8184



The Army Aviation Hall of Fame sponsored by the Army Aviation Association of America, Inc., recognizes those individuals who have made an outstanding contribution to Army aviation. The actual Hall of Fame is located in the Army Aviation Museum, Fort Rucker, Ala., where the portraits of the inductees and the citations recording their achievements are retained for posterity. Each month Army Aviation Magazine will highlight a member of the Hall of Fame. The next triennial induction will occur in the Spring of 2001.

Col. Robert H. Nevins Jr. Army Aviation Hall of Fame 1977 Induction

Col. Robert H. Nevins Jr. commanded three aviation units in succession during the sixties, the 2nd Armored Cavalry Regiment's Aviation Company and the 4th Armored Division's 504th Aviation Battalion, both in Europe, and the 1st Squadron, 9th Cavalry, in Vietnam.

When he returned from Vietnam in 1968, Col. Nevins was assigned to the Armor School at Fort Knox as chief of the Battalion-Brigade Division. While on that assignment, he translated his personal knowledge, experience and expertise in Army aviation in general, and air cavalry in particular, into several courses of instruction for the school's students.

In 1970, after a second tour as commander of the 1st Squadron, 9th Cavalry, Col. Nevins was selected to organize and command in combat the 9th Air Cavalry Brigade. Then in 1972, he was named the second commander of the Army's first formal air cavalry combat brigade, in the 1st Cavalry Division at Fort Hood, Texas.

Throughout his aviation career he was a prime contributor to the art of air cavalry and instrumental in the advancement of doctrine, tactics and techniques to be used on the battlefield of the future. Col. Nevins retired from active duty at Fort Hood in August 1975.



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