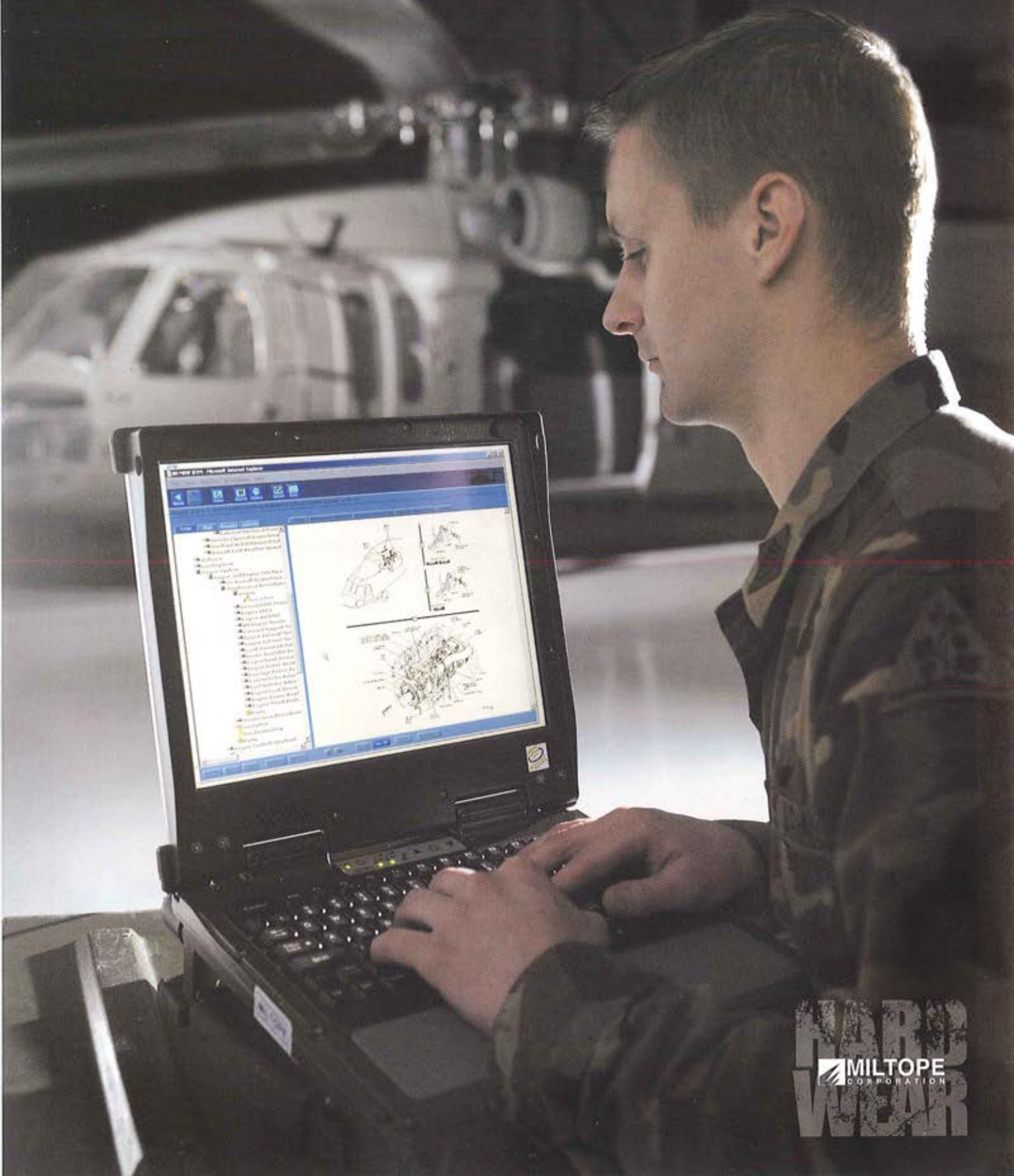


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Entry: be·nev·o·lence
Pronunciation: b&-'nev-l&n(t)
Function: noun
Date: 14th century
1 : disposition to do good
2 a : an act of kindness b : a general
3 : a compulsory levy by certain E to other
authority than the claim of prerog



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on the cover

Paid Advertisement. Miltope is the leader in ruggedized computing systems. The all new TSC-750M is the computer platform for PM TMDE's Maintenance Support Device, as well as for the Army's Aviation Mission Planning, Airborne Command and Control and Blue Force Tracker Systems. Photograph by Signature Advertising. *Caption provided by advertiser.*

Command Sergeant Major Kenneth O. Preston became the 13th sergeant major of the Army on Jan. 15, succeeding SMA Jack L. Tilley on the latter's retirement. Preston had been the command sergeant major for V Corps in Heidelberg, Germany, since April 2001. He also served as the command sergeant major for Combined Joint Task Force 7 in Baghdad, Iraq.



Opportunities to promote U.S. Army Reserve and Army National Guard officers during mobilization have been expanded, according to a new Army policy. Assistant Secretary of the Army for Manpower and Reserve Affairs Reginald Brown recently signed the policy change, which will impact deployed reserve officers. The policy for promoting officers to the ranks of captain through colonel in the Selected Reserve has been modified to allow immediate promotion for officers to a vacant position of a higher grade. The revised Army promotion policy satisfies the needs of the Army's manning requirement and is consistent with the Reserve Officer Personnel Management Act.

In December, Fort Rucker, Ala., initiated what is being hailed as the most progressive overwater training program in the world. The facility was dedicated on Jan. 21, and officially opened for training of Army aircrews (140 aviators have already been through the trial classes). The course has received some of the highest reviews of any Army aviation school.

Vision Technologies Kinetics Inc. has completed the acquisition of Miltope Group Inc., and its wholly-owned subsidiary, Miltope Corp, an established technology company operating in the computer and computer peripheral market. Miltope provides the ruggedized computer platform for Army aviation's Mission Planning, Maintenance Support Device, Airborne Command and Control and Blue Force Tracker Systems. Vision Technologies Kinetics, Inc. is a subsidiary of Vision Technologies Systems, Inc. (VTS). VTS and its subsidiaries provide engineering solutions, products, integrated systems and services in the Americas across the core business areas of marine, aerospace, electronics and land systems. This acquisition strengthens VTS's position as an integrated sub systems solutions provider to defense and commercial customers.

Jim O'Neill has been named deputy director of the Boeing-Sikorsky RAH-66 Comanche Program. O'Neill joins Comanche from Boeing Integrated Defense Systems, where he was general manager of naval weapons. O'Neill's background includes stints as a structural engineer on the F/A-18 Hornet program. He worked on several aircraft and research programs for 10 years before rejoining the F/A-18 program as an integrated product team leader on the F/A-18E/F development program in 1991. He held various management jobs on the F/A-18, with his last assignment being air vehicle manager.

Image processors manufactured by RGB Spectrum are a key component in the Army's upgraded AH-64 simulators. The Canadian firm CAE was tapped to design and implement the simulator upgrades, and chose RGB's SuperView video combiner and DualView scan converters for the display functions of the system. The processors are fed sensor imagery and host symbology created by CAE's RAVE software, and combine these in real time using chroma key technique.

On Jan. 16 the Army - in conjunction with the Massachusetts Institute of Technology, Lincoln Laboratory, Federal Aviation Administration and the U.S. Environmental Protection Agency - began the fourth in a series of tests designed to provide data for the development of an early warning system for chemical and biological events. The test was conducted in the vicinity of Oklahoma City, Okla., through Jan. 20, using a Cessna 182A as the test platform. No simulants were disseminated.

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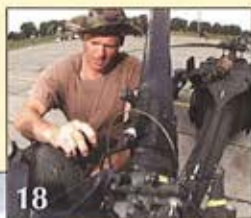
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"Freedom's Voice" — *Up and Running!*

By BG E. J. Sinclair

The U.S. Army Air Traffic Services Command (ATSCOM) became operational at Fort Rucker, Ala., on Aug. 15, 2003.

Chief of Staff of the Army Gen. Eric K. Shinseki approved the concept of a centralized headquarters for Army air traffic services (ATS) in 1999. The intent of creating the new command was to provide centralized oversight of the ATS mission area. The command formed provisionally in 2001 at U.S. Army Forces Command (FORSCOM), Fort McPherson, Ga., and over the past two years has worked diligently with FORSCOM, the Department of the Army (DA) Staff, the U.S. Army Aviation Center (USAAVNC), the Installation Management Agency (IMA) and other activities to develop its implementation plan, TDA and workable memorandums of agreement. The U.S. Army Air Traffic Control Activity (USAATCA), which formerly belonged to the USAAVNC at Fort Rucker, became part of the ATSCOM with its TDA/former mission incorporated into this new command.

ATSCOM's impressive activation ceremony at Fort Rucker on Aug. 28 was hosted by MG Julian H. Burns Jr. He read a greeting outlining the Army's "charge" to ATSCOM from LTG Richard A. Cody, the Army's deputy chief of staff for operations (G3).

Burns remarked to the assembled soldiers and guests that the "road ahead in this demanding year of beginning for the ATSCOM will indeed be challenging. The great soldiers and civilians of this organization will man towers, manage air space, maintain radars, sensors and equipment, and support major commands, as well as ATS operations for IMA. They will 'stand watch' over Army aviation operations, transmitting 'The Voice of Freedom' on the controlling airwaves of our military might!"

ATSCOM will provide "unity of purpose" and tie together an air-traffic control community, which has until today, existed in an isolated state. It will provide needed leadership, assess readiness, and address critical safety concerns now and into the future. ATSCOM's subordinate command relationship with FORSCOM will allow the new headquarters to more easily exercise its centralized authority for Army air-traffic services mission area activities.

The mission of this critical headquarters is focused on providing airspace and air traffic services support to Army warfighters, major commands (MACOMs) and installations. It will ensure safety of operation, standardization and controller/unit certification of Army air-traffic control through rigorous compliance and certification inspections. Further, the ATSCOM will develop and provide functional-area support and expertise to meet ATS and Army airspace requirements to operate in joint and combined environments, and in national and international airspace. The mission-essential tasks for this organization include:

- Executing ATS mission-area responsibilities and providing ATS subject-matter expert (SME) support to MACOMs and the IMA.
- Providing ATS mission support to combatant commanders, the reserve component and the USAAVNC.
- Executing the Army's ATS Quality Assurance Program for MACOMs and the IMA (in accordance with regulatory guidance).

ATSCOM



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■ Planning, operating and maintaining ATS for USAAVNC.

The ATSCOM is competently led by COL Don Adkins and CSM Johnny Hatten, both well-seasoned in aviation and air-traffic operations. The ATS community is comprised of more than 3,000 members, including active-duty, Reserve and National Guard soldiers, and Department of the Army civilians and defense contractors.

This new command has several critical air-traffic control units assigned, including the 1st Battalion, 58th Aviation Regiment (ATS), at Fort Bragg, N.C.; and the 1st Bn., 11th Avn. Regt. (ATS), and Company F, 58th Avn. Regt., (Maintenance) at Fort Rucker.

Over the past two years members of this command have served - and continue to serve - with distinction in support of contingency operations in Kosovo, Afghanistan, Kuwait and Iraq, as well as providing safe and efficient round-the-clock support to aviation training missions in the United States.

Great examples of the talented and dedicated soldiers of this command can be found in:

■ The ATS Control Manager of the Year, SFC Russell Lowrey, who excelled in his duties as ATC chief, Terminal Platoon sergeant and Kandahar Tower facility chief. Lowrey tirelessly trained and mentored subordinates, and was directly responsible for the success of countless aviation combat, combat-support and combat-service-support missions.

■ The ATS Technician of the Year, SPC Davananda Jodham, who distinguished himself while forward-deployed to Afghanistan in support of Operation Enduring Freedom. Serving Task Force Tiger with excellence, he aggressively maintained his unit's terminal platoon equipment under the most difficult of circumstances, ensuring mission success.

■ The many outstanding air-traffic controllers currently deployed to Iraq in support of Operation Iraqi Freedom, who have provided dedi-

cated ATS support in handling literally thousands of aircraft safely and effectively.

■ The talented air-traffic controllers who support aviation training at the USAAVNC around the clock, seven days a week, maintaining an unequalled safety record.

■ The highly trained ATS soldiers and civilians who perform stellar general and limited depot support maintenance on an array of ATS systems.

The ATSCOM stands ready to direct the ATS mission area, and to meet the 21st century Army transformation challenges, manned by competent professionals - active-duty military, reserve component members, DA civilians and defense contractors.

"Freedom's Voice!"



BG E.J. Sinclair assumed command of the U.S. Army Aviation Center and Fort Rucker, Ala., from MG(P) John M. Curran and became the 10th Aviation Branch chief on Dec. 10, 2003.

Maintenance Facilities Embrace OSHA Compliant Fall Protection Platforms.

From Alaska to Florida, Korea to Honduras, US military maintenance personnel are benefitting from a new fall protection system that greatly improves the efficiency of their aircraft maintenance program.

No longer are maintenance professionals required to risk life and limb while scaling the aircraft occupying their service bays. An innovative Phase Maintenance Fall Protection Platform eliminates that problem.

Precision Lift, Inc. and West Coast Weld Tech have teamed up to manufacture and deliver their mobile platforms to Chinook, Blackhawk and Apache maintenance facilities across the country. This fall protection system



was designed with direct input from military aircraft mechanics.

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Product Support and Reset: The **AMCOM** Perspective

By BG(P) Jim Pillsbury

As commander of the U.S. Army Aviation and Missile Command (AMCOM), I can definitely report with pride and pleasure that the fine team MG Larry Dodgen has left for me is poised to continue the superb AMCOM tradition as 2004 unfolds.

I would like to briefly illustrate what AMCOM is doing for our Army aviation warfighters on the twin fronts of product support and Reset.

PRODUCT SUPPORT

Weapon-system readiness will be AMCOM's focus as we continue the global war on terrorism. For example, the Aviation Engineering Directorate (AED) has been actively engaged on fleet sustainment and support, having recently sent a "Tiger Team" to assess aircraft-survivability issues. The team is working to introduce a number of new measures, including ways to protect hydraulic servos by way of ballistically-armored blankets.

AED has:

- issued 445 Airworthiness Flight Releases — for aircraft modifications;
- worked 37 Safety of Flight (SOF)/Aviation Safety Action Messages (ASAM);
- issued 63 Safety Risk Assessments/Airworthiness Impact Statements;
- established Battle Damage/Maintenance Repair Assessments/Criteria;
- established a maintenance information Web site;
- managed combat retirement life and time-between-overhaul (TBO) extensions;
- worked Blue Force Tracking, Mark 40/66 rocket-firing, gun-mount system and "brown-out" issues; and
- developed and qualified fixes for high-demand readiness drivers.

Earlier this month our Acquisition Center successfully sponsored "Industry Days," an information-sharing meeting on current and future aviation and missile operations. AMCOM, Corpus Christi Army Depot (CCAD), Letterkenny Army Depot, the Defense Logistics Agency and the Defense Contract Management Agency worked with our major suppliers in a customer-supplier relationship — meeting "one-on-one" at the weapon-system level.

Together, we identified progress on support for items that are currently critical to support Operation Iraqi Freedom (OIF), as well as to develop innovative solutions for future continued support. We focused on the commitments necessary for making the investments and business-process changes that will expand production capability and improve overall support.

I told Industry Day participants that they are critical to the success of our warfighter-support efforts, and that we face significant challenges that can only succeed by implementing extraordinary measures. I emphasized that together we can and must develop the solutions that will ensure our success.

Likewise, our Integrated Materiel Management Center (IMMC) draws a singular focus on the readiness of our Army aviation weapon systems. Let me highlight a few initiatives that IMMC is pursuing.

The IMMC has worked diligently to support deployed Apache, Black Hawk, Chinook and Kiowa Warrior warfighters and their ground-support equipment.

APACHE

During Operation Enduring Freedom (OEF) and OIF, IMMC has been working to make sure that eight AH-

64D units currently fielded and four more to be deployed this year have the contracts in place to reduce lead times, expediting spares support requirements and maintaining readiness.

Critically-needed items have been "pushed" by way of our 24/7 Operations Center and the daily morning update meetings of the "Redstone Arsenal Breakfast Club." In fact, it is not unusual for the dedicated Team Redstone workforce to work on weekends and holidays, ensuring that requirements are filled expeditiously. Further, the IMMC's Attack Directorate works to keep abreast of changing operational tempo (OPTEMPO) schedules and lessons learned from fielded units to improve customer support. We approach every action with an eye toward how the decisions that we make in Alabama ultimately affect our Army aviation soldiers on flight lines throughout the world.

AMCOM continues to work the Boeing-CCAD partnering contract that procures technical, engineering and logistical services and supplies in direct support of depot Apache overhaul and recapitalization. This effort reduces repair turnaround times while increasing the quality and reliability of repaired weapon systems. Not only will customer-centered performance measures be achieved, but AMCOM also expects to save more than \$1.3 million over the life of this contract. In addition, this contract surges production to meet increased OEF and OIF requirements.

We are producing the Army's only class IV Aviation Interactive Electronic Technical Manuals for all elements of aircraft repair, providing aviation warfighters with the most up-to-date technologies.



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BLACK HAWK

AMCOM and CCAD are working to reduce repair turnaround times and increase operating times for Army aviation's utility fleet. By way of best commercial practices at CCAD, COL Jim Budney and the depot workforce are focused on production planning, production control, materials management and process engineering for Black Hawk component and airframe goals, introducing new repair processes and methods.

Additionally, CCAD continues to work with General Electric as the T-700 Overhaul Center of Excellence and the Six Sigma cornerstone to:

- make sure that engines pass their engine run and test cells on a first-time basis;
- increase shaft-horsepower margins, which currently show a 60-percent improvement factor;
- use LEAN manufacturing to increase parts availability and produce an "engaged" work force;
- produce savings by using newly developed overhaul repairs; and
- improve fleet forecasting capabilities by way of improved material-management processes.

The GE and Army Partnering Team Agreement is an excellent example of cooperation that meets the daunting challenge of providing T-700 engine product support for ever-increasing OEF/OIF OPTEMPOs.

The Army aviation community also needs to be encouraged by the fact that our combined aggressive and relentless approach toward problem solving has earned respect as a role model for all to follow.

CHINOOK

Key to AMCOM's cargo-fleet support and maintenance has been the community's concerted efforts to stock critical components in-theater, thereby reducing order and ship times while maintaining high readiness levels.

We are working partnership contracts to provide and facilitate the logistics and engineering support that will drive down cargo fleet-repair costs and reduce repair-cycle times. Quick-procurement awards for critical components allow for optimum support and reduced lead times, while quickly returning first-class aircraft to flight status.

KIOWA WARRIOR

Our OH-58D Kiowa Warrior fleet continues to maintain high readiness levels in OEF and OIF, while facing increased flying hours, extreme operating environments and hostile fire.

We have an Integrated Process Team (IPT) that works hand-in-hand with our Contractor Logistics Support (CLS) counterparts in a "power-by-the-hour" sustainment effort. Specifically, this effort concentrates on maintenance, overhaul and support-strategy techniques.

With our product-support, maintenance and sustainment work, we are pursuing a number of Reset initiatives.

As an example, we have Forward Repair Activities (FRA) that provide depot-level work to reduce the logistical pipeline and avoid costs for safe and capable OH-58Ds Mast Mounted Sights and engines. Our FRA at Arifjan, Kuwait, has achieved the remarkable record of repairing 194 MMS items, saving an immeasurable amount of time and avoiding more than \$16 million in costs to OIF units.

RESET

Weapon system readiness is also drawing AMCOM's focus in the global war on terrorism by way of our Reset efforts, with one-half of the Army aviation fleet deployed and the other half set to redeploy. Put another way, virtually the entire fleet is either preparing for deployment to the OEF/OIF theater, or returning from the theater.

With our product-support, maintenance and sustainment work, we are pursuing a number of Reset initiatives.

Specifically, our Reset objectives are to return aircraft to predeployment condition, using a Special Technical Inspection and Repair (STIR) process that includes:

- inspection;
- cleaning;
- repair;
- mandatory parts replacements;
- application of all approved Maintenance Work Orders (MWO);
- phase maintenance;
- the repair of crash and battle damage;
- field redesigned parts and system modifications; and

- integration of the Blue Force Tracker.

On all OEF/OIF aircraft, we are installing desert kits and improvements, including:

- inlet barrier filters on engines and Auxiliary Power Units;
- improved particle separators;
- molded polyurethane rotor-blade boots; and
- windscreen covers.

COL Ray Woolery and BG Stu Gerald (Ret.) are on the point for this effort. They and their Project Manager (PM) Reset staff are working to return aircraft to the fleet as rapidly as possible.

In November the pair headed an 11-member team that visited the site of every OEF/OIF Army aviation unit, for an on-the-ground assessment of the awesome logistical challenge we face.

One of the keys to helping us meet our logistical challenge will be the Reset PM's optimal use of all government and industry repair and production sites worldwide, as well as a long-lead requirement timeline to efficiently and effectively support Reset operations. Additionally, Reset operations must be in sync with unit deployments, redeployments and training requirements.

Last, I want to emphasize the unique capabilities of our Aviation Classification Repair Activity Depots (AVCRADs) — the 1107th and 1109th. These two units have worked mightily to help us improve readiness, reduce costs and provide superb "go-to-war" skills. For example, the 1109th has been using Large Area Maintenance Shelter, or LAMS, in Kuwait. These LAMs, and the AVCRAD soldiers working in them, offer aviation units on-site facilities that provide quick maintenance and return to unit capabilities.

As our Army continues prosecuting the global war on terrorism, AAAA members can be assured that AMCOM will continue working closely with PEO Aviation and the Aviation Center to provide the best possible product support and maintenance to our warfighters.



BG Jim Pillsbury is commander of the U.S. Army Aviation and Missile Command at Redstone Arsenal, Ala.

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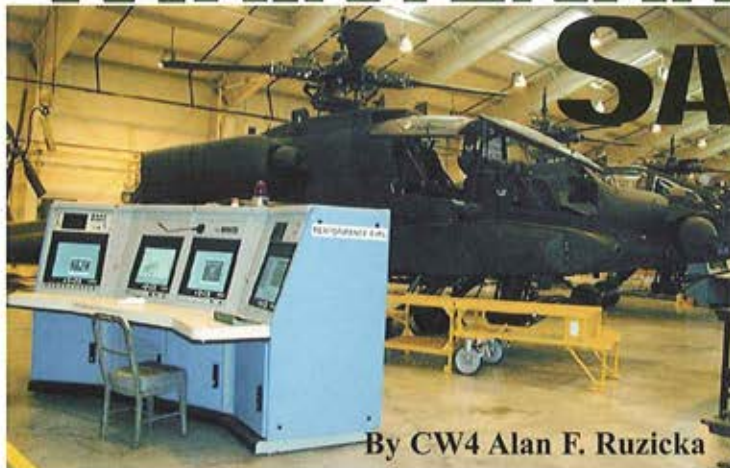
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The MAINTENANCE SAGE

Anyone who spends time on any flightline, with any aircraft, has often been exposed to a certain type of maintenance expert. This expert seemingly has some kind of supernatural power to glimpse or feel an aircraft fault and make the correct call for the component repair or system diagnosis.



By CW4 Alan F. Ruzicka

One example of how these supernatural experiences are applied would start when a flightline maintainer, often called a crew chief, approaches the maintenance expert, "the Maintenance Sage," and reports a problem that does not fit the clean fault-isolation procedure (FIP) in the manual.

The Maintenance Sage, interrupted at some other important task, asks a few questions of the crew chief to evaluate if the Sage's input is really required or if the crew chief is just lacking some basic knowledge or skill. After a few moments of interrogation of the crew chief, the Maintenance Sage determines that a simple flightline diagnosis is in order.

Abandoning the important task that was being worked prior to the interruption, the crew chief (and more than likely with the assistant crew chiefs in tow), follows the Sage out to the problem aircraft. There at the problem aircraft, the Sage commands the crew chief or crew chiefs to show the Sage the mysterious maintenance problem that is not specified in the manuals.

As if on cue, the mysterious aircraft fault shows itself during the crew chief's demonstration and the Sage eyeballs the symptom with silent, thoughtful curiosity. Almost like a faith healer of old, the Sage feels the aircraft by fiddling with a few knobs and dials, all the while observing and mentally cataloging results. These observations might be in the form of reading and deciphering onboard dig-

ital readouts, or observing the operation of the system in the degraded state. Looking around, listening for the abnormal and feeling for the unusual, the Sage starts piecing together a troubleshooting method.

Regardless of the method derived from this test, the Sage evaluates the aircraft fault with smooth contemplation. Not really saying much or taking notes, the Sage conducts a series of tests that are not written in any manual, but are well known among the experts. After what seems like just a few minutes, the Sage gives the crew chief the "cut" signal and silently meditates by the aircraft. Around the aircraft, crowds gather with great anticipation, waiting (often anxiously) for the Sage to officially pronounce what the system fault could be.

For the crew chiefs, properly diagnosing an aircraft fault not only saves the Army money, but some maintainers are thinking that today might actually be a normal 10-hour day. Looking around to make sure everyone can hear the anxiously awaited pronouncement, the Sage announces that the fault is in an obscure relay or system, that the repair is buried in a specific publication, and that the repair is in a special procedure that was approved but has never made it to the manual for implementation.

After making the official pronouncement, the Sage stays with the project until the crew chiefs are back on track using the technical resources that they are familiar with. The Sage ensures that the crew chief fills out a

DA Form 2028 (Recommended Changes to Publications and Blank Forms) and submits it to the proper headquarters. The 2028 will help improve the FIP in the manual. Ensuring that there is no more training to be conducted concerning this repair, the Sage returns unceremoniously to the original task. A short while later, one of the crew chiefs stops by to let the Sage know that the aircraft is repaired and ready to fly, and to say thanks for the troubleshooting help that saved everyone's time.

The Source of Sage Wisdom

The result of this little interaction among the Maintenance Sage and the puzzled crew chiefs is that the aircraft is quickly returned to an airworthy condition, and the time and expense of a protracted repair procedure were quickly eliminated.

So, how did the Sage do it? Where did the Sage get the technical training to make that kind of aircraft maintenance diagnoses? What procedures did the Sage use to reach the conclusion that an obscure component was the problem? Why couldn't the crew chief diagnose to the level of the Sage? This article will hopefully provide some answers to some of those nagging questions.

Building the Foundation for Aircraft Troubleshooting

How does the aviation maintenance soldier acquire the attributes of troubleshooting proficiency, know-

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ledge and skill? Well, it starts from the beginning of the soldier's technical training at the U.S. Army Aviation Logistics School (USAALS) at Fort Eustis, Va. For the scout/attack helicopter maintainer, fault-isolation procedures (what is called troubleshooting everywhere else in the aviation world) are embedded in almost every training task conducted.

Using the OH-58D, AH-64A and AH-64D armament/electrical systems Initial Entry Training (IET) as an example, student soldiers are exposed to and learn about the aircraft system through a series of presentations and simulations. Some of these presentations are instructor guided or individually learned by using computer-based training, often referred to as Interactive Media Instruction (IMI).

After this exposure, student maintainers have a chance to practice operating the system through a classroom simulation. These simulations allow for a fully interactive response to the student soldier's inputs that replicate the aircraft 100 percent, in some cases. Results in the classroom and in the field show that having the confidence to operate the individual aircraft system allows for improved fault diagnoses by not identifying an operator error as an aircraft system fault.

Once the student maintainers have had a chance to practice operation and learn where all the big pieces to the aircraft system are, the class is then transitioned to an actual "hands-on" practical training session. For the armament maintainer, this training is predominantly conducted on a maintenance-training device. These devices are typically real aircraft that have had electrical relays placed throughout their airframes to open circuits and fail critical aircraft systems. Exposing student soldiers to a real failed aircraft system allows for the transfer of learning by applying memorized system descriptions to actual aircraft-repair procedures, then gaining knowledge and skills through that experience.

Fault Isolation Training, Initial Exposure

Troubleshooting training in earnest for IET soldiers really starts at the maintenance-training device. Here the students typically work in small, two- to four-person teams and are given an aircraft fault from the

aircraft's logbook. The first task is to conduct a real maintenance operational check (MOC) of the specified system — with no faults applied — to ensure that all the student soldiers see how the system is supposed to look once the repair is completed. Once the MOC is conducted and all the student soldiers see "what looks right," the instructor inserts a fault into the maintenance-training device.

Once the fault is inserted, the student soldiers conduct the MOC again, but this time discover a problem while the aircraft system is being tested. Having discovered the fault, each student, in concert with other team members, searches for and starts applying an FIP. In the conduct of these fault-isolation procedures for the armament maintainer, the use of a circuit tester (multimeter) or specified external test equipment is required for 90 percent of the electrical training conducted at USAALS. Under the guidance of the instructor, the students learn how to select the proper FIP, and then use the correct tools or test equipment to diagnose or troubleshoot the defective system.

With the cause of the system fault discovered, the student maintainers move to a non-powered clone of the maintenance-training device and conduct the actual repair to the component or system wire harness. After the repair is completed to standard the class moves back to the powered maintenance-training device to conduct the final power-up MOC to ensure the repaired system is fully functional. Throughout this training event the student maintainers are continually challenged to apply classic troubleshooting methods and procedures to properly fault-isolate the maintenance event. What is really remarkable about this approach is that all this training can be achieved quickly by students who have little or no maintenance experience at all prior to coming into the Army.

Troubleshooting Training after IET

What happens after the new aircraft maintainer hits the aviation unit full of all the skills, knowledge and experience that IET has passed along?

As far as troubleshooting training or further techniques in fault isola-

Maintenance Sage cont.d. on pg 31

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Black Hawk Down: Scheduled Maintenance and the UH-60

By Wade Townsend



As the UH-60 Black Hawk has evolved, becoming more technologically sophisticated and operationally capable, the preventive-maintenance system that drives scheduled maintenance for the aircraft has changed little.

Increasingly, in a post 9/11 environment, units are required to do more, often with fewer aircraft. Army aviation is now facing unprecedented fiscal, logistical and operational challenges. This article discusses a proposed new strategy for Black Hawk scheduled maintenance that will give the aircraft the edge it needs for future combat.

THE ARMY CHALLENGE

Army Transformation is currently under review by the Army's senior leaders. One thing is clear, however: Change is in the offing.

The operational requirements thrust upon commanders in Afghanistan and Iraq highlighted the need for improved operational flexibility at high operational tempos (OPTEMPOs) and improved maintenance efficiency. Status quo cannot achieve what is required.

The Utility Helicopters Project Manager is engaged in the development of a new scheduled maintenance system for the Black Hawk. It offers 200 additional flight hours, extending the maintenance cycle from 500 to 700 flight hours, and is extremely robust at high OPTEMPOs. It is a comprehensive change to the current scheduled maintenance system and, if approved, will require a cultural change in Black Hawk maintenance management.

Army maintainers and logisticians have had their hands on this new system during its development. Limited testing has demonstrated that the basic characteristics of the new system are viable, and that there are virtually no additional resources required for implementation. Engineers from the Army and Sikorsky Aircraft Corp. (manufacturer of the Black Hawk) have reviewed the system and their recommendations have been incorporated. The concept is now in the process of being presented to senior aviation leaders for their consideration.



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A full-up operational test of the new system at an active Army aviation unit may be a path ahead. On the other hand, the new system is low technical risk, and could be implemented on a rolling basis (e.g., after RESET) and monitored as required. A decision to implement the new system will come at a critical time for Army aviation and the Black Hawk.

THE SIKORSKY DESIGN: A BASIS FOR CHANGE

During the design of the Black Hawk, Sikorsky used an analytical process known as Reliability Centered Maintenance (RCM) to determine Preventive Maintenance (PM) requirements for the new helicopter. Engineers identified component- and system-failure modes, and mitigated the associated risk either through design (e.g., redundant systems, "over-designed" components) or inspection for pre-failure/failure conditions (so-called "on-condition" maintenance). Some components that did not affect safety were allowed to fly to failure.

In theory, this approach allowed components to achieve their inherent reliability before being removed from the aircraft. Conditional maintenance inspections were "packaged" in common intervals that incorporated standard design margins of safety. In the absence of any maintenance history, some inspection-interval determinations were based upon test or "default" data. However, 25 years after the introduction of the first Black Hawk, except where new design may have dictated otherwise, many preventive maintenance inspections are still based upon the original engineering assumptions and analyses. Additionally, numerous PM tasks have been created by Safety-of-Flight (SOF) inspections and Aviation Safety Action Messages (ASAMs).

The combined effect has been to increase the maintenance burden on soldiers in the field. However, inherent in the original design is a means to an end. A deliberate examination of PM tasks, including engineering requirements and packaging or risk-mitigation strategies, is a means to effect change in preventive maintenance.

ALTERNATIVE SCHEDULED MAINTENANCE (ASM)

The RCM risk-mitigation strategies for the Black Hawk are directly linked to the packaging of maintenance inspections, which reflects the Army's mode of operations and logistics-support infrastructure. Packaging can be adjusted to optimize operational requirements if the inspection intervals don't violate engineering constraints.

ASM is essentially a repackaged system, and is considered a low technical risk for this reason. It consists of a Preventive Maintenance Daily (PMD), a Preventive Maintenance Service (PMS) and a Phase Maintenance Inspection (PMI). The PMD is comprised primarily of repackaged 10-hour/14-day PMS-1 inspection tasks. The PMS is performed every 35 hours (no calendar component) and is comprised primarily of repackaged 30-hour/42-day PMS-1 inspection tasks. The PMI is comprised entirely of repackaged 500-hour PMS-2 inspection tasks. Nearly every inspection task in the PMI "moved to the right" (i.e., from 500 to 700 hours) and required engineering approval.

THE PMD

The PMD is performed by the Black Hawk's crew chief (one person/45 minutes) and generally gets favorable comments from the field. It is a "maintenance preflight" that consists of visual inspections and concentrates on flight-critical aspects only. The PMD is good for seven days if the aircraft is not flown, and can be pulled at the end of the mission day or before the first flight of the next mission day.

THE SPLIT PHASE

The PMI is unequally divided into a "light" phase (PMI-1) and a "heavy" phase (PMI-2). It is estimated that a PMI-1 would take no more than 21 calendar days to complete, and that a PMI-2 would take no more than 41 calendar days to complete. The interval between phases is 350 flight hours.

The light phase is a major advantage of ASM. It can be performed in the field and completed in a relatively short period. It also mitigates risk for older airframes. The light phase is another opportunity for maintenance that occurs sooner (24 months) than the current

PMS-2 (36 months) at normal OPTEMPO.

The main concern expressed by users in the field is that the duration of the light phase could be extended because of time awaiting parts, thus compromising the overall effectiveness of ASM. Parts support will likely be the same under ASM as the current system.

The current PMS-2 phase inspection takes an average of 62 calendar days to complete. A significant part of that time is now being used to buffer supply-system response, which usually runs concurrent with phase maintenance. ASM will increase the amount of time available to buffer supply response without impacting the flow of aircraft into phase. This is possible because the same amount of maintenance (PMI-1 + PMI-2 = PMS-2) is spread over an additional 200 flight hours. Therefore, there is additional time between phases, over and above the 62 days currently being expended, to buffer supply-system response. The chance of having two aircraft in phase at the same time is significantly decreased under ASM for this reason.

In addition, there is considerable evidence that the likelihood of awaiting parts for a light phase is relatively low. The light phase includes Area 1 (cockpit); Area 2 (cabin) minus flight controls; Area 3 (transition); and Area 4 (tail cone) minus drive shafts, bearings and flex couplings. The vast preponderance of time awaiting parts is for Area 5 (tail rotor pylon) and Area 6 (main rotor pylon), which are part of the heavy phase.

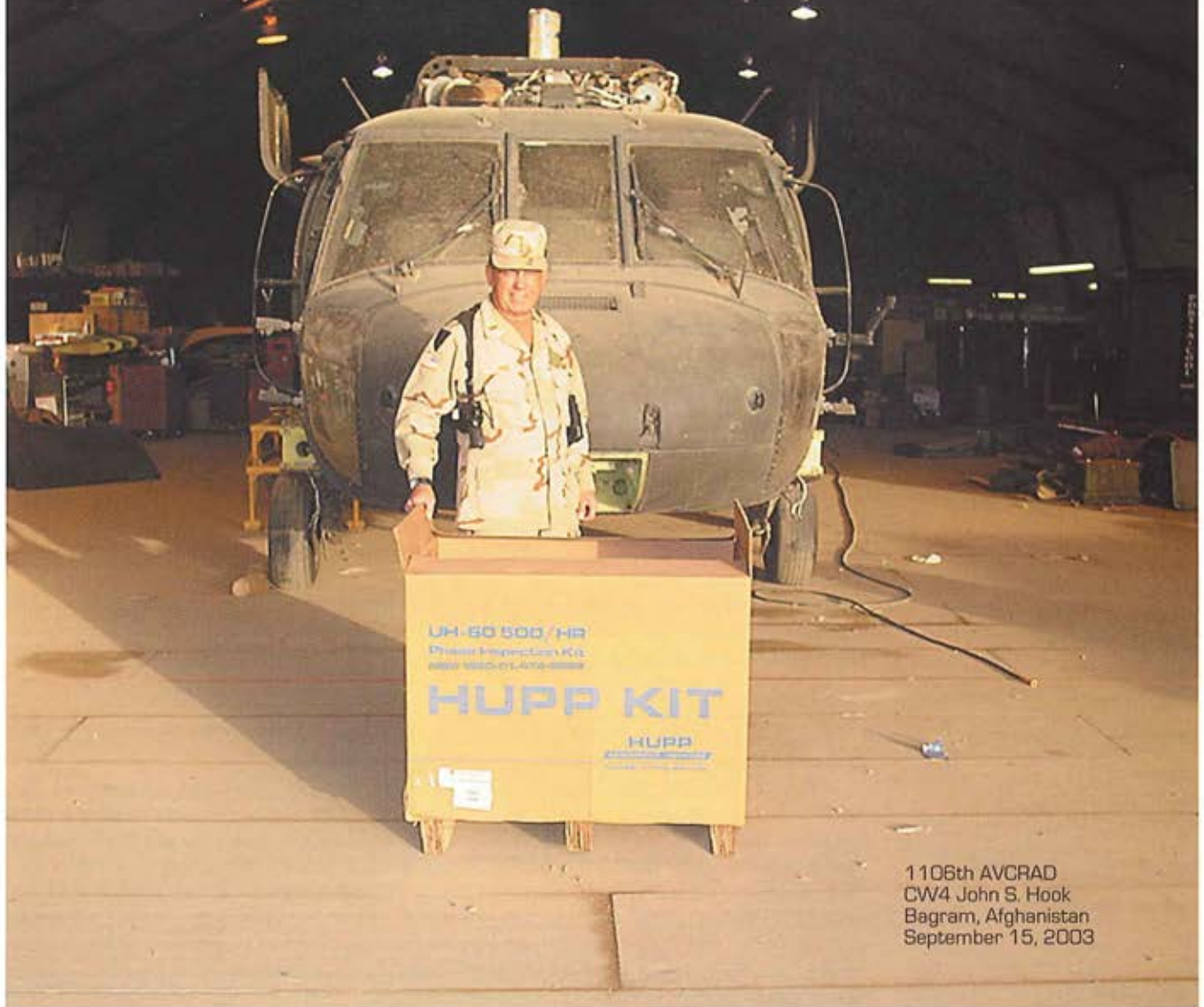
FINAL THOUGHTS

ASM provides a framework for a continuously evolving maintenance system that responds to change. When combined with such other evolving programs as Health Usage Monitoring System (HUMS) and Maintenance Management Information System (MMIS), ASM promises to enhance the Black Hawk's sustainability. The UH-60 is a superb aircraft that is inherently capable of sustaining higher operational availability and a much higher OPTEMPO.



Wade Townsend is a senior engineer for CAS Inc., supporting the Utility Helicopters Project Management Office at Redstone Arsenal, Ala.

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Sustained Aviation Operations in a

Desert Environment

Part I

By LTC Laura Richardson and CPT Tony Hudson



The real test for every Army aviation unit is its ability to launch aircraft, recover them and then launch them again. Sustained aviation operations in a desert environment create some very unique challenges in completing this test successfully. Unless these challenges are recognized before deployment and unless resources are allocated early on, long-term operations will become unsustainable. As a battalion commander and aviation unit maintenance (AVUM) company commander for a UH-60L battalion in Operation Iraqi Freedom, we can attest to the unique challenges we've faced while operating in a sustained desert environment.

The following are lessons learned with 5th Battalion, 101st Aviation Regiment, during the first 90 days of combat operations in Iraq. While the experience is strictly devoted to the UH-60L airframe, much of the information can be applied to all helicopter types.

THE CHALLENGES

FM 3-04.500 (FM 1-500), "Army Aviation Maintenance," provides doctrinal guidance concerning aviation-maintenance organizations and functions.

Chapter 7 speaks specifically to the challenges posed by desert operations, and says sand and dust can easily cause failure of such items as cyclic and collective electrical switches, digital-entry keyboards, radio-tuning knobs and circuit breakers. Sand erosion causes wear on rotor heads, the leading edges of rotor blades, Teflon bearings and all turbine engine blades. Blowing sand gradually degrades optical instruments and wind-screens by pitting and scratching. Sand, dirt and dust accumulation on oil-cooler surfaces creates loss of cooling efficiency, and when mixed with oil forms an abrasive paste. Lube fittings and bearing seals require frequent inspection. The bottom line is that desert operations can be a nightmare for aviation maintainers.

As we had anticipated and found, the two most significant areas of increased maintenance were the rotor blades and turbine engines. These items multiplied the maintenance workload by several times, depending on if we were staging out of the sand or a hardstand, and we also found that pilot flying techniques made a difference. During the first 60 days our operations were staged from a sand environment, and after that a hardstand. During the first few days of environmental training in Kuwait where landings were numerous, we were faced with main-rotor blade erosion.

As we all know, erosion of the exposed main- and tail-rotor blades is unavoidable, and as the nickel abrasion strip continues to wear repairs become ineffective. Although tail-rotor erosion is reduced due to the rotor's location above and behind the main rotor, the blades must eventually be repaired or replaced if they are not aggressively taken care of. Spray paint can be used to slow the erosion effects, but when using paint as an anti-erosion medium, application must be tailored to the environment and blade condition. Once

the paint is gone, the protection is gone. In the harshest conditions, we were applying a full can of spray paint to each blade after each flight.

Blade erosion tape is another option and is much more durable, effective and, in some cases, showed little damage for as long as 30 flight hours. We deployed with one aircraft that had blade erosion tape; it had been applied as a test back at Fort Campbell. We did not tape more aircraft because our actual deployment date was unknown, because of the restriction against flying in the rain or using the blade de-ice when the tape is installed, and because the bad winter weather at Fort Campbell prevented it. Once we got to Kuwait, however, we were able to tape 10 more aircraft.

Having had the opportunity to personally experience both spray-painting and blade taping in a combat environment, we highly recommend the blade-erosion tape as the primary measure and the spray paint as a backup. And since no solution is permanent, nothing can beat an established float blade program already in place to allow for major repairs while minimizing down time.

As predicted by FM 3-04.500, the next major maintenance issue was degradation of turbine engines. The inlet particle separator (IPS) on the UH-60 is incapable of completely purifying the air drawn through the engine, and because it's less efficient at idle RPM all ground runs must be kept to an absolute minimum. Operations in fine-sand and dust environments exacerbate the problem, allowing large amounts of unclean air into the engines.

In our experience this resulted in severe erosion of the compressor section, and buildup of sediments and glass inside the combustion section, especially the first-stage nozzles. This caused extensive blockage and loss of cooling air flow, as well as interference with cross-bleed and start valves, which quickly led to poor performance and high operating temperatures or over-temperature conditions. The in-flight health indicator test (HIT check) was used as the basic predictive tool for engines that were becoming degraded by sand. Be advised that sometimes the first indication would not be a high HIT check, but an engine that at the end of a mission when the PCL was brought back to the idle detent induced a compressor stall and over-temperature condition on the affected engine.

TB 55-2840-248-20-17, "Sandy Environment and/or Combat Operations for T700-Series Engines," provides specific instructions concerning exposure to extremely sandy environments. While operating in a sand environment engine flushes are reduced from every 100 flight hours to every 50 flight hours. The TB says that if a unit is to begin operations in sandy environments, a 50-hour compressor cleaning and a 50-hour hot section cleaning should also be done.

To help counter the desert's detrimental effects on our

engines we pursued an aggressive engine flush-and-rinse routine to slow the degradation process and prolong engine life. Engine flush times were reduced to every 25 hours - and in some cases every 10 hours - a fresh water rinse or "bird bath" was done after every flight, and an AVIM hot-section cleaning of the GG rotors if engine degradation was suspected. This regime prolonged the operating life of 47 engines despite the extremely sandy and dusty environment. We cannot overemphasize the need for a mature engine float program, readily available engine repair parts such as GG rotors, and an AVIM ultrasonic engine cleaner as the recipe for success with engines in the desert.

Although we all know operating from an improved surface will minimize the desert's damaging effects, you must assume that your unit will be operating from the sand and take all steps necessary to be familiar with the process of aggressively taking care of your aircraft.

As mentioned earlier, pilot technique does play a part in minimizing damaging effects. Pilots in the 5th Bn. were trained in Kuwait to select the appropriate approach, depending on the conditions and texture of the terrain, to minimize brownout conditions and reduce the ingestion of debris in the engines.

Iraq had several different types of terrain and soil composition. The terrain changes from fine sand and dust in the south to a more densely compacted soil, yet still dusty, soil in the north. For the surface areas covered with fine sand or dust we trained our pilots to use a lower and faster approach to stay ahead of the dust cloud. For terrain that was more densely compacted or contained rock we used a steeper approach with a positive termination to the ground, minimizing hovering and facilitating less ingestion of sand and dust into the engines.

minimizing hovering and facilitating less ingestion of sand and dust into the engines.

The second part of this article will appear in the next issue of Army Aviation.



LTC Laura Richardson is the commander of 5th Battalion, 101st Aviation Regiment. CPT Tony Hudson commands the battalion's AVUM company.



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Developing New CMF 15 AVIATION MAINTAINERS

By Benjamin Morris

Aviation maintenance training for initial-entry enlisted soldiers is conducted either at the U.S. Army Aviation Center at Fort Rucker, Ala., or the U.S. Army Aviation Logistics School (USAALS) at Fort Eustis, Va. The aircraft maintenance career management field (CMF) 15 includes specialties such as aircraft mechanics and component repairers. The average course length for each specialty training is 15 weeks. Upon completing a course, soldiers are awarded a Military Occupational Specialty (MOS), which is the equivalent of a civilian job title. The specialty code identifies the soldier as a specific type of repairer. For example, the MOS 15R specialty is an AH-64 Apache helicopter repairer.

One of the most important documents

an Advanced Individual Training (AIT) graduate will receive is the Individual Training Record (ITR). All AIT soldiers are given a copy of their ITR upon graduation, and they hand-carry the document to their unit commander, first sergeant or platoon sergeant. The information contained in the ITR identifies exactly which critical tasks were taught to the soldier. With this information, the unit trainer is better able to develop an individual training plan for each soldier.

The AIT graduates are apprentice-level aviation mechanics. According to Webster's Dictionary, an apprentice-level mechanic is defined as "One who is learning a trade - one who lacks experience." Apprentice-level soldiers have the basic skills and knowledge of aircraft maintenance, but they must be supervised until they perform the maintenance correctly.

With Army aviation units located all over the world, soldiers will be assigned where they will continue to train and improve their maintainer skills while at the same time gaining valuable experience. Improved skills and experience gained at the unit are essential for soldiers to assume duties as crew chiefs or to become "seasoned" mechanics. Experience cannot be taught in the school, it must be acquired by repeated hands-on involvement with the equipment the soldier is working on.

Within two years after leaving initial MOS training soldiers will be eligible for promotions to private first class (E-3) and specialist (E-4). With each promotion, the soldiers can expect increases in both pay and responsibilities. Additionally, the soldiers will have gained the confi-



dence and skills to move to the journeyman level.

A journeyman was originally one who worked for another for daily wages. He was distinguished from an apprentice, who was learning the trade, and a master artisan, who was in business for himself. At the apprentice level, Army aviation mechanics should have achieved a level of competence that enables them to perform most maintenance tasks without supervision. Therefore, they can now be considered journeyman mechanics.

Up to this point, the soldiers have been promoted without having to compete. Promotions to the rank of sergeant (E-5) and higher are competitive and require completion of professional schools.

Those soldiers recommended to the rank of sergeant and staff sergeant (E-6) must appear before battalion promotion boards. Selectees are then placed on a promotion standing list. Next, the Department of the Army (DA) will announce cut-off scores for each specialty in the Army and those

soldiers having the requisite scores will be promoted. Those soldiers promoted to sergeant first class (E-7) and higher are selected for promotion by a DA selection board.

The first professional course soldiers attend is the Primary Leadership Development Course, which focuses on developing basic leadership skills. These skills are essential for soldiers transitioning to leadership or supervisory roles.

The next two courses are the Basic Noncommissioned Officer Course (BNCOC) and the Advanced Noncommissioned Officer Course (ANCOC).

The BNCOC consists of two phases, with the first phase concentrating on common leader skills and the second phase on technical-skills training. The technical training is oriented to technical inspections of aircraft systems and component repairs. The BNCOC students receive technical training peculiar to their specific MOSs. With the exception of MOS 15N, avionics mechanic, all active-

Army aviation BNCOC students are trained at USAALS. MOS 15N students receive BNCOC training at the Army Aviation Center at Fort Rucker. In ANCOC students are trained on the higher-level leadership skills associated with increased responsibilities. This training is critical to aviation soldiers because they provide the aviation maintenance and leader training required to ensure the unit's mission is accomplished. All aviation ANCOC training, with the exception of MOS 15K, aircraft component repair supervisor, is given at the Army Aviation Center. MOS 15K is trained at USAALS.

Aviation soldiers are well-trained leaders who are prepared to face any challenge, any time. They pride themselves on being "Above the Best."



Benjamin Morris, a retired sergeant major with more than 30 years of aviation-maintenance experience, is a training developer at the U.S. Army Aviation Logistics School at Fort Eustis, Va.



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TRAINING TODAY'S POWERPLANT REPAIRER

By SSG Mark Dudley

The qualification course instructs future MOS 68B soldiers in turbine-engine theory, as well as in the maintenance, operation and troubleshooting of Army helicopter engines and auxiliary power units (APUs). Basic and Advanced Noncommissioned Officer Course attendees, as well as warrant officer (MOS 151A) students, are also taught turbine-engine theory and familiarization at the course.

In the 68B course, we start out small and work our way up to the bigger engines. The first engines taught are APUs, followed by the C250-30R3 turboshaft engine used in the OH-58D Kiowa. Next the students begin training on the General Electric T-700/701/701C series of aircraft engines used in the UH/MH-60 Black Hawk fleet.



T-700 series engines are comprised of several "modules" which, when put together, make up one complete engine. This provides for ease of maintenance and cost reduction. For approximately 79 hours, students in the T-700 section remove, inspect, repair and install the various modules. The T-700 engine was designed so most tasks can be performed with only a few common hand tools. It is remarkably easy to maintain, and a student favorite. Students perform an engine change in a UH-60 helicopter, which gives a better understanding of the various engine control and airframe components typical of an engine-change operation. They also learn the value of teamwork.

They are then ready for a more mechanically challenging scenario. The venerable T-53 series of engines provides that challenge. Although nearly obsolete, this engine exercises a student's accuracy in precision measurements like no other. Because of its age, the T-53 requires great attention to detail. Everything is mechanical - for instance, the clearances between rotating and nonrotating parts within the combustion section must be set manually using an assortment of shims and spacers. It takes a great deal of time and patience for students to learn the procedures for completing these tasks.

After this section, aspiring mechanics put their skills to the test on an operational turbine engine. The run cell offers the most realistic, dynamic, and challenging training the course has to offer. It not only gives them a deeper appreciation of the job field they are about to enter, it also helps keep them focused on aircraft maintenance.

The final engine taught in the 68B course is the mighty T55-GA-714A. This is the Army's newest turbine engine, and it was the first in the fleet to incorporate a Full Authority Digital Engine Control (FADEC) system. Due to the complexity of the engine itself and, most notably, the FADEC system, the engine is taught at the end of the course.





surements. Tolerances have been reduced on this engine to help boost power output, so a difference of 20 thousandths of an inch between a turbine rotor and its associated nozzle can mean the difference between a smooth-running turbine engine and a catastrophic failure. Laptop computers are used on an operational training aircraft to upload and download historical data into the Chinook's Digital Engine Control Units.

Students are now ready for the course finale: the Situational Training Exercise (STX). They begin by donning Mission Oriented Protective Posture (MOPP) gear. After "suiting up" they are given a number of different scenarios that would normally be executed in a field environment. Students learn, first hand, the challenges involved with working in MOPP gear.

Instructors are either staff sergeants or sergeants first class, and most have 10 to 18 years of experience on the job and are subject matter experts in their fields. The instructors are here for one purpose: to provide unit commanders with quality aircraft powerplant repairers who are capable of performing turbine-engine maintenance immediately upon arrival in their units.

We train the Army's newest 68Bs to standard, the first time, every time. And we accomplish this by imposing and enforcing uncompromising standards to augment the high-quality hands-on training given at USAALS.

Using state-of-the-art Interactive Multi-media Instruction (IMI) the students receive approximately 2-1/2 days of classroom training on the engine and its Interactive Electronic Technical Manual (IETM) before they perform their first practical hands-on exercise. Emphasis is placed on precision mea-

◆◆◆

Ssg Mark Dudley is an instructor/writer in the Propulsion and Powertrain Division of the Department of Aviation Trades Training, U.S. Army Aviation Logistics School, Fort Eustis, Va.

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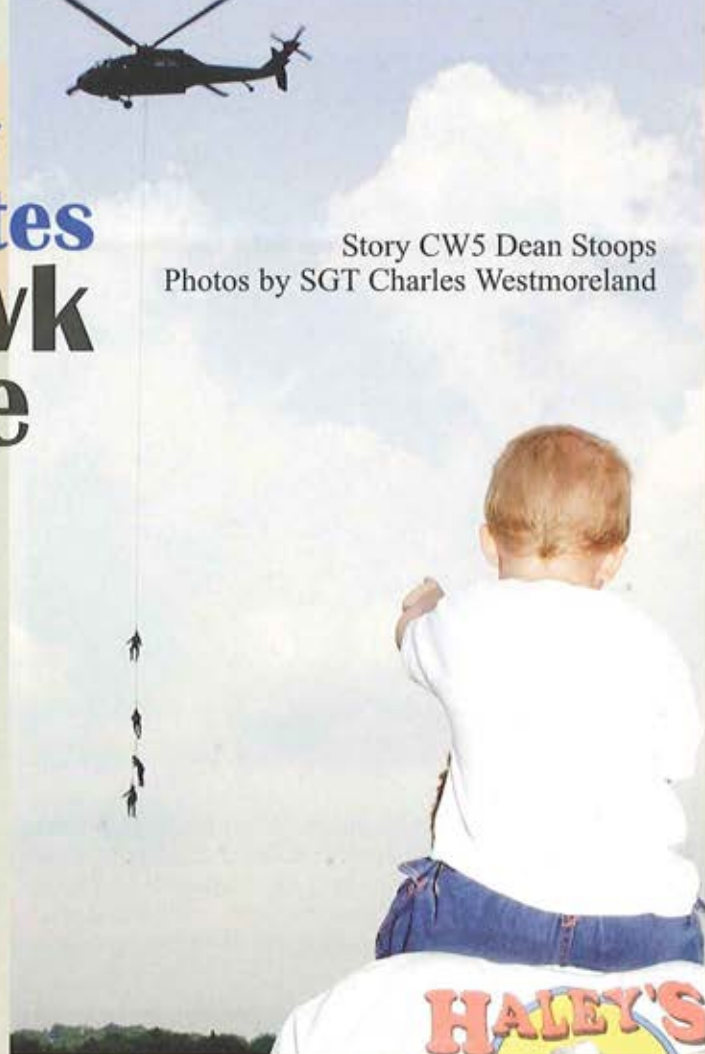
Kentucky Army Guard Celebrates Black Hawk Milestone

Story CW5 Dean Stoops
Photos by SGT Charles Westmoreland

On Aug. 9 the Kentucky Army National Guard celebrated 20 years of UH-60 Black Hawk operations in a special ceremony at the Army Aviation Support Facility (AASF) at the Boone National Guard Center in Frankfort, Ky. The guest of honor for the ceremony was Sergei Sikorsky, son of helicopter pioneer and aviation legend Igor Sikorsky. Also in attendance were several dignitaries from Sikorsky Aircraft, Inc., the Kentucky National Guard and the local community.

Sergei Sikorsky spoke on the history of the helicopter and delighted the audience with personal memories about his father and about such early aviation pioneers as Orville and Wilbur Wright, Charles Lindbergh and Howard Hughes.

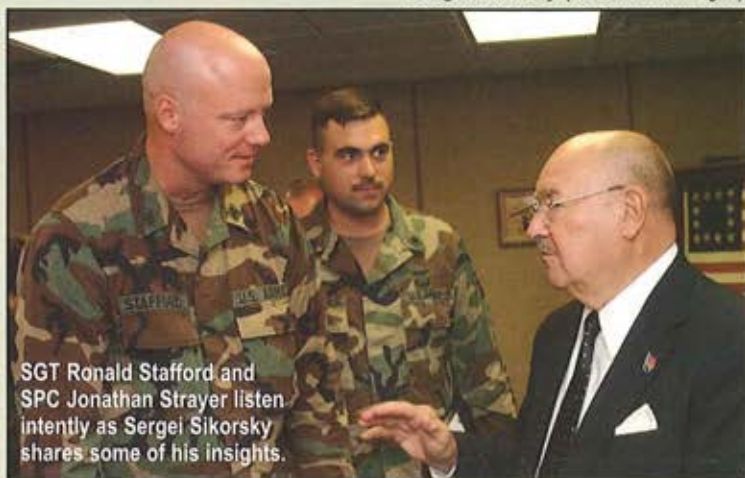
Sikorsky and two representatives of the firm his father founded - Tom Nicolet and Joe Farrar - pre-



Kentucky Army Guard UH-60 crews and soldiers celebrate the anniversary with a rappel demonstration.



Kentucky's first UH-60 Black Hawk crew - MAJ Brad Bailey (Ret.), CW4 Wallace Walker (Ret.) and SSG Larry W. Slaughter (Ret.) - received commemorative miniatures from Sergei Sikorsky (second from right).



SGT Ronald Stafford and SPC Jonathan Strayer listen intently as Sergei Sikorsky shares some of his insights.

sent a special plaque commemorating the event to the Kentucky Guard's commanding general, MG D. Allen Youngman, and to MG Billy G. Wellman (Ret.), who was the state adjutant general when Kentucky received the first UH-60s.

The state's Army aviation officer, COL Benjamin F. Adams III, and the commander of the 63rd Avn. Group, COL Ricky W. Branscum, received a large flag from Sikorsky featuring the familiar Black Hawk. Also on hand were the Kentucky National Guard aviators who delivered the state's first UH-60 from the Sikorsky factory in Connecticut.

"At the time, it was like going from a Volkswagen to a Cadillac," said MAJ Brad Bailey (Ret.), who commanded the first Kentucky Black Hawk crew.

Sikorsky credited the military with the success of the UH-60.

"These people - the pilots, the men and women that fly and maintain these machines - they are really the heroes. We build and instruct. They make it synch."



CW5 Dean Stoops is with the Kentucky Army Guard's 63rd Aviation Group. SGT Charles Westmoreland is assigned to the state's 133rd Mobile Public Affairs Detachment.

Kentucky Army National Guard Black Hawk deployments include:

- Hurricane Hugo, the U.S. Virgin Islands (1989)
- Disaster-relief support, Rhode Island (1995)
- Hurricane Fran, North Carolina (1996)
- Operation New Horizons, Ecuador (1998)
- Operation New Horizons, El Salvador, Honduras and Nicaragua (2002)
- Supported 7th Special Forces Group at the Joint Readiness Training Center, Fort Polk, La., (1999)
- Supported SEAL Team 4 training (1999-2002)
- Supported Special Warfare Training Center at Fort Bragg, N.C., for Exercise Robin Sage (2003)

Special achievements:

- 20 Years with more than 31,000 Blackhawk hours flown
- 30-Year Lindbergh Award for accident-free flying



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 MAILBOX, 755 Main Street, Suite 4D, Monroe, CT 06468-2830, Tel: (203) 268-2450, FAX: (203) 268-5870, E-Mail: magazine@quad-a.org.

Dear Editor;

I have been in aviation for almost 11 years. My MOS is 93C (air-traffic control). I read your article "Transforming Virtual and Real World Training for the Ultimate in Air Warrior Readiness," and discovered that although our pilots are the ones "up there," air-traffic controllers only see quality training once a year, at best.

ATC is, or at least should be, right along side our pilot all the way, in both the real world and in training. Yet we suffer from a lack of training, and there is a lack of experience on the part of our ATC colleagues in the National Guard and Reserve.

Is there a brighter future for ATC also?

Name withheld by request



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.

The Office of the Army Chief of Staff has announced the promotion of the following general officers, effective Jan. 1, 2004:

LTG Joseph L. Yakovac Jr., military deputy/director, Army Acquisition Corps, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), Washington, D.C.

BG Stephen D. Mundt, assistant division commander (support), 1st Infantry Division, USAREUR, Germany.

MG Kenneth J. Quinlan Jr., commandant, Joint Forces Staff College, Norfolk, Va.

BG Joseph A. Smith, commanding general, U.S. Army Safety Center, Fort Rucker, Ala.

BG Daniel J. Keefe, chief of staff, V Corps, U.S. Army, Europe, and Seventh Army (USAREUR), with duty as C-5, Combined Joint Task Force-7, Baghdad, Iraq.

COL Thomas J. Shailor was promoted to brigadier general on Dec. 1, 2003. Shailor had been the commander of the U.S. Property and Fiscal Office for the Vermont Army National Guard. His new assignment is as the state's assistant adjutant general, Army.

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Maintenance Sage cont'd. from page 16

tion, often nothing is provided to the new maintainer in a guided environment. Not to worry, though, here's where we find the crew chief who initially sought assistance from the Maintenance Sage.

In our scenario, the Sage organizes a troubleshooting procedure that encompasses multiple FIP or tests. The crew chief, being exposed to these methods of the Sage, learns from experience how to advance beyond the fundamentals passed along in IET. This experience gained by the training conducted by the Sage is essential to building a knowledge bank of troubleshooting skills that gets better each time a maintenance fault is solved on the flightline or aircraft hangar.

One of the many issues with this type of technical skill training in maneuver units is that not everyone gets exposed to a Maintenance Sage. Additionally, the training the Sage imparts is not guided, recorded or evaluated. After all is said and done, the question that begs to be answered is: Why can't everyone in the unit get that same maintenance training through exposure to the Sage?

Some help might come from the computers embedded everywhere in Army aviation. There are resources out there for training basic troubleshooting methods and procedures for the Apache attack helicopter maintainer. Currently, this sustainment training can be acquired or downloaded from sources such as the PEO Aviation Apache Web site. This sustainment training is designed to refresh maintainers on basic system knowledge and provide one, sometimes two, simple troubleshooting faults that reinforce that basic system knowledge.

Although not the total solution for troubleshooting training, these resources provide some guided maintenance training that ensures that current and approved procedures are reinforced.

Troubleshooting Training, The Road Ahead

Current and future-generation aircraft require more than just the Sage imparting knowledge during troubleshooting on the flightline. To meet the needs of solving the maintenance challenges of the digital aircraft, institutional troubleshooting methods and procedures beyond those provided in IET for the soldier must be provided.

One method currently used by the USAALS Apache armament training division is to capitalize on computer-based training and to fully exploit the capabilities of the maintenance-training devices. This approach in enhancing troubleshooting skills is used to center focus on staff sergeants that return to USAALS for the Basic Noncommissioned Officers Course (BNCOC).

For the BNCOC student, procedures are being developed to add a multilevel game to the IMI that soldiers would use for refresher training. This multilevel game, sometimes referred to as Level 4 IMI, provides complicated technical problem-solving challenges on a specific aircraft system. An additional benefit in developing this method is that this IMI training is PC based and is fully exportable to the field.

In addition to the computer-based training, the goal of the course is to fully exploit the maintenance training devices by allowing BNCOC students to solve multiple faults on a specific system. This innovative

approach is designed to provide the latest aviation industry training in human factors and airframe situational awareness to enable BNCOC students to devise troubleshooting strategies.

With this advanced training in the guided approach to solving a complicated maintenance challenge, all staff sergeants as a community should have the tools necessary to become that Maintenance Sage in the cavalry squadron or attack helicopter battalion.

Troubleshooting Skill, a Question of Proficiency

Not unlike flying skills, technical maintenance proficiency is a perishable skill. To build those technical skills necessary to solve or troubleshoot the problems on today's flightline, aviation maintenance soldiers must be exposed to the day-to-day maintenance challenge.

By removing the specialist or sergeant from the flightline, the Maintenance Sage will continue to be the rare human asset instead of an expert aviation maintenance soldier that is common throughout the organization. Our soldiers are able and willing to attain that level of expertise through training and experience. Given the issue of improving flightline presence and the continued efforts in improving training, battlefield sustainment for our aviation maneuver force will only grow stronger.



CW4 Alan F. Ruzicka is a 22-year aircraft maintenance veteran, AH-64D maintenance test pilot and chief of the Advanced Attack Armament Division, Department of Attack Helicopter Training, USAALS, at Fort Eustis, Va.

LEGISLATIVE REPORT



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

NEW "KEEP OUR PROMISES" BILL INTRODUCED

Stymied by the court system, the Class Act Group, led by COL George Day (Ret.), has turned to Congress to win relief from unanticipated health-care costs.

Rep. Chris Van Hollen (D-MD), joined by Reps. Chet Edwards (D-TX), Jeff Miller (R-FL) and Randy Cunningham (R-CA), has introduced H.R. 3474, an updated version of the Keep Our Promise to America's Military Retirees Act. This bill would:

- Authorize military retirees and family members the option of participating in the Federal Employees Health Benefit Plan (FEHBP).

- Waive Medicare Part B premiums for retirees (and their dependents) who entered service before June 7, 1956 (the date the law first referred to "space available" care).

- Limit pharmacy copays to TRICARE network pharmacy rates for eligible beneficiaries who live in nursing homes and who don't have access to retail pharmacies.

TMC and MOAA support H.R. 3474 as a logical extension of our "friend of the court" brief in support of the Class Act health care lawsuit. But as of Nov. 21 it has 63 cosponsors. Ask your U.S. representative to become a cosponsor; visit MOAA's Web site at <http://capwiz.com/moaa/issues/bills/>.

S. 1156 APPROVED

The Veterans Health Care, Capital Asset and Business Improvement Act of 2003 has been approved by Congress. It would authorize priority access to VA health care for veterans who participated in certain DOD chemical- and biological-warfare exercises from 1962 through 1973. S. 1156 also would require the VA to report on proposed facilities closings, reorganization or consolidation under the VA's long-term plan to align projected demand for VA services with facilities.

TMC appreciates the dedication of the leaders, members and staff of the House and Senate veterans-affairs committees for their commitment to the men and women who have worn the uniform of our country.

DOD EYES FAMILY BENEFITS FOR CUTS

The services recently were notified that DOD plans to close 19 commissaries and is considering closing up to 19 more. At the same time, a transfer study is nearing completion on whether DOD should close or transfer the schools it operates at U.S. bases under the Domestic Dependent Elementary and Secondary Schools (DDESS) program.

These actions stem from Secretary of Defense Donald Rumsfeld's continued push to eliminate functions he does not consider part of DOD's "core competencies." Commissary stores and education are apparently two of these functions. In the case of commissaries, Rumsfeld has made no secret that he wants to get out of the commissary business and is considering contracting out this top-rated benefit.

DOD thinking on DDESS schools in the United States has galvanized military members and families into action. These schools have long been a source of pride and sense of community for thousands of military families and most are performing at levels equal to or above the schools in surrounding communities. As a result, military people are not about to give them up without a fight. In unusually candid remarks base commanders are questioning this potential attack on military families.

Planned commissary closings will mean long dri-

ves for members and families to shop at other commissaries — more than 100 miles in some cases. The future of base schools may be even more uncertain if DOD decides to close or transfer schools. There is no guarantee that the surrounding communities will be able to, or will even agree to, take over the schools and maintain the current level of quality education.

After years of concerted DOD efforts to enhance quality-of-life programs for military families around the world, these potential cuts are taking us in the wrong direction. They are particularly alarming at a time when operational tempos are at all-time record levels and our military is being asked, across the board, to make ever-greater sacrifices.

VA MAKES GOOD ON PLEDGE TO REDUCE CLAIMS BACKLOG

A cornerstone of the VA's 2001 pledge to the nation was to reduce the pending claims workload in VA to 250,000 rating claims by Sept. 30, 2003. This number represents a normal workload inventory because of the complex process involved in gathering all the information and evidence needed to decide a veteran's claim.

To convert that pledge to an actionable plan, the VA Claims Processing Task Force was chartered to recommend a series of changes to improve the claims process. As a result, VA has over the past two years decided about 68,000 claims per month, an increase of more than 70 percent from the 2001 level of about 40,000 per month. The average age of the claims in VA's inventory has been reduced from more than 200 days to 111 days. The VA's measure of accuracy of its benefit entitlement decisions is now at 85 percent, an improvement from an 81-percent accuracy level in FY 2002.

As VA works toward continued improvement in quality and the 100-day goal to render a decision, the VA directed all employees to give special priority to the claims of veterans returning home with injuries sustained in Iraq and Afghanistan.

PARTIAL COLAS FOR 2003 RETIREES

A couple of months ago I reported that most military retirees and survivors would see a year-end cost-of-living adjustment (COLA) of 2.1 percent. The exception is that new retirees during any calendar year receive a somewhat smaller partial COLA for the years of their retirements, because they already received a January military pay raise (which also raised their retired pay) during the retirement year.

Members who entered service before Sept. 8, 1980, and who retired on or after Jan. 1, 2003, will receive a 1.7 percent COLA on Dec. 1 (payable in the Jan. 2 retired-pay check).

Members who entered service on or after Sept. 8, 1980 (whose retired pay is calculated on their highest 36 months' basic pay rather than final basic pay), and retired between Jan. 1, 2003, and Oct. 31, 2003, will receive a partial COLA based on the calendar quarter in which they retired. Those retiring in the first quarter of calendar year 2003 will receive 1.7 percent; in the second quarter, 0.7 percent; and in the third quarter, 0.4 percent. Those who retire after Oct. 1, 2003, will see no COLA this year.

Members retired during 2003 will receive full-year COLAs in future years.

NEW LAW WILL INCREASE SUPPORT FOR DISABLED VETERANS, SURVIVING SPOUSES AND THEIR CHILDREN

President George W. Bush has signed H.R. 2297, the Veterans Benefits Act of 2003. The new law authorizes \$1 billion over the next 10 years for new and expanded benefits for disabled veterans, surviving spouses and children.

Within the next several weeks Bush will also sign another important veterans bill authored by Congressman Chris Smith — H.R. 100, the Service Members Civil Relief Act — legislation that will help lessen personal financial and legal burdens service members and their loved ones may face at home while they are on active duty in Iraq, Afghanistan or other locations around the world.

"The Veterans Benefits Act provides significant new support to veterans, particularly to disabled veterans, their surviving spouses, and children," Smith said. "For example, my legislation increases federal grants used to adapt homes and automobiles for the use of severely disabled veterans."

"For disabled veterans who own or want to start a small business, this new law requires federal agencies and departments to give special consideration during federal contracting and procurement. In 2002, disabled veteran-owned firms received only 0.13 percent in federal contracts, even though there is a 3 percent statutory goal," Smith said. "In addition, veterans, disabled veterans and their dependents will be able to use their veterans educational benefits to cover self-employment training and entrepreneurship courses."

"Educational benefits provided to widows and children of veterans who are totally disabled or who died from service-related causes are also being increased," Smith said. "Furthermore, for those widows of veterans who died of service-related causes, my legislation allows them to remarry later in life without suffering the loss of survivor benefits."

As enacted, the Veterans Benefits Act of 2003:

- Allows the Department of Veterans Affairs (VA) to provide specially adapted housing grants to severely disabled service members before their separation from active-duty service.

- Increases the specially adapted automobile grant from \$9,000 to \$11,000, and increases the specially adapted housing grants from \$48,000 to \$50,000 for the most severely disabled veterans and from \$9,250 to \$10,000 for less severely disabled veterans.

- Restores dependency and indemnity compensation (DIC), home loan, education and burial benefit eligibility for spouses remarried after age 57.

- Increases monthly educational benefits for spouses and dependent children of disabled veterans from \$695 to \$788 for full-time study, from \$522 to \$592 for three-quarter time study, and from \$347 to \$394 for half-time study.

- Expands benefits eligibility to children with spina bifida who were born to certain Vietnam-era veterans who served in Korea near the demilitarized zone.

- Allows the surviving spouse or dependent chil-

dren to receive the full amount of accrued benefits if the veteran dies while their claim is still pending.

- Eliminates the 30-day requirement for prisoners of war (POWs) to qualify for presumptions of service-connection for certain disabilities including psychosis, any of the anxiety states, dysthymic disorder, organic residuals of frostbite and post-traumatic osteoarthritis.

- Provides full compensation and DIC to members of the new Philippine Scouts if the individual resides in the United States as a citizen or permanent resident. Also extends eligibility for burial in a national cemetery.

- Expands the Montgomery GI Bill program to cover self-employment training programs of less than six months and entrepreneurship courses at approved institutions.

- Allows federal agencies to create "sole-source" contracts for disabled veteran-owned small businesses — up to \$5 million for manufacturing contract awards and up to \$3 million for non-manufacturing contract awards.

- Allows federal agencies to restrict certain contracts to disabled veteran-owned small businesses if at least two such concerns are qualified to bid on the contract.

- Mandates that the Department of Labor place staff in veterans' assistance offices at overseas military installations 90 days after date of enactment.

AAFES TO EXTEND SUPPORT TO WOUNDED SERVICE MEMBERS

Various organizations have expressed concern that wounded and ill Operation Iraqi Freedom and Operation Enduring Freedom military personnel are arriving at hospitals with little more than the clothes on their backs.

The "problem" as defined by the Memorandum of Understanding between the Army and the Army & Air Force Exchange Service (AAFES) is that soldiers who were injured as a result of combat action in Iraq or other areas, or became ill were being medically evacuated to locations away from their organizations, arrive at military medical treatment facilities (MTFs) without adequate clothing items. Many of these wounded service members were being released to travel as ambulatory patients or transported using commercial transportation to other MTFs or to return to their home stations short on civilian clothing support.

Congress recognized this problem and has authorized the procurement of civilian clothing specifically to assist injured soldiers. Under provisions of section 1319, H.R. 1559, soldiers who are medically evacuated for treatment in a medical facility, or for travel to a medical facility or the member's home station, by reason of an illness or injury incurred or aggravated by the member while on active duty in support of Operations Noble Eagle, Enduring Freedom or Iraqi Freedom may be authorized to purchase up to \$250 worth of civilian attire suitable for wear by the member during the travel.

The agreement will allow authorized wounded or ill soldiers and airmen to select articles of clothing apparel at AAFES facilities throughout the world. Army or Air Force medical officials certify eligibility. The clothing the individuals ultimately choose is left to their discretion. The items they are allowed to select include undergarments, uniform items and non-clothing items.

AN END TO NON-AVAILABILITY STATEMENTS?

As of Dec. 28 the long-anticipated elimination of

Non-Availability Statements (NAS) went into effect. TRICARE Standard beneficiaries who live within a 40-mile radius of an MTF will no longer need to obtain a statement or preauthorization from the MTF before receiving inpatient care, other than inpatient mental-health care.

However, section 735 of the fiscal year 2002 National Defense Authorization Act (NDAA) allows the secretary of defense to waive the prohibition if three things were to happen:

- If the secretary can demonstrate that significant costs would be avoided by performing specific procedures at the affected military medical treatment facility or facilities.

- If the secretary determines that a specific procedure must be provided at the affected MTF or facilities to ensure the proficiency levels of the practitioners at the facility or facilities.

- If the secretary determines that the lack of non-availability statement data would significantly interface with TRICARE contract administration.

The Department of Defense (DOD) has long overlooked the Standard Beneficiaries. The Military Coalition (TMC) and the other military associations have been advocating an increased outreach and education program since the beginning of the TRICARE program. We are one step closer, with the FY 2004 NDAA requiring DOD to perform surveys on the providers accepting new standard patients as well as designating a senior official to take actions necessary for achieving/maintaining adequate participation of standard providers in each market area.

However, the only communication DOD is required to provide to the beneficiary is an open notice in the Federal Registry and a note to Congress, although the TRICARE Management Activity (TMA) is working on additional methods to publicize these isolated events, should they occur.

ECONOMIC PROTECTIONS DURING MOBILIZATION

Since World War II the Soldiers and Sailors Civil Relief Act of 1940 has been a major bulwark to protect men and women in uniform from civil actions while deployed overseas. It's a safeguard against creditors, landlords and others who might potentially take advantage of a service member's absence. But economic and social changes over time have driven a need to bring the law up to date. In 2002 TMC and other veteran's organizations urged Congress to enact much-needed modernization efforts. Many of our recommendations were incorporated into the final version of the Service members Civil Relief Act (H.R. 100) which was signed by the president.

Among other provisions, the Service members Civil Relief Act:

- Expands protection for service members and their families against eviction from housing while on active duty due to nonpayment of rents — raising the maximum housing lease rates subject to the protection from \$1,200 per month to \$2,400.

- Provides a service member who receives permanent-change-of-station orders or who is deployed to a new location for 90 days or more the right to terminate a housing lease.

- Clarifies and restates existing law that limits to 6 percent interest on credit obligations, including credit-card debt, incurred before a member is mobilized or enters active duty. H.R. 100 unambiguously states that, for such previously incurred debts, the higher interest rates also cannot become due once

the service member leaves active duty. Instead, that portion above 6 percent is permanently forgiven (though this does not apply to debts incurred after the member is mobilized or enters active duty).

UPGRADING RESERVE RETIREMENT

When established in 1948 the reserve retirement system was intended to supplement a normal civilian career retirement program. But over the past dozen years, reserve call-ups have averaged a thirteen-fold increase over any comparable period during the entire span of the Cold War. Since Sept. 11, 2001, more than 325,000 reserve-component service members have been called up to extended active-duty tours. Recent DOD assertions that it sees no need for additional active-duty or reserve-component manpower for the foreseeable future mean that members of the reserve component can expect multiple, lengthy mobilizations over the course of their careers.

Inevitably, these policies will cut into citizen-soldiers' private-sector retirement plans.

TMC and the Military Officers Association of America (MOAA) have monitored this situation very closely in recent years, and we supported Congress' decision last year to task the DOD and the General Accounting Office (GAO) for input on updating the reserve compensation and retirement system. We expected these studies would seriously examine the factors that over the long term will encourage reserve participation and retention. But the DOD study only called for further study, and the GAO's recent report on reserve financial issues and health care deferred action to a second study, now just begun.

TMC maintains that reserve career retention inevitably will suffer unless action is taken soon to address these problems. With no end in sight to reliance on the reserve component, it's time to match the reserve retirement system with the realities of 21st-century reserve service.

TMC strongly supports enactment of legislation to allow National Guard and Reserve career service members the option of receiving their full reserve retired pay and benefits at age 55.

H.R. 742 (Rep. Saxton, R-NJ) and S. 1035 (Sen. Corzine, D-NJ), are posted on the MOAA Web site at <http://capwiz.com/moaa/issues/bills/?bill=4123186> and <http://capwiz.com/moaa/issues/bills/?bill=4122751>. Just type your ZIP code in the box and click "GO" to urge your legislators to cosponsor these bills.

EXTRA PROTECTION FOR TSRX

Congress had passed H.R. 1, the Medicare Prescription Drug and Modernization Act of 2003. We continue to hear concerns from our members that they fear this new benefit may lead the DOD to force TRICARE Senior Pharmacy (TSRx) beneficiaries into the federal program. The TSRx benefit is set in law in Title 10 and it would take legislation to change it. While we believe that neither DOD nor Congress intends to change the TSRx program, TMC is pleased to see that Rep. Ed Schrock (R-VA) has introduced H.R. 3390, a bill to further protect the pharmacy interests of Medicare-eligible military retirees.

If enacted, H.R. 3390 would bar Medicare-eligible military beneficiaries from paying higher out-of-pocket costs than other TRICARE beneficiaries. H.R. 3390 ensures that Medicare-eligible military retirees will remain on equal footing with active duty and under age-65 retiree beneficiaries — currently,

both pharmacy benefits are the same.

Last summer Rep. Tom Davis (R-VA) introduced similar legislation to protect the interests of federal workers under the Federal Employee Health Benefit Program. His H.R. 2631 sailed through the House, but similar Senate legislation still awaits action.

H.R. 3390 reaffirms the government's commitment not to reduce or eliminate pharmacy benefits to military retirees now that a Medicare pharmacy benefit has been enacted. Providing a Medicare prescription-drug benefit for the broader population does not change the fact that military retirees earned TSRx benefits through a career of service and sacrifice to the nation.

TMC supports passage of H.R. 3390. To invite your representative to become a cosponsor, visit <http://capwiz.com/moaa/issues/bills/>.

MEDICARE BILL CONCERNS FOR THE FUTURE

The president has signed the Medicare Prescription Drug Improvement and Modernization Act of 2003 into law. As has been previously reported, this legislation makes several much-needed improvements to Medicare and TRICARE that have received much less publicity than the new pharmacy provisions. These include:

- Raising Medicare and TRICARE payments to doctors by 1.5 percent as of January 2004, instead of the 4.5 percent payment cut previously scheduled;

- Removing the \$1,590 annual caps on Medicare payments for occupational therapy and physical or speech therapies, as of January 2004; and

- Authorizing an open enrollment period in 2004 to let TRICARE-For-Life beneficiaries sign up for Medicare Part B without incurring any late-enrollment penalties, and ending current penalties for TFL beneficiaries who signed up for Part B since Jan. 1, 2001.

But the new law also includes some provisions that TMC and MOAA have concerns about for the longer term. One would phase in Part B premium increases for higher-income beneficiaries, starting in 2007. Another would authorize a test of having

Medicare-managed care plans and traditional fee-for-service Medicare compete for participation, beginning in 2010, which has the potential for increasing Medicare premiums for those who remain in the fee-for-service plan.

- Part B Premium Means-testing Beginning in 2007 Medicare Part B premium increases would start being phased in for Medicare beneficiaries with higher incomes. Under current law, Part B premiums are 75-percent subsidized by the government for all beneficiaries (that is, the Part B premium is set at 25 percent of the program's cost). By 2011 the new law would change the subsidy. The changes would be phased in over five years between 2007 and 2011, with 20 percent of the increase in 2007, 40 percent of the increase in 2008, etc.

Traditionally, TMC and MOAA have opposed means-testing of earned compensation and benefits, and we have concerns about the equity of imposing income-based premiums. We also recognize that the demographic reality of an oncoming tidal wave of baby-boom retirements will require some hard choices between cost increases and benefit cuts for current eligibles vs. very large tax increases for a relatively smaller pool of current workers to pay the larger bill. There will be no easy solution to the coming problem.

Last year, TMC and MOAA members overwhelmingly approved a resolution stating that Medicare/Social Security reforms should not impose disproportional financial penalties on any segment of the population. In the three years available before the premium formula changes will occur, TMC will be working with Congress and other advocacy groups to assess the relative inequity of the income-based Part B premium increases vs. other options to ensure fairness.

- Medicare Premium Support/Competition. Another controversial provision of the Medicare law seeks to bolster availability of HMO-type plans, with subsidies to firms that offer them and Part B premium rebates to beneficiaries who enroll in them. These plans would be offered in 2006. The new HMO-style plans would offer locality-specific cost

bids. To the extent they bid a lower cost than standard fee-for-service Medicare, beneficiaries who enroll in them would receive a rebate from the government equal to 75 percent of the difference in the premium. If they offer plans with premiums higher than fee-for-service Medicare, the enrolling beneficiary would have to pay the extra premium.

Critics of this concept worry that the HMO-style plans would "cherry pick" the relatively healthy people and be able to offer "low-ball" cost bids. Over time, they speculate that this migration pattern would drive Part B premiums ever higher every year for people who wish to remain in standard fee-for-service Medicare.

On one hand, similar speculation years ago about the likely effect of introducing HMOs proved wrong, as many HMOs went bust. On the other hand, the new law's planned subsidies for HMO providers and premium rebates for people who enroll in them could change the dynamic significantly.

TMC has no objection to competition in principle, but the competition must be fair. As we read the new law, the formula for comparing the cost of the HMO-style plans with fee-for-service Medicare is grossly biased against traditional Medicare. Why? Because it would count neither the subsidies to the HMO-style providers nor the premium rebates to the HMO enrollees in the cost of those plans. If the government is going to use relative program costs to assign beneficiary premium rates, it has to include all costs in that formula. Jimmying the formula in this way would blatantly undermine the Medicare fee-for-service system that is the cornerstone of health care for America's elderly.

With two presidential elections and three congressional elections before even a test would happen, it's certain that there will be some changes — and very likely a lot of changes — before the law takes effect. Even Health and Human Services Secretary Tommy Thompson — among the law's most ardent supporters — has said he doesn't think it will be implemented as currently written.

MAJ Henry C. Fariss (Ret.) of Daleville, Ala., has received the Order of St. Michael Silver. The award was presented Dec. 9 by local chapter president COL Steven Semmens at Flowers Hospital, where Fariss is undergoing treatment for cancer.

Fariss comes from a family with a tradition of military service. He flew Army aircraft for 39 years and compiled more than 15,000 hours of flight time. Originally from Bedford, Va., he joined the Army in 1953 as an enlisted man and subsequently served as a warrant officer and commissioned officer. His service includes two tours of duty in Vietnam flying H-21 Shawnees and UH-1 Iroquois, including two missions in which his aircraft were shot down.



After his retirement in 1973 Fariss passed on his skills and experience as a civilian instructor pilot with DOSS Aviation and subsequent flight training contractors for the U.S. Army Aviation Center at Fort Rucker, flying the TH-55 Osage, UH-1 Iroquois and finally TH-67 Creek. His contributions to Army aviation continue through his many former students who serve the nation, the Army and the Aviation Branch. - Bill Hayes, USAAVNC Public Affairs Office

COL Steven Semmens congratulates MAJ Henry C. Fariss (Ret.) (at left) upon the latter's award of the Silver Order of St. Michael. Fariss received the OSM in recognition of his significant contributions to Army Aviation and for demonstrating the highest standards of integrity and moral character. Photo by SGT Roger D. Lumpkin

Cribbins' Memorabilia

A display of memorabilia pertaining to Mr. Joe Cribbins is being planned for the U.S. Army Aviation Museum and the Soldiers' Service Center at Fort Rucker, Ala. If you



have any memorabilia that you feel is appropriate for one of these displays, please contact Tommie Harding. She can be reached at any of the following phone numbers (888) 276-9286, (334) 598-2508 or (334) 598-9465. You may also correspond with her by e-mail at avnmuseum@ala.net or by regular mail at the Army Aviation Museum Foundation, Inc., P. O. Box 620610, Fort Rucker, AL 36362.

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Aumua
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 SPC Christopher R. Patti
 PV2 John W. Payne
 PFC Steven M. Peachey
 PV2 Jonathan Penareyes
 SPC Christopher M. Perdue
 SPC Thomasina M. Perdue
 PFC Eugene Perez
 PV2 Nicholas Perez
 PV2 Demetress D. Perry
 PV2 George W. Perry, Jr.
 PFC Saheed H. Persad
 PV2 Jeremiah M. Peryam
 SGT Velerie A. Petersen
 PFC Steven V. Pezold
 PV2 Mortimer Philbert
 SGT Martin Pierce
 PFC Kristopher L. Plummer
 PV2 Russell A. Poindexter
 SSG Charles B. Poole II
 SPC Jason W. Pope
 SPC Eric W. Porter
 SSG Todd A. Porter
 PFC Bryan K. Potter
 PV2 Patrick C. Powers
 PV2 Vladimir J. Pratt, Jr.
 SPC Robert A. Price, Jr.
 SPC Edward H. Pringle
 PFC Gerard J. Pristera
 PFC Joshua C. Pritchard
 PFC Dennis M. Proell
 SPC Daniel M. Purnell
 SGT David B. Query
 PFC Dezaray D. Quetot
 SPC Guimel R. Quinones
 SPC Manuel Ramosmoreno
 SGT Charles E. Ray, Jr.
 PFC Jimmy Ray
 SGT Darrin W. Reed
 SPC John P. Reed
 PV2 Paul D. Reikowski
 PFC Asher R. Replogue
 SPC Neil V. Rerucha
 PV2 Phillip F. Reyes
 Mr. Min Hee Rhee
 SGT Takeiya L. Rias
 PFC William J. Rich
 PFC Adam A. Rivera
 SGT Allan M. Rivera
 SPC Jacqueline Riveratorres
 SPC William Robinson
 PFC Michael A. Rodriguez
 PV2 Amy E. Romero
 PFC Eric N. Rondeau
 SPC Micah O. Ross
 PFC Steven C. Rotski
 PV2 James W. Rubert
 PFC Zachary A. Rubin
 PFC Randall C. Rucker
 SGT Jeannie R. Ryan
 PFC Shawn P. Ryan
 SPC William E. Sanders, Jr.

PFC Derik L. Sandoval
 SPC Joseph A. Sansone
 SPC Eduardo
 Santiagovazquez
 PV1 Henry Santizo
 SPC Andrew J. Scales
 SGT Brian D. Scheuring
 SPC Christina J. Schmalzel
 PFC Amy J. Scott
 SSG Anthony Scott
 PFC Kendrick D. Scott II
 SPC Seth O. Scott
 PFC James N. Semper, Jr.
 SPC Andrew J. Seng
 SPC Weitang Shao
 SPC Gabriel S. Shelnutt
 PFC Keith R. Sherwin
 PFC Sand Hoon Shin
 SSG Joshua A. Simard
 PFC Sam S. Simons
 SGT Micheal W. Sizemore
 PV2 Robert A. Small
 SSG Alisha G. Smith
 PFC Brenna L. Smith
 SPC Christopher M. Smith
 SGT John P. Smith
 SGT Kenneth B. Smith
 PV2 Letisha N. Smith
 SPC Robert C. Smith
 PFC Joshua R. Soley
 SSG Robert F. Stafford
 SSG Robert C. Staton
 PFC Hannah A. Steltzen
 PV2 Tamra M. Stewart
 PFC William R. Stewart
 SPC Gloria Stith
 PFC J. Devin Stout
 PFC David P. Stowe
 SGT Ronald T. Stuart
 SPC Seth Stump
 SSG Alexander K. Sumowulu
 PV2 Heather M. Surap
 PFC Ronald L. Swinyer, Jr.
 SSG Fredrick S. Tajjeron
 SPC Daniel F. Taitano, Jr.
 PV2 Ronnie Y. Talon
 SPC Robert Tanoury
 PFC Nickolas T. Tarrant
 PFC Jamie V. Taschetti
 SPC Arthur D. Taylor II
 SGT Casey L. Taylor
 SPC Phillip L. Taylor
 SPC Milan Thakkar
 SPC Michael A. Thatcher
 SPC Michael R. Thoma
 SPC Gerald C. Thomas
 SSG John A. Thomas
 SGT Matthew E. Thomas
 SPC Stephanie M. Thompson
 PFC Phillip D. Tindall
 PFC Chris Tipton
 PFC Eladio Tirado
 PFC Matthew P. Tobin
 PV2 Rachel M. Towse
 SPC Thuyvi T. Tran
 SGT Steven L. Trull
 SSG Paul G. Tucker
 PV2 David M. Tuper
 PFC Cheryl L. Tupulua
 PV2 Dustin W. Turner
 SGT Peter A. Upson
 CPL William D. Urena
 PV2 Varoj Vaidhayakul
 PFC Elizabeth R. Velten
 SGT Alan R. Ventris
 SPC Jeffrey Vest
 PV2 Juan C. Villasiqueiros
 SPC Gabriel E. Vivastores
 PFC Terry A. Walden, Jr.
 SPC Damon L. Walker
 SGT Jimmy Walker
 PV2 Shamika N. Wall
 SSG Robert E. Walters

SSG Frank L. Ways
 PFC Robert Webb
 PV2 David L. Weber III
 SGT Clay L. Weekes
 PV2 Lasalle N. Weeks
 PV2 Timothy J. Weidenhammer
 PFC George L. Wells
 SSG Mark A. Wesley
 PFC Philip J. Wheeler
 PV2 Rebecca S. Wienk
 SPC Mary M. Wilcox
 PFC Aerial P. Williams
 SGT Marcus W. Williams
 PFC Shawna T. Williams
 PV1 Jamie S. Willis
 SGT James K. Yuille

NORTH COUNTRY CHAPTER FORT DRUM, NY

CW4 Chris M. DeRonda

NORTH STAR CHAPTER ST. PAUL, MN

LTC Christopher H. White

NORTH TEXAS CHAPTER DALLAS/FORT WORTH

Mr. Eric Jensen
 Mr. Brad S. Wanek

NORTHERN LIGHTS CHAPTER FORT WAINWRIGHT/ FAIRBANKS AK

CW3 David M. Lyons
 1LT Benjamin R. Thomas
 1SG George T. Towers

OLD TUCSON CHAPTER MARANA, AZ

Mr. David K. Crowe
 Mr. Dennis Kenman

OREGON TRAIL CHAPTER SALEM, OREGON

CW4 Scott R. Sanetel

PHANTOM CORPS CHAPTER FORT HOOD, TX

Mr. Larry L. Cooksey
 SSG(P) Angel R. Galinanes
 SFC Jose A. Scagliusi
 Mr. Snuff Thompson

PIKES PEAK CHAPTER FORT CARSON, CO

SPC Charles D. Savel

RHINE VALLEY CHAPTER HEIDELBERG, GERMANY

Mr. Timothy L. Fleming
 CW3 Richard W. Knowlton

RISING SUN CHAPTER CAMP ZAMA, JAPAN

Mr. Masao Tada

SAVANNAH CHAPTER FT STEWART/HUNTER AAF, GA

LTC Robert O. Bannon
 CDT Travis Betz
 1SG John C. Buxton
 1ST Kenneth J. MacCartney

SOUTHERN CALIFORNIA CHAPTER LOS ANGELES, CA

SGT Sean Aube
 Mr. James E. Kolb
 Ms. Elissa Teitelman

STONEWALL JACKSON CHAPTER SANDSTON, VA

CW3 Richard C. Brown
 SGT Stacy D. Johnson
 Ms. Elizabeth A. Williams

TAUNUS CHAPTER WIESBADEN, GERMANY

CW3 Donald E. Swanberg

TENNESSEE VALLEY CHAPTER HUNTSVILLE, AL

Mr. Bruce E. Albert
 Mr. Timothy L. Allison
 Ms. Pamela B. Baird
 Ms. Amanda C. Billings
 Mr. Gene Candill
 Ms. Janice F. Clemons
 Mr. Michael W. Cook
 Ms. Wanda J. Endicott
 CPT Peter A. Fowles
 Mr. Glenn Guillen
 CW4 James E. Hardy, Ret.
 Mr. Dennis D. Hoefle
 Ms. Marjane M. Jerauld
 Ms. Deborah A. Kulmer
 SFC Richard W. LeQuieu, Ret.
 Mr. Mark D. Lumb
 Mr. Joseph M. Navas, Jr.
 Ms. Nancy Regan
 Ms. Dottie A. Rogers
 Mr. Benjamin E. Sanders
 1LT John B. Schmidt
 Mr. Greg Schumann
 LTC Phillip B. Sherrill
 Mr. Kent A. Smith
 Ms. Jaclyn R. Tippie
 Mr. Joshua P. Trelxer
 SFC Kenneth G. Trickey, Ret.
 Ms. Pamela D. Webb
 Ms. Kara L. Wernldi
 Mr. Travis H. Williams
 SFC Lloyd E. Willis
 Ms. Lisa L. Wornbacher

UNIV OF NORTH DAKOTA CHAPTER GRAND FORKS, ND

CDT Jonathan D. Scholbery

VMI/VWIL CHAPTER LEXINGTON, VA

MAJ Gary A. Bissell
 CDT Tania L. Cheng
 CDT Abigail G. Withnell

WASHINGTON-POTOMAC CHAPTER WASHINGTON, DC

MAJ Celeita A. Kramer
 Mr. James I. Munsterman
 LTC Billy M. White, Ret.

WRIGHT BROTHERS CHAPTER COLUMBUS, OHIO

2LT Thomas J. Ratcliff

MEMBERS WITHOUT CHAPTER AFFILIATION

Mr. Albert Bohemier
 CW2 Jon D. Castle, Ret.
 PV2 Zachary J. Durban
 Mr. Chuck Lanza
 SPC Christopher T. Logue
 SPC Melvin O. Merrero
 Mr. John Marshall
 Mr. Thomas Moore
 Mr. Dan R. Netcher
 CW3 Patrick A. Niven
 MAJ Jimmie C. Parker, Ret.
 Mr. Greg L. Roshier
 Ms. Trish Tully

New Chapter Officers

Delaware Valley:

COL Robert D. Richardson, Ret., Pres.; BG R. Dennis Kerr, Ret., Sr. VP; Mr. Frederick A. Bergner, Sec.; 1SG John R. Keim, Jr., Treas.; Mr. Rex A. Russell, VP Programs; CPT Peter Kim, VP Scholarships; LTC Mark E. Ballew, VP Special Interests.

Indiantown Gap:

COL Christopher D. Latchford, Pres.; COL Paul M. Amalfitano, Sr. V.P.; CW5 Donald E. Beatty, Ret. Sec.; MSG Timothy R. Bentz, Ret., Treas.; CSM Charles N. Reisinger, VP Enlisted Affairs; MAJ Sheryl A. Rozman, VP Scholarship; CSM Francis Zandome, VP Enlisted Affairs.

Keystone:

COL Christopher D. Latchford, Pres.; COL Paul M. Amalfitano, Sr. VP; CW5 Donald E. Beatty, Ret., Sec.; MSG Timothy R. Bentz, Ret., Treas.; LTC Timothy R. Bentz, Ret., Treas.; LTC Timothy J. Hilty, VP Enrollment; CSM Charles N. Reisinger, VP Enl. Affairs; LTC Daniel R. Stefanowich, VP Scholarships; LTC David W. Russell, VP Awards.

North Country:
LTC Elvin K. Gunter, Sr. VP; CW4 Chris M. DeRonda, VP Membership.

Talon:

CPT Frederick J. Toti, VP Membership.

AAAA Soldier of the Month

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

SGT Randy J. Nimitz
December 2003
(Keystone Chapter)

AAAA Soldier of the Quarter

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

SPC James T. Horace
1st Qtr. 2004
(Phantom Corps Chapter)

PCS Jeremy O. Jacobson
1st Qtr. 2004
(Aviation Center Chapter)

AAAA Distinguished Instructor of the Quarter

A Chapter Program to Recognize Distinguished Instructors on a Quarterly Basis

SSG Dale L. Bailey
Oct.-Dec. 2003
(Colonial Virginia Chapter)

AAAA NCO of the Quarter

A Chapter Program to Recognize Outstanding Aviation NCOs on a Quarterly Basis

SGT Sunday Hahway

1st Qtr. 2004
(Phantom Corps Chapter)

SSG Rocky R. Marsh, Jr.
1st Qtr. 2004
(Aviation Center Chapter)

New AAAA Life Members

LTC Peter D. Kowal
MAJ David E. Laack, Ret.

New AAAA

Industry Members
Aerospace Integration Corporation

New AAAA Order of St. Michael Recipients

BG Thomas J. Shailor (Silver)
CW4 Gary A. Pruyne (Silver)
John R. Benham (Silver)
MAJ Henry C. Fariss, Ret. (Silver)
COL William G. Lake² (Silver)
SSG Christopher S. Aguon (Bronze)
Robert F. Vlasics (Bronze)
Thomas Lavin (Bronze)
MG Larry J. Dodgen (Bronze)
LTC Toby D. Reese (Bronze)
Larry L. Homan (Bronze)
CW4 Steven L. Sanders (Bronze)
MAJ(P) Robert L. Marion (Bronze)
MAJ Larry D. Boggs (Bronze)
David J. Weller (Bronze)
CW5 John E. Martin (Bronze)

LTC Charles Petrarca (Bronze)
CW5 William Williams (Bronze)
CW4 Frank Puleo (Bronze)
CW4 Steven Moy (Bronze)
CW4 John Lipski (Bronze)
CW4 Michael Alford (Bronze)
CW4 Robert Atkinson (Bronze)
CW4 Michael Carpenter (Bronze)

1SG Charles Herman (Bronze)
SGT George Thibault (Bronze)
SGT Chris Del Sest (Bronze)
COL Donald Gagliano (Bronze)
CW3 Fred L. Hodges (Bronze)
CW3 Robert Holloway, Jr. (Bronze)

CW4 Larry E. Mull (Bronze)
MSG(R) Diane Morau (Bronze)
CSM Eugene Jeffers (Bronze)
CW3 Derek Muller (Bronze)
CW3 Kevin W. Jordan (Bronze)
SFC David S. Williams (Bronze)
SSG Christopher Kent (Bronze)
SFC Michael Stoddard (Bronze)
CW4 Robert J. Martin (Bronze)
CW4 Rick Flory (Bronze)
MSG Richard Juarbe (Bronze)
1SG George Basara (Bronze)
LTC William Hunt (Bronze)
MAJ James L. Sedlak (Bronze)
John R. Keim (Bronze)

MSG Terrance O'Neal (Bronze)
CPT Benedict J. Smith¹ (Bronze)
2LT Jeremy L. Wolfe¹ (Bronze)
CW3 Kyran Kennedy¹ (Bronze)
CW2 Scott A. Saboe¹ (Bronze)
WO1 Erik Kesterson¹ (Bronze)
SSG Warren Hansen¹ (Bronze)
SSG Paul M. Neff¹ (Bronze)
SGT Scott C. Rose¹ (Bronze)
SGT John W. Russell¹ (Bronze)
SPC Ryan T. Baker¹ (Bronze)
LTC Carl L. King, Ret. (Bronze)
CW4 Mark Friskel, Ret. (Bronze)
CW5 William Karins (Bronze)

LTC William V. Hill III (Bronze)
CPT George Eyster (Bronze)
CW2 James Miller (Bronze)
CW3 Eric Donop (Bronze)
LTC Calvin J. Owens (Bronze)
CW3 Chong K. Yim (Bronze)
1SG Dwaine E. Walters (Bronze)
CPT Jason Wright (Bronze)
CPT Scott Butler (Bronze)
1SG Randolph Adams (Bronze)
CSM Ralph Middlebrooks, Jr. (Bronze)

CW3 Michael Scheel (Bronze)
COL Blain Wyckoff (Bronze)
LTC Stuart K. Driesbach (Bronze)
CW4 Samuel McKinney (Bronze)

CW4 Lawrence J. Hays (Bronze)
CW4 Randolph Welch (Bronze)
CW4 William Sweeney (Bronze)
COL George J. Gluski (Bronze)
MSG James Newcomb (Bronze)
COL Manuel Quiterio III (Bronze)
COL(R) Alberto Jimenez (Bronze)
COL Charles H. Dove (Bronze)

¹ Posthumously
² Received more than one award

Aces

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

Ms. Connie Z. Armstrong
LTC James E. Larsen, II
CW4 Anthony C. Lynch

In Memoriam

COL Adrian D. Cunningham
LTC Morris G. Rawlings
COL Selmer A. Sundby, Ret.
(AAAA Charter Member and Member of Cub Club)



The AAAA Scholarship Foundation, Inc. (AAAASF) is now part of the Combined Federal Campaign (CFC), a workplace charitable fund drive conducted by the U.S. Government for all federal employees. It is the single largest workplace fund drive in the country, raising approximately \$195M in pledges annually.

In 2003, the AAAASF received a total of over 200 applications and awarded 107 grants and loans totalling \$153,500. These awards are made on the basis of academic merit only and the applications are scrubbed to remove all references to the names and ranks of their AAAA member relative.

Don't forget, all overhead costs are borne by the AAAA so that 100% of your contribution (net CFC charges) go directly to AAAA Scholarship Foundation, Inc. awards. Help us reward more of these outstanding students with larger awards.

COMBINED FEDERAL CAMPAIGN

Tax-deductible donations may also be made directly to the

AAAA Scholarship Foundation, Inc.

755 Main Street, Suite 4D, Monroe, CT 06468-2830 E-Mail: aaaa@quad-a.org
Tele: (203) 268-2450; FAX: (203) 268-5870



The Colonels Mangum

COL Robert Mangum (Ret.) pins the silver eagles on his son, COL Kevin Mangum, during a ceremony at Fort Bragg, N.C. The Mangums represent more than 60 years of AAAA membership. Bob (left) joined in 1960, and Kevin, who was also an AAAA Scholarship recipient in 1978, joined in 1983.



Lost Members

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, 755 Main Street, Monroe, CT 06468-2830. Tele: (203) 268-2450; FAX: (203) 268-5870; E-Mail: aaaa@quad-a.org.

Adler, Michael C., 2LT
Anthony, William E., SSG
Athanasakis, Michael, 1LT
Bare, Josh C., WO1
Bery, Wesley R., WO1
Bryant, Meagan A., 1LT
Burke, Timothy W., CSM

Cahill, Michael D., 2LT
Carscadden, Sean, CAPT
Castro, Pio Raoul N., 2LT
Chiasson, Scott M., CPT
Eric, Covillard, CAPT
DeCarlo, Jeffrey A., CPT
Deiss, Tony, 2LT

Duffy, Christopher, CPT
Farr, Michel R., Mr.
Filzpatrick, Jordan K., Mr.
Franchina, Charles T., LTC, Ret.
Fuller, Christopher, Mr.
Gagan, John A., CPT

Gee, Randall S., CW2, Ret.
Griger, Mark J., WO1
Gullen, Jayro M., Mr.
Hanrahan, Ryan P., 2LT
Hummel, Brian M., 2LT
Hunter, Steven J., CW2
Jones, Wanda C., SSG

Knisley, William H., CW2
Landrum, Steffen T., 2LT
Marchant, Stephen T., CPT
Melo, Jonhatten R., SPC
Nicholas, Scott P., CPT
O'Connor, James C., CW3
Pioch, Dirk T., 2LT

Prosie, Steven P., Mr.
Rauch, Benjamin W., WO1
Rice, Jessica V., 2LT
Saldana, Eric A., WO1
Saltzahn, Bobby S., WO1
Tanner, John E., SGT
Thomas, Matthew J., 2LT



Valentine, Steven R., 2LT
Vidoloff, Michael J., CW2
Wheeler, Craig L., 1LT

CONNECTICUT CHAPTER

AAAA's Connecticut Chapter recently hosted a social to honor National Guard soldiers returning from Iraq and Kuwait, and to raise money for the Connecticut National Guard Foundation, Inc. (CNGFI).

The proceeds from the evening's raffle were donated to the CNGFI. Mike Blake, Connecticut Chapter president and Comanche Program director, presented the check for \$2,000 to LTC Thomas Boland, the State Aviation Officer representing MG Cugno, Connecticut's adjutant general.

CNGFI was established to perform a crucial role, supporting the Connecticut National Guard's most important resource - its people! CNGFI's primary mission is to minimize the impact of monetary crises on members' ability to perform their duties, whether at home or abroad, through need-based loans, grants and scholarship opportunities. Whether it's junior enlisted members trying to make ends meet or career members facing financial hardships due to mobilization or other unforeseen circumstances, CNGFI serves as a safety net for National Guard and Organized Militia personnel and their families.

With the country at war, we continue to ask more from our soldiers, airmen and their families. A donation to CNGFI provides the means to ease the burdens placed upon the National Guard and Organized Militia community, and ensure that we can continue to look after our own and their families.

Anyone wishing to support this outstanding effort may call (860) 241-1550. Contributions will ensure our members can rely on a solid and caring organization that will assist them should they face a crisis.

Additionally, the Connecticut Chapter would like to recognize John Babina and Charles Brady for their substantial contributions.



ATTENTION AAAA MEMBERS!!!

Send us your name and

E-MAIL ADDRESS

(Especially Your AKO Account)

AAAA National Office

Email: aaaa@quad-a.org



AAAA NATIONAL EXECUTIVE BOARD NOMINATIONS

In accordance with the AAAA By-Laws, notice is hereby given that in addition to the nominations recommended by the Nominations Committee for those NEB offices in which vacancies occur at the time of the annual election, floor nominations may be made at the Annual Convention, provided that the name of the floor nominees appear on nomination petitions signed by 25 AAAA members and said petitions are provided to the Chairman of the Nominations Committee at the AAAA National Office at least 30 days prior to the conduct of the AAAA Annual Convention.

- ☛ Feb. 11-13. Cribbins Product Support Symposium, Huntsville, AL.
- ☛ Mar. 15-17. HAI Heli-Expo 2004, Las Vegas, NV.
- ☛ Mar. 24-27. AAAA Annual Convention, Gaylord Opryland Convention Center, Nashville, TN.
- ☛ Jun. 8-10. AHS 60th Annual Forum & Technology Display, Baltimore, MD
- ☛ Jul. 16. AAAA Scholarship Executive Committee Meeting, National Guard Readiness Center, Arlington, VA.
- ☛ Jul. 17. AAAA Scholarship Selection Committee Meeting, National Guard Readiness Center, Arlington, VA.
- ☛ Oct. 18-21. AFCEA Infotech 2004 Conference & Exhibition, Dayton, OH



Army Aviation Hall of Fame

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 2004. Contact the AAAA National Office for details at (203) 268-2450

MG Story C. Stevens Army Aviation Hall of Fame 1986 Induction

"Unquestionably the Army's most experienced and expert commander and manager in the full spectrum of Aviation acquisition." So said GEN John R. Guthrie, commander of the U.S. Army Materiel Command, of MG Story C. Stevens.

A master Army aviator, Stevens planned, established and commanded the U.S. Army Aviation Research and Development Command (AVRADCOM) — now the Aviation Systems Command - for eight key years. It was during that period that the entire present generation of Army aircraft - the UH-60 Black Hawk, AH-64 Apache, CH-47D Chinook and OH-58D AHIP — was developed, tested and initially fielded.

Under Stevens' leadership a number of advanced development programs produced noteworthy technical improvements in the areas of composite structure, fuel-efficient turbine engines, survivable digital electronics and reconfigurable flight control systems. Working closely with his colleagues at U.S. Army Training and Doctrine Command, Stevens laid the groundwork for the Army's LHX (now Comanche) program.

Employing a unique style of management, wherein his subordinates enjoyed both professional freedom and total support, Stevens was responsible for AVRADCOM becoming a model command for creativity, innovation and teamwork. His major program accomplishments were the successful development, qualification and fielding of long-life fiberglass rotor blades for AH-1S and CH-47D; the lifesaving wire-strike protection system; radically new procurement strategies for the AHIP Program; completion of the CH-47D Program on cost and on schedule; and the development of aircraft survivability equipment.

During his career, the 1951 graduate of San Marcos Air Force Base Army flight training served as an Army aviator in Korea, Japan, Alaska, Vietnam, Germany and the continental United States, and directed aviation staffs at both AMC and Department of the Army headquarters.



EXTENDING COMBAT CAPABILITIES.



Robertson Aviation is proud to have provided United States Army Aviation helicopters with extended range fuel systems that have added to their combat capabilities in Iraqi Freedom, Enduring Freedom, Desert Storm, Bosnia, and Panama.

- **Combo Pak Internal Auxiliary Fuel System (Combo Pak IAFS)** for the AH-64 Apache helicopter that consists of a crashworthy self-sealing internal auxiliary fuel system integrated with an ammunition storage magazine. The Combo Pak IAFS provides 100 gallons (nominal) of fuel and 300 rounds of ammunition (including rounds in the chute). The Combo Pak IAFS is completely interchangeable with the standard ammunition storage magazine and can be quickly installed or removed using the Apache Magazine and Auxiliary Tank Transfer System (AMATTS).

- **Extended Range Fuel System II (ERFS II)** for the CH-47 and MH-47 Chinook that consists of up to three 800 gallon crashworthy self-sealing tanks to provide up to 2,400 gallons of additional fuel for extended range or for offloading to other combat weapons systems in the forward area.

- **Internal Auxiliary Fuel Tank Systems (IAFTS)** for the UH-60 and MH-60 Black Hawks; including a two-tank internal crashworthy self-sealing system that increases range/endurance approximately 100%, and a single tank internal crashworthy self-sealing system that increases range/endurance approximately 50%. With aircraft modifications installed the two systems are completely interchangeable.

To be fielded in 2003 the Crashworthy External Fuel System (CEFS) for the UH-60 Black Hawk consists of two crashworthy self-sealing single-point pressure refuelable external tanks that mount on ESSS equipped UH-60 Black Hawk helicopters.

Robertson Aviation will continue to search for ways to improve the combat capabilities of Army Aviation – we are proud to have the opportunity to be part of your team.

For more information visit our website at www.robertsonaviation.com, call (480) 337-7050, fax (480) 968-3019, or write 1024 E. Vista Del Cerro, Tempe, AZ 85281

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Crashworthy Extended Range Fuel Systems