

ARMY AVIATION

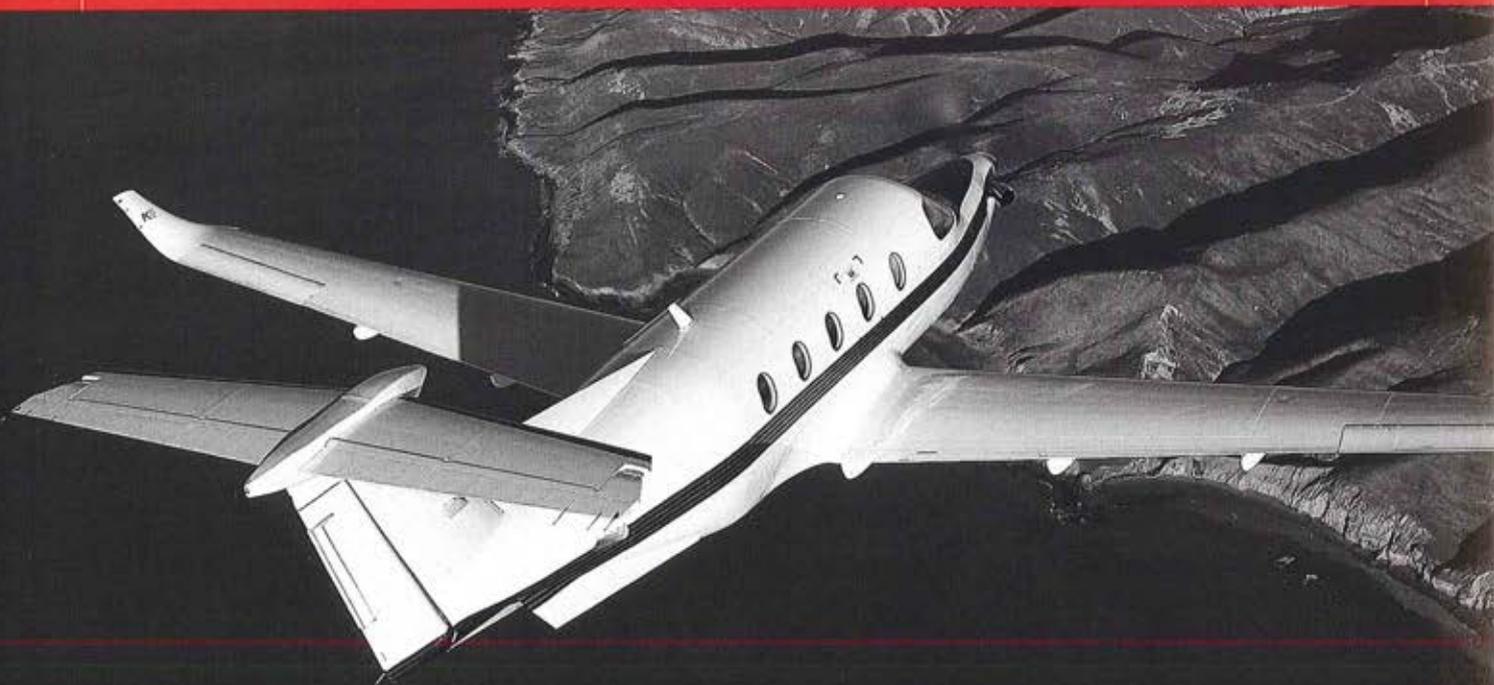
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on the cover

Paid Advertisement. Boeing-produced AH-64 Apaches have been called into service around the world, including Iraq and Afghanistan, in recent months. The Apache provides the war-fighter with the tools to excel on the battlefield while protecting America's most precious assets, its soldiers. Photograph by Bob Ferguson. *Caption provided by advertiser.*



Sikorsky Aircraft Corp. has announced that it has presented its Winged-S Rescue Award to the crew of the Army 160th Special Operations Aviation Regiment MH-60K Black Hawk helicopter that took part in the April 1 rescue of Army PFC Jessica Lynch in Nasiriya, Iraq. The MH-60K was a key part of the force responsible for the rescue of the wounded Lynch, who was held in Saddam Hospital as a prisoner of war. After the infiltration of special operations forces at about 2 a.m., the aircraft remained on the ground in front of the hospital for the 20 minutes it took for the wounded soldier to be located, secured and loaded aboard. After Lynch and the rescue team were safely on board, the MH-60K departed the area under armed escort. Lynch, 19, suffered broken legs, a broken arm and other injuries when her convoy was ambushed early in the war.

A squadron of AH-64D Apache Longbow helicopters returned to its home base at Camp Humphreys in South Korea in early June after completing a year of the Army's transformation and modernization program at Fort Hood, Texas. The 17 helicopters of 3rd Squadron, 6th Cavalry Brigade, left Korea last year as AH-64A models and were upgraded to D-model Longbows while in the United States. The aircraft arrived June 5 after a lengthy voyage from Corpus Christi, Texas, aboard the cargo ship Green Point.

The publishing firm G.P. Putnam's Sons has released "In the Company of Heroes," the stirring account by CW4 Michael J. Durant (Ret.) of his shootdown and capture by Somali forces during the United States's 1992 incursion in the strife-torn African nation. The book is a gripping personal account that tells the world about Durant's harrowing confinement.

The Boeing Co. will pay the Army \$2.5 million to settle a fraud lawsuit involving an allegedly defective part in the AH-64 Apache attack helicopter. The out-of-court settlement ended a five-year dispute centering on allegedly defective debris collectors in the helicopter's main transmission and two nose gearboxes. Eugene Swensen, a former engineer at Boeing's Apache-production facility in Mesa, Ariz., filed a whistle-blower lawsuit in December 1998 alleging that Boeing attempted to cover up the problem rather than fix it. Swensen will be paid \$575,000 by Boeing in compliance with the False Claims Act, and the aerospace giant also agreed to pay Swensen an additional \$825,000 to settle an employment claim and pay legal fees and other costs. Swensen retired from the company in January 1999.

Polhemus — a provider of 3D position/orientation tracking systems, digitizing technology solutions, eye-tracking systems and handheld three-dimensional scanners — has announced a new 6 DOF tracking product line named Liberty. The new product is said to represent a quantum leap in new technology and state of the art Digital Signal Processor (DSP) electronics. The 240 Hz-per-sensor Liberty operates via an intuitive Graphical User Interface (GUI), and offers scalability and improved signal-to-noise ratios which increase stability and resolution while providing consistent, high-quality data.

The University of North Dakota's Helicopter Flight Training Program will train U.S. Military Academy cadets to fly Army helicopters. The initiative is funded through \$1.4 million that Sen. Byron Dorgan secured for UND's "Air Battle Captain" helicopter training program in the 2003 Defense Appropriations bill signed by President George W. Bush in April. The partnership will begin as a one-year pilot project exclusively between UND and West Point. It will be opened up to a competitive bid process following the pilot period.

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ARMY AVIATION is the official journal of the Army Aviation Association of America (AAAA). The views expressed in this publication are those of the individual authors, not the Department of Defense or its elements. The content does not necessarily reflect the official U.S. Army position nor the position of the AAAA or the staff of Army Aviation Publications, Inc., (AAPI). Title Reg^x in U.S. Patent office. Registration Number 1,533,053. SUBSCRIPTION DATA: ARMY AVIATION (ISSN 0004-248X) is published monthly, except April and September by AAPI, 755 Main Street, Suite 4D, Monroe, CT 06468-2830. Tel: (203) 268-2450, FAX: (203) 268-5870, E-Mail: aaaa@quad-a.org. Army Aviation Magazine E-Mail: magazine@quad-a.org. Website: <http://www.quad-a.org>. Subscription rates for non-AAAA members: \$30, one year; \$58, two years; add \$10 per year for foreign addresses other than military APOs. Single copy price: \$3.00. ADVERTISING: Display and classified advertising rates are listed in SRDS Business Publications, Classification 90. POSTMASTER: Periodicals postage paid at Monroe, CT and other offices. Send address changes to AAPI, 755 Main Street, Monroe, CT 06468-2830.

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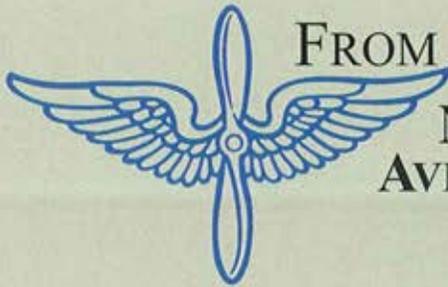


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FROM THE AVIATION BRANCH CHIEF

NOTES ON SPECIAL OPERATIONS AVIATION AND NIGHT VISION DEVICES

By MG John M. Curran

This month **ARMY AVIATION** focuses on special-operations aviation and night-imaging devices. The magazine's staff is working hard to improve our de facto professional journal and bring you the best information from multiple sources. I encourage you to provide to the editors your comments on what you read. They need your feedback to help serve our association and make our journal better.

ARMY SPECIAL OPERATIONS AVIATION (ARSOA)

We are proud of how well our special operations aviation forces have carried out their missions in support of Operation Iraqi Freedom. Serving as part of the Joint Special Operations Task Force, elements of ARSOA — the 160th Special Operations Aviation Regiment (SOAR) — provided the joint-force commander with the flexibility to conduct a variety of missions, some asymmetrical, against Iraqi forces.

The highly publicized night rescue of former POW PFC Jessica Lynch from Iraqi captivity is one noted mission of hundreds they accomplished — many of which we will never hear about. The 160th SOAR contributed attack and lift helicopter support to the great team effort that freed Jessica.

Our conventional Army aviation force benefits greatly from the cross feeding of ARSOA tactics, techniques and procedures to our units. This is made possible by the move back and forth of 160th leaders and crewmembers from special ops to conventional assignments. I encourage leaders to take advantage of newly assigned personnel for officer, NCO and soldier professional development.

INCREASE IN WORLDWIDE REQUIREMENTS

The vision for ARSOA is to be a rotary wing force for the U.S. Special Operations Command — a force that is manned, equipped, and trained to provide focused aviation support capable of conducting rapid worldwide deployments in less than 18 hours.

The mission of ARSOA is to be capable of conducting precision helicopter attacks and assaults in complex urban areas, and provide medium- and heavy-lift capabilities to conduct infiltration and extraction missions — all over long ranges, in all weather and terrain conditions, and in high-threat environments.

ARSOA assets are constantly in high demand to support a broad range of customers. Combatant commanders rely on ARSOA for theater contingency and operational plans, and Joint Chiefs of Staff-directed exercises. They also provide support to the combat training centers, the Special Warfare Center School, to seven special forces groups (approximately 350 operational detachments), the Ranger Regiment, and to 48 Navy SEAL platoons and a host of other special-mission units.

Presently, ARSOA assets are based at Fort Campbell, Ky., and Hunter Army Air Field near Savannah, Ga., and overseas

in Korea and Puerto Rico. However, there is also a need to provide for West Coast-based and more forward-deployed ARSOA assets to support homeland defense and the U.S. European and U.S. Central Command areas of operations. So there is a compelling necessity for ARSOA growth.

Recent Army strategic planning guidance places the modernization of ARSOA as the highest priority within Army aviation transformation. This priority will help to give the Department of Defense increased capabilities for the global war on terrorism with trained and ready forces.

TRANSFORMATION SOLUTIONS

In the future, the number of 160th SOAR authorizations will increase from current levels by more than 1,150 soldiers. The increase in positions includes commissioned officers from O2 to O6, warrant officers from W2 to W4 and enlisted soldiers from E3 to E9.

This action adds positions and increases the grades of other selected positions to enhance the regiment's ability to plan, coordinate, command and control with allied and coalition forces. It increases battle-staff personnel at various levels to enhance mission analysis, coordination and command of the expanding number of diversified theater-level ARSOA missions.

In addition, it provides the necessary growth in maintenance and support personnel to increase the "tooth-to-tail" logistics ratio. To accompany the added manning, we will also see an increase in the number of special ops aircraft from the current 141 to 213.

This is great news for soldiers desiring an opportunity to serve with the elite Night Stalkers. To learn more about ARSOA transformation, read Dwain Pannell's article "Army Special Operations Aviation Transformation" in this issue.

NVDS

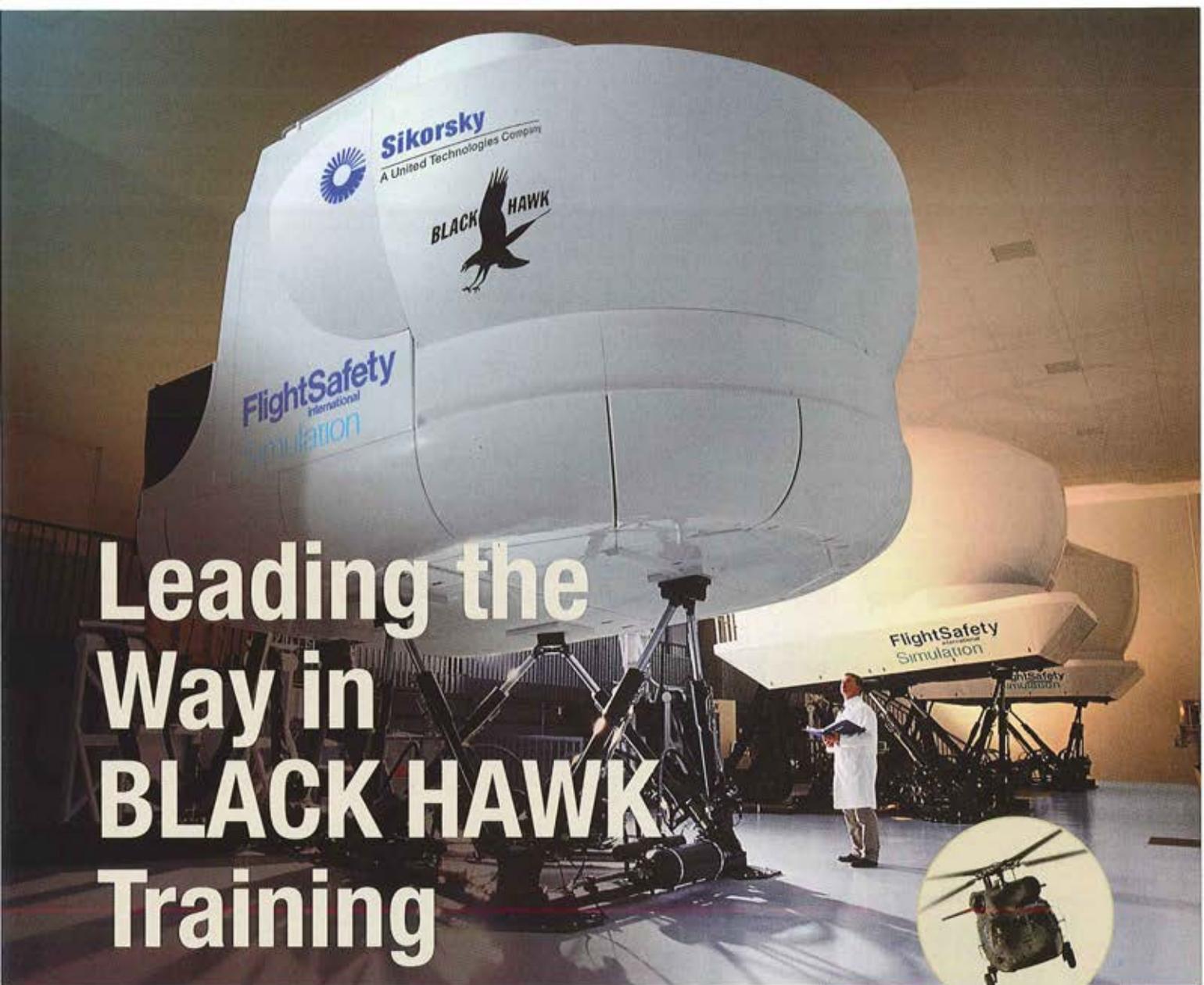
The other focus this month is night-imaging devices. We have some good news to report on several fronts.

The Army began fielding in June 2002 the newest version of the aviator's night-vision system (ANVIS), the AN/AVS-6(V)3. To date, the 160th SOAR, all aviation units at Fort Bragg, N.C., and some organizations at Fort Campbell have received this system.

On April 30 the Army took delivery of the latest upgrade of the (V)3 ANVIS. The improvements to this version of the (V)3 over the initial (V)3s include significantly expanded high- and low-light operational capabilities (improved resolution), the reduction and control of halo effects, and an increase in signal-to-noise ratios.

We have obtained the funding to upgrade approximately 60 percent of all our legacy ANVIS systems by fiscal year 2007. The next scheduled fielding is to units in Korea this September.

Army aviation also needs to explore technologies other



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than just image intensification (I2) for our UH-60s and CH-47s, to allow these aircraft to meet the 24/7 capabilities of the Objective Force. Here at Fort Rucker, the Aviation Training Brigade is helping to conduct an operational assessment of a wide-field-of-view goggle to determine if a wider FOV improves operational effectiveness. We'll be watching for the assessment.

COMBINING TECHNOLOGIES

A program our Directorate of Combat Developments is monitoring is called the Enhanced Night Vision Goggle, or ENVG, for use with our crew chiefs and door gunners. The U.S. Army Infantry Center at Fort Benning, Ga., is working on incorporating a very small forward-looking infrared system (FLIR) with NVGs similar to the dismounted AN/PVS-14.

The picture you get from the image intensification (I2 — what you get from traditional goggles) is overlaid on the image from a FLIR sensor. Each image can be optimized independently of the other. So, depending on the meteorological conditions, the two images may be optimized to produce the clearest "combined" picture.

This begs the question: "So why for crew chiefs and door gunners, but not pilots?"

The answer is relatively simple. The FLIR "sees" heat — more precisely, it "sees" the difference in heat. A FLIR's "sensitivity" or quality is measured in terms of "minimum resolvable temperature." It works great for targeting because a hot vehicle against the cool night sky appears brighter than other objects.

However, if everything is the same temperature, the

FLIR image becomes nearly unusable. The greater the temperature differentials are of objects in the sensor's view, the clearer the picture.

The problem for pilots is that the windscreens impede the sensing of temperature differentials with the outside world. Plexiglas is a great insulator. That's why FLIR sensors on aircraft are mounted outside and the images are "piped in" to the pilots.

So for crew chiefs and door gunners, who are leaning out of aircraft to shoot and clear obstacles, the combined images will provide for superior imaging over existing goggles.

The ENVG is still under development, but we are working closely with the Infantry Center to articulate our requirements.

CLOSING THOUGHTS

Before I close this month I would like to remind commanders, leaders, pilots and crewmembers that despite the advancements in technologies to operate at night, night operations are inherently our most risky mission. It takes a team — conducting careful premission planning, determining the risks, chain-of-command involvement, then good communications among the crew and other aircraft — to prevent mishaps and the loss of life. Risk management and mitigation is everyone's business.

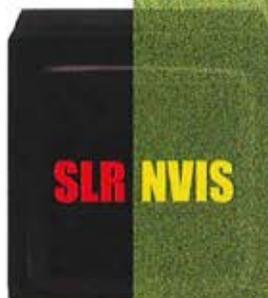
Thanks for your diligence and professionalism. Continue to think safety and risk management, be safe and watch out for others. Above the Best!



MG John M. Curran is the commander of the U.S. Army Aviation Center and chief of the aviation branch.

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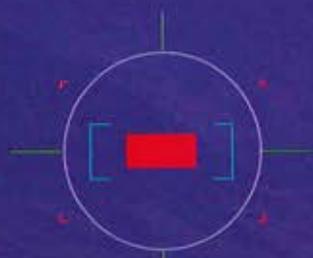
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PRAISING HEROES (AND LEARNING HOW TO MAKE FUTURE OPERATIONS EVEN SAFER)

By BG James E. Simmons

This is truly a wonderful time to be part of this great Army. Our extremely resilient and flexible soldiers proudly answered our nation's call and did an outstanding job defeating an oppressive regime in Iraq. To each of those soldiers — heroes all — we owe a huge debt of gratitude. But even as we reflect on our successes and praise our heroes, we are also already sorting through

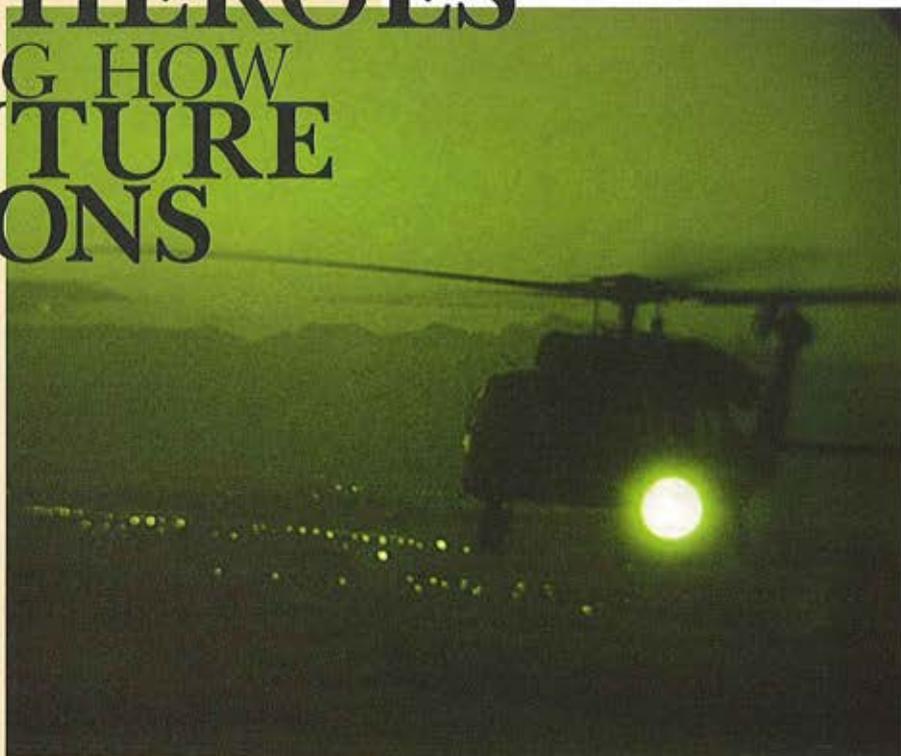
tons of data for lessons learned that we can apply to future operations.

It does not take a lot of analysis to understand that our achievements in operations Enduring Freedom and Iraqi Freedom have been nothing

short of phenomenal. Leaders and individual soldiers alike demonstrated incredible courage and adaptability in dealing with every threat and defeating the enemy decisively. Most importantly, we were able to accomplish our objectives with minimal accidental fatalities, making this the safest war in which we have ever participated.

In every previous major conflict with the exception of the Korean War, we have lost more soldiers to accidents than to enemy action. However, analysis of preliminary data indicates that is not the case in Enduring Freedom and Iraqi Freedom. Superior equipment, advanced technology and, most importantly, the greatest soldiers in the world allowed us to accomplish objectives with minimal accidental fatalities.

Our aviation community has had the opportunity to put to the fullest test our doctrine, our training and our individual aviator skills. And I can tell you, our aviators had some



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tough flights and fights, but they repeatedly proved themselves to be more than equal to every challenge they encountered.

We have long lived by the maxim "train how you will fight." While we did have to be flexible and adaptable in the way we employed our aviation assets when we encountered problems like night landings in brownout conditions, our soldiers were successful because of their training and their ability to manage risks as new hazards arose. Our flight crews received training that allowed them to stretch their individual limits and the limits of our equipment time and again and still bring the aircraft, often riddled with enemy bullets, back safely.

In virtually every area of Army aviation, there are many lessons to learn from our combat operations. I want to focus on some of the hazards we at the Army Safety Center have identified in our preliminary analysis of accidents that have occurred during recent night operations.

detailed analysis of accident data is required to flesh-out all of the hazards that are causing this increase in accidents, but we do have some early indicators of causal factors.

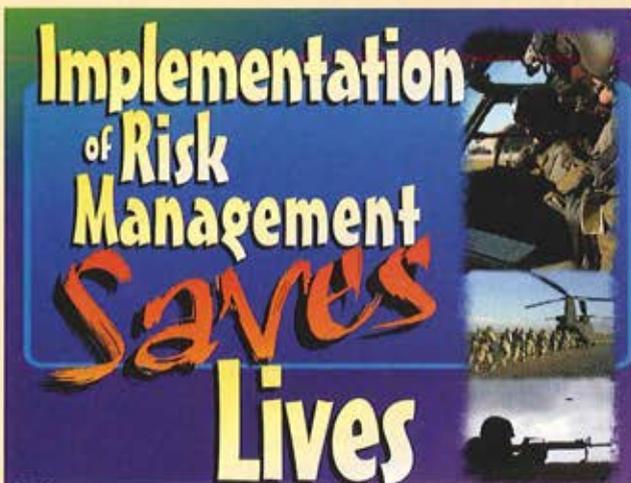
Adverse environmental hazards have had causal or contributory roles in many recent accidents. Specific hazards identified include low lunar illumination levels, areas of poor terrain contrast and definition, and poor weather conditions. When taken individually, we seem to do well in managing these hazards. However, when we conduct operations under conditions that combine the hazards, the risks quickly elevate beyond acceptable levels.

In several recent accidents, the percent of lunar illumination was zero or near

Chalk 2 in a flight of two en route to a training area. As the flight reached the last light indicating the flight route, Chalk 1 turned to return to base because the weather was deteriorating below acceptable limits. Chalk 2 did not realize what Chalk 1 was doing and, in the confusion, inadvertently flew into the ground. The aircraft was destroyed and the crew was killed. Again, in this case, had the crew been called upon to



In virtually every area of Army aviation, there are many lessons to learn from our combat operations.



While our night-vision devices worked well, we have learned yet again that they do have their limitations. In fiscal years 2000 and 2001, our night-aided accident rate for all rotary-wing aircraft was 0.56 and 2.83 per 100,000 flying hours. In FY 2002, our rate was 6.95, and so far our rate in FY 2003 is 5.46. A more

zero. That by itself does not seem to be a problem, but when crews fly over areas of low contrast under zero lunar illumination, the routine flight can quickly turn tragic. In one accident on a night with zero illumination, an experienced and highly qualified H-60 crew crashed while in a steep left turn over an area of low contrast and little definition. This crew had trained extensively at night

and, in spite of that, still did not maintain orientation in the turn. Even some of our very best can lose orientation when hazards accumulate.

In another accident, an H-60 crew encountered deteriorating weather conditions over a large area of poor contrast and definition on a dark night. The accident aircraft was

deal with only one of the hazards, it is entirely probable that they would have retained orientation and returned safely to base.

It isn't just the aircrews flying under night vision goggles who are experiencing problems. We had two Apache crews using the TADS/PNVS experience inadvertent instrument meteorological conditions (IIMC) in the span of three weeks. In the first accident, the crew was flying the system on a mission to re-establish the pilot's system currency when they suddenly realized that they could not see very well through the system. The instructor pilot quickly glanced outside the aircraft and initiated IIMC recovery procedures when he realized the aircraft was IMC. As he initiated a climb, the aircraft struck trees. The aircraft, still IMC, continued forward and crashed into trees on a steep slope approximately one kilometer from the initial tree strike. Fortunately, this crew survived with minor injuries, but the aircraft was destroyed.

In a second AH-64 accident, the crew on a night vision systems continuation training flight was attempting to return to their home airfield through mountainous terrain in deteriorating weather. The crew departed from their intermediate airfield under special visual flight rules, maintaining 100 knots indicated airspeed after takeoff. Visibility at the airfield was 2 miles, and 1-mile visibility was forecasted en route. The crew encountered undetermined weather conditions and impacted rising terrain. As a result, the aircraft was destroyed and both crewmembers were killed.

No matter how good the night-vision devices, we should anticipate that aircrews will not always be able to see the detail they normally see, particularly when they are flying on dark nights over areas of low contrast and definition. When assessing the mission risk levels, commanders, trainers and individual aviators should consider the cumulative effects of hazards and develop controls based on operational requirements to help aircrews maintain situational awareness.

A review of our accident data shows that there is sometimes a reluctance by some aircrews to execute IIMC procedures in a timely manner. All too often, IIMC procedures are evaluated during the oral examination, as opposed to being evaluated in the actual aircraft. Commanders should have their instructors and examiners conduct IIMC recovery procedures in the aircraft at night. Hooded flight at night makes the situation more realistic and the training more beneficial.

The accident data also reveals a number of breakdowns in crew coordination. Flight crews should not view crew coordination as simply a required task, but rather as a control for the hazards they encounter. All aircrews should capitalize on the synergy that working as a crew generates. During pre-mission briefings, cover contingency plans for the frequently occurring hazards we have discussed here. In the mission brief, we should identify the recovery airfield and the available approaches. Comman-

ders, it is incumbent upon you to use the latest crew-coordination training materials and sustain aircrew member proficiency in crew coordination.

In all of the accidents we have reviewed, imagine the outcome if the unit commander or the mission briefing officer had asked the crews some of the "tough" questions. Those tough questions might include a discussion of contingency plans, weather checks, route planning and who does what during the execution of IIMC procedures.

As individual aviators, we simply cannot blame the commander or the leader for the accident. All too often during the investigation of an accident, clear evidence of overconfidence by the aircrew surfaces. Don't get me wrong, I think all aircrews must be confident in their abilities. What we must fight against is the kind of overconfidence that results in not doing correctly — by the standard, by the book — everything necessary for safely accomplishing the mission.

There is no question that we have excellent night-vision equipment, and the technology just keeps getting better. In fact, improvements in the equipment make some of the night vision equipment I started flying with virtually obsolete! However, we can never afford to believe that excellent equipment performance eliminates the need for good judgment. Good judgment can be a willingness to modify mission routes, change flight crews and use all available equipment to help maintain situational awareness.

Training how we will fight, understanding how to manage risks as situations and conditions change, following established standards and procedures, making effective crew coordination a control measure for every flight and including some huge doses of good judgment create an unbeatable formula for growing future heroes and ensuring that we continue to execute successful aviation operations.



BG James E. Simmons is director of Army safety and commander of the U.S. Army Safety Center at Fort Rucker, Ala.

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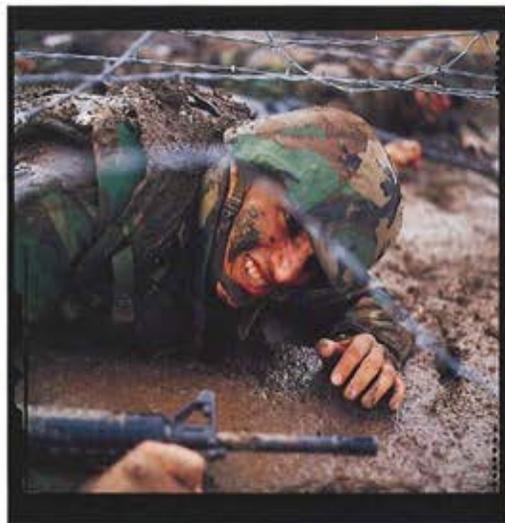
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THE NIGHT VISION DEVICES BRANCH

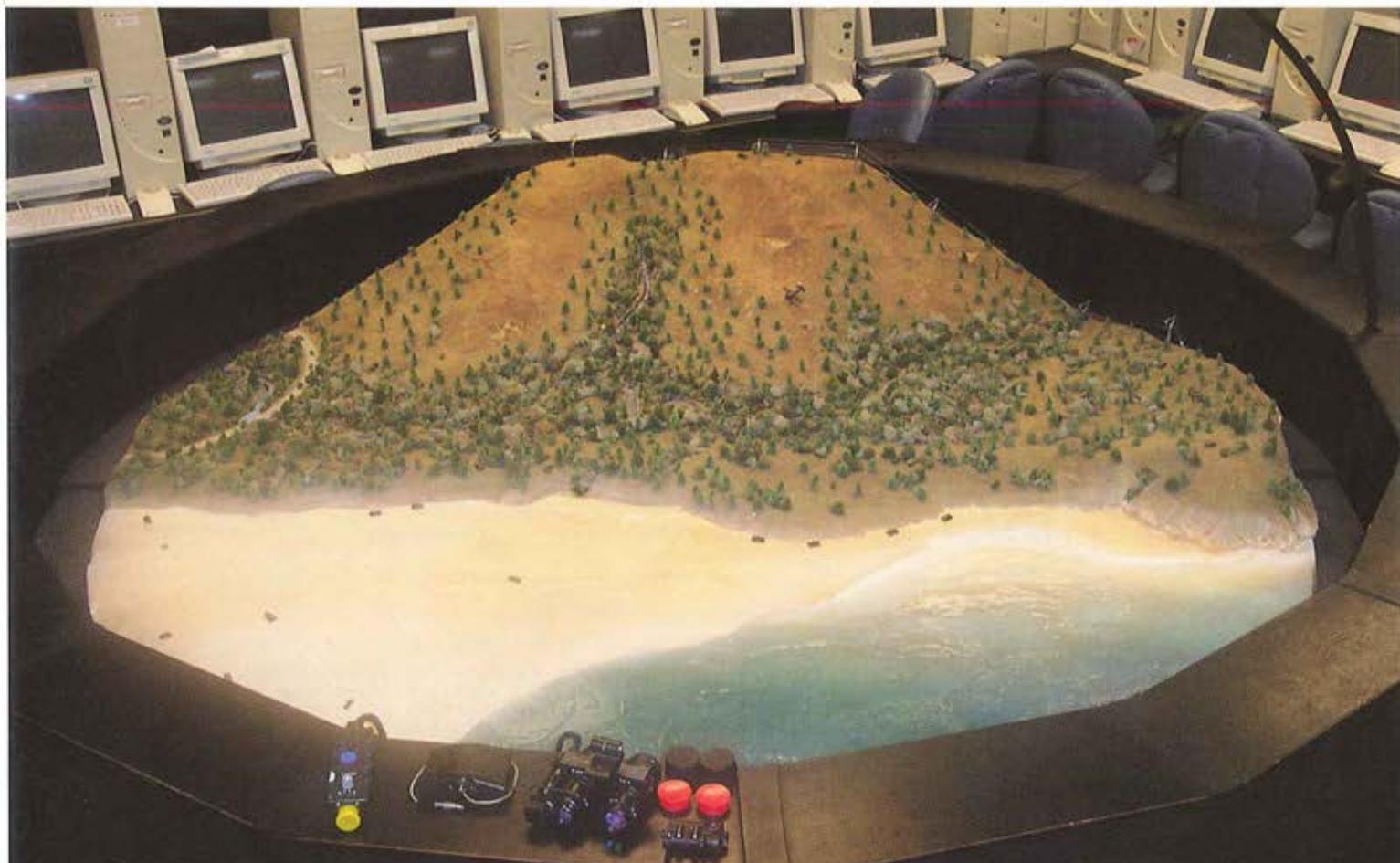
By CW3 John H. Bentley

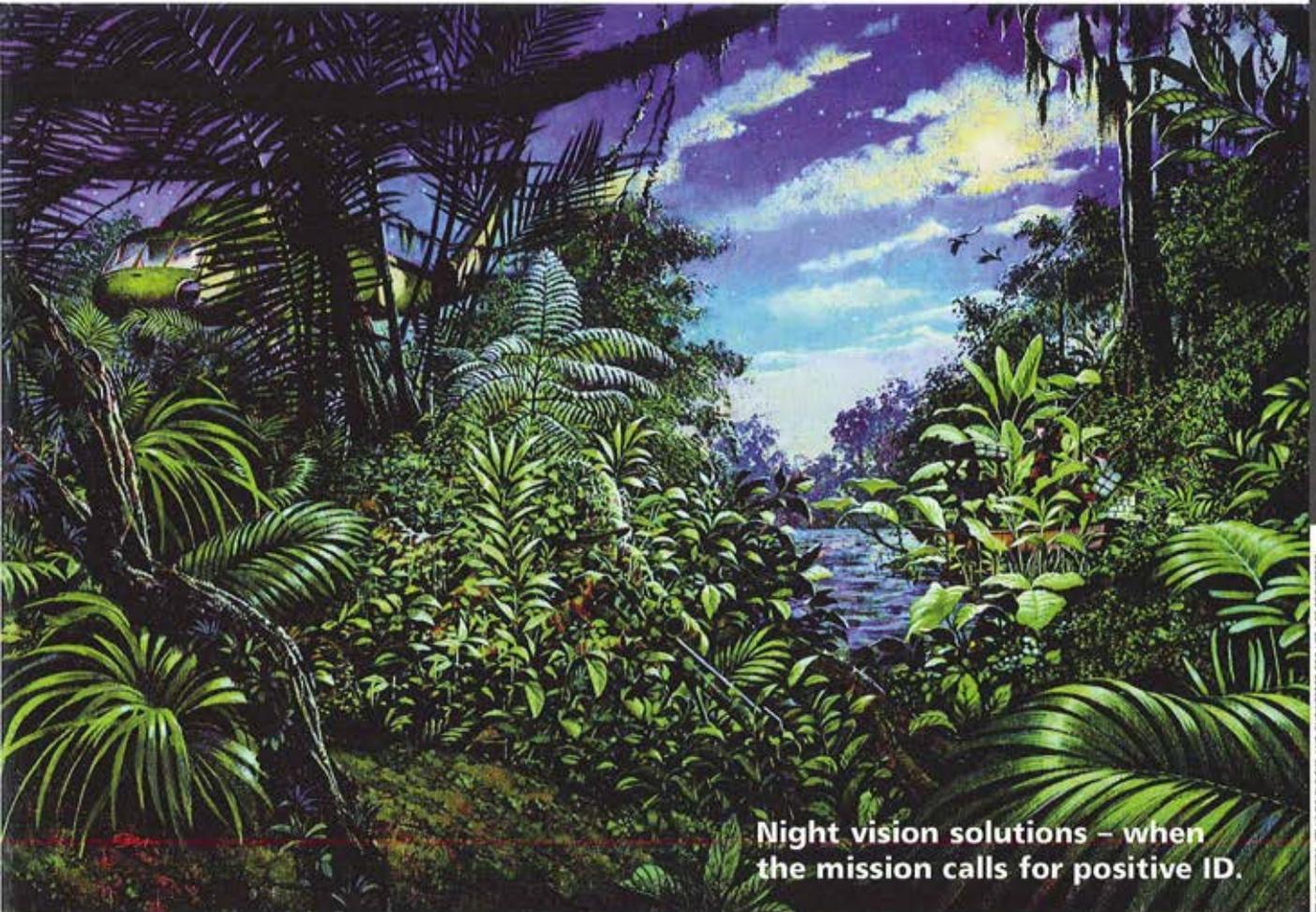
The Night Vision Devices Branch (NVDB), located at the home of Army aviation on the main post at Fort Rucker, Ala., is a one-of-a-kind organization. In addition to training warfighters, this multifaceted organization structures and implements the U.S. Army's aviation night-vision program.

The NVDB provides night-vision leadership and guidance to all of Army aviation, and conducts night-vision training in support of the U.S. Army Aviation Center (USAAVNC) at Fort Rucker. The NVDB is the worldwide point of contact (POC) and the principal Department of the Army (DA) staff agency for night-vision training, operations and maintenance issues.

The NVDB is responsible for providing academic in-

struction to approximately 3,000 students annually on a myriad of night-vision subjects. The NVDB trains all Initial-Entry-Rotary-Wing (IERW) students (including Flight-School XXI) along with all rotary-wing Aircraft Qualification Courses (AQC), the Instructor Pilot (IP)/Method of Instruction (MOI) courses, the UH-60 and CH-47 Flight Engineer Instructor courses (FEIC), the flight medic's course and the flight surgeon's course.





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In addition, the NVDB provides academic instruction to students enrolled in the brigade and battalion commander's Precommand Course and the Aviation Senior Warrant Officer Course, and conducts academic instruction for the U.S. Drug Enforcement Agency (DEA), the U.S. Customs Service (USCS), and inter-service and international students. Lastly, the NVDB presents numerous briefings and academic classes at the request of governmental agencies, local organizations and industry. With the exception of the Branch NCOIC, all NVDB staff instructor/writers (I/Ws) are qualified in an advanced aircraft and are graduates of the U.S. Training and Doctrine Command's (TRADOC) Instructor Training Course (ITC).

The NVDB's vision is to be the Army's premier leader in aviation night vision and academic instruction, thereby contributing to the success of the USAAVNC mission and Army aviation's ability to train as we fight during the darkest of nights.

The branch chief, a DA position currently occupied by CW5 Dennis McIntire, provides primary oversight of the entire U.S. Army aviation night-vision program. The branch chief is a subject matter expert (SME) in matters pertaining to future night-vision product specifications and acquisition, and occasionally serves on source-selection boards for NVD contracts.

The branch proponent, another DA position currently held by CW3 Jerry Caffee, sets regulatory requirements for field units in the form of an annual Aviation Safety Action Message (ASAM). In addition to proponent duties, Caffee is also an academic IW and is qualified to teach all branch lesson plans.

The ASAM is initially disseminated through command channels and then is posted on the branch's web site (www-rucker.army.mil/atb/nvd/nvdb.htm). To determine the contents of the annual ASAM, the proponent hosts an annual seminar with representatives from all major commands (MACOMs), including the Department of Evaluation and Standards (DES); PM Soldier - Sensors and Lasers; National Guard Bureau; U.S. Army Research Laboratory (USAARL); U.S. Army Safety Center (USASC); U.S. Army Communications-Electronics Command (CECOM) Logistic Assistance Representative (LAR)/Safety; and the Directorate of Combat Development (DCD). These regulatory requirements must meet with the U.S. Army Materiel Command (AMC) commander's approval before Armywide dissemination.

The project manager (PM) Soldier Sensors and Lasers works with the branch proponent and is the primary POC for new NVD fielding, as well as the cascading of older NVDs to subordinate units. The NVDB assists the PM as he supervises the contract execution, as well as the manufacturing and acceptance of all night-vision equipment into the Army inventory. The NVDB staff is occasionally requested to augment and provide assistance in the fielding of new night-vision equipment, as is the case with the new AN/AVS-6(V) 3, Type-five and six NVDs.

SSG Richard Himes is the branch NCOIC. He is accountable for many branch areas of responsibility. Aside from assisting the NVDB proponent field ques-

tions from Army units worldwide, he also is an SME on NVD unit-level maintenance issues. Himes also is the Aviation Training Brigade's (ATB) Aviation Life Support Equipment (ALSE) NCOIC, and helps the CECOM-LAR organize Fort Rucker's NVD Unit-Level Maintainer's Course. As a graduate of ITC, Himes is also qualified to teach academics.

I/Ws assigned to the NVDB are required to perform quality control and update lessons plans and tests to assure quality information is being disseminated. The branch is often audited by DES to ensure that data contained in lesson plans is accurate, correct, and conforms to the Automated Systems Approach to Training (ASAT) format.

Instructors are evaluated annually by the Staff and Faculty Division to guarantee they are using the most up-to-date methods of instruction. Motivated instructors can compete for the "Instructor of the Quarter" honors. If an instructor wins this award, he or she can compete for the "Instructor of the Year" honor, which will lead to the "Training and Doctrine Command's (TRADOC) Instructor of the Year." These honors will render points toward the senior and master instructor badges.

The USAAVNC academic instructor development program consists of "instructor," "senior instructor" and "master instructor" levels. The first level is attained by successful completion of the Total Army Instructor Training Course (ITC). The Aviation Center's senior and master instructor prerequisites are specified in USAAVNC Pamphlet 350-10. Further educational opportunities are available for those seeking advanced academic instructional skills (e.g., Automated Systems Approach to Training, Middle Manager's Course or Senior Manager's Course).

The NVDB utilizes an innovative approach to demonstrate how the moon angle and illumination levels dramatically affect our view of terrain. The NVDB uses a rotating terrain board which was fabricated, at our request, by the Training Aid Support Center (TASC). This terrain board uses multiple red LEDs controlled by a rheostat on a light bar to simulate moon angles and illumination levels.

The board was designed to simulate flight at approximately 500 feet above ground level over different types of terrain, such as water, desert and mountains. While the students view the scene under NVDs from around the terrain board, the instructor is able to rotate the board and control the moon angles and illumination levels from his control panel, giving the student a profound demonstration of the challenges of terrain flight under various scenarios.

The Army is a very complex and diverse machine with numerous moving parts. The NVDB is only one moving cog responsible for the management and execution of the Army's aviation night-vision program. With visionary leadership and a Department of the Army focus, the NVDB is poised to meet the challenges of future NVD development while "Training Aircrews for Tomorrow, Tonight."



CW3 John H. Bentley is the Night Vision Devices Branch's director of training, Fort Rucker, Ala.



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ARMY SPECIAL OPERATIONS AVIATION TRANSFORMATION

By Dwain E. Pannell

..."Another key element in Army aviation transformation is the transformation of Army Special Operations Aviation (ARSOA). The future ARSOA structure will be fully capable of supporting strategic national missions as well as the full spectrum of military operations." - *2003 Army Modernization Plan*

Because of existing and evolving threats to the United States, its citizens and its national interests, the Army will continue to have a requirement to provide the president, the secretary of defense and the theater combatant commanders with a rapidly deployable, fully interoperable Army Special Operations Aviation (ARSOA) capability.

Threats range from acts of terrorism against domestic targets to information operations waged in cyberspace. As the nations and organizations hostile to the United States gain financial support, transnational mobility and advances in asymmetric capabilities, it becomes more likely that they can effectively respond to diplomatic, military or economic policies pursued by the United States.

As threat technology proliferates, ARSOA must maintain the capability to operate in urban, jungle, desert, mountainous, arctic and over-water environments. It must train and maintain the capability to execute special-operations missions during adverse weather conditions, periods of limited visibility, and in nuclear, biological or chemical (NBC) contaminated environments for extended periods of time. ARSOA will conduct these missions in support of ground and maritime special-operation forces (SOF) across the operational continuum, applying precise timing of all supporting air plans and surgical lethality of aerial fires.

The president or the secretary of defense may direct the 160th Special Operations Aviation Regiment (SOAR) or its battalions, as a member of a joint task force (JTF) or joint special-operations task force (JSOTF), to conduct overt or clandestine missions that apply restricted rules of engagement and demand mini-

mum collateral damage. Geopolitical considerations may require ARSOA to conduct long-range missions that require combat air patrol or armed escort assets. To this end, ARSOA transformation will give all ARSOA battalions the capability to operate unilaterally or in a joint, interagency, or combined-force environment and possess organic fire support/escort assets.

The success of the 160th SOAR and its predecessor units in such operations as Urgent Fury, Mount Hope III, Prime Chance, Just Cause, Desert Storm, Gothic Serpent, Restore Democracy, Joint Endeavor, Assured Response and other classified operations provided significant practical experience in mission analysis and joint interoperability. There is no better example of successful ARSOA employment throughout a theater campaign plan than present day support to Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF).

MODERNIZATION AND THE 160TH SOAR

Throughout the evolution of the 160th SOAR, conventional models applied to the force structure failed to meet the requirements of this one-of-a-kind unit. The unit's required operational capabilities grew faster than conventional-force modernization systems could respond.

ARSOA force-modernization issues are based on unique mission and organizational capabilities that are validated by the JSOTF commander or theater combatant commanders and translated into a Mission Essential Task List (METL). Based on current doctrine, ARSOA will be deployed worldwide across the spectrum of conflict during peace and war. National/theater strategic and operational environment considerations and require-



AIRCRAFT	DURATION OF FLIGHT	PILOT TIME	PILOT EXPERIENCE
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ments, which dictate ARSOA Objective Force design, are detailed in a classified design concept paper.

To meet its expanding global requirements the ARSOA transformation will address immediate and extensive force-structure growth. Numerous force design deficiencies over the past two decades have introduced risk to the force. The ARSOA growth initiatives greatly mitigate this risk and better allow the unit to safely accomplish its growing mission set. The following paragraphs describe the four force structure categories that comprise required growth.

STAFF IMPORTANCE

The requirement for a robust battle staff is based on the number of leaders, planners and technicians it takes to conduct mission analysis and subsequently plan, coordinate and command an expanding number of diversified theater-level ARSOA missions. The end state is to transition the current staff to a regiment battle staff that can deploy as a warfighting headquarters when required.

The regiment must continue to man, equip, train, sustain and in most cases fight these forces once deployed.

All elements of the regiment must train and fight in accordance with joint doctrine. If the 160th SOAR establishes a Joint Special Operations Air Component (JSOAC) it must be prepared to receive operational control (OPCON) of joint forces and fight them theater wide. Additionally, as ARSOA continues to forward base units overseas, it will require an expanded battle staff to oversee their administrative control.

The regiment must continue to man, equip, train, sustain and in most cases fight these forces once deployed. Since all SOA-unique aircraft periodically require hardware and software upgrades, it will require the movement of forward deployed aircraft to a CONUS modification facility to complete the work. While individually manageable, these support tasks will require constant management and staff coordination.

The inherent closed-loop or stovepipe nature of special-operations units places these burdens squarely on the backs of the current regiment and battalion staffs. For all these reasons, ARSOA transformation will give the regiment staff significant force-structure growth to enable it to meet the U.S. Army Special Operations Command (USASOC) vision of transitioning it to a warfighting headquarters while maintaining the capability to serve as a resourcing headquarters.

AIRCRAFT MAINTENANCE PERSONNEL

The requirement for additional aircraft-maintenance personnel is based on the historically low tooth-to-tail

ratio applied to the most sophisticated aircraft in the Army inventory. Extended phase-maintenance inspections and an increasing number of deferred write-ups are but two symptoms of the under-resourced maintenance support organic to the 160th's current force structure.

The regiment will also continue to execute an aggressive flying-hour program, which at this point exceeds the Army rate by 30 to 35 percent. Many of these hours are being flown by an aging fleet of SOA-unique aircraft in demanding mission profiles under the harshest environmental conditions in the world.

AIRCREW MEMBERS

The requirement for additional air crewmembers is based on the necessity to gain a 1.5 crew ratio for all probed (air-to-air refuelable) aircraft. The requirement for 1.5 crew manning is based on several aspects of ARSOA operations: short-notice strategic deployment or long-range self-deployment; the routine execution of long-range missions (in excess of 10 hours); and sustaining 24-hour operations over extended periods of time.

ADDITIONAL CSS

The requirement for additional combat service support soldiers is based on historically inadequate authorizations in the areas of medical services, administration, logistics, ammunition handling and petroleum management.

The ability to refuel and rearm organic aircraft is particularly critical. Whether in training or deployed on a contingency operation, the regiment has not had sufficient ammunition handlers or petroleum specialists to prevent daily inter-unit task organization to accomplish the mission. While task organizing these critical support elements will likely occur during surge operations, it should not be the norm for day-to-day sustainment. The regiment currently has the lowest medical aid man-to-soldier ratio in USASOC, calculated at approximately 1 medic for every 70 soldiers.

THE IDEAL OUTCOME

Ultimately, ARSOA transformation will organize and resource the regiment to enable the safe and rapid deployment of ARSOA forces capable of conducting worldwide SOA unilaterally or as a member of a joint/combined force. It will also give the regiment resources to command joint SOF air assets as well as general-purpose aviation forces. The new SOA regiment force design meets all current mission requirements and the Objective Force postures the force to succeed on future battlefields of the 21st century.



Dwain E. Pannell is a force modernization analyst for IDR, Inc., who works with the 160th Special Operations Aviation Regiment at Fort Campbell, Ky.

CW3 Roger Farina, a CH-47 pilot with the Germany-based 12th Aviation Brigade who saw service in both Operation Desert Storm and Operation Iraqi Freedom, has been tapped as the winner of the inaugural National Hockey League 7th Man Award as "Fan of the Year." A life-long New York Islanders fan, Farina got to serve as NHL commissioner for a day, had lunch with hockey greats Bobby Nystrom, Jean Potvin and Brian Mullins, and dropped the first puck in a ceremonial face-off at center ice. Farina was deployed in southwest Asia when a cousin and a friend entered him in the contest. The Associated Press, USA Today, the New York Times, NBC's Today Show and Fox News all profiled the aviator after his win.

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SOA AVIM in Support of the Global War on **TERRORISM**

By MAJ Sal Herrera and CPT Mark Kappelmann

Though the Sept. 11, 2001, terrorist attacks against the United States changed the world for every American, only a relatively small percentage of Americans were actually called upon to take the war to the terrorists and fight on foreign soil.

The 160th Special Operations Aviation Regiment (SOAR) was one of the first units called. It was the first Army rotary-wing unit to actively participate in Operation Enduring Freedom, deploying two task forces in the first two weeks of October 2001. Both task forces relied extensively on the MH-47E special-operations variant of the Chinook helicopter. Since this initial deployment supporting the global war on terrorism, the MH-47Es and soldiers from 2nd Battalion, 160th SOAR, have been continually deployed overseas.

The maintenance support for the MH-47E Chinooks stationed at Fort Campbell, Ky., is provided by the 2nd Bn.'s Company D, the "Workhorse" company of the "Darkhorse" battalion. Co. D is the Aviation Intermediate Maintenance (AVIM) support for the only special operations heavy assault battalion in the world. The company provides all Aviation Unit Maintenance (AVUM) above the crewmember level, up to and including limited depot-level support. Co. D also performs all scheduled and unscheduled maintenance, and all special inspections and servicing required to sustain the aircraft in a desert environment. It also provides

constant phase support and limited depot repairs in its maintenance facility at Fort Campbell.

The first challenge the company faced was supporting multiple forward-deployed locations, particularly the required split of low-density aviation shops personnel and equipment. The standard maintenance package consisted of an officer in charge (an MH-47E maintenance test pilot), an NCOIC (30-series MOS 67 or 68) and 14 maintenance soldiers from the company (with MOSs 67U, 68B, 68H, 68D, 68G, 68F/N, 68S and 67U); as well as four soldiers from the 160th's Headquarters Co. (two automated logistical specialists, an avionic radar specialist and an avionic communications specialist).

INTO IRAQ

In March 2003 Co. D was again challenged to task organize to support a third forward-operating location in support of Operation Iraqi Freedom (OIF). The Afghanistan mission was modified, but both locations still required full support from the company.

Co. D answered the requirement

with soldiers from home base, effectively leaving only one small team back at Fort Campbell to conduct multiple phase-maintenance inspections. In a true example of one team, one fight, the shortage was quickly filled by two sources.

First, our civilian DynCorp phase team aggressively tackled a full hangar of MH-47Es, and provided professional and invaluable support to sustain the battalion's fight. The second force came in the form of 25 soldiers from the Oklahoma National Guard. Over the last two years, the 160th SOAR has greatly benefited from the professional maintenance efforts of two Guard units — Co. D of the 109th Aviation Bn. (AVIM) from Iowa and Nebraska, and Co. D of the 245th Avn. Bn. (AVIM) from Oklahoma and Arizona.

Each and every soldier and civilian performed magnificently — they have been the true unsung heroes of the past 21 months of combat operations. Their personal efforts and mission focus contributed directly to the timely phase inspections demanded by the unit's increased combat operations tempo.



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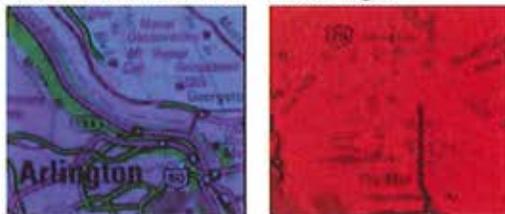
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VARIED MISSIONS

The global war on terrorism provided the stage for Co. D to perform many complex missions, several of which have been firsts for the 160th SOAR.

One of the more notable missions was the aerial recovery of an MH-47E shot down during Operation Anaconda while attempting to insert a special reconnaissance team. The aircraft sustained heavy damage from machine guns and rocket-propelled grenades. The crew was able to safely execute a forced landing on an 8,340-foot mountain. The aircraft was sanitized, the crew rescued by their wingman and the aircraft temporarily abandoned.

As Operation Anaconda wound down, the opportunity arose to recover the aircraft. The first part of the mission included getting a Battle Damage Assessment and Repair (BDAR) team to the site to evaluate the aircraft. The team determined that the aircraft could not be repaired and flown off of the mountain. Planning then began for an aerial recovery. The unit obtained a Russian-built Mi-26 Halo to provide the lift for the operation.

The Co. D Downed Aircraft Repair and Recovery Team (DARRT) inserted to the mountaintop, removed blades, engines and excess gear, and rigged the aircraft for sling load.

Following the successful recovery, the aircraft was torn down and redeployed to Fort Campbell. The aircraft was assessed and the plan was put into place for the repair. Civilian teams deployed to Fort Campbell from both Corpus Christi Army Depot (CCAD) and Bluegrass Army Depot (BGAD) to work on the extensive avionics and electrical damage. The regiment's DynCorp support team performed the structural repairs and conducted all phase inspections. The aircraft returned to a fully mission capable status within six months after it was shot down, months ahead of all initial depot estimates.

BUSY IN KENTUCKY

When the soldiers of Co. D redeploy from overseas, they return to one of the most active hangars in the Army. The unit conducts not just the phase inspections, but also depot-level repairs and modifications and a Special Technical Inspection and Repair (STIR) for all aircraft returning from a desert combat deployment.

Based on lessons learned from previous desert deployments, the unit has modified its phase inspection to include pulling the pedal boxes, replacing all rod-end bearings, replacing all bell-crank bearings, replacing dampner bushings, pulling the ILCAs and dual boost actuators, painting all rotor blades, removing

the engines and shipping them to a depot-level overhaul facility, and bench testing all avionics components. The intense maintenance efforts have paid great dividends - the battalion has aircraft that are on their third rotation to a desert environment and have accumulated in excess of 600 hours of desert flying.

The officers, NCOs and soldiers of Co. D have successfully deployed and sustained operations from up to three simultaneous locations over the past 21 months. The war on terrorism will probably continue for many years to come. The requirement for quality Aviation Intermediate Maintenance support will continue for the special-operations community, in order to provide the heavy lift assets to the joint special operations task force commanders around the world.

Co. D's successes during Operations Enduring Freedom and Iraqi Freedom are directly attributed to the hard work and dedication of the soldiers and civilians of this great company. Each day they prove why they are the "Workhorses" of the "Darkhorse" battalion.



MAJ Sal Herrera is the commander of Company D, 2nd Battalion, 160th Special Operations Aviation Regiment, at Fort Campbell, Ky. CPT Mark Kappelmann is the company's executive officer.



ARMY AVIATION mailbox

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Dear Editor;

I was recalled to active duty in February after more than a decade of retirement, and reported to Fort Campbell, Ky. By March I was in Kuwait, and am currently flying in northern Iraq.

It has been a challenge to "catch up" after 10 years of retirement, but I feel I've made a contribution to this unit. I never expected to be logging combat time in my 50s, and we have a National Guard CW5 in our sister unit who is 55 (his last active duty was in 1969). This has so far been a very unique experience.

While this war began as an armor/mechanized infantry confrontation, aviation will play a key role in the next phase. Small guerilla groups are located and quietly dealt with, looters are identified and stopped, civil action has begun. Now we are inserting infantry - with civil affairs and psyops - to assess towns and deliver food and medical supplies. Seeing people waving now, instead of running and hiding, has been great.

Of special note was overflying the thousands of pilgrims walking to Karbala a few days ago. While I've read of protests by the Iraqis, what I saw was people exercising a newfound freedom. They were not afraid, and waved when we overflew them.

CW4 Guy D. Montjoy

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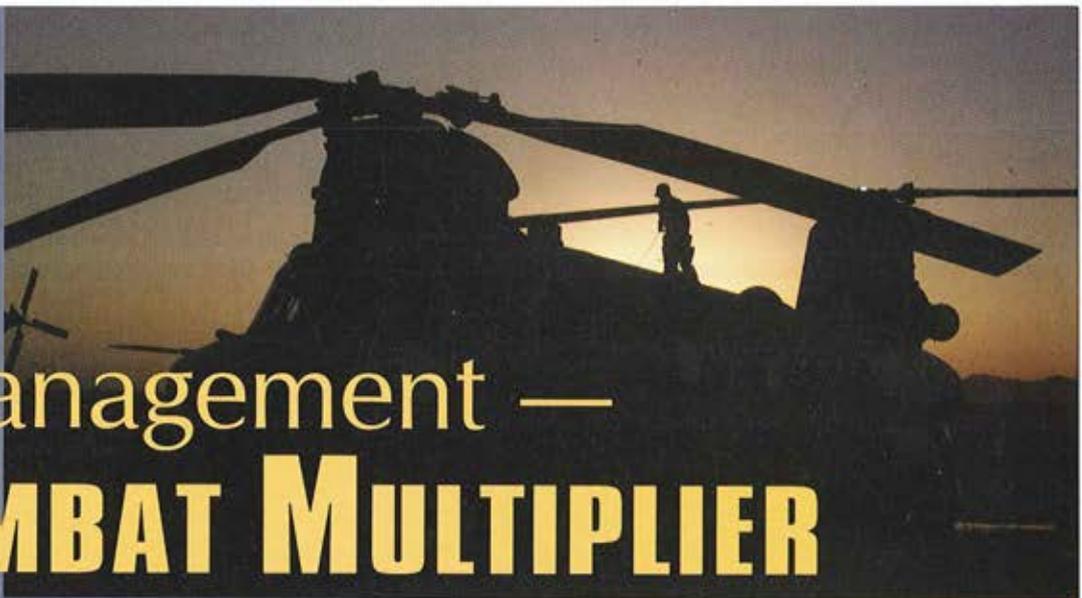


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Risk Management — A COMBAT MULTIPLIER

By CPT Tim Swanner

From the peaks of the Hindu Kush to the jungles of the Sulu Archipelago, the 3rd Battalion, 160th Special Operations Aviation Regiment (SOAR), found itself decisively engaged in the war on terrorism.

Simultaneously supporting operations in Afghanistan and the Philippines while fielding complex and lethal new equipment, the battalion accomplished much and did it without the loss of an aircraft or crewmember. This would not have been possible without a fully developed culture of proactive risk management in the unit. This article describes how our risk management techniques enhanced our mission accomplishment.

PLANNING FOR RISK MANAGEMENT

Before deploying to Afghanistan and the Philippines in support of Operation Enduring Freedom (OEF), Company A of the 160th's 3rd Bn. was faced with qualification training of its pilots to conduct aerial refueling. One year later the same company, while still supporting the Afghanistan deployment, trained in a new mission set on a modified MH-60L Defensive Armed Penetrator (DAP, an armed Black Hawk) for deployment in support of Operation Iraqi Freedom (OIF).

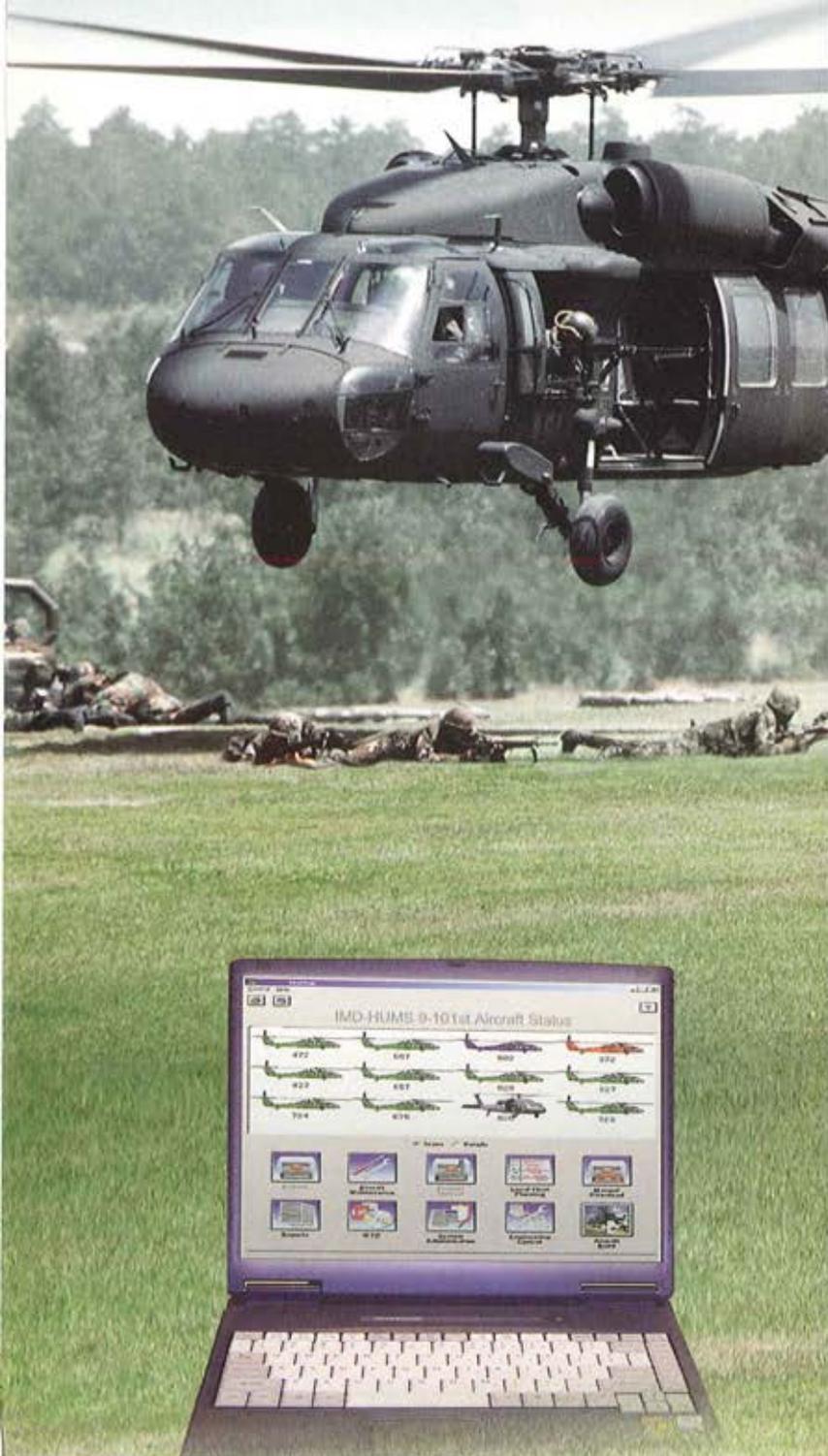
DAP fielding came only two months before the anticipated OIF deployment. The company's aircrews were separated into a DAP platoon and an assault platoon. Fully mission qualified assault crews had to be left in each platoon for the company to operate. Crew selection was paramount to the successful transition into the new mission. The commander selected a carefully chosen mix of flight lead, fully mission qualified and basic mission qualified pilots for DAP training.

As in most training plans, the most experienced instructor pilots (IPs) were trained first, and they in turn trained the remainder of the DAP crews. Two experienced pilots from the 3rd Bn.'s sister battalion were attached — a sound risk-control measure for a unit completing qualification as it deployed to the combat theater. These attachments seeded the company with experience and accelerated a successful qualification and combat employment.

Risk Mgmt. continued on page 31

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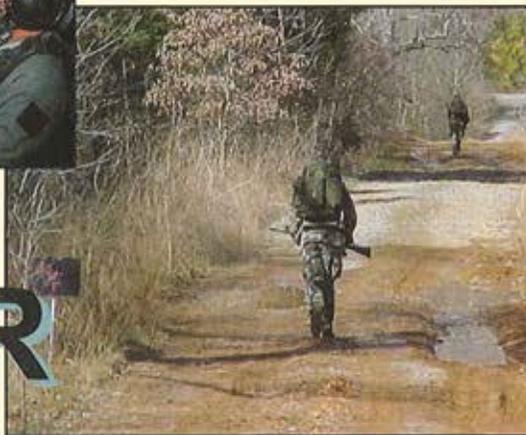
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GREEN PLATOON:

The First Step to Becoming a

NIGHT STALKER

By MAJ Jerome Meyers



The Special Operations Aviation Training Company (SOATC) conducts initial enlisted and officer qualification courses and selected continuation training of assigned personnel to the exacting standards of the 160th Special Operations Aviation Regiment (SOAR). SOATC is a distinct arm of the "Night Stalkers" — a separate company that is manned, equipped and resourced to conduct all initial training for all soldiers assigned to the 160th before their assignment to their respective battalions and companies. The SOATC has unique training programs for both officers and enlisted soldiers.

OFFICER TRAINING

Every officer who enters the gates of the 160th SOAR is first assigned to SOATC. Officers complete initial training specifically tailored to the position in which they will serve in the regiment. Officer Green Platoon is completed in three phases.

Phase I, Combat Skills, is a 15-day training Program Of Instruction (POI) focused on intermediate and advanced soldier skills and is mandatory for every officer who volunteers for service in the 160th SOAR. The training includes the combat lifesavers course, tactical marksmanship with the M4 and M9 weapons, land navigation and Close Quarters Countermeasures (CQC). Upon completion of Phase I, all aviators attend a certified Dunker/Helicopter Emergency Egress Device (HEED) training course that is mandatory prior to flight training in the 160th.

Phase II, Basic Skills, is a three-

week mission-planning and navigation flight-training program. SOATC instructor pilots (IPs) teach newly assigned aviators night-vision goggle navigation to the regiment's standard of time on target, plus or minus 30 seconds. Students also receive detailed instruction on mission planning, map preparation, kneeboard packet preparation and the presentation of the aircrew mission brief.

Regardless of their future aircraft designation in the unit, all aviators initially qualify and train in the MH-6 "Little Bird" during Phase II. Each aviator completes up to 16 hours of NVG navigation training before taking an end-of-phase check ride and continuing on to the final part of their training to become a Night Stalker.

In Phase III, Aircraft Specifics, the class is divided and each rated student pilot begins training in the special operations aircraft they'll fly during their operational assignment in the regiment. Civilian Mission Instructors (CMIs), who are contracted retired Night Stalkers, teach Phase III. Each CMI has years of tactical experience in the regiment and averages more than 6,000 flight hours and 2,500 NVG hours.

During aircraft specifics, each aviator spends between 50 to 90 days becoming qualified in the aircraft and training in all mission profiles and environmental tasks. Upon completion of this phase the aviator undergoes an intensive Basic Mission Qualified (BMQ) check ride. If successful, he will be awarded the maroon beret and be called a Night Stalker.

ENLISTED TRAINING

Every enlisted soldier assigned to the 160th SOAR at Fort Campbell will complete Enlisted Green Platoon (EGP) prior to being assigned to a unit. Soldiers may be assigned to 3rd Battalion at Hunter Army Airfield, Ga., or one of the regiment's forward-deployed companies in Puerto Rico or Korea before attending and completing Enlisted Green Platoon. However, soldiers who remain in the regiment will complete EGP at some time during their tour of duty.

Enlisted Green Platoon is taught by the SOATC "Black Shirts," who are hand picked from within the regiment and volunteer to leave their primary MOSs to train the next generation of Night Stalkers. All instructors are certified in at least one advanced marksmanship course and have completed the CQC instructor's course.

The Enlisted POI is 25 training days and broken down into five modules.

The first module is an academic week. The first day of EGP starts like most other Army courses — with an Army standard APFT. SOATC teaches all annual and semi-annual Army mandatory courses and selected 160th SOAR courses during academic week. At this time, the unit also initiates paperwork for the issuance of a secret security clearance (mandatory for service in the regiment).

The second module is land-navigation week, which reviews all of the basic Army skills and then puts the students through a series of increasingly more difficult and complex land-navigation exercises. The land-navigation

training culminates with an aircraft infiltration to an objective and an overland night movement to a designated partisan link-up point. Opposing forces and trained dogs pursue students throughout their movement.

The third module is CQC — an intense hand-to-hand combat training program that teaches students to successfully subdue enemy attackers.

The fourth module is weapons training. Students qualify with the M4 and receive extensive training on both the M4 and M9. In this module, each soldier shoots an average of 2,000 rounds in a three-day period. The fifth and final module is the Basic Combat Lifesavers course.

Green Platoon is an intense 25-day POI that serves as a refresher of some basic soldiering skills and a platform to teach advanced techniques in multiple areas. The program ensures that the line units of the Regiment receive highly motivated and well-trained enlisted Night Stalkers.



THE GOAL

The SOATC training programs are unique to Army aviation. They allow the line units of the 160th to focus solely on METL training and combat operations.

The success of the unit's training programs has been proven in combat. Over the past two years, many soldiers have walked across the SOATC graduation stage to be immediately deployed to combat duty in the regiment's ongoing missions in the global war on terrorism.

The professionalism and devotion to duty of the officers, soldiers and civilians of SOATC has guaranteed the success of 160th on the battlefield. Students of Green Platoon are challenged to be the best and graduate to live the 160th SOAR motto — Night Stalkers Don't Quit!



MAJ Jerome Meyers is commander of the 160th SOAR's Special Operations Aviation Training Company at Fort Campbell, Ky.

Risk Mgmt. continued from page 28

DETAILED PLANNING

Almost every mission flown during OEF and OIF pushed the limits of aircraft and crew. Risks in Iraq included an integrated air-defense threat, visual observation posts lining the border, high gross-weight operations, poor visibility, rising terrain and brownout landing conditions. In Afghanistan, terrain and high-density altitude presented the greatest threat to rotary wing operations under night-vision goggles (NVGs), especially when mission profiles were routinely above 9,000 feet.

The supported special-operations commanders depended on the 160th's trademark detailed planning and precision execution in order to accomplish their missions. Many of the SOF missions were conducted before the ground war, and any failure may have complicated the military or political landscape of the war plan. The challenge became not to eliminate the risk — clandestine border crossings into a hostile nation with a poised integrated air defense network are inherently risky — the task was to mitigate the risk associated with combat missions through detailed planning and rehearsal.

Planning for OIF began four months before the deployment. Planning for the pre-G Day missions began very early at locations in the continental United States. The unit conducted an operational test of an internally loaded special-operations vehicle weighing more than 13,000 lbs., and undertook detailed planning to determine the feasibility of moving mounted special forces teams several hundred miles inside Iraq. The result of the testing and rehearsal was several modifications to allow the vehicle to fit inside the MH-47D.

The unit also developed and rehearsed crewmember load training tasks. Once deployed in theater, aircrews practiced loading and flying with the loads under all conditions. Crewmembers started loading on runways, and then moved to unprepared flat surfaces and finally rehearsed on unimproved landing zones in the desert.

While aircrews were practicing

with the loads, pilots were focused on refining the detailed planning for the actual flight. Due to the distances, the mission required two air refuelings — one before border penetration and one on egress from Iraq. A dangerous border crossing against visual observation posts, flights through and around known air defense radars and weapon systems, and a brownout approach at high gross weight also had to be considered in the plan.

Commanders and crews continued to refine the plan with greater fidelity as they received intelligence and operational updates. The unit implemented numerous risk-control measures designed to increase the probability for success of the ground-force commander. When the aircraft finally took off on the mission, hundreds of man-hours had been devoted to formulating a solid plan that considered all contingencies.

After the initial infiltrations, the battalion continued to use the same detailed planning methodology for every mission. Each one, down to the most routine resupply, received the fullest planning effort, a detailed mission analysis and briefing, and a thorough risk assessment. Never did we take a mission for granted.

FOCUS AND ATTITUDE

The mission focus and attitude that prevails within 3rd Bn. is that of finding a way to safely and precisely accomplish the mission. It permeates the command from the most experienced pilots down to the most junior crewmember. Every mission has the potential to result in a serious incident. Accidents often cost the ground-force commander his mission, and may cost the unit in terms of damaged equipment or loss of life.

Operating on the edge — whether it is the enemy situation, aircraft performance, weather, or extended lines of support — increases the risk considerations required for safe operations. Incorporating a culture of sound risk management as a force multiplier to mission accomplishment will result in a safe unit that is successful in all it does, both in peace and war.



CPT Tim Swanner is a platoon leader in Company B, 3rd Battalion, 160th Special Operations Aviation Regiment, at Fort Campbell, Ky.

THE BROWNOUT LANDING:

EVOLVING OLD TECHNIQUES TO MEET NEW CHALLENGES

By CW4 Robert D. Walker

Soon after the Sept. 11, 2001, terrorist attacks on the United States the nation's special-operations aviators were executing raids of a duration and distance that were reminiscent of the America's last response to an attack on its sovereign soil — the 1942 Doolittle Raid on Tokyo. Aircrews of the 160th Special Operations Aviations Regiment (SOAR) were called upon to conduct missions under the harshest environmental conditions known to man. To be successful, they had to change their tactics, techniques and procedures (TTPs) to adapt to the modern battlefield.

The call to Operation Enduring Freedom (OEF) was not unexpected given the events of Sept. 11, but was highly anticipated by the "Night Stalkers" of the 160th SOAR. The unit was forward-based in two unique locations at the onset of OEF. One task force, TF Dagger, staged at an undisclosed location outside Afghanistan, while another, TF Sword, was aboard an afloat forward staging base (AFSB) on an aircraft carrier in the Indian Ocean off the coast of Pakistan.

While aircrews operating from each location faced a range of challenges — enemy fire, high-altitude and high density-altitude operations, flights of extreme duration and many others — by far the greatest threat to the 160th aircraft during OEF was brownout conditions on the objective.

FACING THE BROWNOUT

Simply defined, a brownout is the loss of all visual references during landing or takeoff resulting from a visual obscurant such as sand or dust (Figure 1).

Traditionally, two schools of thought exist concerning brownout-landing techniques. The first and most preferred technique is to maintain forward ground speed to remain ahead of the cloud and touch down before being completely engulfed by it. This results in a running or roll-on type landing. The alternative technique is to set the aircraft up in a controlled descent that allows touchdown with minimum sink-rate (descent) in a level or near-level attitude. While

the dust cloud will engulf the aircraft during the terminal phase of the maneuver, this technique minimizes ground run.

The problem with brownout landings is that the pilot inherently experiences some level of apprehension or anxiety when a visual obscurant engulfs the aircraft. The common tendency is for a pilot to reduce power and reach for the ground when he's engulfed by the obscuration, or to land the aircraft at a high rate of speed to remain ahead of the cloud.

When a pilot reaches for the ground he places the aircraft in a higher-than-normal rate of descent, often resulting in landing gear or belly damage. This also holds true when landing on an unimproved surface with too much forward speed. The pilot retains his comfort level because he stays ahead of the dust cloud, yet because the forward speed cannot be adequately dissipated the aircraft rolls across rough terrain, again resulting in potential damage to the aircraft.

The 160th SOAR crews deployed to Afghanistan weren't rookies in terms of operating in austere desert and mountain environments. These seasoned crews felt they were ready to take on another desert environment, but Afghanistan added an unanticipated element to brownout flying. The crews came to call it "explosive brownout." Brownout normally forms in a set pattern that allows the pilot to place his aircraft in a safe landing attitude with a controlled descent to touchdown. Traditionally, the cloud forms aft of the tail and moves forward until it slowly engulfs the aircraft at touchdown (Figure 2).

Explosive brownout does not form at the tail and move forward. It erupts vertically, nearly instantaneously engulfing the aircraft (Figure 3). In addition, the brownouts experienced in OEF occurred at much higher altitudes. Normally, brownout will engulf the aircraft between 10 and 30 feet above the ground, depending on forward speed. The 160th pilots experienced brownouts that engulfed their helicopters at altitudes greater than 100 feet above the ground.

Figure 1.



Figure 2.



During go-arounds or departures from the landing zones (LZ) it was not uncommon to remain obscured up to altitudes in excess of 150 feet above the ground.

As a result of operating in this unique desert environment, the 160th quickly sustained damage to many of its aircraft. During the first year of operations in Afghanistan, the 160th suffered damage to one MH-6J, two MH-60K, and six MH-47D/E aircraft due to hard landings in brownouts. Some of these incidents resulted in a prolonged loss of the aircraft due to extensive depot-level repairs.

Two things that make Afghanistan's desert environment different from many places in the world are contrast and debris. The landscape has very little contrast, making it extremely difficult during night operations to perceive height above the terrain and obstacles. It was not uncommon to fly at en route altitudes as low as 50 feet and not see the landing surface. The forward-looking infrared (FLIR) system provided little additional contrast or resolution to determine the state of the landing environment.

Obstacles and debris became the second major factor in the 160th's increased accident rates. Unseen hazards such as sand-filled ditches, old mud-home foundations and large rocks caused extensive damage to aircraft landing gear. It quickly became evident that some of the tried and true desert tactics were ineffective in this environment.

Because the 160th did not have a TTP to specifically address this challenge, it was faced with two options: We could accept the battle damage as the cost of doing business or we could change our procedures. The 160th went to the drawing board and developed a new technique.

A NEW WAY TO DEAL WITH BROWNOUTS

Through the collaboration of its standardization instructor pilots (SIPs), the use of the combat mission simulator, and some trial and error, the 160th developed a new ATM task called "VMC Approach With Loss of Visual Reference During Landing." This task maximizes the capabilities of the 160th special mission cockpits — specifically, the precision hover symbology capability (see Figure 4).

The equipment, coupled with procedural changes in crew coordination, resulted in the development of three different techniques written in the task to support operational missions based on the threat environment in the landing zone. These new



Figure 3

maneuvers allow pilots to select one of three types of approach for landing, depending on mission requirements.

The first type of approach involved the development of a hover-down task. The maneuver is similar to the old technique of hovering above an obscuration until the dust clears away. However, the problem in OEF is that the dust never clears. Thus, the aircrew must descend the

aircraft vertically into the dust cloud while maintaining a stable hover platform. This is accomplished by using the hover symbology and enhanced crew coordination.

Crew coordination is key in keeping the flying pilot aware of the state of his aircraft. For the MH-60, the co-pilot is allowed to actively fly the collective (guarded by the pilot) while the pilot flies the cyclic during the descent. This aids the primary pilot in maintaining a zero-drift position and provides for a smooth touchdown in a complete brownout. This technique affords the aircrew the ability to land on mildly sloping terrain and avoid potential obstacles.

The second type of brownout landing is to the ground with forward speed. This task is recognizable by most pilots as the traditional method used in a desert environment. The major difference between the 160th technique and the standard Army dust-landing procedure is cockpit configuration and pilot transition to a head-down (flying the flight instruments) attitude before entering complete obscuration.

When using this technique, the pilot places the aircraft in a normal landing profile that assures a safe landing and transitions to the cockpit displays, especially the hover and track symbology, prior to complete cockpit obscuration. This allows the pilot to complete the maneuver without regard to the obscuration, thereby reducing the potential for anxiety or apprehension. This task is ideal for landing in

environments with few obstacles, or in semi-improved areas like dirt or sand blown runways. Throughout OEF, the 160th aircrews employed this type of approach when landing on outlying airfields and emergency-recovery locations.

The third type of brownout landing is to a specific landing point with minimum ground run. This landing is an assault approach into an objective under potential threat engagement. The technique allows the aircrew to place the aircraft in a decelerative descent that allows the aircraft to land at a specific point with minimal forward speed and

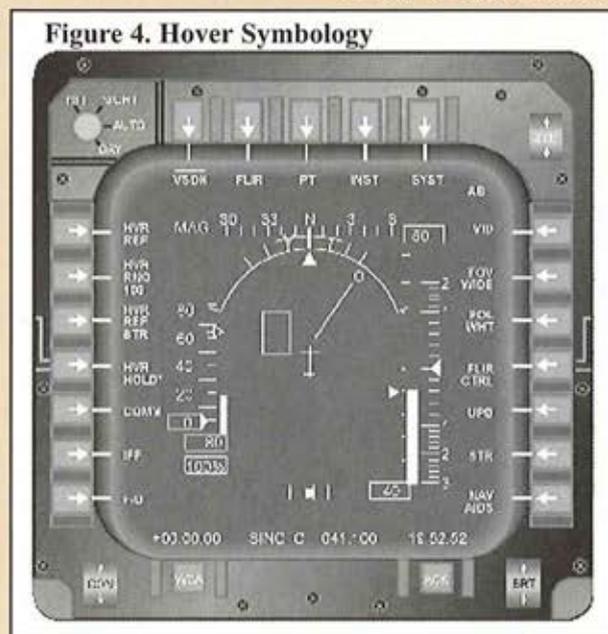


Figure 4. Hover Symbology

Brownout cont'd on pg 35

Molding Master Gunners

By William Hayes

Based on reports and communications from field commanders and collective training analysis, leaders at the U.S. Army Aviation Center at Fort Rucker, Ala., decided to increase the focus on aviation-gunnery training. A little more than a year ago, the Master Gunner Branch was established with increased staff, forming a team to address gunnery-training issues throughout the Aviation Branch.

The growth of the U.S. Army Aviation Center's Master Gunner Branch from a one-man "shop" to a five-member team has been matched by a broader scope of mission elements.

The team now includes a CW5 master gunner; a CW4 qualified as an AH-64D Instructor Pilot (IP); an IP-qualified OH-58D CW3; a staff sergeant trained, qualified and experienced in door gunnery; and a retired Army aviator who's now a Department of the Army civilian training specialist.

Collectively, the team members' flight logs total well over 14,000 hours and an uncounted number of rounds on target in both combat and training. To a visitor, their mutual respect, trust and confidence toward each other is evident during informal moments. But those moments are brief. Their sense of mission is evident throughout their individual and collaborative efforts.

"This element of the Directorate of Training, Doctrine and Simulation is not about the designated branch mas-

ter gunner, or even the five-member team," said CW5 Ronald C. Moring, USAAVNC's master gunner. "It's all about the crew members out there putting rounds on target — all types of rounds."

The Master Gunner Team's four-fold mission now includes:

- Developing and integrating the Army Aviation Gunnery Program.

- Maintaining a close working relationship with field units to protect gunnery-training assets and foster a positive flow of gunnery information.

- Maintaining close working relationships with the Directorate of Evaluation and Standardization (DES) and the Aviation Training Brigade on gunnery issues.

- Ensuring integration of operational and mission gunnery capabilities throughout Army aviation.

The one-man Master Gunner Branch previously had to focus on the "50-meter targets" — the actions that were "right here, right now and urgent."

"The Master Gunner Branch now has a team of well-qualified subject-matter experts to take on a longer list of objectives, which we've organized into near-, mid- and long-term goals," Moring said.

"On near-term focus



Members of the Gunnery Branch include (from left) Jack Bell, SSG Douglas A. Ronkainen, CW5 Ronald C. Moring, CW4 Mark B. Ivey and CW3 Nelson R. Lubold. (U.S. Army photo)



CW3 Nelson R. Lubold (standing) details a range layout at Fort Drum, N.Y., for those Gunnery Branch team members who hadn't been there.

is to receive and respond to questions from the field with prompt, accurate and useful gunnery information," he said. "We pay close attention to all of these, but our highest priority is going to those coming from Southwest Asia. Our goal is to research the issue, develop a response and have it ready for staff review the morning of the next duty day."

But team members aren't just answering the mail. They're also charging hard on mission-driven initiatives.

Originally a long-term goal, the Master Gunner Collaboration Center Web site is already up and running. Commanders, S-3s and unit master gunners can now access the Army Knowledge Online (AKO) site for information and updates. E-mail addresses for the Master Gunner Branch, included in the site, have also been distributed to Aviation Branch personnel directly responsible for gunnery training, allowing them to communicate directly with the Master Gunner Branch and download frequent updates from the gunnery collaboration community.

Development of the Master Gunner Course continues, focused on preparing future master gunners to develop battal-

ion-level gunnery-training programs. The target date to start the first class is October of this year.

Three 80-hour classes are scheduled for fiscal year 2004. Classes are scheduled to take advantage of summer permanent-change-of-station (PCS) moves to facilitate temporary duty (TDY) en route.

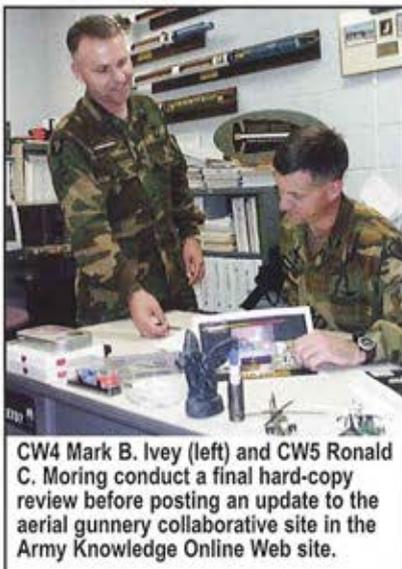
"The two-week course will prepare students to establish, implement and manage an effective METL-based aerial gunnery training program," Moring said. Topics include Gunnery Program Records; Risk Management; Ammunition Resources; Target Arrays; Scoring; Ranges; Gunnery Readiness; Effective Target Engagements; Staff Planning; and Individual, Crew, Advanced and Sustainment Gunnery Training.

Changes to FM 3-04.140 (FM 1-140), "Helicopter Gunnery," are in progress, and are being distributed in draft for field review. Changes reflect the emphasis on collective gunnery (Tables IX through XII) as the culmination of a unit gunnery program once crew qualification (Table VIII) is achieved. Collective gunnery tasks integrate doctrinal tactics, techniques and procedures (TTP), while ensuring that effective distribution and segregation of fires maximize training and combat effectiveness.

"Crew qualification is the lynch pin to successful collective gunnery execution and to a unit accomplishing its Mission Essential Task List,"

Moring said.

The advantages of simulated gunnery are widely acknowledged, but live-fire gunnery training is essential to maintaining requisite pilot combat proficiency, armament personnel skills, and battalion or squadron III/V platoon readiness. So ammunition availability to support and sustain gunnery skills through live-fire training is yet another focus of effort, Moring said.



CW4 Mark B. Ivey (left) and CW5 Ronald C. Moring conduct a final hard-copy review before posting an update to the aerial gunnery collaborative site in the Army Knowledge Online Web site.

That involves a continuing dialog with ammunition managers and procurement specialists to ensure ammunition supplies match training requirements as nearly as possible.

Ranges get attention too. Team

members are in touch with units, installations and major range complexes to develop a "library" of range maps and data. They're also traveling to conduct detailed recon and to record their observations about range facilities. The objectives are to understand unique aspects of specific ranges and to support efforts at passing good ideas to the gunnery community for affordable range improvements that enhance training value. One particular interest is a real-world range layout that allows full-crew door-gunnery training, including live-fire from both sides of the aircraft with "front-seater" involvement.

The team is also working to develop liaison and communications with every battalion-level master gunner or senior gunnery officer in the Army, with a view toward a master gunners conference preceding the aviation conference in January.

A long list of intermediate- and long-term objectives is not gathering dust. Neither is anyone in the Master Gunner Branch. To the extent feasible, team members are traveling to units and ranges, assessing gunnery programs and exchanging information on gunnery issues. These visits are conducted in conjunction with DES visits or during unit gunnery densities.



William Hayes works in the U.S. Army Aviation Center Public Affairs Office at Fort Rucker, Ala.

Brownout cont'd from pg 33

near-zero rate of descent.

During this type of approach the aircrew sets the aircraft up for a successful landing barring any unforeseen hazards. The pilot transitions to the flight instruments and the hover symbology before losing visual reference with the ground and continues the approach to termination. The approach is completed by flying specific parameters on the instruments and stabilizing the aircraft for touchdown by minimizing the descent rate, controlling drift on the hover symbology display and arresting forward speed prior to touchdown.

Again, crew coordination is elevated to a higher level, involving the copilot in the flying process. No longer is he just a passenger along

for the ride, he is integral to the success of this task. In the end, the task development, training, and TTP implementation was successful in reducing risk of combat assault operations in a desert environment.

Beating Brownouts in Iraq

On the heels of 18 months of sustained operations in Afghanistan, the 160th received the call for Operation Iraqi Freedom (OIF). The Regiment deployed two aviation task forces and many of its aircrews moved directly from Afghanistan to Iraq.

When the unit commenced combat operations, it employed forces in advance of conventional air and ground forces. To date, the 160th has not suffered a single brownout-related aircraft accident or incident. During OIF, the results achieved are

a testament to the skill of the aircrews, the capability of the aircraft and the vision of our leaders to recognize a need for change.

The world as we know it is in constant flux. Our TTPs cannot remain static or we will quickly move towards obsolescence. The original design of any weapon system — whether aircraft, vehicle or support equipment — must adapt to an ever-changing battlefield. We must maintain the vision that allows us to step out of our current paradigm and apply new tactics to remain relevant on tomorrow's battlefield.



CW4 Robert D. Walker is the regimental standardization instructor pilot for the 160th Special Operations Aviation Regiment at Fort Campbell, Ky.

BLUE FORCE TRACKING— AVIATION...

By LTC Anthony W. Potts, Richard M. Szczepanski and Alvin A. Abejon

Since Operation Desert Storm, the Army's urgency for a versatile digitized Blue Force Tracking (BFT) system for both ground and aviation platforms has intensified. Subsequent to the events of Sept. 11, 2001, Operation Enduring Freedom (OEF) has been a major influence in shaping requirements for BFT capabilities.

The Army's newly developed BFT Aviation (BFT-AVN) System is a "system-of-systems approach" to satisfy the Army's immediate and urgent requirement for providing maneuver commanders with the near-real-time situational awareness (SA) data that is essential to a streamlined decision-making process. The BFT-AVN System is an integration of existing and modified commercial off-the-shelf (COTS) and government off-the-shelf hardware and software used to track both ground and airborne platforms, and to provide a dynamic aggregated SA picture of those platforms.

The BFT-AVN System employs the Force XXI Battle Command, Brigade and Below (FBCB2) hardware and software as a direct interface into the common operating picture (COP) via the Global Command and Control System-Army (GCCS-A). The system consists of an A-Kit and a B-Kit, and populates the COP through GCCS-A via satellite links. The A-Kit is comprised of such aircraft modifications as wiring, cabling, circuit breakers, electrical power and the mounting hardware required for installation of the B-Kits. The B-Kit consists of BFT-AVN hardware and integrated software, as well as data communications and position/location components.

The system integrates the most current version of FBCB2 hosted on a military computer, a COTS L-band transceiver, data communications router and a standard Precision Lightweight Global Positioning System Receiver, which is housed within a robust mounting rack.

REQUIREMENTS GENERATION

Initial requirements for a BFT system stem from the November 1998 Army Battle Command System Capstone Requirements Document, and the March 2002 FBCB2 Operational Requirements Document. The FBCB2 System is supported by the January 1995 Joint Requirements Oversight Council-approved Mission Need Statement for Horizontal Integration of Battle Command.

The February 2002 Operational Needs Statement for the BFT of the U.S. Army Forces Central Command expanded the BFT requirements to include the Balkans Digitization Initiative (BDI) to support OEF and other Central Command operation plans. Further Army Requirements Oversight Council decisions led to the OEF Command, Control, Communications and Computers Intelligence, Surveillance, and Reconnaissance (C4ISR) effort, which the BFT-AVN system supports.



*Figure 1.
BFT-AVN System installed in
UH-60L Black Hawk helicopter.*

ACQUISITION REFORM

With today's acquisition-streamlining initiatives, the "blocked systems approach" is a viable method used to provide warfighters with critical operational capabilities (i.e., it is critical in providing a 90-percent solution now rather than waiting five years for the 100-percent solution).

The success of the BFT-AVN Program can be measured on the three metrics of cost, schedule and performance. Despite the critical timeline imposed upon the system, the BFT-AVN Product Office was successful in effectively managing personnel and funds. The program continues to stay within budget and maintains an aggressive schedule - a remarkable feat considering the Product Office performed approximately two years' worth of work in only six months.

In addition, system performance has met or exceeded the user's requirements. By performing simultaneous activities throughout the development of the program - aided by the effective teamwork of numerous organizations - the Product Office was able to break down acquisition paradigms of the past and achieve both incremental and overall program successes.

PARTICIPATING ORGANIZATIONS

Although numerous federal agencies and Department of Defense contractors supported the program, the following organizations played a critical role in executing the BFT-AVN Program:

■ U.S. Army Aviation Applied Technology Directorate (AATD)

Located at Fort Eustis, Va., AATD provided the overall hardware design, configuration control and appropriate antenna placement, as well as providing test, manufacturing and integration oversight.

■ Aviation Engineering Directorate (AED)

The AED is located at Redstone Arsenal, Ala., and was responsible for the generation of Airworthiness Releases (AWRs) on the four primary aviation platforms on which the BFT-AVN Systems are mounted. The AWRs certify that the BFT-AVN A-Kits and B-Kits do not adversely

affect the aircrafts' flight and missions and, where applicable, identify specific operational limitations of the BFT System.

The AED was instrumental in implementing acquisition-reform initiatives and transformation in the development of the BFT-AVN AWRs, which can typically take several months to produce and issue to the field. Due to the program's high visibility, AED's management was able to effectively prioritize the efforts and provide the needed manpower requirements to support the program's requirements in a timely manner.

■ BFT-AVN Product Office
The BFT-AVN Product Office is colocated in the Tactical Operation Centers/Air and Missile Defense Command and Control (TOCs/AMDCCS) Project Office Building in Madison, Ala. However, the FBCB2 Project Office - located at Fort Monmouth, N.J. - oversees the BFT-AVN Product Office. Both TOCs/AMDCCS and FBCB2 Project Offices are within the organizational structure of the Program Executive Office (PEO) for Command, Control and Communications-Tactical (C3T), also headquartered at Fort Monmouth. The BFT-AVN Product Office is responsible for the execution of the acquisition processes of planning, programming, budgeting and life cycle engineering support.

■ Information Assurance Community Functional and technical experts from such offices as the Defense Information Systems Agency, National Security Agency, Department of the Army and PEO C3T coordinated to resolve major program issues regarding the Defense Information Technology Security and Accreditation Process, the Secret and Below Initiative, an Interim Authority to Connect and Operate, and other C4ISR-related issues.

■ Aviation and Missile Command Project On Location Repair (OLR) Office

The Project OLR Office has facilities and personnel at various Army installations throughout the United States and overseas. This team has installed BFT-AVN A-Kits and B-Kits into various aviation platforms.

■ PEO Aviation
The Redstone Arsenal-based Program Executive Office-Aviation was

responsible for the total life cycle planning of the Army's inventory of aviation platforms. The PEO-Aviation was instrumental in providing platform aviation expertise.

■ Prototype Integration Facility (PIF)

The PIF at Redstone Arsenal is a component of the Engineering Directorate of the Aviation and Missile Research, Development and Engineering Center. The PIF provides in-house, rapid-response capability for generating hardware solutions and was instrumental in providing mechanical fabrication, cable assembly and integration expertise, as well as platform integration coordination and test support. This Army facility was paramount in the rapid manufacturing and production of BFT-AVN systems and spares.

■ Redstone Technical Test Center (RTTC)

The RTTC performed the electromagnetic environmental effects (E3) testing required on aviation platforms equipped with BFT, and provided support personnel and facilities. The E3 Test Branch conducted various types of testing to support AED's development and issuance of AWRs.

■ Unit Participation
Various aviation units from Fort Campbell, Ky., provided aircraft, aircrews and maintenance support - all of which were critical during the BFT-AVN Proof-of-Principle Demonstration, integration of the BFT-AVN mission packages, E3 Testing and first-article installations.

■ U.S. Army Aviation Logistics School (USAALS)

The USAALS assisted in the development of training and operating manuals for all four aviation platforms equipped with the BFT-AVN mission packages.

■ U.S. Army Staff
The primary staff offices included G3 (Operations and Plans), G6 (Communications) and G8 (Programs), as well as the Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), which prioritized requirements, provided funding, and provided program oversight.

TEAM SYNERGISM

The Army-lead BFT team effectively utilized the "flexibilities of

acquisition reform" in the near-real-time design, development and production of the BFT systems. Due to the national priority, fielding requirements and time constraints imposed upon the system, the BFT Product Office assumed many risks, which were inherently affected by the near-simultaneous design, integration, testing, manufacturing and installation of BFT-AVN Systems. Such risks caused by concurrent processes included starting production prior to the release of final engineering drawings, ordering of long lead-time items, unforeseen changes and increased testing.

Despite the scheduling, manufacturing and integration risks, the product office was effective in managing the overall efforts. The synergistic effects of the entire team were realized in the fielding of 200 BFT-AVN

systems installed in different aviation platforms - including the UH-60A/L Black Hawk (see Figure 1), the HH-60L medevac aircraft, the Army Airborne Command and Control System (A2C2S), the AH-64A/D Apache and the CH-47D Chinook.

CONCLUSION

The BFT-AVN Product Office has been highly successful as a result of the synergism of its highly talented and proactive team members, astute application of acquisition reform and the use of bold leadership at all levels of management. The BFT-AVN Product Office has enjoyed high-visibility and has been given national priority, and its successes can be used as a model for acquisition reform and transformation for larger programs throughout the aviation and defense communities.

By eliminating the few remaining antiquated acquisition paradigms that still exist, and by implementing new and more innovative approaches, acquisition reform and streamlining can be realized and the potential for program success can be maximized regardless of the program's acquisition category. Nevertheless, the principal element of any successful program is cohesive teamwork across the spectrum of disciplines focused on the program's goals.



LTC Anthony W. Potts and Richard M. Szcpanski are, respectively, the product manager and deputy product manager for BFT-AVN. Alvin A. Abejon is a senior analyst for Science Applications International in Huntsville, Ala.



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, 755 Main Street, Suite 4D, Monroe, CT 06468. Email: magazine@quad-a.org

Army Chief of Staff GEN Eric K. Shinseki announced the following aviation general officer assignments on April 18:

MG Craig D. Hackett, currently deputy commander of Joint Sub Regional Command Southeast in Turkey, will become commanding general of the U.S. Army Security Assistance Command at Fort Belvoir, Va., with a report date to be determined.

BG Jeffrey J. Schloesser, currently chief of the War on Terrorism Strategic Planning Cell, J-5, The Joint Staff, Washington, D.C., will become assistant division commander of the 101st Airborne Division at Fort Campbell, Ky.

BG James E. Simmons, currently commanding general of the U.S. Army Safety Center at Fort Rucker, Ala., will become deputy commanding general of III Corps at Fort Hood, Texas, with a report date to be determined.

BG Edward J. Sinclair, currently ADC (support) for the 101st Abn. Div., will become DCG/assistant commandant of the U.S. Army Aviation Center at Fort Rucker, with a report date to be determined.

COL Joseph A. Smith, currently ADC(S) for the 82nd Abn. Div. at Fort Bragg, N.C., will become CG of the U.S. Army Safety Center.

COL Doyle D. Broome Jr., currently chief of staff at the U.S. Army Aviation Center, will become ADC for the 82nd Abn. Div., with a report date to be determined.

COL Michael C. Flowers, currently director of the Center for Army Leadership at the U.S. Army Command and General Staff College, Fort Leavenworth, Kan., will become director of the Human Resources Policy Directorate, Deputy Chief of Staff, G-1, U.S. Army, Washington, D.C., with a report date to be determined.

BG John M. Custer III, assistant commandant of the U.S. Army Intelligence Center and Fort Huachuca, Ariz., to director for intelligence, J-2, U.S. Central Command, MacDill Air Force Base, Fla., with a report date to be determined.

BG Daniel J. Keefe, assistant division commander (maneuver), 1st Infantry Division, with duty as commander, Multinational Brigade East,

Camp Bondsteel, Kosovo, to chief of staff, V Corps, U.S. Army, Europe, and Seventh Army, Germany.

MG Raymond F. Rees, formerly vice chief of the National Guard Bureau, took over as chief of staff of the North American Aerospace Defense Command/U.S. Northern Command at Peterson Air Force Base, Colo., on May 12.

The Army chief of staff announced May 6 the assignment of **MG Dell L. Dailey**, currently the commanding general of Joint Special Operations Command at Fort Bragg, N.C., as deputy commanding general of XVIII Airborne Corps and Fort Bragg, with a report date to be determined.

President George W. Bush has nominated **MG Anthony R. Jones** for appointment to the rank of lieutenant general and assignment as deputy commanding general and chief of staff, U.S. Army Training and Doctrine Command, Fort Monroe, Va. Jones is currently the chief of staff, U.S. Army, Europe, and Seventh Army, in Germany.

Army Chief of Staff Gen. Eric K. Shinseki announced May 21 that **MG Virgil L. Packett II**, assistant chief of staff for operations, Regional Command South, Italy, will be the next commander of the Stabilization Force, Operation Joint Forge, in Sarajevo, Bosnia-Herzegovina. A report date has yet to be determined.

The following aviation officers have been nominated for promotion to major general:

BG James A. Kelley, currently chief of staff, U.S. Army Reserve Command, Fort McPherson, Ga.

BG James H. Pillsbury, currently deputy chief of staff, G-4, USAREUR, Germany.

BG James E. Simmons, currently commanding general, U.S. Army Safety Center, Fort Rucker, Ala.

COL Anne F. Macdonald turned over command of the 17th Aviation Brigade to **COL David J. Abramowitz** at a June 20 ceremony at Lombardo Field in Yongsan, Korea.

Defense Bill Markups

During May, the full House Armed Services Committee (HASC) approved its version of the fiscal year 2004 Defense Authorization Bill. On the personnel front, the Committee adopted nearly all of the provisions approved by the Total Force Subcommittee. The Senate Armed Services Committee (SASC) proposed its own version of the defense bill.

Both the House and Senate bills propose an across-the-board pay raise averaging 4.1 percent. This is part of an effort to help the Department of Defense (DOD) retain skilled personnel and improve the plight of the many young soldiers and sailors who are not paid enough to care for their families. This will result in a raise of at least 3.7 percent for all grades and all uniformed services — including Public Health Service and NOAA Corps officers (who were recommended for a 2-percent raise by the Bush Administration). The bills (both HASC and SASC) target mid-grade, senior noncommissioned officers and warrant officers for raises ranging from 5.25 percent to 6.24 percent.

These proposed raises are in line with President George W. Bush's budget request for next year.

The committees adopted matching legislation proposed by Sen. John McCain (R-AZ) and Rep. Susan Davis (D-CA) to specify in permanent law that future active-duty raises should match private-sector wage growth (this would erase a provision of current law that requires capping military raises below that level every year, starting in 2007).

Extra housing-allowance increases were also proposed, in the fourth step of a five-year plan aimed at making housing allowances fully cover median housing expenses for each grade and location by 2005.

These are the major provisions of the SASC version that are of interest:

- **Special Pays:** Provides significant increases in several special and incentive pays, including \$100 per month for military members in Korea; increase in family separation allowance from \$100 to \$250 per month; and an increase in hostile fire/imminent danger pay from \$150 to \$225.

- **High-Deployment Allowance:** Authorizes up to \$1,000 per month to compensate frequently deployed service members, including members of the reserve component.

- **DOD Health Care:** A variety of initiatives to improve TRICARE Standard beneficiaries' access to health-care providers, including directing the appointment of a single individual in the DOD to be responsible for measuring the adequacy of provider participation, and ensuring Standard beneficiaries have the necessary information and capability to secure a provider.

- **Directs the secretary of defense to ensure the TRICARE standard benefit remains viable and adequate.**

The full House Armed Services Committee (HASC) approved these additional major issues:

- **Manning:** Increases active duty end strength 6,240, and Guard and Reserve strength by 2.2 percent — above DOD's requested levels.

- **Senior Officers:** Authorizes extended tours for general/flag officers, with the stipulation that longer careers should not decrease promotion opportunities of lower-ranking officers.

- **Guard/Reserve:** Provides several measures enhancing Guard/Reserve compensation, including equalizing hazardous-duty pays with the active force; additional subsistence allowance to Guard/Reserve members in high-cost areas; authority to pay Guard/Reserve members per diem for housing when in leave status; and unlimited commissary access for these service members.

- **Wartime Pays:** Increases imminent-danger pay and family separation pay for troops engaged in operations Enduring Freedom and Iraqi Freedom.

- **DOD Healthcare:** Directs an active information outreach and assistance program for TRICARE standard beneficiaries; authority for medical and dental screening, and care for Guard/Reserve members alerted for mobilization; and establishment of a working group to assess impact of health-care delivery for BRAC-potential closings.

Lawmakers Introduce Pay-Comparability Bills

Sen. John McCain (R-AZ) and Rep. Susan Davis (D-CA) have introduced legislation (S. 945 and H.R. 1885, respectively) that would change the permanent law to tie military pay raises to private-sector pay growth.

One of TMC's long-time legislative priorities has been the restoration of military pay comparability with civilian workers of comparable education and work experience. Years of pay raise caps in the 1980s and 1990s saw the "pay-comparability gap" grow to 13.5 percent by 1999. When retention and



LEGISLATIVE REPORT

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

readiness suffered, Congress passed legislation pulsing up military raises through 2006. Our efforts have been fairly successful thus far. The proposed raise for FY 2004 will reduce the pay gap to 5.4 percent. But current law stipulates that after 2006, military pay raises will again be capped 0.5 percent per year below the average American's pay raise, as measured by the Bureau of Labor's Employment Cost Index (ECI).

If the law isn't changed, military pay comparability will begin to decline once again, and DOD will be unable to recruit and retain the high-quality personnel who serve our country so well in assignments across the globe.

These bills would recognize in permanent law the reality that military pay comparability is essential to the success of the all-volunteer force.

Senate Approves Military Tax-Relief Plan

After weeks of inaction on the House-passed version of the Armed Forces Tax Fairness Act of 2003 (H.R. 1664), the Senate voted to include a similar measure in the president's tax-cut package (H.R. 2).

Senators McCain and Max Baucus (D-MT) joined forces to offer an amendment to the original bill during Senate floor action. The amendment contains the provisions of H.R. 1307, the most recent Senate-approved military tax bill. It would make all \$6,000 of the military death gratuity tax-free, provide capital gains tax relief to military homeowners, and restore a tax deduction for Guard/Reserve members' travel and overnight training-related expenses. Military home sales provisions would be retroactive to 1997, when military homeowners lost their capital gain "rollover" entitlement.

Special-Compensation Update

TMC and other military and veterans' service organization representatives met informally in May with DOD officials on the procedures governing the new special compensation for certain military retirees with combat, operational or training-related disabilities. As this goes to press DOD should have released the new rules.

Although the draft procedures were not released to the participants, an outline of the process emerged during the informal talks:

- Instructions and an electronic application — to be printed and mailed to the retiree's parent service — will be available via the Web and retiree newsletters.

- Each military department will establish review boards to award or deny the special compensation for retirees with at least 20 years' active federal service who have VA-rated disabilities that are associated with a Purple Heart (10 percent or higher) or that are related to combat or military operations (60 percent or higher). Appeals of adverse decisions may be made to the Office of the Secretary of Defense (OSD).

- Applicants can speed consideration by attaching copies of any available supporting documents to the application (no originals, please, and certified true copies won't be required).

- The Pentagon is asking potential applicants NOT to request supporting documents from the National Personnel Records Center or the Department of Veterans Affairs. DOD has made separate arrangements with these agencies to obtain needed documentation on an expedited basis (as quickly as one week, in some cases). Retirees can help speed decisions by attaching copies of documents they already have in their possession, but individual requests for records (which normally take months) will only add to the record centers' workload and delay the process.

- Approved applicants will receive compensation retroactive to June 1, 2003, provided the qualifying disability was rated by the VA on or before that date.

- The special compensation will be fully tax-free.

- VA disability rating codes will be used in the evaluation process, and VA's presumptive combat-related/service-connection rules (such as for Agent Orange exposure in Vietnam, battle-related post-traumatic stress syndrome, etc.) are expected to apply.

AAA NEWS

NEW MEMBERS

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Mr. Stephen W. Williams

ALOHA CHAPTER
HONOLULU, HI
CPT Heather O. Bellusci
SSG Korey M. Hammer

ARIZONA CHAPTER
MESA, AZ
Mr. John B. Chambers
Mr. Brian S. Smith

ARMADILLO CHAPTER
CONROE, TX
CDT John E. Sakaleros

AVIATION CENTER CHAPTER
FORT RUCKER, AL

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CPT Gina E. Adam
WO1 Jeremy B. Addleman
2LT Toby J. Alkire
2LT Daniel J. Allen
LTC John G. Alvarez
WO1 Ray E. Areshenko
2LT Michael J. Ballard
WO1 Joseph E. Beauchamp
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2LT Bryon L. Blohm
CPT Michael D. Blomquist
COL Joseph S. Bowen
WO1 Sean C. Brady

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2LT Dustin Burton
2LT Byron N. Cadiz
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PFC Alfred B. Dickens
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MSG Susan G. Bentley

TALON CHAPTER
ILLESHEIM, GERMANY
1SG Michael L. Reynolds
Ms. Barbara L. Yerbury

TARHEEL CHAPTER
RALEIGH, NC
Mr. Steve C. Meyer

TAUNUS CHAPTER
WIESBADEN, GERMANY
MAJ Derek R. Rountree

TENNESSEE VALLEY CHAPTER
HUNTSVILLE, AL
Ms. Miranda E. Bouldin
Mr. Steven F. Carr
Ms. Rhonda P. Clemons

SGT Derrick T. Davis
Mr. W. Mark Dörner
Mr. John M. Fields
Mr. James D. Gruschow

LTC Brent Horrocks
Mr. P. Sam Hutcheson
MSG David E. Lizotte, Ret.
Mr. Michael S. McCall

Mr. Richard C. McCann
Mr. William M. Newby
Mr. Robert K. Reynolds
Ms. Christina L. Ridgeway

Mr. David L. Routh
Mr. Mark S. Smith
Mr. Ralph E. Smith
Mr. J. (Steve) L. Sutherland
CSM Ricky E. Terrell, Ret.
Mr. Karl W. Uhrnscko

1SG George M. Walters, Ret.
LTC Stephen R. Yerby, Ret.

VMI/WVIL CHAPTER
LEXINGTON, VA
CDT Anthony Iliadis
CDT Derek R. Rankin
CDT Daniel O. Schreiber

VOODOO CHAPTER
NEW ORLEANS, LA
1LT John E. Lund

WASHINGTON-POTOMAC
CHAPTER
WASHINGTON, DC
Mr. David B. Andress
CW4 Phillippe E. Catoire

Mr. Allen R. Christensen
Mr. Kevin M. Corcoran
Mr. Loic B. De La
Bourdonnaye

Ms. Kathy A. Grochowski
Mr. Grey Hagwood
2LT Florian Heitner
MAJ Laurence W. Howl

Mr. Kevin P. Hynes
Mr. Howard M. Kessler
LTC(P) Chuck R. Mehle
CDT Brian M. Merkl

Mr. Joseph M. Parsley
1LT Steven A. Sherrill
LTC Gerald A. Soltis, Ret.

WESTERN NEW YORK CHAPTER
ROCHESTER, NY
Mr. Arthur C. Lauer

WINGED WARRIORS CHAPTER
SOTO CANO AB, HONDURAS
CW4 Kenneth J. Bernstein
CW3 Daniel E. Connolly
MSG Diego M. Forero
CW2 Joel B. Sizelove

MEMBERS WITHOUT
CHAPTER AFFILIATION
Mr. Robert F. Acevedo
Mr. C. Andy Allen
LTC Joel E. Best

Mr. Emerson Callender
LTC Harold L. Campbell, Jr.
CW4 Ray D. Clements, Ret.
COL Gregory R. Cluff

Mr. Neville Dawson
Mr. Angelo Decamilis
LTC Darryl J. Ducharme
CPT Richard D. Ferguson

Mr. Manuel Figueroa
CW4 Dennis Forster, Ret.
SGT Michael J. Gunderson
COL Harry Haroldson

WO1 Matthew W. Hart
Mr. Peter R. Haynes
LTC Eugene R. Heuschel, Ret.
CPT Loren B. Jerlow

CAPT John S. Kamen, USN
CW4 Barry D. Lamkin
Mr. Dennis M. Lance
Ms. Judith C. Lane

LTC Gregory R. Lynch
2LT Michael K. Lynch
LTC Lee J. Merryman, Ret.
Mr. John Minjares

Mr. Bruce A. Mitchell
2LT John P. Neidlinger
CPT Darrell C. Nelson
Mr. Lonnie G. Nipper II

SSG Lee O. Parsons
LTC Erminio Pierangelini
Mr. Robert J. Sanchez
CW2 Robert M. Shine, Ret.

CPT David A. Strayer
Mr. Conrad K. Struckman
MAJ Lou F. Whitaker
Dr. Jim B. Wickes

WO1 Chris N. Wright

AAAA Locator



The AAAA offers its members the opportunity to contact the national office for addresses and phone numbers of other members with whom they have lost touch over the years.

In addition, as a service to our members, a brief announcement may be placed in these pages to help locate those who are not AAAA members

I would appreciate your help in locating the following old soldier:

Jack Armstrong Walker. Grew up in the Miami, Fla. area, and graduated from the University of Florida, Class of 1957. Flew helicopters in the US Army. If you have information, please contact: COL Jimmy M. Smith, (Ret.) phone (904) 260-2670 or e-mail: jmscjs@bellsouth.net.

Northern Lights Chapter

AAAA's Northern Lights Chapter held its Quad A Ball on May 2 at the Princess Lodge in Fairbanks, Alaska. The guest speaker was MG McNair (Ret.), who also presented various awards to chapter members. Orders of St. Michael (Bronze) went to: CW3 John Clements, CW3 Steve Rexroat, CW3 Wade Boynton, CW4 Mark Morgan, CSM Robert Kearney Jr., 1SG Charles Donely, 1SG Richard Mitchell.



McNair receives a gift presented to him by MAJ Lawrence W. Hallstrom, commander of the 68th Medical Company.



McNair (left) presents CW3 Steve Rexroat with the Order of St. Michael.

Looking for Cobra Details

The National Air and Space Museum is preparing an AH-1F (67-15508) for display at the Steven F. Udvar-Hazy Center, opening this December at Dulles International Airport, Va. The facility's curators are very interested in hearing from anyone who flew this aircraft, which has a history going back to 1967. The aircraft is known to have operated in both Vietnam and Somalia. If you have any knowledge of this aircraft or its deployments, please contact Roger Connor, Aeronautics Division, National Air and Space Museum, PO Box 37012, NASM-Aeronautics Division, MRC 0312, Washington DC 20013-7012. You may also contact him by phone at (202) 633-2634, or via e-mail to roger.connor@nasm.si.edu

AY03 U.S. Army War College Aviators



Back Row (left to right): LTC Tim Edens, LTC Sam Torrey, LTC Stephen Westphal, LTC Al Viani, LTC Tom Commodeca and LTC Mike Courts.

Front Row (left to right): LTC Bill Morris, LTC Ron Tuggle, COL Robin Mealer, COL Mike Hoff, LTC Mark Hayes, LTC Scott Ciluffo and LTC Howard Killian.

Not Pictured: LTC Trey Braun, LTC Catherine McNerney, LTC Andy Milani, LTC Murray Pittman, LTC Chris Philbrick, LTC Joe Thome and LTC Perry Wiggins.

AAAA PRESIDENT'S CORNER

This last month has brought developments on a couple of fronts. In late May MG Jim Snider, Ret., our Secretary Treasurer, Bill Harris, AAAA Executive Director, and COL Sy Berdux, our AAAA Representative to The Military Coalition (TMC) and I met with GEN Gordon Sullivan, the President of AUSA and LTG Ted Stroup at their offices in Washington, DC. It was a very productive meeting centering around collaboration between AUSA and AAAA on the legislative front and issues of interest to the Army Aviation Community. We look forward to even more effective cooperation between our associations as we increase the use of our Washington office located in the AUSA building.

Later in the month, I had the honor to return to West Point during graduation week to present the USMA Top Aviation Cadet Award. This year's winner is Cadet Brian Merkl. Cadet Merkl (holding trophy) is pictured above with me (far right) and members of his family including from left to right his sister Abbie, father Doug, mother Avis and sister Cadet Sara Merkl. Note that his sister is also a USMA Cadet! CW4(R) Bill Atkinson, a former Army Aviator and Vietnam veteran with over 2,000 combat hours, also made a presentation of a signed print of one of his paintings depicting the Vietnam Army Aviator Memorial at the Army Aviation Museum at Fort Rucker, AL. So the past month has really focused on the future as we prepared to better represent your issues to senior decision makers in Washington and as we continued to recognize excellence in our future leaders like Cadet Merkl. This is what AAAA is all about.



Andy

Join the Professionals — Join AAAA



ARMY AVIATION ASSOCIATION OF AMERICA (AAAA)

755 MAIN STREET, SUITE 4D, MONROE, CT 06468 • PHONE (203) 268-2450 • FAX (203) 268-5870

Please check one: Change of Address: New Membership Application

I wish to join the Army Aviation Association of America (AAAA). My past or current duties affiliate me with U.S. Army Aviation and I wish to further the aims and purposes of the AAAA. I understand that my membership includes a subscription to AAAA's official magazine "Army Aviation", and that my membership will start on the subsequent first of the month. Contributions or gifts to AAAA are not deductible as charitable contributions for federal income tax purposes. Dues payments may be deductible by members as ordinary and necessary business expenses.

Rank/GS Grade _____ First Name _____ MI _____ Last Name _____ Sex _____

Mailing Address _____

Mailing Address _____

City _____ State _____ Zip + 4 Code _____

Active Duty or Civilian Job Title and Unit or Firm name _____ E-Mail _____

() () () () () ()

Area Code Office Phone _____ Area Code Residence Phone _____ Area Code FAX _____

Consent: I do I do not consent to the publication or release of the above information to third parties.

Signature _____ Date _____

Citizenship _____ Nickname _____ Spouse's Name _____

Date of Birth (Mo/Yr) _____ Social Security No. _____

membapp.131 08/22/01

AAAA ANNUAL DUES

Applications other than those listed below:
 () 1 yr, \$26; () 2 yrs, \$47; () 3 yrs, \$70
 Full-Time Students; Enlisted; WO1s; GS-8 DACs & Below;
 Wage Board 12 DACs & Below:
 () 1 yr, \$15; () 2 yrs, \$27; () 3 yrs, \$39
 Add \$5 per year if you have a foreign, non-APO address.
 Add \$15 if your check is drawn on a foreign bank.

Check enclosed payable to "AAAA" or charge to
 AMEX Diners Club Mastercard VISA
 Card No. _____

Amt \$ _____ Exp. Date _____

Signature: _____

Date: _____

Check (✓) Your Professional Qualification:

- | | |
|---|---|
| <input type="checkbox"/> Army Active Duty | <input type="checkbox"/> Other US Military Service (Active) |
| <input type="checkbox"/> Army AGR (ARNG) | <input type="checkbox"/> Other US Military Service (Retired) |
| <input type="checkbox"/> Army AGR (USAR) | <input type="checkbox"/> US Defense Industry |
| <input type="checkbox"/> DA/DOD Civilian | <input type="checkbox"/> US Defense Industry & Military Retired |
| <input type="checkbox"/> Army Nat'l Guard | <input type="checkbox"/> Consultant |
| <input type="checkbox"/> Army Reserve | <input type="checkbox"/> Publishing/Other Assn. |
| <input type="checkbox"/> Army Retired | <input type="checkbox"/> Other |
| <input type="checkbox"/> Foreign Military Service | |
| <input type="checkbox"/> Foreign Defense Industry | |

Are you a former AAAA member? Yes No

If yes, what year did you join? _____

Chapter Affiliation Preferred _____

Print Name of Recruiter _____

New Chapter Officers

Armadillo:

LTC Michael J. Currie,
President; COL Robert Poland,
Ret., Senior Vice President;
CW4 Bobby R. Deiss,
Treasurer; CW4 Daniel T.
Heggie, V.P. Membership
Enrollment.

Aviation Center:

CW3 Stephanie K. Truax, VP
Awards; CPT Jennifer S. Hebert,
VP Programs.

Bavarian:

LTC Donald M. MacWillie, III,
President; CPT Geoffrey A.
McLaughline, Sr. VP; CPT John
A. Polhamus, Secretary; CW4
Jeffrey A. Reichard, Treasurer;
CW4 Michael R. Friend, VP
Membership Enrollment; CW4
Douglas C. Hettler, VP
Programs; CPT Jeffery G.
Bouma, VP Scholarship.

Colonial Virginia:

LTC Mark S. Jones, Ret., Sr.
V.P.; SGM Michael G. Postell,
Sr., VP Awards.

Corpus Christi:

Ms. Annette B. Cross, VP
Benefit.

Northern Lights:

MAJ William R. Cristy, Senior.
V.P.; CPT Cameron S. Curtis, VP
Membership; CPT Spencer D.
Hasch, Treasurer.

Old Tucson:

MAJ Kenneth G. Campbell, VP
Membership.

Showme:

MAJ William J. Thomas,
President; MAJ Mark W.
McLemore, Sr. V.P.; CW2 John
Roy Masters, Treasurer; CW5
George M. James, VP
Membership Enrollment; CW4
Randall D. Zehnder, VP
Programs; LTC John W.
Salchow, VP Area SGF; MAJ
Charles D. Hausman; VP Area
SZL; SFC William J. Vogel, Jr.,
Assistant Secretary.

Winged Warriors:

CPT Eric J. Eberline, VP
Awards.

New AAAA Life Members

CPT Matthew W. Anderson

MAJ Mathew J. Brady
CW4 Kenneth G. Donley, Ret.
COL Lawyn C. Edwards
LTC Alvin L. Foshee
CPT Clair A. Gill
SGM Thomas S. Gittemeier
SFC Mark Kather, Ret.
MAJ Jack Kimberly, Ret.
CW4 Richard H. Kimble, Ret.
MAJ Robert L. Marion
COL Kevin R. McBride
LTC Charles W. Millican, Ret.
Mr. Roger J. Olson
Mr. Ross M. Pedersen, Ret.
BG(P) Kenneth J. Quinlan
Mr. Ronald R. Holweger
Mr. George T. Singley, III
CW4 Stephen A. Timmons
CPT Malcolm L. Wise

Aces

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

CPT Ray J. Davis
SGM Wayne W. Thompson

New AAAA Industry Members

American Management Sys.
(AMS)
Anteon Corporation
Bearing Inspection Inc.
Bobcat Company
Campbell's Port-A-Cool
Clockwork Solutions, Inc.
Dynamic Instruments, Inc.
ESTARI, Inc.
Fabritech, Inc.
HAWK Enterprises, L.L.C.

AAAA Soldier of the Month

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

SSG Amy A. Litman
July 2003
(Narragansett Chapter)

AAAA Distinguished Instructor of the Quarter

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

SSG Clark K. Herring
January - March 2003
(Colonial Virginia Chapter)

In Memoriam

COL William A. Bearden
MAJ John Joyce, Ret.
CW4 Michael J. Madden, Ret.
LTC Gary W. Niles
LTC Robert L. Rackley, Ret.
COL George C. Tillery, Ret.
LTC George J. Young

AAAA STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2002

ASSETS	
Cash	\$109,135
Cash Equivalents, Interest Bearing	600,888
Investments	269,954
Inventory of Pins	9,471
Inventory Order of St. Michael Medals	15,267
Prepaid Administrative Fees	223,983
Prepaid Expenses and Other Assets	4,615
TOTAL ASSETS	\$1,233,313

LIABILITIES	
Accrued Expenses and Allocations Payable	\$63,271
Due to AAPI	3,399
Due to Foundation	40,000
Deferred Membership Dues	216,922
Deferred Convention Revenues	551,100
TOTAL LIABILITIES	\$874,692

NET ASSETS	
Unrestricted:	-
Designated:	-
Emergency Fund	\$270,269
Hall of Fame Escrow Fund	11,939
Order of St. Michael Fund	20,000
Washington, D.C. Office Fund	32,630
Audit Escrow Fund	-
TOTAL UNDESIGNATED	\$334,838
TOTAL UNRESTRICTED NET ASSETS	\$358,621

TOTAL LIABILITIES AND NET ASSETS \$1,233,313

STATEMENT OF ACTIVITIES YEAR ENDED DECEMBER 31, 2002

REVENUES	
Membership Dues, Net	\$304,910
Annual Convention	942,153
Hall of Fame	-
AEC Symposium	53,085
Order of St. Michael	16,404
Souvenirs	1,282
Investment (Loss) Income, Net	(75,886)
Affinity Card Income and Miscellaneous	4,129
TOTAL REVENUES	\$1,246,077

EXPENSES	
Chapter Programs	49,213
National Programs	66,425
National Board Activities	22,842
Annual Convention	581,643
AEC Symposium	52,382
AAAA Scholarship Foundation Donation & Expenses	61,021
Order of St. Michael	1,802
Hall of Fame	61
Special Allocations	95,275
Miscellaneous	-
TOTAL PROGRAM SERVICES	\$930,664

Supporting Services:
General and Administrative \$392,882

TOTAL EXPENSES \$1,323,546

Change in Net Assets (77,469)
Net Assets— Beginning 436,090
Net Assets — Ending \$358,621

The Financial Statements have been audited by
Friedberg, Smith & Co. PC Certified Public Accountants

AAAA NEWS



Northern Lights Chapter

Pictured are (from left to right) Northern Lights Chapter members CPT Todd Buhr (recently selected to attend the experimental test pilot course by Aviation Branch), MAJ Will Cristy (new chapter vice president) and chapter president MAJ Larry Hallstrom. The chapter is planning its first annual 5K Run for Aug. 23.



On June 4, 2003, the 4th Battalion, 101st Aviation Regiment, bid farewell to the 159th Avn. Brigade commander, COL William H. Forrester, at Tall Afar, Iraq. Before his departure Forrester presented Bronze Orders of St. Michael to MAJ Ralph J. Litscher, MAJ Michael L. Shenk, CW4 Gregory Wood, CW4 Lucky Mertes and CSM Donald Gregg. Also in attendance were LTC Anthony Sabb, CW5 Brent Driggers and CSM William E. Allen.

Phantom Corps Chapter



CSM Felipe Mendez of the 3rd Squadron, 6th Cavalry, at Fort Hood, Texas, received the Bronze Order of St. Michael at a recent meeting of AAAA's Phantom Corps Chapter. Mendez was joined at the presentation by COL Douglas R. Eller, chapter president (at right) and LTC Jeffrey D. Brown.

Indiantown Gap Chapter

AAAA's Indiantown Gap Chapter held a business/professional meeting at the Community Club at Fort Indiantown Gap, Pa., on Mar. 21. The guest speaker was COL Alberto Jimenez of the National Guard Bureau. He spoke on the status of the Army National Guard and Army Guard aviation since the tragic events of Sept. 11, 2001. He gave an update on deployments of aviation units and discussed the importance of the Army National Guard to the total defensive posture of the United States military.



Mr. Art Milano (right) of LSI presented a check for \$2,500 to the John J. Stanko Scholarship Fund of the Indiantown Gap Chapter. COL Stanko (left) gratefully accepted the check on behalf of the chapter.

Stanko (below left) was also on hand to present the Order of St. Michael Silver Award to CW5 John Travers (Ret.). Travers retired in 2001 after 32 years of service. Several past chapter recipients of the Order of St. Michael were on hand to witness the event.



ATTENTION AAAA MEMBERS!!!
 Send us your name and
E-mail Address (Especially Your AKO Account)
 AAAA National Office, Email: aaaa@quad-a.org

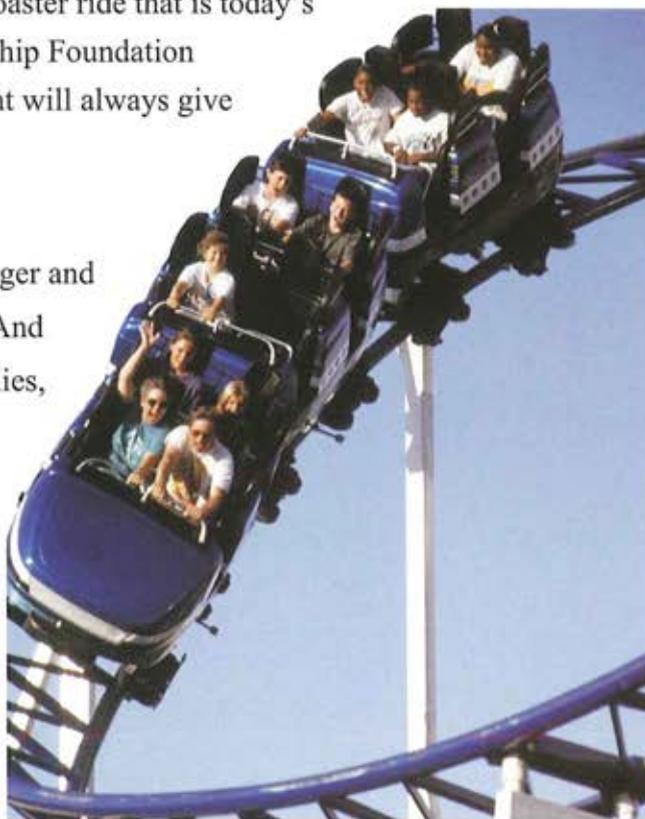


Tired of the Stock Market Roller Coaster Ride?

If you're tired of the down hill roller coaster ride that is today's stock market, then the AAAA Scholarship Foundation suggests you invest in the one thing that will always give you a good return—the **future**.

Tomorrow's Army will be leaner, stronger and more technologically adept than ever. And that means our soldiers, and their families, need easier access to education. When you give to the AAAA Scholarship Fund, you are enabling many of them to acquire the strategic skills they need to win in the 21st century.

Giving opportunities exist for individuals, chapters, and companies through our matching fund programs, as well as through the Combined Federal campaign. What's missing is your support. Help us help the Army of tomorrow by supporting the AAAA Scholarship Foundation with a donation that guarantees the best return for your investment.



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AAAA NEWS

Air Assault Chapter



COL William H. Forrester, president of AAAA's Air Assault Chapter, presented the Order of St. Michael to soldiers of the 159th Aviation Brigade at Mosul Airfield, Iraq, on June 6. The individuals receiving the OSM were MAJ Joseph Matthew, MAJ Brian I. Smalley, CPT Anna M. Haberzettl and SGM Eric Vazquez. The ceremony marked Forrester's last official act as the chapter president, a position he'd held since July 2002. BG Edward J. Sinclair presented Forrester with the Silver OSM in an earlier ceremony the same day.

Army aviators assigned to the Air Force's Air Command and Staff College at Maxwell Air Force Base, Ala., had an opportunity recently to meet and chat with Medal of Honor recipient and AAAA member CW4 Michael Novosel (Ret.). Novosel — who is also a member of the Air Force's Gathering of Eagles program — was invited to Maxwell to speak to the 600 majors assigned to ACSC.



CW4 Michael Novosel (Ret.)

A yearly speakers program at ACSC invites famous members of the air and space community to speak on related air-power issues. The officers who attended the luncheon included COL Benjamin Williams, LTC Mark Barefield, MAJ Jayson A. Altieri, MAJ Sharlene Donovan, MAJ Susan Lind, MAJ William McGarrity, MAJ Jodi Nelson and MAJ Thom Styner.

The luncheon was held at the Maxwell AFB Officers Club, where Novosel signed books and photos for those present.



Novosel (at center) is flanked by (left to right) MAJs Thom Styner, William McGarrity, Sharlene Donovan and Jayson A. Altieri.

LOST & FOUND

One pair of reading glasses were found at the 2003 AAAA Annual Convention in Fort Worth, Texas. If they belong to you please contact the AAAA National Office at (203) 268-2450

Aviation Center Chapter



On a beautiful, sunny day at Fort Rucker's Silver Wings Golf Course, team members representing Navigator Development Group Inc. walked away with first place in the AAAA Spring Golf Classic. The winning foursome — (from left) Chris Miller and Ron Wilson, both of Navigator, and Jody Dorill and 1LT Scott Johnson — took the top prize ahead of some 128 golfers. The team shot 28 under par for a winning score of 44 in the "string" tournament format. Each golfer received a Ping graphite driver.

AAAA's Aviation Center Chapter presented \$3,400 worth of prizes at the tournament. The Spring Golf Classic raises funds for the center's annual scholarship contributions, quarterly professional forums and donations to local groups.



☛ **Jul. 11.** 7th Annual Army Aviation Museum Golf Classic to benefit Army Aviation Museum Fund. For information contact Darrell Allman (334) 347-1281.

☛ **Jul. 18.** AAAA Scholarship Executive Committee Meeting, National Guard Readiness Center, Arlington, VA.

☛ **Jul. 19.** AAAA Scholarship Selection Committee Meeting, National Guard Readiness Center, Arlington, VA.

☛ **Sep. 15-18.** The C4IEWS Path to Military Transformation & Homeland Security Enabled by Military & Civilian Warfighters Symposium, Sponsored by: U.S. Army CECOM and the Fort Monmouth Chapter of AAAA - AFCEA - AOC - AUSA. Visit website for more details: <http://www.aaaamonmouthchapter.org>

Army Aviation Hall of Fame

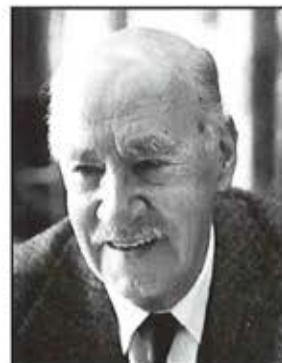
The Army Aviation Hall of Fame sponsored by the Army Aviation Association of America, Inc., recognizes those individuals who have made an outstanding contribution to Army aviation. The actual Hall of Fame is located in the Army Aviation Museum, Fort Rucker, Ala., where the portraits of the inductees 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 2007. Contact the AAAA National Office for details at (203) 268-2450.

Igor I. Sikorsky **Army Aviation Hall of Fame 1974 Induction**

Igor I. Sikorsky's interest in rotary wing flight first manifested itself in 1909 when he produced two unsuccessful experimental helicopters in Russia. His visionary efforts were the foundation of the technology that was basic to modern helicopters worldwide. In constructing the VS-300 30 years later, Igor Sikorsky solved the problem of anti-torque control and developed a successful rotor head which incorporated features that enabled the pilot to control motion in all directions. These cyclic and collective pitch control features are utilized in virtually all helicopters today.

Sikorsky-designed H-19 and H-34 helicopters saw extensive Army service in a variety of missions. They provided the Army one of its earliest capabilities to exploit airmobility with utility and cargo helicopters. The H-19 was the first cargo helicopter in the Army inventory to see combat during the Korean War. The H-34 was the first helicopter approved for Army use as a presidential executive transport vehicle. It was followed in this role by the Sikorsky VCH-3.

Development of and use by the Army of Sikorsky CH-37 medium cargo and CH-54 heavy lift helicopters were further tributes to the engineering genius for which he was renowned. This aviation pioneer, who is the father of today's fleet, retired from active engineering work in 1957. He continued to express an interest in helicopter technology and gave direction to these efforts at the Sikorsky Aircraft Division until his death in 1972.



NEW TACTICAL SOLUTION FOR EXTENDED RANGE.



The Crashworthy External Fuel System (CEFS) offers a new tactical solution for extended range for the Black Hawk helicopter.



Existing 230 gallon external ferry tanks are modified to incorporate a self-sealing crashworthy bladder, a gravity and single-point pressure refueling capability, a cavity drain and a customer provided fuel quantity probe. Any AFMS equipped UH-60 helicopter can be easily modified to add the suction fuel transfer system to move the fuel from up to four 200 gallon CEFS tanks into the main fuel tanks.

FEATURES

- Crashworthy to same standards as primary fuel system
- 200 gallon fuel capacity per CEFS tank
- Single-point pressure refuelable
- Dropped full of water from 65 feet
- On-aircraft full scale crash test
- Gunfire tested (50 cal., 14.5mm, 23mm HEI)
- Minimal aircraft modifications to AFMP, airframe and ESSS
- Fuel quantity indication system
- Installation and removal by two men in about 10 minutes per CEFS tank using a portable lifting system

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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