

ARMY AVIATION

OFFICIAL PUBLICATION OF THE ARMY AVIATION ASSOCIATION OF AMERICA • OCTOBER 31, 2003 • \$3.00



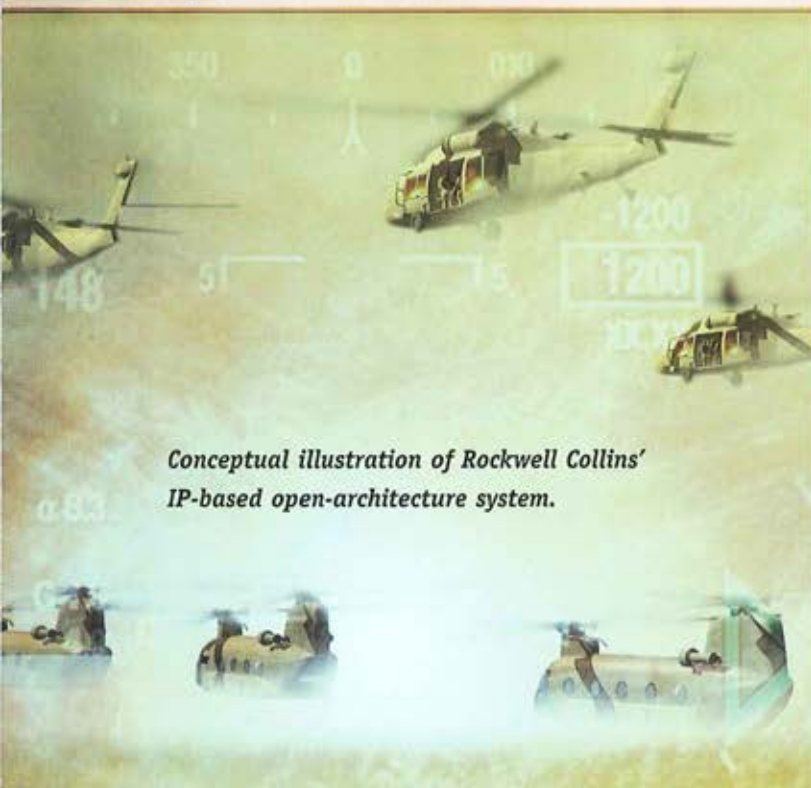
COMMAND

SEARCH

HELP

IP

NETWORK INTERNET PROTOCOL



Conceptual illustration of Rockwell Collins' IP-based open-architecture system.

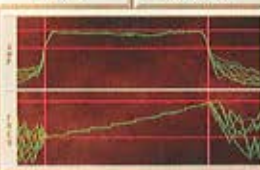
GRAB

ZOOM

VIEW

NAV

COMM



MAP

FILTERS

COMBAT

COMMAND

MSG

ADMIN

STATUS

F1

APPS

HELP

OPS

F2

SECURE

F3

F4

F5



SEARCH



BROADCAST

FREQUENCY



**Rockwell
Collins**

recorders

smiths

there's a **smiths flight recorder**
for almost **any aircraft**



Smiths Aerospace has more than 15 years' experience in producing solid-state voice and flight data recorders. We can offer complete turnkey systems for virtually any aircraft.

Our systems feature multiple data channels, going beyond the standard regulatory requirements, providing the capability to acquire additional data on structures, engine health and maintenance to support Flight Operations Quality Assurance (FOQA) programs. With a full suite of PC-based ground support software, Smiths flight recorders can be put to use every day for maintenance diagnostics, mission replay and crew reinforcement training. And thanks to advanced digital design, high performance recorders are available and can be repackaged into compact sizes for platforms where space and weight are at a premium. Low cost – small size – practical applications: another success from Smiths.

engineering value in **electronic systems**

Publisher
William R. Harris Jr.

Editor
Stephen Harding

Production Manager
Barbara Ross

Contributing Editor
James R. Bullinger

Circulation Manager
Mary Ann Stirling

Circulation Assistants
Debbie Coley
Diane Grinsted
Mary Ellen Kother
Deb Cavallaro

Advertising
Robert C. Lachowski



on the cover

Paid Advertisement. As a leader in developing affordable and highly scalable solutions for the military, Rockwell Collins has won open-architecture systems programs in avionics, communications and networking. Rockwell Collins' solutions include open-architecture systems for the KC-135, the Army Joint Tactical Radio System (JTRS) and Special Operations Forces Common Avionics Architecture System (CAAS). Rockwell Collins also helped U.S. Army Communications-Electronics Command (CECOM) develop MOSA-IC, an IP-based open-networking solution. These programs demonstrate Rockwell Collins' commitment to total connectivity on the battlefield. *Caption provided by advertiser.*

briefings



President George W. Bush has nominated Army LTG George W. Casey Jr. for appointment to the rank of general and assignment as Army vice chief of staff, U.S. Army. Casey is currently director of the Joint Staff in Washington, D.C.

California Army National Guard aviator SGT Chris Shaw saved his UH-60 Black Hawk helicopter from probable destruction in mid-August through a combination of keen observation and quick action. The aircraft had landed at a remote area of the National Training Center at Fort Irwin, Calif., when an unmanned M998 truck began rolling down a slope toward it. Shaw saw the vehicle, jumped out of the still-running aircraft, and brought the Humvee to a stop before it could strike the Black Hawk.

On Dec. 9 the Smithsonian Institution's National Air and Space Museum would like to honor military aviation veterans for their service by inviting them to be among the first to celebrate the opening of the new Steven F. Udvar-Hazy Center. Due to space and safety requirements, attendance is limited to 4,000 people on a first-come/first-served basis. Tickets are \$15.00 each and are limited to four per veteran. To purchase tickets call (866) 814-4441 or visit www.one-stop-registration.com/snav.

Northrop Grumman Corporation's Information Technology sector has won a contract from the U.S. Army Engineer Research and Development Center to provide topographic information support to the agency's Topographic Engineering Center in Alexandria, Va. The indefinite delivery/indefinite quantity contract for the Combat Terrain Information Systems (CTIS) Systems Integration program has a potential value of more than \$100 million over 10 years.

In other Northrop Grumman news, the firm has received from the Massachusetts Institute of Technology the first test terminal for the Department of Defense's Advanced Extremely High Frequencies (EHF) satellite system. Northrop Grumman Space Technology is developing the satellite communications payloads for the system, which will deliver secure, high-speed network-centric communications with "anywhere/anytime" access to U.S. and allied forces.

BAE Systems has provided a Segway two-wheeled transporter vehicle for the Army's use at Redstone Arsenal, Ala. The gyroscopically stabilized vehicle is built by Silicon Sensing Systems Ltd. as part of a joint venture with BAE. The latter firm's Inertial Products division provides the inertial measurement technology that helps keep the vehicle upright.

Embry-Riddle Aeronautical University in Daytona Beach, Fla., has been named the top school in the aerospace/aeronautical/astronautical engineering category of U.S. News and World Report's 2004 "best Colleges" guide. Embry-Riddle's Prescott, Ariz., campus was named third in the same category. This is the fourth consecutive year that the Florida campus has claimed the first-place title.

Sikorsky Aircraft's UH-60M Black Hawk No. 1 made its first flight on Sept. 17, staying airborne for 75 minutes during the flight from the Sikorsky Flight Development Center in West Palm Beach, Fla. The UH-60M is designed to replace the UH-60L as the standard Army Black Hawk configuration beginning in 2007. Aircraft No. 1 was originally built as a UH-60A, and is the test vehicle for such airframe issues as performance and handling.

Armor Holdings Inc. has announced its intention to acquire Simula Inc., a leading safety-technology company and supplier of safety systems for Army UH-60 helicopters and other systems in all branches of the U.S. military. The deal, valued at \$110.5 million, will allow Armor to diversify its product base, expand its technical capabilities and enhance its position as the leading supplier of armor, safety and survivability systems to the U.S. and foreign militaries.

Army Fleet Support LLC — a joint venture among L-3 Communications Integrated Systems, Vertex Aerospace, Paragon Systems and U.S. Helicopter — has won a U.S. Army Aviation and Missile Command contract to provide maintenance and logistics support for rotary-wing aircraft at Fort Rucker, Ala. The 10-year contract has a potential value of \$2.7 billion.

contents

vol. 52 no. 10

OCTOBER 31, 2003

FEATURES:



6

6 Army Aviation Operations During Operation Iraqi Freedom

by MG John M. Curran

26 Training Black Hawk Mechanics "On the Road"

by LTC Lisa A. Wall



19

28 20 Years Ago in "Army Aviation" — The New Aviation Branch

by BG Ellis D. Parker

30 GPS Approaches: A Risk Mitigator and Necessary Alternative

by CPT Ed Austin



26

33 Revitalizing Close Combat Attacks in Iraq

by MAJ David J. Rude

SPECIAL FOCUS: Protecting the Force — ASE, Avionics, Safety & Life Support



33

14 ASE Update

by Wesley F. McElveen and C. Henry Flick

19 PM for Aviation Systems: Enabling the War Fighter

by Gary Nenninger

21 The Improved Data Modem: Army Aviation's Communication Gateway to the Future

by MAJ Norbert E. Vergez



38

24 Bridging the Gap Between Lack of Experience and Safety Excellence

by BG Joseph A. Smith

DEPARTMENTS:

AAAA New Members	39	Calendar	42
AAAA News	36	Hall of Fame	43
Briefings	3	Mailbox	27

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[®] 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.

**Your commitment is to protect freedom.
Our commitment is to protect you.**

ITT Industries takes great pride in providing electronic protection to the
Armed Forces of the United States and friendly nations.



ENGINEERED FOR LIFE IS A REGISTERED TRADEMARK OF ITT INDUSTRIES. 02201

"This country will define our times, not be defined by them. As long as the United States of America is determined and strong, this will not be an age of terror; this will be an age of liberty, here and across the world." — George W. Bush, September 20, 2001



ITT Industries
Engineered for life™

ARMY AVIATION OPERATIONS DURING OPERATION IRAQI FREEDOM

By MG John M. Curran

In the last couple of months we have had the opportunity to review the information gathered during operations in Iraq, and we started analyzing the data for future doctrinal and training changes. Our Directorate of Training, Simulation and Doctrine is heading up the study for the Aviation Branch. Overall, the most fascinating aspect is reading about what was accomplished and how well our soldiers performed. Here's an update from some of the material the Aviation Center is studying.

OIF STUDY GROUP

In April 2003 Army Chief of Staff GEN Eric K. Shinseki commissioned the Operation Iraqi Freedom Study Group (OIFSG), led by BG Mark O'Neill from the Army G3 staff, with the mission to conduct a thorough review of U.S. forces in theater and evaluate their performance during combat operations. The OIFSG assessed the Army's contributions to the joint and coalition operations, and captured the strategic, operational and tactical lessons learned.

In support of this initiative, the U.S. Army Aviation Center provided three officers with attack, lift and maintenance backgrounds to review and study past and ongoing aviation operations. Each officer interviewed and discussed key aviation-related issues with leaders and soldiers throughout the theater. In total, the OIFSG conducted more than 1,900 interviews with deployed service members.

Returning to Fort Leavenworth, Kan., in July, the team spent two weeks recreating the major combat operations by battlefield operating systems (BOS). The correlation of lessons by BOS presented a unique view, providing significant insight into how key battles unfolded and why leaders made certain decisions during the conduct of operations.

It soon became apparent that most battles occurred under similar circumstances. Due to a vague enemy situation, friendly units were forced to conduct movements



An AH-64D Longbow Apache from 1st Bn., 3rd Avn. Regt., heads out on a mission. Note the combination of laser- and radar-guided Hellfire anti-tank missiles. (US Army photograph).

to contact in order to find and engage both regular and irregular enemy forces.

A CENTRAL ROLE

Army aviation was central to the success of OIF through support provided not just to Army ground units, but also to joint and coalition forces. From the onset of hostilities, Army aviation was overt — units conducted countless missions in support of ground units in contact or moving in tactical convoys, and moved personnel, equipment and supplies throughout the width and depth of the battlefield.

Aviation units also conducted missions independent of ground forces to destroy Iraqi military targets or positioned themselves so that they were able to support the maneuver forces. After major resistance was eliminated, Army aviation units occupied fixed bases and Army aircraft were the primary movers of critical supplies until a viable ground-transportation network was established.

The OIF operating environment enabled Army aviation units to demonstrate the value of helicopters on a fast-moving and asymmetric battlefield. Ground units moved quickly to disrupt the enemy's decision cycle and prevent the establishment of an effective defense. The speed of the operation resulted in the fall of Baghdad, Saddam Hussein's center of gravity, in just 22 days.

MISSIONS

Army aviation attack and cavalry units conducted reconnaissance and security, movement-to-contact, search-and-attack, and close-combat attack (CCA) operations in support of the rapid advance of the 3rd Infantry Division (3ID). Army aviation lift and assault-helicopter units conducted air assaults; air movement of personnel, supplies and equipment; and insertion and extraction

The **Experience** You Need. The **Results** You Want.



Aviation Support

For more than 50 years, DynCorp Technical Services has found the experienced personnel the government needs to deliver the results they desire.

Aircraft Fleet
Management

Aircraft Maintenance
and Modifications

Kit Manufacture and
Installation

Avionics Systems

Aircrew Services
Training

Logistics Support

Facilities Maintenance
Engineering

Utilities Operations and
Maintenance

Transportation Operations
and Maintenance

Communications and
Information Technology

Management Systems

Housing Maintenance

Roads & Grounds

Data Collection,
Reduction, and Analysis

Modeling

Simulation and Info
Management

Test Planning

Operations and
Management Engineering

Equipment and
Instrumentation

Base Operations Support

Range Support

EXPERIENCE. RESULTS.

DynCorp

A CSC COMPANY

missions of soldiers at critical locations on the battlefield. Aviation units also supported the commitment of the V Corps reserve and conducted attacks against the Medina Division of Iraq's Republican Guard.

Assault, lift and medical-evacuation units were invaluable to both the ground forces and other aviation units. These units conducted command-and-control and embedded personnel recovery missions; transported downed-aircraft-recovery teams; moved mission-essential equipment; conducted general support (GS) and medical-evacuation tasks; inserted and extracted long-range surveillance detachments; established forward arming and refueling points (FARP); and conducted air-assault operations and refuel missions known as "Fat Cow" (CH-47) and "Fat Hawk" (UH-60) operations. They also provided the quickest link to the logistical support bases in Kuwait during and after major combat operations in Iraq.

OPERATIONS

The following vignettes provide examples of the variety of aviation operations conducted during OIF.

4th Brigade Combat Team (4th BCT), 3ID

On March 20, the onset of the war, the 4th BCT as the division main effort — supported by the 3ID Division Artillery (DIVARTY) and aviation assets — conducted

for follow-on missions.

Before noon on March 21 attack helicopters of the 1st Battalion, 3rd Avn. (1/3 Avn.), and seven UH-60s from 2/3 Avn. occupied a staging area at Jalibah Airbase in southern Iraq to prepare for shaping operations and CCA to destroy the Iraqi 11th Inf. Div.. Although the attack was initially planned for the following day, they executed the mission at 1700Z in support of 3rd BCT, 3ID. The result was the successful securing of the Highway 1 bridge over the Euphrates River at An Nasiriyah. During the next several days, 3ID aviation units supported the division's northward movement and Marine Corps units engaged in fighting at An Nasiriyah.

3rd Squadron, 7th Cavalry (3/7 CAV)

The OH-58D Kiowa Warrior (KW) aircraft proved very successful in conducting urban operations using CCA techniques. Once the war began, 3/7 Cav. used both of its air troops to conduct security missions forward in order to confirm the disposition of six bridge sites south of As Samawah.

Flying more than 100 kilometers in front of their ground troops, KW crews relied on FARP assets provided by UH-60 Fat Hawk aircraft. As ground cavalry troops moved forward near the bridge sites at As Samawah, OH-58Ds conducted CCA in and around the city, engaging ground targets while calling in both close air support and indirect fires. Coordinating with special operations units on the ground, 3/7 Cav. used KWs to locate and destroy a key enemy headquarters.

101st Airborne Division (101st Abn. Div.)

As 3ID moved north towards Baghdad, 101st Abn. Div. aviation units moved to terrain that was cleared by the movement of 3ID. The mission of the 101st Abn. Div. aviation units was to get the 101st Avn. Brigade in position to attack the 14th Brigade of the Republican Guard's Medina Division and influence the battle of Baghdad.

To do this, the brigade had to move nearly 400 kms. north of its staging base in Kuwait. Therefore, an intermediate refueling point and a FARP were

required at the forward staging base. The 159th Avn. Bde. was tasked to establish rapid refuel point (RRP) Exxon and FARP Shell. Exxon was the intermediate RRP and Shell was the most northern FARP in the drive towards Baghdad.

The establishment of Exxon and Shell relied on integration between aviation units and ground forces. Both missions relied on the synchronization of convoys with the actions of supporting aviation assets. FARP teams composed of all elements of the 159th Avn. Bde. moved with forces from the 101st's Division Support Command and 101st Corps Support Group with attached ground forces until they reached their destinations.

Before the arrival of the FARP teams, the 3rd Bn., 187th Inf., was air assaulted more than 380 kms into FARP Shell to secure the objective. While the concept

CH-47 and UH-60 aircraft from the 159th Avn. Bde. conduct air-assault operations near Mosul, Iraq. (US Army photograph).



an observation post (OP) elimination mission that facilitated the movement of forces in Kuwait across the berm into Iraq.

At 1815Z, two attack-helicopter companies and a command-and-control UH-60L Black Hawk departed Camp Udairi, Kuwait, en route to destroy Iraqi OPs in support of the 3ID's breach and penetration of the Iraqi border. By 1830Z, the 4th BCT with the 3ID DIVARTY began executing a coordinated attack to destroy border OPs and two critical command posts (CPs). Fires began at 1850Z and nine of 11 targets, seven OPs and two CPs, were engaged and destroyed. The DIVARTY then shifted fires and destroyed the remaining two OPs with 36 artillery rounds per OP. AH-64Ds confirmed the destruction of the targets. Upon mission completion, all aircraft returned to Camp Udairi and began preparing

BLACK HAWK

Option II Cabin Heater Kit



- Mission Kit (16.5 lb installed)
- Minimal Installation Requirements
- Minimal Space Requirement
- Low Maintenance/High Reliability
- Superior Performance at a Low Cost

A Sikorsky/AirComm Corp. cooperative development.

For inquiries, requests for quotes, or orders please fax us at (203) 386-7548.



Sikorsky

A United Technologies Company

worked well, it was not without challenges, given the large volume of aircraft combined with a dusty environment. Although both FARPs were planned to be operational for a short period, Exxon remained operational for 17 days, while Shell was open for 12 days.

During this operational phase, Shell became the staging base for AH-64s conducting deep shaping operations and CCAs. As 3ID began to push north, the 101st was tasked to clear such major urban areas as Al Kifl, Al Hillah, Karbala and Mosul. Both aviation brigades supported the BCTs with air assaults, shaping operations and CCAs into these locations, with the final air assault into Mosul spanning more than 500 kms. Located not too far to the east, 3ID secured Objective Rams with a similar intent for its aviation assets. Out of OBJ Rams, tactical assembly area (TAA) Vicksburg was established as home to the attack helicopters of V Corps's 11th Avn. Regt.

11th Aviation Regiment

On 23 March, the 11th Avn. Regt. conducted a cross-FLOT (forward line of troop) attack against the Medina Division, which resulted in almost every aircraft receiving some type of damage from small arms and air defense artillery. While ingressing along the route, aircraft encountered an unexpected and sophisticated anti-aircraft ambush that prevented some crews from reaching their objectives.

After this attack, senior 11th Avn. Bde. leaders conducted an after-action review (AAR) with the 101st Avn. Bde. and developed tactics, techniques and procedures (TTPs) to counter this threat. Four days later, the 101st Avn. Bde. flew 128 kms. across the FLOT against the same division and received damage to only one aircraft. The suppression of enemy air defense (SEAD) plan prepped the route using Air Force close air support (CAS) and ATACMS (Army tactical missile system).

Once the aircraft departed the TAA, ATACMS fired again in a rolling barrage, landing two to four minutes in front of the aircraft along their route. If enemy contact was made along ingress, aircraft would conduct basic actions on contact by suppressing, deploying to cover away from the fire and then developing the situation. Crews would then engage stored targets with direct and indirect fires, continuously moving to increase aircraft survivability.

Battle damage assessment (BDA) for both attacks was low, causing some critics to question the validity of shaping operations. But, in reality, the shaping operation accomplished its mission because it verified that the enemy was forced to disperse his assets across the battlefield, making him virtually useless against follow-on ground forces. It is also important to note that these and subsequent attacks showed the survivability of the Apache — it was able to take a hit and continue flying.

The 11th Avn. Regt.'s 2/6 Cav. did not execute the mission the night of March 23 and was placed under the operational control of 4th BCT in order to support 3ID's

movement north. With two attack-helicopter battalions under its control, 4th BCT provided 24-hour CCA coverage as the division maneuvered north through the Karbala Gap towards Baghdad.

Following 3ID's movement north, the 101st Avn. Div. tasked OH-58D and AH-64 crews to support ground forces in order to clear cities block by block. Using an inner-ring/outer-ring concept, Apaches covered key avenues of approach on the perimeter of the city while OH-58Ds flew in the center area searching for pockets of resistance. This technique provided the ground commander greater flexibility by allowing him to focus his combat power on the intended objective. These TTPs also leveraged CAS and indirect fires by ensuring enlisted terminal attack controllers (ETAC), air-liaison officers, fire-support officers and forward air controllers (airborne) were integrated on every mission.

LESSONS LEARNED

When describing Iraq's fielded military forces, MAJ David J. Rude, S3 operations officer of 1st Bn., 3rd Avn., stated: "The Iraqis tucked their conventional weapon systems into their city blocks among family dwellings and behind human shields. We were not fighting tanks in this war. Apaches were not sent after division artillery groups in engagement areas because they were not arrayed as such."

Facing an enemy differing from that envisioned in prewar intelligence briefings, warfighter computer exercises or the collective experience gained during Operation Desert Storm, aviation units were forced to adapt quickly to an asymmetric battlefield.

Many of the successes achieved in OIF are attributed to lessons learned from Operation Enduring Freedom, where the term CCA was codified. Attack and cavalry units in OIF quickly realized the significance of dynamic

engagements by using running and diving modes of fire in order to maintain survivability on the battlefield. Target handovers between air and ground forces became standardized, with both elements emphasizing the importance of understanding marking methods of both friendly and enemy locations. This positive transfer of TTP allowed Army aviation units to support the ground commander with responsive direct fires.

Air-ground integration is much more than attack and cavalry aviation units supporting ground elements in contact. Lift and assault units are integrated with ground elements when they conduct air assaults, move personnel, supplies or equipment, or provide command-and-control assets to units on the ground during engagements or tactical convoys. Air-ground integration also occurs when ground elements are attached to aviation units to be used as door gunners or security elements for base security, personnel recovery teams and downed aircraft recovery teams.

The 159th Avn. Bde. received 136 door gunners from the BCTs of the 101st Avn. Div. The soldiers were des-

*Air-ground integration
is much more than
attack and cavalry
aviation units
supporting ground
elements in contact.*

THE BEST SURVEILLANCE SYSTEM IS THE ONE THEY NEVER SEE

Minimize Exposure with the PC-12's Retractable Sensor Package.



Introducing the new PC-12 Spectre, the single multi-role platform versatile and efficient enough to fulfill all your missions. With its large, pressurized, quick-conversion cabin, the Spectre adjusts to suit virtually any mission profile. And it places legendary PC-12 performance at your command. Like endurance in excess of 9 hours. A dash speed up to 310 mph. And the ability to stand off at up to 30,000 feet. Plus, you get nimble in-flight handling, the freedom to land on short and unimproved runways, and operating costs that come in well below the radar.

Combine all this with a retractable sensor payload and you can see why the PC-12 Spectre is so special.

Even if the bad guys can't.

SURVEILLANCE • INTERDICTION • COMMAND AND CONTROL • TRANSPORT

www.pc12spectre.com

PILATUS
SPECIAL MISSIONS

1-800-PILATUS



Chart your course to degree completion with new courses from Excelsior College!

For more than thirty years, our goal at Excelsior College has been to meet you where you are – with the information we deliver and the opportunities we provide.

That's why we're particularly excited to welcome you to a whole new era in how we're meeting your needs. In addition to offering you military career-related degree programs at-a-distance, we now offer distance courses on CD-ROM. We've added these courses to the many avenues we provide to help you chart your course to completing your respected Excelsior College degree.



Excelsior College is the flexible, portable way to earn your respected college degree.

With no residency requirement, Excelsior College helps you apply, toward your degree, credit earned from our new CD-ROM courses, and from traditional and other non-traditional sources, including:

- Excelsior College Examinations – Funded by DANTES
- DANTES and CLEP Exams
- Military and corporate training
- Other distance and classroom-based courses

Choose from 31 associate and bachelor's degree programs.

Excelsior College offers degree programs from the Schools of Liberal Arts, Business & Technology, and Nursing. Several of these degree programs were developed specifically to help you capitalize on your formal U.S. military training.

Excelsior College is a proud member of the Servicemembers Opportunity College (SOC) Network.

Join the thousands currently completing their degrees at-a-distance with Excelsior College.

Contact Excelsior College today to start earning the credit you need for your respected degree. With many credit-earning avenues available to you, you'll soon count yourself among more than 40,000 graduates from the military!

Call toll free: 888-522-4723

From outside the U.S. and Canada call: 518-464-8500

(At the prompt, press 2-7.)

Or email: admissions@excelsior.edu

Regents College is now...

EXCELSIOR COLLEGE

MANY AVENUES. ONE GOAL: YOUR DEGREE.

www.excelsior.edu

Located at 7 Columbia Circle • Albany, New York 12203 • 518-464-8500, Excelsior College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street • Philadelphia, PA 19104 • 215-662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation (CHEA). All the College's academic programs are registered (i.e., approved) by the New York State Education Department. Excelsior College is not a Title IV provider. Excelsior College admits students of any race, color and national or ethnic origin.

ignated before the deployment and received 40 hours of training focused on aviation operations. The attachment of door gunners benefited maintenance by allowing one crew chief to fly with the helicopter on a mission. The remaining crew chiefs were used to conduct maintenance on aircraft that remained and in the assembly area — this facilitated the execution of "launch, recover and launch again."

The fluid battlefield revealed that the execution of many air missions is event-based where air and ground operations are integrated. The establishment of RRP Exxon and FARP Shell were tied to the movement of ground elements. Aircraft from the 159th Avn. Bde. carrying the security elements were launched so that they would arrive ahead of the ground elements to facilitate the establishment of the FARPs. Also, the movement of personnel and equipment to OBJ Rams to support the deep attack conducted by the 11th Avn. Regt. was contingent upon the area being cleared by 3ID and the anticipated arrival of the 1-227th Avn. FARP ground convoy.

The utilization of the events-based operations places a premium on accurate and timely Blue Force information. Leaders require visibility of the status of trigger events and the ability to communicate with elements waiting for the trigger conditions to be met. Blue Force Tracker (BFT) was used successfully during Operation Iraqi Freedom to accomplish the task of transmitting the location of aircraft and text messages. Decision makers received updates and issued execution orders using BFT. Also, aviation used BFT to transmit special instructions (SPINS) to the aircrews that were separated from their parent units.

SUMMARY

Army aviation was essential to the battle plan of OIF due to the versatility, speed and effectiveness aviation formations bring to the battlefield. Aviation provided ground commanders with options that translated into flexible operations. Speed and lethality were the keys to preventing the Iraqi leaders and military from establishing an effective defense. Assault and lift aviation units rapidly moved soldiers and equipment to critical points and then sustained those units. Attack and cavalry units supported ground elements and conducted independent operations to locate enemy formations and reduce their combat effectiveness.

Once major combat operations ended and stability operations began, the versatility of Army aviation was very important. Attack and cavalry units conducted security operations while lift and assault units took on the task of moving supplies and repair parts.

Hats off to the men and women of Army aviation who served and continue to serve on operations as part of the joint and combined arms team. And hats off to the team that has worked so diligently to collect observations and insights that will help us improve our aviation contribution to warfighting, now and in the future.

Think safety and risk management always, 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.

9 for 9.



Recently, Viper Strike — a new variant of the Army's BAT submunition — was tested at the White Sands Missile Range. The results were striking. Perfect in fact. A series of 9 engagements against a variety of targets in various scenarios resulted in 9 direct hits. Viper Strike was carried and launched from Army Hunter UAVs. The Hunter's TV and infrared sensors and laser designator enabled ground operators to locate and laser designate targets for Viper Strike engagement from the same UAV carrying the Viper Strike. Other targets engaged by Viper Strike were laser designated from the ground by the Army's Lightweight Laser Designator/Rangefinder (LLDR). The widely varied scenarios included day and night strikes against both conventional military targets and modified civilian vehicles that were moving, stationary, hot and cold. Viper Strike's outstanding performance gives the Army a weaponized UAV with a robust and lethal precision-strike capability. Viper Strike, Hunter and the LLDR are provided to the US Army by Northrop Grumman.

www.northropgrumman.com

©2003 Northrop Grumman Corporation

NORTHROP GRUMMAN DEFINING THE FUTURE™

Electronic Systems

ASE Update

IEW&S
PROGRAM EXECUTIVE OFFICE



By Wesley F. McElveen and C. Henry Flick

The Aviation Electronic Systems (AES) Project Office is responsible for Army aircraft survivability equipment (ASE) development, fielding and sustainment. This includes the Advanced Threat Infrared Countermeasures (ATIRCM)/Common Missile Warning System (CMWS), the AN/AVR-2A Laser Detecting Set, the Aviation Survivability Equipment Trainer IV (ASET IV) and other, current ASE systems.

The Project Office reports to the U.S. Army Program Executive Officer for Intelligence, Electronic Warfare and Sensors (IEW&S), Fort Monmouth, NJ. The Project Office acquires for the warfighter the effective means to defeat a broad spectrum of tactical missile threats populating current and future force battlespace environments.

AES Project Office Mission

The mission of the AES Project Office is to provide for the Army aviation community a family of systems designed to counter the infrared (IR), radio frequency (RF) and laser-guided missile threats in the hands of current and future adversaries. In addition, the project office is responsible for managing the sustainment of currently deployed Army IR/RF legacy systems.

The AES Project Office currently manages five ASE systems from its location at Redstone Arsenal, Ala. These include the currently fielded AN/AVR-2A(V) Laser Detecting Set, AN/APR-39A Radar Warning Receiver and AN/ALQ-144A(V)3 IR Countermeasures System. Developmental systems include the AN/ALQ-212 ATIRCM/CMWS. The fifth system is the Aircraft Survivability Equipment Trainer (ASET) IV.

The following paragraphs will focus on the fielding status of two new recently developed systems which, when in the hands of the user, will significantly impact

near-term contingency operations — the ATIRCM/CMWS and AN/AVR-2B systems.

Operation Iraqi Freedom (OIF)

Even before the beginning of OIF hostilities on March 19, 2003, PM AES was busy tracking and ensuring the availability of spares and field support for deployed AES.

Responding to calls through channels and directly from aviation units and logistics assistance field representatives, the PMO coordinated the

{i.e., Jammer Processor};

- Infrared Jam Laser (IRJL) {with articulated arm / optical coupler for beam path}; and

- Improved Countermeasure Dispenser (ICMD) [see Figure 1 below]. The ICMD consists of at least one ALE-47 Sequencer plus multiple "smart" dispensers capable of automatically sensing the payloads present.

The baseline ATIRCM/CMWS system includes one ECU, four EOMSSs, one JHCU, one IRJL, one IRJH and one ICMD.



Figure 1
AN/ALQ-212
ATIRCM/CMWS

repair of AN/ALQ-156 Missile Approach Detector components still in Kuwait. As the operational tempo picked up and units moved into Iraq, sand intrusion in the bearings of the AN/ALQ-144 became a significant readiness challenge.

To successfully meet the challenge, PMO personnel assisted in the location and shipment of hundreds of spare bearings and complete systems. The PMO continues working to ensure uninterrupted support of OIF warfighters, and the incorporation of lessons learned in system modifications and new system developments.

ATIRCM/CMWS

The ATIRCM/CMWS consists of six major components:

- Electro-Optic Missile Sensor (EOMS);
- Electronic Control Unit (ECU) {i.e., CMWS Sensor Processor};
- Infrared Jam Head (IRJH);
- Jam Head Control Unit (JHCU)

Program background

On Jan. 18, 1995, the undersecretary of defense for acquisition and technology approved the merger of the USAF/USN/USMC Advanced Missile Warning System with the Army ATIRCM program. The programs were streamlined to form a joint acquisition strategy, with the Army Acquisition Executive being designated as the Milestone Decision Authority.

Due to subsequent programmatic and schedule issues, the Air Force and Navy/Marine Corps made the decision to withdraw from the program in August 2000. Since then, the Army has completed development, successfully tested and is producing the CMWS/ICMD components of the system for urgent SOCOM needs.

However, due to severe fiscal constraints in the Army in mid-2001, all production funds for this program were withdrawn. Then, as a result of urgent operational needs following

HEY SOLDIER!

AMERICA'S ENEMIES WANT TO THANK YOU FOR CARRYING A **RED FILTERED** FLASHLIGHT. A **RED FILTERED** FLASHLIGHT ALLOWS THEM TO SEE YOU FROM FIVE MILES AWAY WITH NVGs; IT ALLOWS THEM TO ACT FIRST AND FINISH DECISIVELY. AND THAT MAKES HUSSEIN, BIN LADEN AND ALL OF THE TERRORISTS VERY HAPPY.



One of our **Phantom Warriors** in action.

FOR OVER 15 YEARS, PHANTOM PRODUCTS HAS PRODUCED THE MOST INDISPENSABLE PIECE OF MILITARY EQUIPMENT FOR U.S. OPERATORS...SECOND ONLY TO HIS PERSONAL WEAPON - THE **PHANTOM WARRIOR®** FLASHLIGHT. IF YOU HAVE NOT SEEN OUR LIGHTS BEFORE, THAT IS BECAUSE THEY ARE COVERT AT NIGHT, AND BECAUSE WE HAVE PROTECTED U.S. TROOPS BY REFUSING FOREIGN SALES. THIS DEFENSE CONTRACTOR HAS A CODE OF ETHICS WE WILL NOT BREAK BECAUSE **YOU PROTECT AMERICA.**

OUR LIGHTS ARE SIMPLY THE BEST THERE IS:

- * THEY PRESENT A LOW SIGNATURE TO NVGs
- * THEY ARE COLOR ACCURATE
- * THEY ARE RUGGEDIZED
- * THEY ARE COST EFFECTIVE
- * THEY REALLY LAST

OUR LIGHTS ARE THE CHOSEN EQUIPMENT FOR:

- * JRTC O/C TEAM MEMBERS
- * US ARMY MEDICS
- * SOF PILOTS AND AIR CREWMEN
- * U.S. NAVY SEALS

OUR LIGHTS HAVE BEEN TESTED AND APPROVED BY:

- * SOCOM
- * NAVAIR
- * USMC WARFIGHTING LABORATORY
- * NIGHT VISION GOGGLE DIRECTORATE, FORT RUCKER
- * NIGHT VISION LABORATORIES, FORT BELVOIR
- * NATICK LABORATORIES



Phantom Warrior® Flashlight
(shown with black, sand and OD cases)

We have various lighting colors and configurations!



BellaBeam®



Phantom MEV Stryker Light



Phantom Map Light



Phantom TOC Lighting



SOLDIERS WITH PHANTOM LIGHTS "SHOOT AND SCOOT" SINCE THEY STAY LOW SIGNATURE AND SEE ALL COLORS CLEARLY & ACCURATELY!



SOLDIERS WITH FILTERED LIGHTS ARE EASY TO TARGET AND SUFFER DANGEROUS COLOR DISTORTION.

Be a **Phantom Warrior®** or Become a **TARGET!®**

Call us or visit the Phantom web site today and request your catalog.
Your life and the lives of your soldiers depend on it.

Phantom Products, Inc.

Made with pride in the USA!

404 Lightner Street, Box 548 Union Bridge, Maryland 21791
ph 888-533-4968, fax 888-533-5669
WWW.PHANTOMWARRIOR.COM

the September 2001 terrorist attacks, first CMWS funds in December 2001 and ATIRCM funds in December 2002 were restored to the program. An Army Systems Acquisition Review Council (ASARC) meeting to approve low-rate initial production for ATIRCM/CMWS is now scheduled for the first quarter fiscal year 2004. The special operations MH-47 Chinook will be equipped first, followed by the AH-64D Apache.

Fielding Plan

The ATIRCM/CMWS is being fielded to Army units under an innovative concept, fully consistent with current funding constraints. Instead of traditional one-for-one fielding in which a complete system is installed on every aircraft, ATIRCM/CMWS will be fielded using mission kits tailored to operational needs.

Under the new mission kit concept, every aircraft earmarked for the future force, more than 2,600 helicopters at this time, will have an installation or A-Kit installed, which is capable of receiving any or all components of a tailored mission kit. The A-Kit will be installed while the aircraft is either undergoing remanufacturing, reset or through an MWO process. This fielding method will give units the ability to install tailored mission kits comprised of specific hardware needed for specific mission area operations.

ATIRCM/CMWS will have two mission-kit configurations for each aircraft type. This exploits the system's ability to operate in a CMWS/ICMD configuration or in a full-up ATIRCM/CMWS configuration based on the threat environment the unit is to be exposed to.

Why field the system in this manner? The primary reason is to save money. At no time are all 2,600 aircraft expected to be deployed at

once to areas where the threat warrants the active use of IRCM. So why spend the billions of dollars required to equip the entire force simultaneously? This concept will also save airframe weight in the low-to-medium threat environments, since removing the jammer components reduces total system weight by approximately 60 pounds.

So how will a unit train and fight? First, ATIRCM/CMWS is an automated system. The pilot turns it on and the system does the rest. Second, the system will be incorporated into all of the fleet's aircraft trainers and simulators. Third, systems will be provided for all aircraft at the National Training Center at Fort Irwin, Calif., so that when aviation units deploy for training they will practice installing and training with the system. After training is completed, components will be removed from the platforms, checked out and repaired as necessary, and stored for the next arriving unit.

How will the mission kit issue system work during contingencies? While details are still being worked out, the concept is that when a unit is identified for deployment the depot that manages the system will also be notified. The depot will contact the unit and make arrangements to deliver and install ATIRCM/CMWS mission kits, either before the unit deploys from home station or as the aircraft are reassembled at the port of arrival. When the deployment is completed and the systems are no longer needed, they will be collected by the supporting depot, reconditioned, and returned to storage or reissued to other deploying units. While installed at the unit level, a standard two-level, unit-to-depot, support system will be used.

Future IRCM Requirements

The current ATIRCM/CMWS system is designed to defeat all known Tier 1 IRCM threats. However, known evolving IRCM threats and potential future Army contingencies

compel the developer to plan for the upgrading of the system to keep pace with aviation survivability requirements. Therefore, the product manager has plans in place to counter the future threat through incremental or spiral development upgrades to the ATIRCM/CMWS modular design.

Improvements in CMWS built-in test (BIT) and false alarm rate (FAR) are now being fielded in Increment 1. Ongoing improvements in producibility, BIT, reliability and new-systems integration will be reviewed at the upcoming ASARC and will result in the fielding of Increment 2, ATIRCM active jammer components, in late 2005. Further, Increment 3 improvements will include Tier 2 and 3 threat countermeasures, multi-band laser, fiber optics cable laser beam path, and processor upgrades being fielded in the 2009 timeframe. Increment 4, which is currently unfunded, will address low observable IRCMs and advanced threats in fiscal year 2010 and beyond.

Program Status

Notwithstanding numerous program perturbations during the development phase, the ATIRCM/CMWS system is alive and healthy today. Its Operational Requirements Document (ORD) is valid and current. All technical and programmatic risks have been identified and are manageable. The system is expected to be approved for production before the end of 2003.

8AVR-2A(V) Laser Detecting Set

The AN/AVR-2A Laser Detecting Set (LDS) is a passive laser warning system which receives, processes and displays threat information resulting from aircraft illumination by threat laser-aided weapons. As shown in Figure 2, the AN/AVR-2A and 2B LDSs consist of four- and six-sensor configurations mounted on the aircraft surface, plus one internally mounted central interface unit.

The AN/AVR-2A is currently



Figure 2
AVR-2A and 2B Laser
Detecting Sets





Hedy Lamarr

Frequency Hopping 1942

A moment of **insight**
that helped secure the future.

Ideas give humanity the vision to act and the power to transform. Consider the legacy of Hedy Lamarr, a woman of both graceful cinematic talent and considerable technological ingenuity. Working with composer George Antheil and his player pianos, she developed and patented a method by which frequencies could be changed randomly, and therefore codified to create a secure signal – a concept used today in our everyday lives. In the same spirit, Boeing invites you to discover your place in history by joining our team as we propel change and bring mobility, information and security to the world.

The sophisticated and complex programs we work on at Boeing cover every aspect of the aerospace industry. These include missile defense, laser systems, human space flight, launch systems, reconnaissance and surveillance, combat systems, communications and information systems, information management and software solutions, satellite communications, fighter aircraft development, and homeland security. A career at Boeing is a real opportunity to make your mark on the nation and the world.

The job categories listed below include some of the key skills we are seeking for open positions in **California, Kansas, Pennsylvania, Virginia and Washington**. To view detailed descriptions and apply for these and other similar positions, please visit www.boeing.com/careers

Systems Engineers
Electrical Engineers

Software Engineers
Electro-Optical Engineers

Mechanical Engineers
Systems Integration & Test

Finance/Business
Avionics

If you would like to view a comprehensive listing of all available positions, please visit www.boeing.com/employment

Please apply separately for each position you are interested in. Specific clearance requirements are indicated in the position listings. U.S. Citizenship is necessary for all positions requiring a security clearance.

Boeing is an equal opportunity employer supporting diversity in the workplace.



Don't let history happen without you.

Apply at: www.boeing.com/careers

DESERT PROVEN.

AFS filters are the only engine inlet barrier filtration systems with demonstrated combat performance in the harsh desert environment of Iraq. Not only did AFS filters dramatically improve the ability of helicopters to operate in sand and dust — they boosted engine performance and life, too.

COMBAT PROVEN.

OH-58D Kiowas and AH/MH-6J Special Operations Little Birds deployed with AFS filters in Iraq, and the result has been flawless performance with no unscheduled engine maintenance and no replacements for erosion. While other aircraft were replacing engines, AFS-equipped aircraft were performing missions.



ARMY PROVEN.

Protect your high-performance helicopter engine with patented technology exclusively from AFS. We offer the only helicopter main engine barrier filtration system fully qualified by, and in service with, the U.S. Army on primary combat helicopters.



AEROSPACE FILTRATION SYSTEMS

1-636-498-6016 fax 1-636-498-6005

www.westar-afs.com

installed on Army and Navy aircraft, including the AH-64A/D, OH-58D, MH-47E, MH-60K, MV-22, CV-22, SH-60R, HH-60H, AH-1W/Z, UH-1N/Y and EH-101, as well as the United Kingdom's WAH-64D (via Foreign Military Sales, or FMS). Other potential FMS customers include the Netherlands and Taiwan. Future installations of the system are planned on CH-47F and UH-60L aircraft.

Capabilities

The AN/AVR-2A and 2B LDS systems detect and categorize laser threats as either rangefinders, target designators or beamriders. Additionally, they identify the direction of the threat, prioritize the threat according to lethality, and display threat data to the aircrew both visually and audibly. Currently, this information is displayed on the AN/APR-39A(V) or multi-function display. The AN/AVR-2A and 2B LDS can also be used for training by serving as a MILES/AGES receiver.

System Upgrades

A horizontal technology-insertion approach on improvements incorporated on the AN/VVR-1 Ground Laser Warning Set has been applied to the AN/AVR-2A through an engineering change proposal (ECP). This upgraded system is identified as the AN/AVR-2B.

The AN/AVR-2B increases system performance against improved and emerging threat systems, significantly improves angle-of-arrival information, includes 1553 data bus interfaces, provides improved EMI protection, reduces power consumption, reduces weight, lowers the aerodynamic drag configuration and has a reduced system cost. The AN/AVR-2B Laser Detecting Set (LDS) successfully completed ground testing at the Naval Air Engineering Station, Lakehurst, N.J., in August.

The new AN/AVR-2B mission kit is expected to have higher reliability, improved performance in the area of false alarm and probability of detection, cost approximately 40 percent less, and weigh approximately 10 pounds less in the four-sensor configuration than the current AN/AVR-

2A LDS. Cost savings are estimated to be in excess of \$35 million, based on current estimated procurement quantities. During tests, numerous laser sources and false-alarm sources were used to test the performance of the AN/AVR-2B LDS.

Program Status

The AN/AVR-2A and 2B is currently funded in the POM. The prime contractor for the AN/AVR-2A/B is Goodrich Aerospace Systems in Danbury, Conn. Flight testing of the AN/AVR-2B LDS on an MH-60K special-operations aircraft was conducted during the last two weeks of September as a result of earlier successful field and airworthiness qualification testing. Fielding of the AN/AVR-2B LDS will enhance the survivability and mission effectiveness of SOAR and Army aircraft in hostile airspace environments worldwide.

Summary

The first priority in PEO IEW&S and PM AES is getting equipment into the hands of soldiers. To paraphrase a well-known commercial product, fielding is "JOB ONE."

In spite of unavoidable program delays, the PMO is optimistic now that two of its new development systems are nearing their fielding dates. The full ATIRCM/CMWS is expected to enter production in mid-FY 04 while the first CMWS/ICMD systems have already been delivered for installation on special-operations aircraft.

AN/AVR-2A systems have been delivered to all intended users, except a few Apache A and D model aircraft. The AN/AVR-2B system is planned to be delivered to special operations units in May 2005 and Army UH-60M units later in 2005. Fielding of these new ASE systems will enhance the survivability of special-operations aviation and Army aircraft worldwide.



Wesley F. McElveen is the project manager for aviation electronic systems in the Program Executive Office for Intelligence, Electronic Warfare and Sensors in Huntsville, Ala. C. Henry Flick works for the contractor CAS Inc., in Huntsville.

PM for Aviation Systems: Enabling the War Fighter

By Gary Nenninger



Providing critical warfighting enablers to the aviation commanders and soldiers is the mission of the Program Executive Office — Aviation's Project Manager for Aviation Systems (PM AS).

The project manager and his staff of approximately 400 government and contractor support personnel manage 57 Acquisition Category (ACAT) III systems, which are assigned to his five product managers — Fixed Wing (FW), Scout/Attack (S/A), Aviation Ground Support Equipment (AGSE), Air Traffic Control (ATC) and Aviation Mission Equipment (AME).

While these product areas have often been a secondary thought to those outside Army aviation, each is decisively significant to employing the Army in battle and each is deserving of equal distinction. This article focuses on the products and services managed by PM ATC and PM AME.

Air Traffic Services (ATS)/Air Traffic Control (ATC)

The acronyms ATS and ATC are often used interchangeably, but there are distinct differences. Army Air Traffic Services (ATS) encompass both military units and operational functions — Army ATS units include ATC personnel who use ATC equipment to provide ATS.

The product manager for air traffic control is chartered to provide these critically important but often overlooked prod-

ucts and services. His job is to develop, acquire, field and sustain the 15 ACAT III programs that produce the ATC equipment used by the personnel of Air Traffic Services commands throughout the Army. The primary tasks of ATC personnel and equipment are to provide visual, oral, electronic or written communication with airmen and to process, handle and control friendly aircraft operating within their areas of concern in order to enhance the safety of aircraft and passengers. The overall goal is to permit the safe and efficient operation of aircraft and other airspace users during tactical and nontactical air operations.

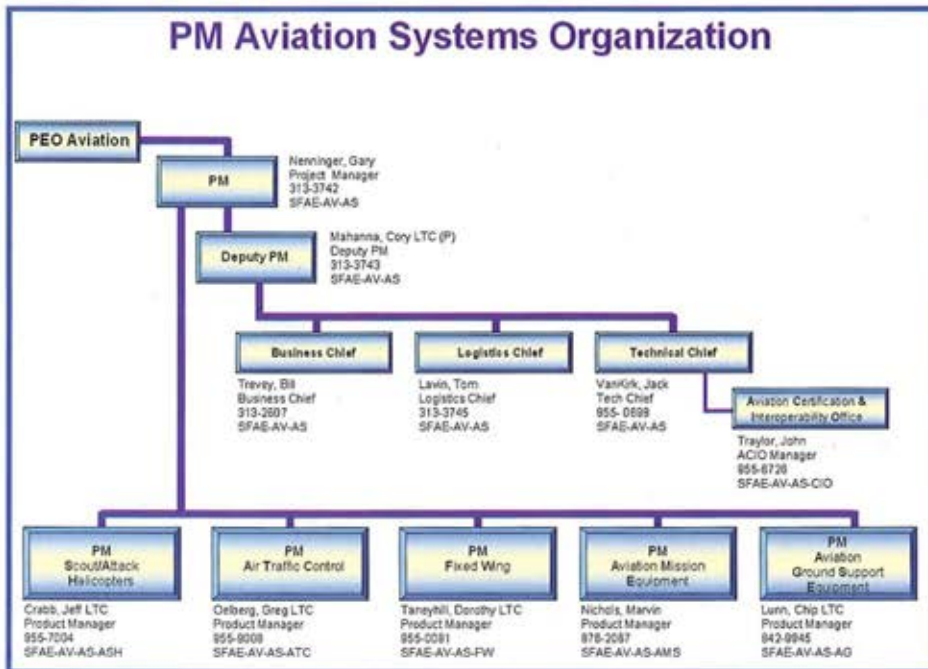
In order to accomplish these missions, ATS commanders must tailor their forces to meet a wide variety of global contingencies — both tactical and nontactical. As a tailored force, these units will support Army aviation operations during all phases of the operational cycle. In addition to considering their personnel as they tailor their assets, ATS

commanders must also consider the capabilities of their ATC systems that will be used to support the various deployment scenarios — ATS capabilities are directly dependent upon the ATS personnel and the ATC equipment available to the unit.

The ATS units are essential to providing joint, combined and interagency interfaces for ATS and airspace management throughout the theater of operations. The personnel and equipment of the ATS unit provide this airspace management expertise to augment the G3 and J3 of the varied command echelons and the land-component commander, the corps and division A2C2 elements, and the battlefield coordination detachment.

The functions used to perform these tasks include ATC tower operations, Army radar approach control, precision approach radar-control ser-

PM Aviation Systems Organization



vices, airspace-information services, and airspace coordination/ command and control or airspace management services. These services are provided by ATS personnel at numerous Army facilities around the world — known as non tactical or "fixed-base" operations.

Fully capable of "going to war," these tactical "air-traffic controllers" can also be found at tactical airfields supporting the theater, corps and divisions; far forward on the battlefield supporting air operations at forward area rearm and refuel facilities; or at landing zones behind as well as in front of the forward line of troops. With them at the tactical airfields or air operations sites are state-of-the-art equipment like the Air Traffic Navigation Integration Coordination System (ATNAVICS), the Tactical Airspace Integration System (TAIS), the Mobil Tower System (MOTS) and the Tactical Terminal Control System (TTCS).

Whenever ATS is required on the battlefield, PM ATC-managed equipment will be hard at work ensuring safe and efficient air operations, aiding in the prevention of accidents and fratricide.

Aviation Mission Equipment (AME)

The PM for aviation mission equipment (PM AME) is chartered to ensure its 14 ACAT III systems enable command, control, communications, and computers, intelligence, surveillance and reconnaissance (C4ISR) interoperability with current and objective forces.

The Army transformation campaign has created a challenging environment in which aviation assets, at any time, must support forces with varying C4ISR capabilities. Combat units within III Corps and the Stryker Brigade Combat Teams (SBCT) operate on an EPLRS-

based Tactical Internet (TI), exchanging JVMF messages via the Force XXI Battle Command Brigade and Below (FBCB2) system.

Current force units outside III Corps either have, or will be equipped with, Blue Force Tracking (BFT) kits that allow sharing situational awareness (SA) and command-and-control information over commercial satellite links using FBCB2. Furthermore, during this decade the Army will see the fielding of the first Future Combat System (FCS) battalion complete with the next-generation battle-command system and C4ISR network using the Wideband Networking Waveform (WNW) resident in the new Joint Tactical Radio System (JTRS). This network will feature automated updates to a common database, rather than structured message exchanges currently prevalent.

The PM AME challenge is to provide flexible interoperability enablers to the fleet for supporting combat units with the variety of previously mentioned capabilities. To this end, the PM AME team embarked on a multifaceted strategy designed to ensure aviation relevance with current and objective forces. Its aggressive pursuit of the EPLRS radio installation into III Corps' Apache and Kiowa Warrior aircraft supported Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). When paired with the Improved Data Modem's (IDM) JVMF messaging capability, these aircraft became full players in the battles.

Continued effort by PM AME to extend aviation TI access Beyond Line of Sight (BLOS) through the High Frequency (HF) — TI Gateway initiative will allow aircraft equipped with the AN/ARC 220 HF radio to access the TI when flying great distances beyond their home bases.

Although initial BFT capabilities were quickly fielded by PM BFT Aviation to meet urgent operational requirements, the PM AME is now teamed with PM BFT Aviation to integrate the BFT L-band transceivers with the IDM, reducing components and installed weight by more than 50 pounds and allowing SA data to be presented on existing aircraft displays. Linking BFT with the IDM, which hosts the FBCB2-Air software application, allows aircraft to operate on BFT networks with almost no loss of payload or power versus the existing rapid prototype BFT A kit.

The PM AME will ensure aviation-Objective Force C4ISR interoperability through two major efforts.

First, aviation will lead the Army in the integration of the Joint Tactical Radio System's (JTRS) Cluster I acquisition in fiscal year 2007. This radio, with its multiple, software-defined waveforms, will provide the wide bandwidth communication "pipes" necessary to move the immense amounts of C4ISR data between aviation assets and FCS-equipped units. Additionally, PM AME is pursuing development of a companion IDM v306 that, in addition to hosting current software applications (i.e. TACFIRE, AFAPD, FBCB2-Air), will be capable of executing battle command on the FCS C4ISR network via database-to-database exchanges with the FCS family of systems.

The end result of PM AME's multi-faceted strategy is a relevant, flexible aviation fleet capable of supporting ground combat forces in any and all C4ISR environments.



Gary Nenninger is the program manager for aviation systems in the Program Executive Office, Aviation, at Redstone Arsenal, Ala.

www.lockheedmartin.com

Lockheed Martin Aircraft and Logistics Center, a wholly-owned subsidiary of Lockheed Martin Corporation, has immediate employment opportunities for:

NON-DESTRUCTIVE TESTING INSPECTORS LEVEL II & III

HELICOPTER MAINTENANCE TECHNICIANS CH-47, UH-60, OH-58, UH-1

AIRCRAFT PRODUCTION CONTROL Qualified on ULLS-A automation system

LMALC also has ongoing maintenance technician requirements located worldwide. We are always interested in hearing from maintenance professionals interested in joining an industry leading team.

LMALC offers a very competitive compensation and benefit plan. If you have the required experience and training and are interested in employment with LMALC please mail, fax or email a detailed, chronological resume and DD 214 to:
LMALC Staffing, 107 Frederick Street, Greenville, SC 29607.
Fax: 864-422-6346. Email: james.a.moore1@lmco.com or michael.j.riley@lmco.com Visit our web site at: www.lockheedmartin.com/careers

An equal opportunity employer.



THE IMPROVED DATA MODEM: Army Aviation's Communication Gateway to the Future

By MAJ Norbert E. Vergez

The technical capabilities available in today's Army combat helicopters are unparalleled. Recent operational engagements in Iraq convincingly demonstrated the tremendous effect that Army aviation delivers to the modern battlefield. Aviation forces performed exceptionally well in fulfilling reconnaissance, fire-support and maneuver missions.

Reliable data communications to provide connectivity between and among airborne and ground platforms was crucial to the success of many of these missions. The ability to send targeting and situational-awareness data in near real time is a significant accomplishment for Army aviation over the last decade, and marks the initiation of a new era in tactical operations for Army units in the field.

BUILDING ON DESERT STORM

During Operation Desert Storm the technology advantage then enjoyed by U.S. forces was confirmed.

Every aspect of the Army's communication network was stressed to the limit and Army aviation was no exception.

In the years following Desert Storm, Army aviation relentlessly pursued a program of increased technological improvement of its communications network. The Program Manager (PM) for Aviation Mission Equipment (AME) is chartered for substantive portions of this mission.

The PM has strived to ensure the current and future relevance of Army aviation to the ever-evolving Network-Centric Battlefield, providing critical interoperability enablers across the fleet and positioning aviation as key contributor to the interim and objective force common tactical picture. Focusing on software-based solutions to meet the ever-growing mission needs of the soldier, PM AME has been instrumental in improving the Army's rotary-winged platforms to uniquely support aviation data communication current and

future needs by implementing equipment-support programs based upon open systems architecture.

INTRODUCING THE IDM

The Improved Data Modem (IDM) provides the essential routing and gateway functionality necessary to support seamless data communication over combat-net radio systems and across multiple tactical networks simultaneously. Presently spanning the Army's fire-support net and the tactical Internet, the latest generation of IDM-based communication is the first in its class to achieve common wireless data communication support for both air and ground forces. The IDM has been used to accomplish this feat on a multi-service basis, supporting Army, Navy, Marine Corps and Air Force operations.

The IDM grew out of the Army's 1999 embarkation upon a journey to catapult itself into the digital age, and was also the result of then-Army Chief of Staff GEN Dennis J. Reimer's belief that the time had come for the Army to "shape the battlefield through information dominance."

The PEO for Army aviation answered the challenge by rapidly commissioning PM AME to develop the next generation of IDM, which enabled Apache Longbows and Kiowa Warriors to exchange digital JVMF messages with ABCS systems. With only 14 months to work with, the IDM team developed and fielded the IDM 303. Today, the IDM 303 is performing extremely well with the 4th Aviation Brigade and 3rd Armored Cavalry Regiment in Operation Iraqi Freedom.

Kiowa Warriors belonging to the 1st Squadron, 10th Cav., hosted a suite of 22 Joint Variable Message Format (JVMF) messages, which included SPOT, Free Text and a host of call-for-fire artillery messages.

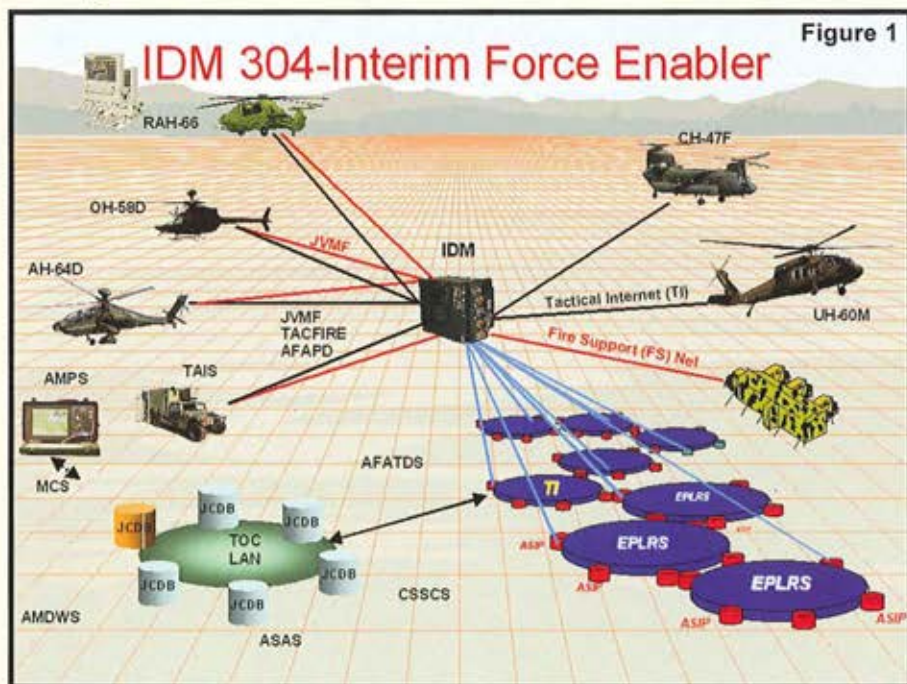


Figure 1

Super IDM: One Box – Multiple Environments

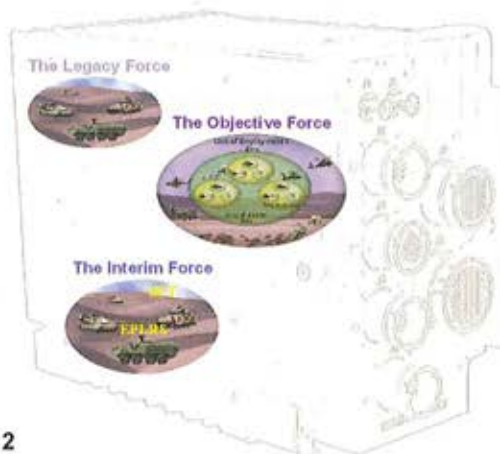


Figure 2

Depending on the network loading, command-and-control (C2) message exchange between the tactical operations centers (TOCs) and the Kiowa Warriors occurred almost instantaneously. The same was true for the Blue Situation Awareness (SA).

The IDM, working as the message manager with the aircraft display processor and mission computer, provided pilots with MIL STD-2525 icons displayed on the aircraft's Multi-Function Display (MFD). This integrated solution enabled the pilots to fly their aircraft, manage their weapons systems and maintain situation awareness with other Kiowa

Warriors and ground-maneuver elements, all the while remaining digitally connected to C2 centers.

BLUE AND RED SITUATION AWARENESS ENABLER IDM 304

Initially commissioned for (and deliberately limited to) a single platform and a single mission, IDM transformed into a critical link in the transformational efforts of Army aviation.

PM AME continues to work with industry to improve on IDM technology for the soldier. Today, for example, the IDM V304 avionics box is

the hardware system of choice to support all Army aviation systems. The IDM V304 is a six-channel avionics system that can support four Combat Net Radio (CNR) channels, one high-frequency (HF) or Blue Force Tracking system, and EPLRS. The IDM V304 also supports both MIL-STD-1553 and the Ethernet interfaces to the platform mission computer.

The IDM V304 is currently being installed on the AH-64D Longbow Apache, OH-58D Kiowa Warrior, CH-47F/MH-47G Chinook, UH-60M/Q Black Hawk and the Tactical Airspace Information System (TAIS) platform. The IDM V304 adopted a general-purpose system approach that supports the unique missions of these vastly different aviation platforms. An example of this approach is the way the IDM V304 handles the various JVMF messages for each aviation platform. (*Figure 1*)

PM FBCB2 AND PM AME TEAMING

With the advent of the First Digitized Division (FDD) and the use of a common-messaging protocol, the Army adopted the Army Tactical Architecture (ATA) in concert with the Joint Tactical Architecture to set standards for communication development and deployment. In this regard, the Army accepted the use of the JVMF as a replacement for its diverse, disparate, expensive and

Figure 3 Evolution of the IDM

Work on the first generation of IDM began over a decade ago at the U.S. Naval Research Lab in Washington, D.C. Innovative Concepts Inc., the IDM's design engineering authority located in McLean, Va., originally developed the equipment under an NRL contract with the U.S. Air Force to support suppression of enemy air defense (SEAD) missions. The initial version was later upgraded to support a new message catalog defined for use in the AFAPD protocol for close air support (CAS) mission requirements. The USAF objective was the creation of an avionics device for installation on F-16 Falcons that could be used in close, systematic cooperation between the aircraft and forward air controllers (FAC), or tactical air control parties (TACP), to identify, address and destroy targets on the ground.

That first prototype of IDM took roughly nine months to develop and was delivered in early 1991. Over the next several years the hardware and software characteristics of the device were continually refined and tested both in laboratory settings and in actual combat situations in Bosnia. By 1995

IDM had become integral to CAS CONOPS assigned to F-16 aircraft. Some 2000 IDM units were ultimately installed in F-16's in both domestic and international fleets.

Beginning in 1994, somewhat in parallel to USAF activities, the Army began experimenting with use of the IDM in its direct attack and fire support aviation units, commissioning roughly 700 IDMs for installation on AH-64 Apache and OH-58 Kiowa Warrior aircraft.

The Army found, however, that the embedded USAF On-Board Flight Program (OFP) designed for the F-16 was not entirely suited to Army purposes and thus commissioned its own version of the IDM software. Initially, the Army employed the AFAPD Protocol with a message set defined by the Boeing Company's Apache Division for use on Apache Longbow helicopters while the Kiowa Warrior used the TACFIRE Protocol for fire support operations. One key advantage gained through the use of the AFAPD protocol was the ability to direct a message to a uniquely defined group of up to 15 other aircraft/ground stations at the same time. The TACFIRE protocol as implemented on the Automatic Target Handoff System (ATHS) avionics equipment supplied by Rockwell Collins provided only a broadcast point to point messaging capability.

increasingly unmanageable catalog of data communication protocols.

The Army concluded that IDM could be used to provide a mobile, airborne routing infrastructure for the "Tactical Internet" integral to the battlespace-digitization scheme being developed under the auspices of FBCB2 (Force XXI Battle Command, Brigade and Below). A partnership soon developed between PM AME and PM FBCB2 that leveraged off each other's technical resources and expertise, enabling Army aviation to operate as an equal player on the TI.

What soon followed was a series of success stories, beginning with Army aviation's highly acclaimed participation in the FBCB2 Field Test-5 (FT5) at Yuma Proving Ground, Ariz. It was here that, for the first time, a Kiowa Warrior and a Longbow Apache shared seamless SA and exchanged C2 JVMEF messages with two brigade size elements.

Following the events of Sept. 11, 2001, Army aviation saw the need to integrate both Enhanced Position Location and Reporting System (EPLRS) and Blue Force Tracking functionality in order to be more

tightly coupled with the requirements for deploying the Army's 4th Infantry Division, the FDD.

Both Blue Force Tracking and EPLRS provide battlefield situational awareness to the user and to higher headquarters. This information greatly enhances the command and control of tactical units by providing commanders with the location of friendly units and abbreviated SITREPs for condition and identification of adjacent units. Soldiers in the field were trained by PM AME and had this warfighting capability in their hands within just nine months of program initiation. Working with a common avionics solution is what allowed PM AME to provide a vital capability to Army aviation.

THE "SUPER IDM"

The Army's direction to implement the MIL-STD-188-220 protocol for maneuver and fire-support networks, and couple this protocol with JVMEF, was the responsibility of PEO C3T. Adopting the latter as a common avionics solution that would reside within a common flight-worthy avionics module was PM AME's


vision. This next generation of IDM, known as the "Super IDM," will essentially link every cockpit to the Army's Tactical Internet, satellite-based Blue Force Tracking, and aircraft within the Unit of Employment (UE) of the Future Combat System (FCS). (Figure 2)

One of the primary missions of FCS is to provide forces with mobile networked command, control, communication and computer (C4) functionalities. Now, instead of a limited broadcast network, the Super IDM will deliver data communications bounded only by the number of Internet Protocol addresses assigned, which in theory anyway is practically limitless. (Figure 3)

With continued emphasis on open-systems architectures, common avionics and software-based solutions, the IDM has the proven track record to lead Army aviation as a major player with the FCS family of systems.



MAJ Norbert E. Vergez is the assistant project manager, Improved Data Modem, in the office of the PM Aviation Systems, PEO Aviation.



Nothing Out There Can Beat What's in Here.

HARD WEAR

A CASE FOR RUGGED

Miltope's all new TSC-750M rugged computer has already been selected as the computer platform for the Army's Aviation Mission Planning System (AMPS). Its key features? The newest technology, ruggedization, and modularity. The 750M is also the platform for the U.S. Army PM TMDE's Maintenance Support Device (MSD), the diagnostic computer system supporting all major weapon systems and vehicles.

At Miltope we're meeting the Army's increasing needs for the next generation: wireless, compact, and the toughest standards in the industry.

MILTOPE CORPORATION
Miltope Corporation, 3800 Richardson Road South, Hope Hull, AL 36043 • 1-800-MILTOPE (645-8673)
Computers • Disk Drives • Mass Storage • Printers • Network Communication Devices • Product Support for Airborne, Military & Industrial Applications

Bridging the Gap Between Lack of Experience and Safety Excellence

By BG Joseph A. Smith

As we approach the end of this fiscal year, the potential exists for the Army to experience its highest number of accident fatalities since 1991. The secretary of defense has laid out a clear challenge for us: Reduce the number of mishaps and accident rates by at least 50 percent in the next two years. The key to achieving this goal lies in bridging the gap between lack of experience and safety excellence.

Recent deployments to Afghanistan and Iraq have taught me that accident fatalities are not normally the result of an inability to identify hazards. Risk is inherent in combat and realistic training, and our leaders generally identify the appropriate hazards. However, we do not do as well identifying and implementing the right control measures to mitigate the risk of those hazards.

The cause stems not from negligence or a lack of effort, but rather from a lack of experience and knowledge. LTG Dick Cody, our deputy chief of staff, G-3, asserts that our small-unit leaders and first-line supervisors simply lack the experience necessary to match the mission risks with the identification and implementation



the CODY model



THE WAY AHEAD

2

RMIS
RISK MANAGEMENT INFORMATION SYSTEM



of the right control measures.

We must bridge the gap between the experience level of our first-line leaders and the knowledge they need to properly mitigate risk. This void can be effectively filled by, first, multi-level leader involvement and dialogue, and second, through knowledge and information-sharing using the Army Safety Management Information System (ASMIS) — a soon-to-be-fielded, Web-based aviation, ground and privately owned vehicle (POV) centralized risk-assessment program.

RISK MANAGEMENT IS "THREE-DEEP" LEADERSHIP

For every mission, on or off duty, there needs to be three levels of leader involvement. Using his knowledge of the individual soldier and guidance from higher levels, the first-line leader interacts face-to-face with each subordinate. The second-line leader supervises and spot checks, providing an independent set of eyes and the higher level of experience. The top-line leader uses his wealth of experience to provide guidance and supervises the risk-mitigation process to ensure the right control measures have been highlighted and implemented.

This process of dialogue between leader levels gives less-experienced leaders knowledge in place of experience to protect their soldiers and move toward a safety band of excellence.

INFORMATION-SHARING THROUGH TECHNOLOGY

A second means of bridging the experience gap for first-time leaders is through information sharing that leverages technology. The Risk Management Information System (RMIS) is our current Web-based hazards, risks and controls database that provides leaders near real-time accident data. As we are transitioning to the next level, the U.S. Army Safety Center is working with Aviation Proponency in developing an automated risk-assessment program that incorporates the data found in the RMIS database, as well as other "stovepipe" systems, to further assist leaders in identifying and implementing effective control measures.

ASMIS will be an on-line, centralized risk-assessment program for air, ground and POVs that will prompt mission leaders to input their demographics, mission types and experience levels. ASMIS will use the Army Safety Center databases to give our soldiers the degree of risk associated with the mission, the hazards, effective control measures and examples of recent accidents that fit the mission profile.

Let's use the example of a commander of an attack helicopter company who has four years time in grade. He will use the Portable Flight Planning System (PFPS) to plan his mission. By entering the known-mission, crew, G-2 intel from higher headquarters and Performance Planning Criteria the commander will be able to have all of the integral pieces of the risk-decision process at his disposal provided by the PFPS software.

The commander will thus be able to see crew configuration of time in aircraft, currency of flight and currency of night-vision system (NVS) experience, and will be able to make an astute decision based upon the crew's history predicated upon the historical data of ASMIS. The user will also

be able to see through ASMIS the historical accident data of mistakes made by previous crews in similar situations of mission profile. All of this information will bridge the "knowledge gap" and give that four-year captain the leverage of 20 years of experience.

ASMIS will also provide senior leaders with the ability to identify and mitigate risks for upcoming deployments and combined-arms exercises. This knowledge will allow them to develop the most effective home-station and environmental training to mitigate their units' risk before departure. In the long-term, ASMIS can be integrated into all Army mission-planning systems. Wireless technology will allow leaders to obtain real-time information even on long deployments and field exercises. Eventually, information on the failure rate of individual pieces of aviation and ground equipment and subcomponents will be incorporated into the aviation and ground centralized risk assessment modules' database.

Using the hazards, risks, and controls information provided by either the ground, aviation or POV modules of ASMIS and supported by three-deep dialogue between soldiers and their experienced leadership, our less-experienced leaders will have the knowledge to properly manage risk.



BG Joseph A. Smith is the Director of Army Safety and commander of the U.S. Army Safety Center at Fort Rucker, Ala.

WE OWN THE NIGHT

160th SPECIAL OPERATIONS AVIATORS



AN ARMY OF ONE



FLY WITH THE BEST

If you're a qualified Aviator with the talent, ambition and motivation to succeed, the 160th SOAR(A) would like to talk to you!

Contact the 160th Recruiting Office for information on volunteering for Special Operations Aviation.

160th Recruiting Office • DSN 635-9819 • Com (270) 798-9819

Training Black Hawk Mechanics "On the Road"

By LTC Lisa A. Wall



Bismarck, N.D., Transition Course graduates.

An innovative approach to MOS training continues to produce qualified UH-60 maintenance personnel throughout the Army National Guard. Officially known as the UH-60 Mobile Training Team (MTT), it is more commonly referred to as the "Road Show."

Beginning in 1996 the U.S. Army Aviation Logistics School (USAALS) at Fort Eustis, Va., working with the Eastern Army National Guard Aviation Training Site (EAATS) and the U.S. Army Aviation and Missile Command (AMCOM), took the MOS 67T2/30 Transition Course to the home states of Army Guard units. Aviation units turning in UH-1 aircraft and modernizing with UH-60 Black Hawks had an immediate training requirement to transition maintenance personnel from MOS 67N to MOS 67T. This training requirement still exists, and the program is now funded through the U.S. Army Training and Doctrine Command (TRADOC) under the umbrella of "Aviation Transformation."

Using the units' aircraft as training devices, a team of two instructors from USAALS conducts the 67T2/30 Transition Course at the unit in eight weeks. The course



Gulfport, Miss., students in the USAALS UH-60 Road Show program install a main rotor de-ice distributor on a Black Hawk.

mirrors the resident 67T2/30 Transition Course. The instructor team provides all course materials required for classroom and hands-on instruction, including technical manuals and computers. The unit provides students, UH-60 aircraft, a classroom, tools and Class IX items to support requirements in accordance with the current program of instruction.

One significant difference in the course is the use of Category A aircraft as training devices. Students trained at Fort Eustis complete the same classes and hands-on practical exercises using Category B maintenance trainers. The intensity and realism of training are higher in the Road Show course simply because the students train on operational aircraft.

"The student critiques consistently praise the training as the best and most realistic training ever received," said Tommy Gaither, the USAALS UH-60 training specialist. Aircraft are inspected during reassembly and at completion of the course by unit technical inspectors, and the training frequently incorporates the maintenance operational checks.

Since USAALS began conducting the Road Show course the initiative has produced hundreds of 67Ts, with full-time technicians in Army National Guard units as the target population.

"I enjoy training the diverse groups of highly experienced technicians from the Guard," said Rick Jones, one of eight Road Show instructors. "The average student trained has anywhere from 15 to 30 years of aviation experience, and the Road Show instructors are the lucky benefactors of many great ideas and approaches to aviation maintenance." Although some active-duty units received training in the past, the program now serves only Army Guard units affected by Aviation Transformation. Units divest themselves of legacy aircraft and receive UH-60s from active-duty units, mechanics must obtain the 67T MOS. Any



Gulfport students install main rotor bifilar under supervision of Road Show instructor Timothy Prickett.

prior trained CMF 67 series soldier is eligible to attend this transition course.

Extensive travel requirements increase the demands on Road Show instructors.

"While the job is highly rewarding, the time away from the family is tough," said John Traub, one of the instructors scheduled to depart again in late August.

Instructors like Traub must coordinate in advance with the unit being trained and must also conduct a site survey. They must be self-sufficient and take the initiative to ensure training is conducted in accordance with program of instruction standards. This means forging a strong working relationship with soldiers and leaders in Army Guard units to ensure all required resources are available for training. All Road Show instructors have extensive experience with the Black Hawk, and several continue to train soldiers in one of the resident courses. USAALS currently has eight Road Show instructors, who operate in two-man teams.

The UH-60 Mobile Training Team increases training opportunities for modernizing units. With resident course seats at a premium, the Road Show provides a viable alternative for units to satisfy their training requirements. Training in this manner also reduces costs for the National Guard Bureau (NGB), and reduces the student load at USAALS, which currently trains more than 1,000 UH-60 mechanics each year. Additionally, the benefits of realistic training on operational aircraft and reduced temporary-duty time for Army Guard personnel contribute to the ongoing success of this program.



Gulfport students remove a main generator spline adaptor under supervision of Road Show instructor Nolan Billiot.

At press time, three teams of instructors were conducting the UH-60 transition course in Mississippi, Indiana and Rhode Island. Three additional states will receive training beginning in late August.

For additional information on the UH-60 Mobile Training Team, contact Esquire McCoy, USAALS Training and Operations Support Division (TOSD), at (DSN) 826-6605, ext 3360; or Ray Jarman, deputy director of USAALS' Department of Aviation Systems Training, at (DSN) 826-5405, ext 222.



LTC Lisa A. Wall is the director of USAALS' Department of Aviation Systems Training at Fort Eustis, Va.



ARMYAVIATION mailbox

Share your opinion on matters of interest to the Army aviation community. The publisher reserves the right to edit letters for style, accuracy or space limitations. All letters must be signed and authors identified. The publisher will withhold the author's name upon request. The opinions expressed are those of the authors, and do not reflect the opinion of ARMY AVIATION Magazine. Send letters to AAAA MAILBOX, 755 Main Street, Suite 4D, Monroe, CT 06468-2830, Tel: (203) 268-2450, FAX: (203) 268-5870, E-Mail: magazine@quad-a.org.

Dear Editor;

The July 2003 article "Simulating Dangerous Aircraft Icing Conditions" begins with this paragraph:

"As American Eagle Flight 4184 from Indianapolis circled at 9,000 feet above Chicago's O'Hare International Airport awaiting permission to land, freezing drizzle was coating the wings with ice. The co-pilot warned his companion about this hazardous condition, but the pilot was unconcerned and distracted by a visit to the cabin, or so it seemed to investigators as they listened to a segment of the aircraft's voice-recorder tape later. The recorder also captured an expletive from the pilot as the Turboprop ATR-72 rolled over and dived to the ground at an estimated 450 miles per hour. All 68 people on board the aircraft died Oct 31, 1994, as the aircraft slammed into a cornfield at Roselawn, Ill."

After this opening paragraph, there are three pages filled with how tests are being conducted about the formation and effects of icing on aircraft.

Please understand, I am not knocking this well-written article or the tests being run, but the problem in the opening paragraph wasn't icing. To blame this aircraft crash on icing is akin to blaming a runway for a hard landing. The co-pilot told the pilot there was a problem and the pilot ignored it. In short, there was a people problem, not an icing problem.

Aug. 13 marked my 40th anniversary as a rated pilot in military aircraft. Next month, I will undergo an extensive Class II Physical to determine my physical condition and will be told whether I can safely continue to operate military aircraft. How many civilian and military aircraft have been lost because a pilot had a physical condition that affected his ability to safely operate an aircraft? I can't think of any.

On the other hand, how many aircraft have been lost because

there was a "headspace" problem on the part of the pilot or someone up the chain of command? There are countless cases. These folks could regurgitate all the cautions, warnings and notes in the operator's manual; could tell you how many rivets were in their aircraft; do a perfect ILS to minimums with a 40-knot crosswind and moderate turbulence; have an IQ of 160; but still not have enough common sense to pour water out of a boot.

They could also be experts in the field of crew coordination and cite chapter and verse. However, the first requirement for crew coordination is to get along with your crew. Arrogance should have no place in aviation, whether civilian or military. Within the past year, I read an article in a Safety Center publication about "checkrides from hell" that turn pilots off from wanting to be good instrument pilots. A competent instructor, evaluator or commander is always available to share his knowledge with others. Someone has said that an evaluation where nothing is learned is a waste of money, and I agree.

Back to the opening paragraph. Suppose this aircraft and its occupants had survived and the co-pilot had told his management of the attitude of the pilot in command? I suspect the aircraft commander would have gotten an "atta-boy" and the co-pilot would have gotten an application for unemployment compensation.

I'm not against flight physicals, as I do not want to endanger an aircraft or students if I am unfit. However, we should be spending more effort looking at the mental capabilities and limitations of those who are flying and managing our aviation assets. Commanders should spend some time talking with the people who are operating their aircraft and be willing to address any problems found.

CW4 Carl L. Hess (Ret.)
Ozark, Ala.

The following is excerpted from an article by then BG Ellis D. (Don) Parker who was the Pentagon-based Army Aviation officer at the time it was published in May of 1983.

"The New Aviation Branch"

by BG Ellis D. Parker

Although it has been a long time in coming, I am excited about the Chief of Staff's recommendation, and the Secretary of the Army's decision, to recognize aviation as a basic branch of the Army. It is no longer a concept, but a reality!

On 12 April 1983, the Secretary of the Army signed the approval to add aviation as the 15th basic branch. The implementation plan is now being prepared for Chief of Staff approval so I cannot give you final details. But I will give you some basic points on what is being proposed in the implementation plan:

- First, as a corollary to the branch decision, the TRADOC Commander intends to centralize the great majority of aviation proponent responsibilities at the Aviation Center. Some responsibilities are to remain with the Health Services Command, the Intelligence and Signal Centers, and at Fort Eustis.

- The Aviation branch is a combat arm of the Army, but it will also provide combat support and combat service support to the combined arms team.

- When fully implemented, all aviation personnel will be members of the Aviation branch, with the exception of Medical Service Corps (MSC) aviators.

Most will enter the branch upon entry to active duty; approximately 15% of the commissioned aviators may come from branch transfers. Most aviators in today's force will be transferred to the new branch. Some aviators now serving may choose to remain in their current branch. However, specifics on the transfer process are yet to be determined.

The remaining points will address

only aviation commissioned officers, less MSC aviators who will continue to be managed as in the past.

- An aviation basic course (Lieutenant's training) is to be implemented in FY87. It is to consist of an eight-week course prior to flight training. Until the course is established aviators will continue to attend selected, but primarily combat arms, basic courses.

- The initial assignment following flight training is to be an operational flying position, preferably in a divisional aviation battalion.

- An aviation advanced course (Captain's training) is to be implemented in FY85 and will be designed around six functional courses: Operations, Support, Company/ Troop Command, Aviation Logistics, Air Traffic Control, and Aviation Military Intelligence. A series of one or more of these courses will be designed for each aviator, depending on the needs of the Army and projected career progression patterns.

- The objective is to develop sufficient aviators to enable company grade additional specialty training and/or utilization. Aviation and additional specialty assignments, CAS3, and graduate education opportunities would follow Captain's training.

- Field grade development and assignment policies will remain basically as they are now. The bottom line is that aviator professional development policies will be the same as those for all OPMS managed officers.

- "What will we wear on our collar?" is a question that has been asked a lot lately. There are three proposals being staffed right now. The approval, development, and distribution processes are to be expedited to the

greatest extent possible.

- Final plans, once approved, will be published in a variety of sources and in greater detail than written here. My intention is to give you an idea of what is on the way.

The Aviation Officer's responsibilities are concentrated in the areas of identifying aviation system requirements, developing future systems, and managing and upgrading current systems. Obviously, the Aviation Team that works for me doesn't do this in a vacuum; the players on the larger team come from the major commands and all HQDA staff agencies.

One of the voids that we recently identified was the lack of a long range plan to help guide the way through the significant modernization effort upon which Army Aviation is now embarked. That void has recently been filled in the publication of the Army Aviation Modernization Plan (AAMP). This plan packages a series of ongoing aviation programs and presents a blueprint to help fulfill future aviation systems and organizational requirements.

Last year, the Army Aviation Mission Area Analysis (AAMAA) and the Army Aviation Systems Program Review (AASPR) identified where we are in the program and where we need to go. The AAMP is the road map on how we get there from here.

The AAMP has been briefed to senior Army commanders throughout the Army Staff, the Army Secretariat, and all the way to Congress. Its significance was succinctly summarized by the Under Secretary of the Army who stated that it should be the prototype for how we lay out every major

program in the Army. We certainly intend to take full advantage of this effort in both planning and executing, as well as in justifying our program before Congress.

SOME TOUGH ISSUES AHEAD

We have made some dramatic gains in Army Aviation over the last few years and I look for that to continue. I believe as a community, we have been open to change for the better, and supportive of those changes that have been made, particularly in the areas of standardization, the ATM program, safety, distribution plans for new systems, and the flying hour program.

That sense of unity and cooperation is certainly encouraging, and I am confident that it will carry over to the challenges that lay before us.

From my perspective, there are three key activities that continue to require the concentrated efforts of the entire aviation community:

- Increasing aviation effectiveness — systems and tactics.
- Fielding the Combat Brigade (Air Attack) (CBAA) in our divisions.
- Transitioning to a branch and centralizing aviation proponent responsibilities.

As we transition to new organiza-

tions and a new management plan, responsiveness to the user must always stay at the top of our priority list. The modernization effort to date has given Army Aviation the potential for fire and maneuver as a combat arm.

But we also provide an infinite number of other capabilities to our ground combat units as part of the combined arms team. Our challenge has been, and will always be, to continually increase our effectiveness to meet our fire, maneuver, and support responsibilities.

It is essential that we maintain our orientation toward the ground gaining arms by meeting user needs and improving our responsiveness, while continuing to build maximum capability into our systems. Never forget the soldier!

The CBAA is proving to be as good in the field as it looked on paper through each design iteration. Battalion commanders at Fort Lewis are excited about being able to concentrate their time on training and being in a position to be "active" on the battlefield. That makes a difference!

We Need to Keep Pushing!

The vast majority of work to complete our transition to this fighting organization still lies ahead of

us. We need to keep pushing to complete it in a timely manner, with minimum disruption, and with the view that it is integrating aviation into the division to a greater extent than ever before.

Our task in transitioning to a new branch and centralizing proponent responsibilities at the Aviation Center closely parallels that of moving to the CBAA. We must "stay in bed" with the training and doctrine developers of all the branches to insure we do not think or act in a vacuum.

I feel good about our current posture and am very optimistic that the years ahead of us promise even greater achievements. As we progress in the area I mentioned earlier, we must insure we don't lose momentum as we go, but rather build on what we already have. Every step we take has to be by design and plan, and not by accident or through default. The intensity of our efforts must never be dimmed. Fly safely!



BG Parker served as the Deputy Director of Requirements and Army Aviation Officer in the Office of the Deputy Chief of Staff for Operations and Plans, Dept. of the Army at the time this article was written.



COL Michael E. Cantor is the new program manager for the RAH-66 Comanche helicopter within the Program Executive Office, Aviation. Cantor, a senior Army aviator, assumed the program manager's position from COL Robert Birmingham in a change of charter ceremony at Redstone Arsenal, Ala., June 12.

The program office manages the development, testing and acquisition of the Comanche helicopter, the Army's newest reconnaissance and attack helicopter, which is scheduled to be fielded in 2009.

Cantor is not new to Huntsville or Redstone Arsenal. He has served as the acting director and deputy director for the Space Technology Directorate at the U.S. Army Space and Missile Command, and as the product manager for the Exoatmospheric Kill Vehicle in the Ground Based Midcourse Defense Program.

Statement of Ownership, Management, and Circulation (Required by PS Form 3526)

Title of publication: Army Aviation (ISSN 0004-248X). Date of filing: September 2003. Frequency of issue: Monthly, except April and September (10). Annual subscription price: \$30.00. Location of known office of publication: 755 Main Street, Suite 4D, Monroe, CT 06468-2830. Location of headquarters or general business office of the publisher: Same. Publisher: William R. Harris, 755 Main Street, Suite 4D, Monroe, CT 06468-2830. Editor in Chief: William R. Harris, Jr. Editor: Stephen Harding. Owner: Army Aviation Publications, Inc. (AAP), 755 Main Street, Suite 4D, Monroe, CT 06468. Known bondholders, mortgagees, and other security holders owning or holding 1% or more of the total amount of bonds, mortgages or other securities: None.

The average no. of copies each issue during the preceding 12 months, and the actual number of copies of the issue published nearest to the filing date (latter appears in parenthesis) were: a. Total No. copies (Net Press Run): 14,527 (14,430) (1); b. Paid Circulation: (1) Sales through dealers, carriers, street vendors, and counter sales: NA (NA); (2) Paid or Requested Mail Subscriptions NA (NA); c. Total Paid and/or Requested Circulation: 13,692 (13,691); d. Free distribution by mail: Samples, complimentary, and other free copies: 270 (264); e. Free Distribution Outside the Mail (Carrier or Other Means): N/A (N/A); f. Total Free Distribution (sum of 15D and 15E): 270 (264); g. Total Distribution (sum of 15C and 15F): 13,962 (13,955); h. Copies Not Distributed 565 (475); i. total (Sum of 15g and 15h): 14,527 (14,430); Percent Paid and/or Requested Circulation (15c/15g x 100): 94% (96%).

I certify that the statements made by me in this statement and dated September 28, 2003 are correct and complete.

William R. Harris, Publisher

GPS Approaches: A Risk Mitigator and Necessary Alternative

By CPT Ed Austin

Inadvertent instrument meteorological conditions (IIMC) are an everyday possibility and a daunting reality for Army aviators. According to the September 2002 edition of Flightfax, between January 1974 and August 2002 the Army experienced 60 Class A through Class C rotary-wing accidents (of which 54 were Class A) involving IIMC.

These statistics point to deficiencies at several levels, including the approach procedures used in tactical environments. Individual aviator instrument proficiency and training to standards reduce the chance of an accident once the aircraft punches into the clouds. However, the recovery approach procedure is a key link to recovering an aircraft safely.

IIMC procedures must change to include access for all army aircraft (including aircraft not equipped with nondirectional beacons) and must include approach procedures that accommodate the recovery of multi-ship missions in tactical environments. The Global Positioning System (GPS) is the key. GPS is the tool, inherent to both aviation and air-traffic-control units, by which the Army can implement better

recovery approach procedures.

The lack of adequate recovery procedures became readily apparent during the fall of 2002 when elements of V Corps deployed to Poland for Operation Victory Strike III. During the aviation exercise, a flight of two UH-60s encountered IIMC while returning to Ziemsko Air Base (ZAB), a tactical IFR airfield in Poland. After executing IIMC breakup, the first aircraft (Chalk 1) was able to receive and track the tactical NDB, proceeded direct to ZAB, was given radar vectors by the tactical GCA controllers, and executed a successful PAR logging only 0.3 hours weather time.

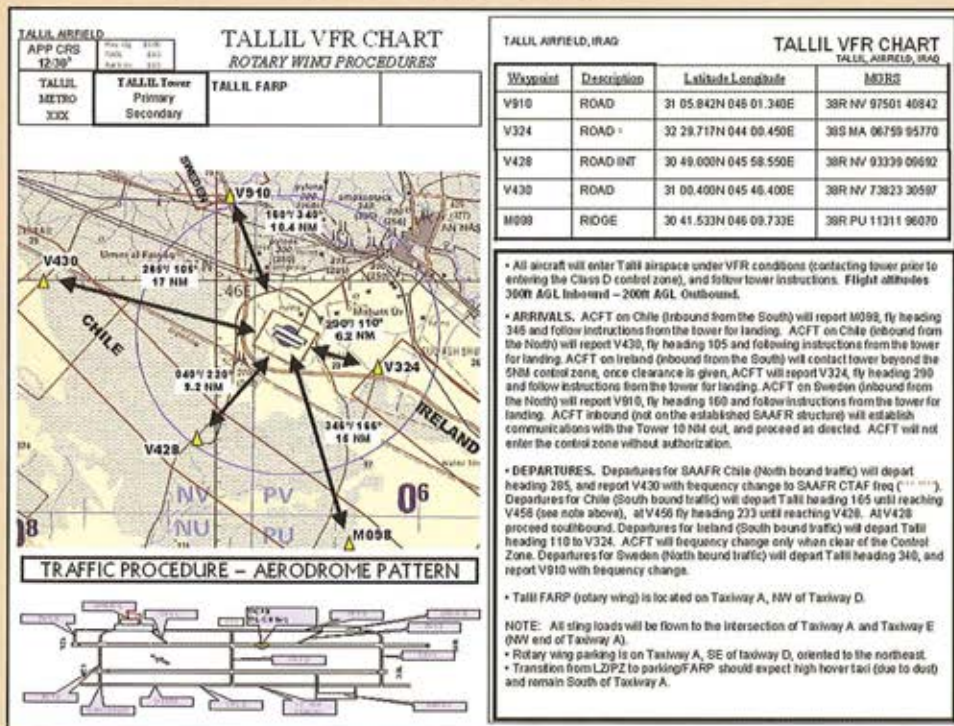
Chalk 2, after encountering IIMC, was unable to receive the NDB and the tactical GCA was not able to identify the aircraft on radar. The ATC controller queried Chalk 2 to determine if the aircraft had GPS capability and if the pilot could locate an established VFR checkpoint using coordinates in the GPS. Chalk 2 was able to use the GPS to identify the checkpoint and proceeded to the VFR checkpoint to hold for radar identification. Once acquired on radar Chalk 2 was able to successfully execute a PAR approach and land.

Since the approach procedure was unpublished and unrehearsed, the total time it took Chalk 2 to be acquired on radar and safely land was logged as 1.0 hours of weather time (a full 40 minutes beyond the required planning fuel reserve for a VFR flight). Fortunately, both aircraft landed safely without incident. However, without ingenuity on the part of the aircrew and controller the result could have been disastrous. No published or previously rehearsed approach procedure was available for the aircraft to execute. The established approach procedures were inadequate to support tactical, multi-ship IIMC recovery. Lack of established and rehearsed tactical IIMC recovery procedures is not an anomaly to Army aviation.

Currently, the primary means for emergency recovery approach procedures during tactical operations is the tactical Ground Control Approach radar (GCA) system (AN/TSW-71B). This aging equipment is very sensitive and maintenance-intensive. It often takes several days to set up, and more time to certify its operating condition. The secondary means for recovery approach procedure is the tactical NDB. These old systems are difficult to set up and maintain, and are not always available in the early stages of a tactical scenario. Through tactical necessity, some aviation units have developed GPS procedures when the primary radar recovery procedure is not available or the secondary NDB recovery procedure will not support the unit's aircraft capability.

Unfortunately, the Department of Defense (Memorandum, Subject: DOD Instrument Flight Procedures Policy, dated Sept. 25, 2002) prohibits aviation units from creating and using their own GPS procedures in IFR situations. One possible solution is to develop emergency recovery procedures based on the GPS to be used for IIMC by aircraft with Doppler Global Navigation Systems (DGNS) or Embedded GPS/Inertial Navigation System (EGI). This can be done effectively and safely with the proper training, in a controlled environment.

The figure below illustrates how we



could configure our tactical IFR airfields in order to provide emergency IIMC recovery procedures to the tactical aviation community. These procedures are designed to facilitate recovery from multi-ship IIMC. The template procedure uses a standard "Y" approach with two holding patterns for inbound aircraft and two holding patterns for missed approach procedures. The additional holding patterns are necessary to facilitate multi-ship inadvertent IIMC recovery. Subsequent fixes can be added along the legs of each "Y" to support additional aircraft if necessary.

The design of the GPS approach coincides with existing radar and NDB approaches for triple redundancy, serves as a combat multiplier by lowering weather minimums for aircraft operating in tactical operations and reduces the risks of IIMC. The following scenario provides an example of how these procedures could be used in a tactical scenario.

An aviation brigade deploys with a supporting ATC company to an unknown and potentially hostile environment for a contingency operation. The GCA team surveys the TAA and begins emplacing the tactical radar and NDB. Concurrently, the GCA chief develops a GPS approach specific to that field site using a computer software program with the pre-established template. The Brigade Standardization Instructor Pilot (SIP) reviews the approach, then flies the approach while the GCA team monitors the approach on board the aircraft using a theodolite and the approach path is confirmed on the radar scope. In less than 48 hours, the approach plate is complete and approved by the brigade commander. Pilots now have a redundant instrument approach to use for VFR training or in emergency IIMC.

The intent of such a procedure is not to develop IFR procedures for day-to-day flight operations or to replace tactical IFR approaches. Rather, these procedures can be built to provide emergency recovery procedures to support tactical operations, as well as to support the necessary training to make pilots proficient in multi-ship IIMC recoveries.

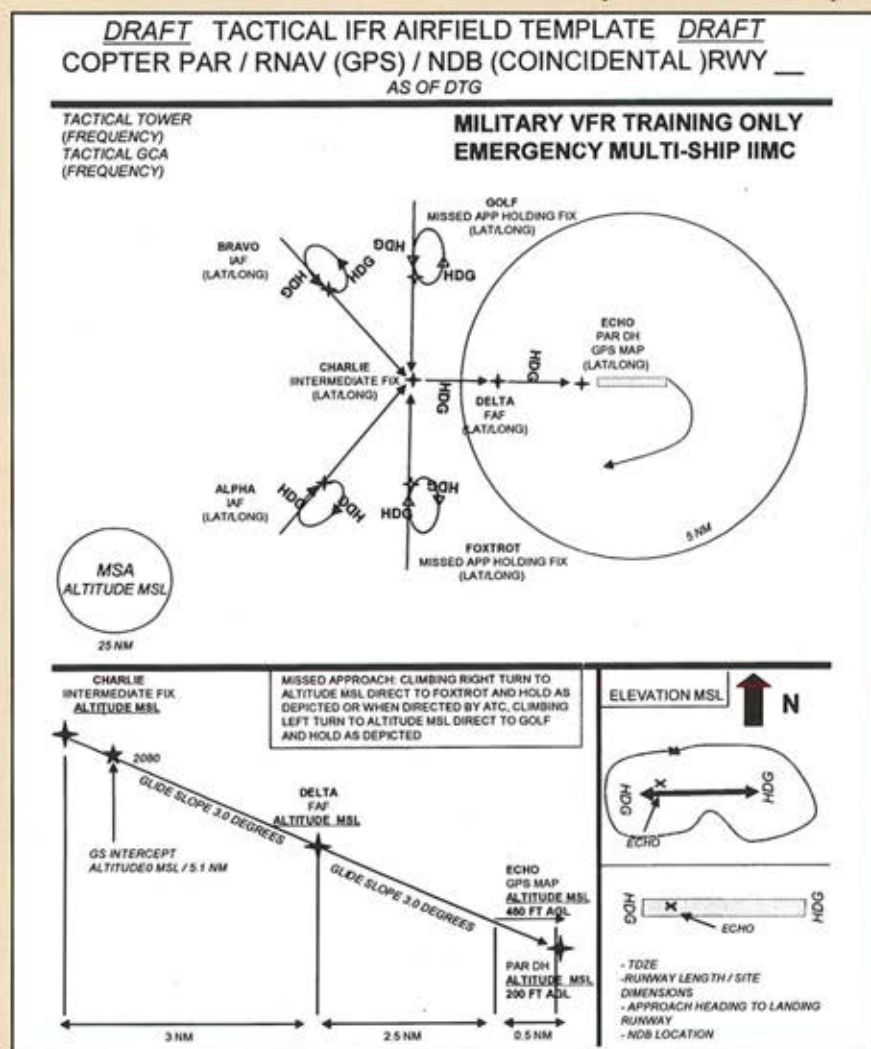
An aviation brigade must accomplish several tasks in order to safely develop and use GPS emergency recovery procedures. First, the ATS unit must seek the authority to establish emergency IIMC procedures that

utilize all appropriate flight equipment, including onboard GPS, DGNS and EGI. Second, the ATS unit must get terminal approach procedure (TERP) training. Third, the ATS unit must acquire automation equipment and software for procedural development. Fourth, the flight units must conduct individual and unit flight training. And fifth, aviation brigade commanders must establish control measures.

The authority to certify instrument approach procedures currently resides with the Federal Aviation Admin-

impractical to comply [with the regulation]. However, to effectively implement IIMC procedures using GPS, aviation brigades must be able to establish these procedures to allow pilots and air-traffic controllers to train in a controlled environment, so they are proficient during tactical conditions.

To make this scenario a reality, regulations must change to grant the aviation brigade commanders authority to establish and operate instrument approach procedures in tactical and training operations. These procedures should require



istration (FAA) due to the National Agreement, NAT 127. The previously mentioned DOD message states that authority for aviation units to create their own instrument approaches rests at the O8-level. However, AR 95-2 ("Air Traffic Control, Airspace, Airfields, Flight Activities and Navigational Aids"), authorizes commanders responsible for ATC operations to deviate from the regulations "in a theater of operations when combat operations and the tactical situation make it

a flight check by qualified Army air-traffic controllers, and not the FAA. ATS units are equipped with the necessary equipment to accomplish the task of flight checking and verifying tactical approaches for IIMC. If the situation permits, or at a later time, FAA can flight check the approach to validate the procedure for day-to-day IFR operations in a mature theater.

TERPs training is another necessity for the tactical air-traffic control NCO supporting aviation operations.

In order to develop safe procedures and to make the procedure possible, formal training must be available to the NCO responsible for establishing emergency recovery procedures. Training opportunities exist both with the Air Force and FAA. In addition to training, automation equipment will reduce errors and enhance the product to be used by the aviator.

Individual proficiency in instrument and unit training is another critical link. The recommendations in Mr. Brook's article list necessary actions to be taken by the individual, the unit and the command in order to reduce the chances for encountering

inadvertent IMC and what to do if you find yourself "in the soup."

In order for all this to mesh and reduce the risks associated with this type of incident, control measures must exist. Air-traffic control specialists must be school trained and maintain currency on developing terminal instrument approaches. Aviators need to be proficient in instrument procedures, and the procedures for inadvertent IMC must be thoroughly developed and briefed for the current operating environment.

The incident during the Victory Strike III training exercise underscores the need for emergency recovery

RNAV (GPS) approaches. A multi-ship operation went inadvertent IMC and both aircraft safely recovered to the tactical airfield due to the procedures developed and the training of the controllers and aviators. It is time that this became the standard in providing tactical air-traffic services. It is time the Army pays credence to GPS technology and empowers air traffic controllers to implement recovery procedures.



CPT Ed Austin of the 3rd Battalion, 58th Aviation Regiment, is the regiment's Air Traffic Safety and Standardization Officer.

AAAA, AUSA Join Forces to Honor Troops

Story and Photos by SPC Kamelia Russell



BG Frank Helmick and CSM Victor Soto present MAJ Scott Gum, commander of the 205th Medical Battalion, with a flag and letter of appreciation.

During a June 5 demobilization ceremony soldiers of the Army Reserve's 205th Medical Battalion stood in formation on the Troop Parade Field at Fort Riley, Kan., to receive recognition for their efforts in Iraq.

The 49-soldier unit left Kansas City, Mo., on Dec. 27, 2002, to provide medical support at Camps Doha and Arifjan, Kuwait, and Camp As Sayliyah, Qatar. The unit's medics and health-care providers staffed the troop medical clinics at each of the camps, and provided ground-ambulance support for the surrounding areas.

"I'm happy each and every one of you came home, but I'm sad we lost one of our soldiers and one of yours," said BG Frank Helmick, commanding general of the 24th Infantry Division and Fort Riley. "Thank you for a job well done. What a tremendous effort you and your soldiers have done."

After honoring the flag during retreat, Helmick and CSM Victor Soto, command sergeant major of the Army Reserve's 3rd Brigade, 75th Division (TS), presented the 205th's commander, MAJ Scott Gum, with an American flag dedicated by the local chapters of AAAA and the Association of the United States Army. Gum was also presented a letter of appreciation signed by Helmick. The post exchange at Fort Riley donated the flags in support of the AAAA/AUSA program.

"I believe it's a great idea that we have a ceremony to say thanks to those who served in Operation Iraqi Freedom," said Soto. "We need to make sure they understand how thankful we are for the sacrifices they made."

The Fort Riley chapters of AAAA and AUSA want to ensure that all of the units that come home and demobilize through Fort Riley know how much their sacrifices are appreciated. Together, the two associations and AAFES have teamed up to dedicate more than 45 American flags, one for each unit scheduled to demobilize through Fort Riley. Each flag is flown over Fort Riley and is accompanied by a letter of appreciation signed by Helmick, then presented to the unit commander at the demobilization ceremony.

"This ceremony was the last step of the demobilization ceremony," said 1LT Sarah Embrey, battalion S1 for the 6025th Garrison Support Unit. "It was an opportunity to appreciate and recognize each soldier."

One of the unit members died in an automobile accident in Qatar Feb. 1, 2003.

SPC Kamelia Russell is with the Army Reserve's 3rd Brigade, 75th Division.



Fort Riley soldiers fold the flag after retreat at the demobilization ceremony.



Helmick and Soto recognize each soldier for a "job well done."

Eagle 1 is a police search-and-rescue helicopter operated by LTC Al Wilcoxson of the Connecticut Army National Guard and CPT Jim Petrino of the New Hampshire Army Guard during their full-time positions as municipal police officers in Connecticut. The two fly the 1968-vintage UH-1 on a volunteer basis, and the aircraft's operations are supported through a nonprofit organization. The helicopter operates at no cost to the taxpayers and is staffed on an on-call basis. All donations for operating expenses, aircraft and rescue equipment are greatly appreciated. Contact Al Wilcoxson, EAGLE 1 Police Helicopter, Stratford Police Dept. 900 Longbrook Ave., Stratford, CT 06614, (203) 385-4100. E-mail: Lwilcoxson@aol.com.



Eagle's crew consists of (left to right) Frank Eannotti, Al Wilcoxson, Ron Jersey and Jim Petrino (not pictured).

Revitalizing CLOSE COMBAT ATTACKS In Iraq

3rd ID Longbows provide close combat attacks in OIF.

By MAJ David J. Rude

Our AH-64 Apache aviators flew into battle in Operation Iraqi Freedom (OIF) expecting to fight Iraq's fielded military forces, mainly armor and artillery, in the open desert. After all, the Apache proved itself in open desert combat 12 years ago.

But we didn't find the enemy there in the dirt this time. Instead, the Iraqis tucked their conventional weapon systems into city blocks among family dwellings and behind human shields. We were also briefed that the Iraqi forces would soon capitulate after we massed our military might and crossed into Iraq. Saddam's regime didn't see it quite that way. His followers even utilized "capitulation" as a ruse to draw U.S. combat forces into traps.

Moreover, we were familiar with an extensive civil affairs, psychological warfare and special operations campaign in the theater prior to combat operations. But who were these Fedayeen fighters, and how come they didn't adhere to our repeated warnings to avoid confrontation with a superior military power that was specifically deployed to combat for the removal of a regime?

The fight that raged around us in the opening days of the ground war wasn't at all like the battle of Operation Desert Storm. Enemy air defenses and anti-aircraft artillery (AAA) units demonstrated increased adaptability and improvements in tactics, especially in their ability to target attack helicopters. Cleverly, the enemy placed deadly weapon systems beneath tree lines and palm canopies, and they tucked them into urban areas to exploit Apache vulnerabilities.

On more than one occasion, the enemy employed an obvi-

ously lucrative target, a T55 or T72 tank, in the open as bait, with the expectation of drawing Apache helicopters into a waiting air-defense ambush. Accompanying many ambush positions, nearby observer teams in civilian attire triangulated aircraft locations and directed mortar and AAA fires. Our Apaches needed to quickly adapt to the enemy's regenerated tactics from the Vietnam era in order to maintain momentum and flexibility for the advancing ground commanders. Our focus shifted to close-combat attacks in support of troops in contact.

A Paradigm Reversal in Enemy Tactics

While conducting close-combat attacks against enemy forces who had pinned down a friendly ground convoy southeast of Al Nasiriyah, a Longbow Apache team came under fire from ground mounted anti-tank

(AT) weapons. The dismounted weapons were concealed along a road in a vehicular ambush position. They were transported by, and set up in close proximity to, civilian pick-up trucks. After evading the direct fires of two AT missiles fired at their aircraft, the Apache hunter-killer team returned fire and destroyed four AT systems with a combination of semi-active laser K-model Hellfire missiles and 30mm cannon fire.

Suddenly, a large Russian-looking, canvas-covered truck commenced movement near the unfolding carnage. Without warning, concealed troops in the back of the truck ripped away the canvas cover and sprayed small arms fire at the aircraft, forcing the hunter-killer team to engage and destroy the truck and troops.

The significance of the above excerpt from my battle journal indicated that the enemy blended into the local population. They concealed themselves in ambush positions to hit our convoys moving north into zone and utilized unconventional tactics "outside the box" to attack our weaknesses. It was difficult to determine who was friendly. Often the enemy and civilians we faced were one and the same. The Iraqi soldiers were often clad in civilian attire, not uniforms. They were very cunning and employed guerrilla tactics against both our ground and airborne platforms. They were neither surrendering nor capitulating.

The war rapidly shifted to fights against terrorists, and it was slowly drawing us into guerilla tactics not seen since Vietnam. There was no conventional, open-desert fight. At the mid-point of the ground war, a car bomb exploded and killed several soldiers from the 1st Brigade Combat Team, but it



Unoccupied tank
hidden beneath
palm trees



was much more complicated than "just a car bomb." Terrorists in Iraq routinely attempted to target a systemic American weakness — exploiting our humanitarian compassion, even in war — and then tried to kill us on the spot. In the car-bomb incident, a taxi driver stopped in close proximity to nearby soldiers and yelled "help, help" in plain English. Several soldiers moved closer to assess the problem. The suicidal driver then got back into his car and blew it up, killing several soldiers and himself.

We also learned in this new war that the Iraqis were using public vehicles to attack U.S. forces. For instance, in the 3rd Brigade Combat Team's zone, a dump truck loaded with armed hostile thugs sped ruthlessly toward an M1A1 tank. The tank crew returned machine-gun fire and attempted to engage the truck with the M1's main gun, but the look-down angle restrictions of the tank tube at close range prevented a clean shot.

The need for a major shift in the Apache's role on the battlefield became all too obvious in the first days of the war...

The dump truck hit the tank head-on and many of the resulting wounded Iraqis continued their meaningless onslaught against the tank. These suicidal attackers eventually died violently, but inflicted no American casualties. Regardless, their fanaticism was alarming. Reports such as these were commonplace on this pitiless battlefield. Saddam had been using school buses, ambulances and other seemingly sacred vehicles to move troops and terrorists. A tyrant by our standards, Saddam embedded command, control, and communications nodes within schools, mosques and hospitals.

We were not fighting tanks in this war. Apaches were not sent after division artillery groups in engagement areas, because they were not arrayed as such. The Iraqi armed forces did not capitulate as we had hoped or had been led to believe would happen. Saddam cultivated the fight close to his cities and forced our troops into urban warfare to cause both civilian and collateral damage and then blame us for errant bombing campaigns and sway world opinion against us. His callous tactic failed, in that he drastically underestimated the precision of U.S. weapon systems.

The "Warfighter Mentality"

The need for a major shift in the Apache's role on the battlefield became all too obvious in the first days of the war, following our successful destruction of observation posts along the Iraqi border.

In past "Warfighter" simulation exercises, Apache battalions had been employed predominately against lucrative, high-payoff targets in the corps and division deep-battle space. For years, these deep "shaping" operations to eliminate key targets before they could affect a brigade combat team's scheme of maneuver were often debated as the only viable mission for Apaches. In fact, Apaches were often restricted from operating in close fights during simulation exercises simply because their icons would achieve glorified success in the deep fight by killing all of the red icons — a dangerous assumption against the tenacious enemy we found in contemporary Iraq.

The fact of the matter was that the Apache's capabilities were not adequately replicated in simulation software, which often skewed their capabilities in real combat. To complicate the Apache's role in deep operations, fighter jets performing the Killbox Interdiction Close Air Support (KICAS) function on the battlefield often presented the ground commander with better options by mitigating tactical risk to aircrews and circumventing the enemy's air-defense network, as experienced both during Operation Enduring Freedom in Afghanistan and in OIF. Even the armed unmanned aerial vehicle (UAV) is infringing upon the Apache's fragile foothold in deep operations.

Close-Combat Attacks

So why not aggressively bring Apaches back into the close fight during the 21st century? AH-1G Cobra gunships conducted close combat attacks successfully in the Vietnam conflict. Recently, Apaches in Afghanistan gained notoriety for supporting ground troops. Even Marine Corps aviation units have firmly indoctrinated their AH-1W Cobras into the close fight to support their ground troops in contact,

while the Army has purposefully shunned the Apache's role in the close combat attack, or "CCA" for years.

We have been taught to rely entirely too much upon intelligence-gathering systems that did not seem to help us visualize the enemy in Iraq. Gaps in intelligence coverage during OIF prevented us from attaining the real-time ability to track definitive enemy activity. There were thus no enemy-driven decision points or triggers to launch Apaches to shape the indistinct battle space in front of ground commanders. UAVs were not available, and we simply did not have the means to detect, locate, or track high-payoff target sets for the commitment of our attack helicopter companies in a maximum destruction attack at a decisive point.

Application of CCA in Operation Iraqi Freedom

So how did a Longbow-equipped Apache battalion adapt to complement the huge success of M1 Abrams tank and M2 Bradley fighting vehicle in the 3rd Infantry Division's historic march to Baghdad?

As the enemy's situation template evolved into an urban-centric disposition instead of presenting itself as a fielded force in the open desert, the mission profile of the "Vipers" of 1st Battalion, 3rd Aviation Regiment, changed from battalion massed or phased attacks against armor and artillery to continuous close-combat attacks in support of the division's main-effort brigade combat team (BCT).

During execution, the Vipers routinely employed Enroute Combat Maneuvers (ECM) and Close Combat Maneuvers (CCM) to enhance aircrew maneuverability and survivability through sustained running-fire tactics, while avoiding the age-old adage of "stacking and racking" gunships in a stagnant battle position.

Because of the concentrated AAA and small-arms threats all over the Iraqi battlefield, the Vipers refrained from launching single Apaches in combat operations. Companies even maintained back-up aircraft at the same readiness condition as the mission aircraft until the time of launch to preclude missing a mission. Moreover, we found that the Iraqis possessed night-vision devices that allowed their AAA gunners to aim fires in the direction of blacked-out Apaches employ-

ing hover-fire techniques. We regenerated the aero-scout role within each Apache team to provide local security against small arms, AAA and RPG fire. The Viper battalion commander, operating from an AH-64D, also provided local security behind the attack helicopter company in contact as well as for the aviation brigade's command-and-control UH-60.

"Ring of Steel"

The Vipers achieved renown during this war for developing and executing a security "ring of steel" around key terrain to clear and then transition to close-combat support for an advancing ground force.

This concept was centered upon a terrain-oriented objective, and the operation commenced with reconnaissance by fire to clear enemy direct-fire weapons within a 2-kilometer circle around the objective. AH-64s then shifted immediately to a 4-kilometer circle around the objective to destroy enemy direct and indirect weapons systems. Once the area was cleared by AH-64s, responsibility for clearance of fires shifted to the advancing ground task-force commander. At that time, the Apaches focused reconnaissance and fires to an outer, 8-kilometer ring to protect the ground force.

Fighter Management for Security Operations

Additionally, the Vipers maintained a standing "be prepared" mission to conduct security in support of contingency operations for the duration of the war. Vipers provided security for medical and casualty-evacuation aircraft that transitioned between the front and ambulatory exchange points. We also supported downed aircraft recovery teams (DART) or immediate personnel recovery (IPR) missions in support of the aviation brigade.

The fast-paced operational tempo required us to be continually postured to launch an Apache company within a 30-minute window from the start of the ground war through the seizure of Saddam International Airport. For sustainability and depth, we maintained the next-up company on a two-hour launch string, while keeping the third company down for future contingencies. During operational missions in support of a BCT in contact, the Vipers conducted continuous rotations of two attack-heli-

copter companies for six- to eight-hour blocks to support the ground commander's fight against the Republican Guard Force Medina Division.

Meanwhile, we retained the third company in a forward assembly area on a reduced readiness condition that afforded aircrews the opportunity to rest. This third company provided utmost flexibility to conduct subsequent contingencies in support of the division. When the battalion was not operationally controlled by a BCT, the attack companies rotated eight-hour cycles on a 30-minute launch string over a 24-hour period to quickly respond to reconnaissance and security mission requirements, some of which required only one team of two AH-64Ds.

Through this tactical employment methodology we were always able to launch teams of Apaches to provide security for medical-evacuation (medevac) helicopters, as well as perform zone reconnaissance missions and security operations, and conduct close-combat attacks in support of ground forces. Moreover, this eight-hour fighter management cycle by company provided the most responsive, sustainable support to the 3rd Inf. Div., where time on station and continuous operations far exceeded the requirements for mass throughout the war.

Implications for Future Apache Air-Ground Integration

Does the overwhelming success of United States mechanized and armored forces in OIF eliminate the need for Apaches to shape a heavy division's deep fight? No. The Apache is still the division commander's premier combat multiplier on a fluid battlefield.

However, the combination of a detailed, cross-BOS (Battlefield Operating Systems) mission analysis, intelligence preparation of the battlefield (IPB), and the redundant incorporation of intelligence collection assets at division and corps levels must always be considered in the determination of whether the Apache should be utilized in either a shaping role beyond the direct-fire capability of a BCT, or in a close-combat attack role supporting his maneuver to the objective.

Despite the fact that the Vipers did not achieve significant battle-damage assessment figures that would resemble results from attacking classic, deep-

attack target sets, we boldly executed 10 battalion air combat missions in support of friendly troops in contact against a determined enemy — whose tactics and uniform were both unconventional — without losing a single aircraft to enemy fire. The battalion's consolidated battle-damage assessment during these missions included 25 tanks, 27 infantry fighting vehicles, six artillery pieces, 52 AAA pieces and more than 100 other enemy assets such as ammunition storage facilities, bunkers, trucks and buildings. Maximum utilization of the Longbow's 30mm cannon and K-model Hellfire missiles was necessary during CCA. The utilization of the RF Hellfire missile in CCA must be re-evaluated.

Needed Improvements

In the weeks before OIF the Viper Battalion worked diligently with the BCTs through embedded aviation liaison officers to test and validate Combat and Thermal Identification Panels (CIP/TIP) for the primary objective of mitigating the risk of air-to-ground "fratricide" during close-combat operations. The CIP and TIP integration on combat vehicles and the Vipers' "weapons-tight philosophy" resulted in zero air-to-ground "fratricide" incidents in the 3rd ID's battle space. However, the Apache's current FLIR provides target identification, even with CIPs and TIPs, well short of its point target killing range.

Generation Three FLIR, a "must-have" for the Longbow Apache to identify targets and further mitigate air-to-ground "fratricide," and the integration of two-way, real-time friendly blue icons onto a moving map display on the Longbow's cockpit's Tactical Situation Display (TSD) will further enhance the Longbow Apache's role in the close fight in the next war.

Whether shaping the battle in a combined-arms fight where intelligence of the enemy is known, or by conducting close-combat attacks in support of a ground commander, the Longbow Apache will provide significantly increased flexibility and firepower for years to come.



MAJ David J. Rude is the operations officer for 1st Battalion, 3rd Aviation Regiment.

NPRC INITIATES ONLINE RECORDS REQUEST PROCEDURES

The National Personnel Records Center is working to make it easier for veterans with computers and Internet access to obtain copies of documents from their military files.

Military veterans and the next of kin of deceased former military members may now use a new online military personnel records system to request documents. Other individuals with a need for documents must still complete the Standard Form 180 that can be downloaded from the online web site.

The new Web-based application was designed to provide better service on these requests by eliminating the records center's mailroom processing time. Also, because the requester will be asked to supply all information essential for NPRC to process the request, delays that normally occur when NPRC has to ask veterans for additional information will be minimized.

Veterans and next of kin may access this application at <http://vetrecs.archives.gov>. Please note there is no requirement to type "www" in front of the web address.

APPLY FOR SOCIAL SECURITY RETIREMENT BENEFITS ONLINE

If you're thinking about applying for retirement benefits, the Social Security Administration suggests you think online. Its redesigned Web site makes it easier than ever before to file for retirement benefits over the Internet from the comfort of your own home. If you have questions about whether you qualify, or how much you can expect to receive, the SSA has other Internet tools to help you.

Visit the Retirement and Medicare page to find out your full retirement age, how much you can expect to get in monthly benefits and information that can help you decide when the time is right for you. The page also has information about working after you start getting retirement benefits, updates on other Social Security programs, Medicare facts and the user-friendly application for retirement benefits. You're only a click away at www.socialsecurity.gov/r&m1.htm.

GOVERNMENT GRAVE MARKER REQUESTS MADE EASIER

The VA has revised its application form to make requesting a VA grave marker easier. The new VA Form 40-1330, "Application For Standard Government Headstone or Marker," includes updated information about changes that expand eligibility for a government marker. The new form and instruction sheets also permit better communication between VA and veterans' families.

For deaths on or after Sept. 11, 2001, Public Laws 107-103 and 107-330 made government markers available for use on veterans' graves that were already marked with privately furnished headstones or markers. Previous law prevented VA from furnishing markers when graves were already marked.

The laws require the secretary of veterans affairs to report to Congress by Feb. 1, 2006, on the effectiveness of this benefit and to recommend whether it should continue. One of the changes made to the application form will allow VA to report on this new benefit by tracking its use.

In January 2002, VA introduced a toll-free fax service for submitting applications. The service is available 24 hours a day, seven days a week, as an alternative to regular mail. Instructions, as well as the toll-free fax number (800) 455-7143, are on the VA Web site at www.cem.va.gov. The application form on the site can be filled in and printed for submission by mail or fax. Questions about a headstone or marker application can be directed to VA's toll-free Memorial Programs Service applicant assistance line at (800) 697-6947.

NATIONAL WORLD WAR II MEMORIAL

The National World War II Memorial is under construction in Washington, D.C., and will be the first nation-



LEGISLATIVE REPORT

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

al memorial dedicated to all who served during World War II. The memorial, which is being established by the American Battle Monuments Commission and is scheduled for dedication on Memorial Day 2004, will honor all military veterans of the war, the citizens on the home front, the nation at large, and the high moral purpose and idealism that motivated the nation's call to arms. WWII will be the only 20th century event commemorated on the Mall's central axis.

The memory of America's World War II generation is being preserved within the physical memorial and through the World War II Registry of Remembrances, an individual listing of Americans who contributed to the war effort. Any U.S. citizen who helped win the war, whether a veteran or someone on the home front, is eligible for the registry. Names in the registry will be forever linked to the memorial's bronze and granite representations of their sacrifice and achievement.

The registry combines four databases that can be searched for names of those whose service and sacrifice helped win the war. The registry includes the names of Americans who are:

- Buried in American Battle Monuments Commission (ABMC) military cemeteries overseas.
- Memorialized on ABMC "Tablets of the Missing."
- Listed on official War and Navy Department "killed in service" rosters now held by the National Archives and Records Administration.
- Honored by public enrollment in the Registry of Remembrances.

To enroll a relative or friend go to www.wiimemorial.com, select "Registry," select "Enroll Honoree" and enter the data requested. Also check that you wish e-mail notification when your honoree has been verified and entered into the database. To see if someone is already enrolled click on search the registry and enter the data and submit. To see the data that is on file click on the person's name.

WHAT'S STILL ON THE TABLE?

Every year, it seems the legislative wheels grind agonizingly slowly, and then lots of things happen at once at the end of the year in Congress' rush to adjourn.

This year, with lots of legislation that has been pending for one or two months or more, it's easy to lose track of what's still on the table. Here's a quick summary of the status of selected legislation affecting the military and veterans' community.

H.R. 1588

The fiscal year 2004 Defense Authorization Act is still pending House and Senate conference action. The final bill should include substantive measures to improve health care delivery for TRICARE Standard beneficiaries. Other issues to be resolved include:

- Authority for concurrent receipt of retired pay and Department of Veterans Affairs (VA) disability compensation (See related article).
- Authority for eligible disabled Guard and Reserve retirees to participate in the Combat-Related Special Compensation Program.
- 2004 uniformed services pay raise and long-term pay comparability principles.
- Health care options for drilling Guard and Reserve members (See related article).
- Eligibility of Gray Area Reserve retirees for federal long-term care insurance.
- Hazardous Duty Pay and Family Separation Allowance rate adjustments.
- Survivor Benefit Plan coverage for Reserve members who die while on inactive-duty-for-training status.

S. 1/H. 1

The Prescription Drug and Medicare Improvement Act of 2003 also is pending House and Senate conference action. In addition to the larger prescription drug authority provisions that have been in the news, the conferees need to resolve proposals to:

- Increase Medicare payment rates to providers and prevent a 4.1 percent payment cut now projected for next January.
- Waive late-enrollment premium penalties for older military beneficiaries who didn't enroll in Medicare Part B when first eligible, but now need to be enrolled to qualify for TRICARE For Life coverage.

H.R. 1307

The Armed Services Tax Fairness Act has been pending House and Senate conference action since last spring. The somewhat less-favorable House version also was included in the House-passed H.R. 1308, the All-American Tax Relief Act of 2003, the much broader child tax-credit bill that is also pending separate conference action. Issues to be resolved include:

- Authority for Guard/Reserve members to deduct drill-related travel and lodging expenses.
- Relief from capital-gains tax penalties for military homeowners sent overseas or elsewhere away from home on military orders so they can't meet presale occupancy requirements.
- Exemption of military survivors from having to pay tax on half of the modest \$6,000 death gratuity paid when the sponsor dies on active duty.

CONCURRENT RECEIPT NEGOTIATIONS CONTINUE

As previously reported, congressional leaders are feeling the pressure to find a way to do something on concurrent receipt. The end of the legislative year is getting closer, and Congress wants to wrap up negotiations on the FY 2004 Defense Authorization Act. They're caught between pressure from military members and veterans (who expect Congress to pass the concurrent-receipt legislation that more than 80 percent of legislators have said they support) and the Bush Administration, which has threatened to veto any such legislation.

Congressional leaders and supporters are discussing several options for action. The Military Coalition (TMC) and the Military Officers Association of America (MOAA) have received many inquiries about news reports that some in Congress and the Bush Administration are seeking large, arbitrary and immediate cutbacks in disability awards for future veterans (including future retirees) as a possible funding source for progress on concurrent receipt.

MOAA and other military and veterans' associations have weighed in to say that any proposals to change the VA disability system must be given due legislative process rather than trying to slip major changes into law in a smoke-filled room at the last minute, without hearings or inputs from association representatives and other expert witnesses. Opposition to that kind of stealthy maneuver is sufficiently broad and strong that we think it's very unlikely to see the light of day.

Meanwhile, it's essential to keep the pressure on legislators to put Congress' money where its cosponsorship is, and enact significant progress on concurrent receipt in the Defense Authorization Act this year.

Equally important, we need a flood of messages to the White House, urging the administration to stop stonewalling concurrent receipt and support fair treatment for disabled retirees.

You can help by visiting MOAA's Web site at <http://capwiz.com/moaa/home/> and clicking on the "Concurrent

Retired Army Aviator Shares Success

By Annette Cross

As most Corpus Christians were busy with hurricane preparations in anticipation of Hurricane Claudette in July, one local businessman took time from his busy schedule to visit Corpus Christi Army Depot (CCAD). Developer and builder Jimmy Johnston, who retired from CCAD in 1978, met with depot commander COL James J. Budney Jr. to announce the establishment of the CW4 Jimmy B. Johnston Family Scholarship Fund through the Army Aviation Association of America (AAAA). One thousand dollars will be made available annually to active-duty and retired military members and their dependents to help defray the costs of college tuition.

Johnston was assigned to CCAD in 1970 following his second tour in Viet Nam, where he flew AH-1 Cobra helicopters for the 1st Air Cavalry Division. He was assigned to Charlie Battery, the "Blue Max," flying many combat missions along the Cambodian and Laotian borders. During his first assignment at CCAD, Johnston worked as a test pilot before returning for a third tour in Viet Nam. In December 1972 Johnston returned to CCAD as a test pilot. During his career at CCAD Johnston was instrumental in cross-training members of the National Guard and Army Reserve.

Johnston's generosity is firmly rooted in his appreciation for his successful military career and years as a CCAD test pilot.

"The Army and CCAD have been good to me. That's where everything started for me, and now it's my turn to pay it back," he said. "This is my opportunity to do something for the organization that was so good to me."

Johnston has been an active member of AAAA for 30 years.

Annette Cross is the Corpus Christi chapter's vice president for benefits. Persons interested in joining the Corpus Christi chapter may contact her at (361) 961-6373, Mail Stop #80, or by e-mail at across@ccad.army.mil.

Photo by Lois Contreras



COL Jim Budney (second from right), Corpus Christi Army Depot (CCAD) commander and president of AAAA's Corpus Christi chapter, accepts a check for \$1,000 from CW4 Jimmy Johnston (Ret.) for the AAAA scholarship fund. AAAA National Board member Joe Guzman (left); Annette Cross, chapter vice president for benefits (second from left); and Amado Garza, CCAD retiree and AAAA member, joined the group at the presentation. Johnston, who retired from his last assignment at CCAD, said he wants to give back some of what he's received from the Army aviation community.

Cooper Receives OSM

CW4 Robert N. Cooper (Ret.), the division safety manager for the Lear Siegler Services (LSI) flight-training contract at Fort Rucker, Ala., received the Silver Order of St. Michael during a June 25 ceremony at Fort Rucker. The award was presented by Henry Witmer, LS's director of training for the Fort Rucker contract.

Cooper retired from the Army in October 1987 with more than 30 years of active service. After his retirement Cooper joined the Fort Rucker flight training contractor's safety team as a civilian and, as a skilled and dual-rated Army aviator, continued to work in aviation safety, managing safety affairs of the instructor pilots teaching military helicopter pilots. While Cooper was primary division's safety manager, the division completed more than 1 million flight training hours, producing seven 100,000 accident-free flight hour awards from the Aviation Center's commanding generals.



Cooper (center) received the Silver Order of St. Michael Award and the congratulations of Henry Witmer (left) and Chip Weakley, LSI director of safety.



LTC George Kunkel (center) is presented with the Order of Saint Michael during his change-of-charter ceremony as product manager, aerial common sensor, by COL Steve Cox, PM for signals warfare and the vice president for programs in AAAA's Monmouth chapter.

NEW MEMBERS

AIR ASSAULT CHAPTER

FORT CAMPBELL, KY
MAJ Jerome Meyers
CW4 Robert Walker

ALOHA CHAPTER

HONOLULU, HI
1LT James G. Campbell
SFC Jesse W. Martin
CPT Daniel J. McAuliffe

AVIATION CENTER CHAPTER

FORT RUCKER, AL
WO1 Melissa S. Babcock
WO1 Rochelle S. Bailey
CW3 Frank R. Bissette
WO1 Brandon S. Burrows
1LT Eric D. Carlson
2LT Joseph A. Clark
SGT William Davis, Jr.
2LT Rene M. de la Fuente
2LT Jesse A. Dunn
WO1 Timothy L. Edwards
SFC David L. Fales
CPT Thaddeus D. Fineran
2LT Charles S. Fuller
WO1 Benjamin P. Gregoire
WO1 Eric M. Gussenhoven
CPT Michael B. Hale
2LT Joshua L. Hawkins
CW3 James W. Howerton
WO1 Christopher D. Jasion
WO1 John A. Jeffries
WO1 Derek J. Joshua
2LT Jared K. Koelling
WO1 Brian M. Larsen
2LT Howard C. Lim
2LT Shawn P. Lough
CPT Andrew D. Maguire
WO1 Chris C. Martin
2LT Joseph A. Martinez
SFC Timothy D. Mcchesney
2LT Joseph J. Miller
2LT Courtney R. Mills
WO1 Steven R. Morris
CPT Patrick G. O'Leary
CDT Michael A. Pearce
2LT Paul A. Perez
2LT Pearl S. Phaovisaid
WO1 Samuel Rojas
2LT David F. Roman
MAJ David C. Romine
2LT Joseph S. Seiver
WO1 Shane C. Smith
WO1 Kevin W. Stingle
WO1 Kevin L. Utterback
WO1 Robert M. Ware, Jr.
WO1 Sascha C. Wellenreuther
2LT Carlos L. Williams
2LT Jason T. Woodward

COLONIAL VIRGINIA CHAPTER

FORT EUSTIS, VA
SFC Palermo A. Deschamps
Mr. Stephen W. Stilwell

CORPUS CHRISTI CHAPTER

CORPUS CHRISTI, TX
Mr. Amando Gonzalez
Mr. Arnoldo R. Gutierrez
Mr. Eric T. Ragner, Sr.

EDWIN A LINK MEMORIAL CHAP

BINGHAMTON NY AREA
SGM Scott H. Hendershott

FLYING TIGERS CHAPTER

FORT KNOX, KY
1LT Julius S. Ramirez

FRONTIER ARMY CHAPTER

FORT LEAVENWORTH, KS
MAJ Geoffrey A. Crawford
MAJ Andrew J. Lippert
MAJ Dennis J. McKernan

GREATER ATLANTA CHAPTER

ATLANTA, GA
CPT Alexander A. Magg

MAGNOLIA CHAPTER

JACKSON, MS
2LT Leslie F. Thaggard

NARRAGANSETT BAY CHAPTER

N. KINGSTOWN, RI
MAJ Tracy E. Pennycook

NORTH COUNTRY CHAPTER

FORT DRUM, NY
CPT Erica G. Courtney

NORTHERN LIGHTS CHAPTER

FORT WAINWRIGHT/
FAIRBANKS AK
CPT Jarrad N. Smith

SOUTHERN CALIFORNIA CHAP.

LOS ANGELES, CA
Mr. C. R. Noel

TARHEEL CHAPTER

RALEIGH, NC
2LT Bethany R. Barden

TENNESSEE VALLEY CHAPTER

HUNTSVILLE, AL
Mr. Michael C. Counts
Mr. Keith A. Jones

WASHINGTON-POTOMAC CHAP.

WASHINGTON, DC
COL John E. Binkley III, Ret.
Mr. Grey Hagwood
Mr. John Harvey
Mr. Mike D. O'Brien
CW5 Thomas W. Potter, Ret.
Mr. Donald G. Reich
Mr. Robert A. Wojciechowski

MEMBERS WITHOUT CHAPTER AFFILIATION

Mr. Norman Blanchard
Mr. Dave Chilcote
Mr. Steve Duke
Mr. Mike Fiset
Mr. Harold Graziano
Ms. Linda P. Hudson
Mr. Brian Kenney
Mr. James C. Martin
Mr. Bob Melillo
Mr. Dave Philbrick
Mr. Frank Pope
SGT Paul F. Quinn
Mr. Pierce Reid
Ms. Diane Sheerar
LTC Robin R. Smith
Mr. Jim St. Germain
Mr. Jim Talley
Mr. Tobin Touchstone
Mr. David Whitehouse
Mr. Peter Woodson

Demilia Awarded Bronze OSM

CW5 Paul Demilia, a special operations aviation/combat mission simulations coordinator for the 160th Special Operations Aviation Regiment (SOAR), was awarded the Bronze Order of Saint Michael during a July 18 ceremony at Fort Campbell, Ky. The award was presented by LTC Gregory Petrik, operations officer for the 160th SOAR, in recognition of Demilia's 26 years of outstanding aviation service and 30 years of Army service.

Demilia, a master Army aviator with more than 4,900 rotary-wing flight hours, retired from active service on July 28 after a distinguished career that included more than 19 years with the 160th SOAR. He began his 160th career in the AH-6 in 1984 and participated in Operation Prime Chance. He played a pivotal role in the sinking of three Iranian gunboats and the capture of the Iran Ajar minelayer. He also participated in Operation Just Cause in Panama in 1989. Demilia went on to the Systems Integration Management Office and was the project officer for the AH/MH-6 program, where he was the developmental chief for integrating a new weapons platform and Hellfire capabilities on the AH-6. He was also responsible for develop-



ing a variant of the 30mm cannon to equip the MH-60 De-Defensive Armed Penetrator. At his retirement Demilia was awarded the Legion of Merit for his outstanding service.



CW5 William L. Barker was presented the Silver Order of Saint Michael at a Sept. 22 ceremony at Fort Rucker, Ala. The award was presented by MAJ Jo Phillips, acting director of the Aviation Proponency at Fort Rucker, where Barker was chief of the Warrant Officer Aviation Proponency until his recent reassignment to Fort Leavenworth, Kan. Barker was recognized for his "many real and lasting positive impacts on the career progression of every aviation warrant officer."

Lost Members

Help us find our Lost Members. We'll give you an additional month on your AAAA membership free for each member you help us locate. Simply write, call or E-mail us with the Lost Member's current address. AAAA, 755 Main Street, Monroe, CT 06468-2830. Tele: (203) 268-2450; FAX: (203) 268-5870; E-Mail: aaaa@quad-a.org.

Butts, Richard M., SGT
Caudle, Kelley D., MS
Chamley, Michael F., CPT
Crowe, Michelle J., SPC
Davis, Harold, SPC

Digerolamo, Anthony J., SSG
Donovan, Patrick K., CPT
Downing, Eric D., PFC
Echelberry, Gregory E., PFC
Garabay, Xavier A., PFC

Glenn, David P., SFC
Griffy, Angela S., SSG
Hawbecker, Joseph L., 1SG
Jeffcoat, Larry, CSM
Jonies, James P., PFC

Lee, Joshua, SGT
Miller, Stephen M., CPT
Paddon, Jacob, SGT
Phelps, Dwayne, SPC
Phung, Tu Oai, SPC

Plourd, Patrick N., COL
Rogers, Jerry, Mr.
Sanders, Dionne, SSG
Scott, Robert F., LTC, Ret.
Sprock, John W., SFC

Stedman, Darryl L., SSG
Whaley, Carrell R., WO1
Wiggers, Toby L., SGT
Withrodt, Robert M., PFC



New Chapter Officers

Black Knights:

CPT Lori L. Turbak, VP
Memberships.

Colonial Virginia:

COL Conway S. Ellers,
President; CW4 William J.
Roberts, VP Programs.

Iron Eagle:

COL Dyfied A. Harris,
President.

Northern Lights:

CPT Jarrod N. Smith,
Secretary.

Tennessee Valley:

CW4 Steven L. Sanders,
Sr., VP Awards.

Old Tucson:

MSG Robyn L. Fowler,
Secretary.

AAAA Soldier of the Month

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

CW4 Charles R. Rlory
August 2003
(Ft. Indiantown Gap Chapter)

AAAA Distinguished Instructor of the Quarter

A Chapter Program to
Recognize Distinguished
Instructors on a
Quarterly Basis

SFC Palermo A. Deschamps
4th QTR 03
(Colonial Virginia Chapter)

New AAAA Life Members

COL Deborah J. Chase
MAJ Blake S. Cromer

LTC Neil R. Hutchison
CPT Nicholas Kaszcuzk
MAJ David W. Marck, Ret.
LTC Glenn A. Rizzi

New AAAA Industry Members

UFA Inc.

New AAAA Order of St. Michael Recipients

William L. Barker (Silver)
SGM Alfred Martin, Ret. (Silver)
LTC Thomas Bryant (Bronze)
LTC Norman Shuffelbarher
(Bronze)

Norb Patla (Bronze)
MAJ Todd A. Messitt (Bronze)

MAJ James D. Toner (Bronze)
LTC Steven K. Satterlee (Bronze)

CW4 Anthony Salerno (Bronze)
1SG William Fearnside (Bronze)

1SG James Raymond (Bronze)
CW3 Fay Bard (Bronze)

CW4 David E. Wortner (Bronze)
MAJ Daniel McCarthy (Bronze)

MAJ James B. Lowery II (Bronze)
CPT Stephen Sullivan (Bronze)

SPC Nicolas V. Carter (Bronze)
CPT John P. Davis (Bronze)

LTC Richard Daum, Jr. (Bronze)
MAJ Albert L. Flood III (Bronze)

CW4 Larry E. Smith (Bronze)
LTC Michael F. McClellan, Ret.
(Bronze)

Christine L. Henderson (Bronze)
Jack Valasick (Bronze)

MAJ Curtis W. Hoffman (Bronze)
CW3 Robert D. Bankston, Jr.
(Bronze)

Aaron U. Trimble (Bronze)
SGM Dennis Jallah (Bronze)

CW3 Michael LaMee (Bronze)
CW4 Christopher Miller (Bronze)

MAJ Thomas von Eschenbach
(Bronze)

CW3 Matthew Tuohy (Bronze)
CPT Tanya T. Markow (Bronze)

1SG Peter M. Markow (Bronze)
MAJ Thomas C. Martin (Bronze)

MAJ Geoffrey Crawford (Bronze)
MAJ Jay F. Klaus (Bronze)

LTC Christopher Smith (Bronze)
CPT Timothy A. Brumfiel, Sr.
(Bronze)

SFC Jeffrey R. Morton (Bronze)

LTC Wayne A. Pollard (Bronze)
CW4 Robert P. Sherrard, Jr.
(Bronze)

LTG Hee Jung Kim (Bronze)
CPT Clay A. Brashear (Bronze)

CPT Jessie J. French (Bronze)
CW4 Santiago J. Garcia (Bronze)

SFC Davis Howard (Bronze)
1SG Richard Lorenzo (Bronze)

1SG George G. Mead (Bronze)
1SG Randy Lange (Bronze)

1SG Lawrence Mione (Bronze)
COL Bae Young Keon (Bronze)

CSM Willie McCoy (Bronze)
CW3 Wendell Reddick (Bronze)

SFC Carl T. Clark (Bronze)
SFC Robert J. Carroll (Bronze)

MAJ Matthew Mattner (Bronze)
LTC Christopher Trouve
(Bronze)

MAJ Richard C. Carroll (Bronze)
BG(P) James A. Coggin (Bronze)

MAJ William Metheny (Bronze)
CW5 Fred Peacock (Bronze)

MAJ David S. Henschel (Bronze)
CW5 Richard J. Rylee (Bronze)

MAJ Jin Taek Kim (Bronze)
MAJ Gregory James (Bronze)

CW3 Argiearld Lewis (Bronze)
MAJ Joseph Henderson (Bronze)

CW3 Everett Smith (Bronze)
CW2 Jerome Goldick (Bronze)

LTC Frederick "Tony" Reininger,
Ret. (Bronze)

CW4 Curtis Haldeman (Bronze)
SFC Ronald F. Pegues (Bronze)

Kyu Yi (Bronze)
James W. Wasdyke (Bronze)

CW4 Sean C. Crothers (Bronze)
CW4 Jerry D. Embry (Bronze)

CW4 John T. Matheson (Bronze)
CW4 Keith D. Shivers (Bronze)

CW4 Jon C. Weston (Bronze)
CSM Diane M. Foster (Bronze)

1SG James H. Franklin (Bronze)
MSG Ronnie Grantham (Bronze)

SFC Clarence Belcher (Bronze)
CW4 David Johnson (Bronze)

MSG Diego M. Forero (Bronze)
SFC(P) Gerald L. Beal (Bronze)

CW3 Erik R. Roach (Bronze)
CW3 Raymond L. Gray (Bronze)

CW3 James Hamilton (Bronze)
CW5 Alfred Pena (Bronze)

CW4 Michael E. Turner (Bronze)
CW3 Israel G. Sanchez (Bronze)

MAJ James R. Bolton (Bronze)
CW2 Hyacinth Jen-Kelly

(Bronze)
CW3 Jonathan Sturnick (Bronze)
Melvin R. Dickerson (Bronze)

CW4 Gary H. Newsom (Bronze)
1SG James Thomson Jr. (Bronze)

CW4 Derek S. Smith (Bronze)
CW3 James A. Lindsay (Bronze)

1SG Leroy Purdie Jr. (Bronze)
CPT David M. Bresser (Bronze)

CPT John F. Arnold (Bronze)
CW4 David Arnold (Bronze)

1SG Stuart O'Black (Bronze)
MAJ(R) Joseph Reames (Bronze)

CW5 Roy L. Robison II (Bronze)
CPT Kevin P. Wimberly (Bronze)

CPT Matthew Weinschel (Bronze)
MAJ Patrick B. Day (Bronze)

CW4 Michael Weist (Bronze)
MAJ Jeffery Sears (Bronze)

MAJ Michael Rossman (Bronze)
CSM Stewart Souder (Bronze)

LTC Robert M. Baxter (Bronze)
SSG James O. Dunlap (Bronze)

1SG Gary W. Cox (Bronze)
MAJ David P. Chapman
(Bronze)

COL Gary M. Hara (Bronze)
CSM Robert Kearney, Jr.
(Bronze)

1SG Stanley Wojtowicz (Bronze)
LTC William E. Parker (Bronze)

MAJ Edward M. Fortunato
(Bronze)

MAJ Todd C. Kros (Bronze)
Johnnie I. Hill (Bronze)

CPT Kelly L. Smith (Bronze)
CPT Anthony J. Asbomo (Bronze)

CW4 James I. Myers (Bronze)
CW4 Charles W. McAllister
(Bronze)

MAJ Eric M. Bleakney (Bronze)
COL Orlan L. Peterson, Jr.
(Bronze)

CPT Christopher A. Cisneros
(Bronze)

LTC(P) Michelle F. Yarborough
(Bronze)

MG John R. Tindall, Jr. (Bronze)
CW4 Kenneth R. Sparks
(Bronze)

MAJ Jeffrey L. Watson (Bronze)
MAJ Douglas VanWheelden
(Bronze)

LTC Michael H. Keogh (Bronze)
CW5 Richard E. Boylston
(Bronze)

Karen S. McDonald (Bronze)
Deborah Blanchard (Bronze)

MAJ Ronald S. Volkin (Bronze)
1SG Marilyn J. Bradley (Bronze)

CW4 Stephen T. Grady (Bronze)
CW4 Brenton J. Vedder (Bronze)

CPT William P. Gordon (Bronze)
Glenn D. Harrison (Bronze)

MAJ(P) Patrick J. Mason (Bronze)
LTC Thomas Horlander (Bronze)

LTC Monica Gorbandt (Bronze)
CW4 Mark Armstrong (Bronze)

CW4 Timothy W. Whited
(Bronze)

MSG Robert Van Vleck (Bronze)
CW4 Mark A. Martin (Bronze)

COL William Simpson (Bronze)
MAJ James W. Ring (Bronze)

CW4 Mac Brown (Bronze)
SFC Mark R. Kurek (Bronze)

CPT Neal J. Edmonds (Bronze)
COL Craig T. Ceneskie (Bronze)

CW4 Kevin W. Murphy (Bronze)
LTC Gregory E. Stewart (Bronze)

LTC Scott R. Smith (Bronze)
LTC David L. McGuire (Bronze)

1SG Timothy J. Cash (Bronze)
MAJ Daniel M. Larsen (Bronze)

LTC(P) Charles R. Mehle, II
(Bronze)

Janette Fleming (Bronze)
CW5 Jim Notgrass (Bronze)

CW2 Scott Jamar (Bronze)
LTC Bob Tamplet (Bronze)

COL Michael Ledbetter (Bronze)
CPT Jason S. Davis (Bronze)

CW3 Todd S. Blake (Bronze)
CW4 John R. Pickett (Bronze)

MAJ Stephen Barnes (Bronze)
COL Thomas Schuurmans
(Bronze)

LTC Roger J. Barros (Bronze)
CPT Thomas Shultz (Bronze)

MAJ Keith Ladd (Bronze)
MAJ David Fee (Bronze)

CPT Mike Enos (Bronze)
CPT Brandon Majerus (Bronze)

CPT Eric Little (Bronze)
CPT Deanna Bridenback
(Bronze)

COL Mark V. Rhett (Bronze)
CPT Thomas De La Garza
(Bronze)

LTC John T. Hansen (Bronze)
CPT William Boswell
(Bronze)

CPT John R. Walters (Bronze)
CPT Robert Baldwin (Bronze)

CW4 Arlynn Georgeson
(Bronze)

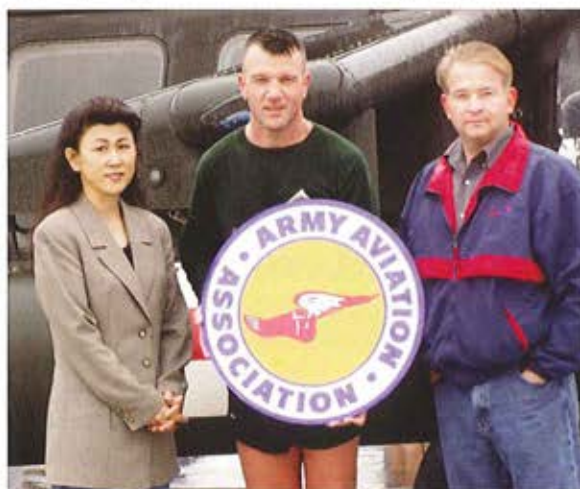
Northern Lights Chapter



AAAA's Northern Lights Chapter conducted a 5K Run at Fort Wainwright, Alaska, on Aug. 23. The event was sponsored by First Command of North Pole.

Ken Feiereisen graciously donated his time and energy, but most of all his money, to pay for the T-shirts given to all runners who participated in the event. The 5K run was dedicated to the memory of MAJ Eric Wahlgren (Ret.), who was a friend and loyal supporter of the Fort Wainwright community while serving as a member of the First Command Team. His wife Shinsook (left) started the runners on their 5K journey around the airfield at Fort Wainwright by firing the starter pistol. More than 120 runners participated in the run, and although the weather did not fully cooperate, a great time was had by all. All the proceeds went to the chapter to raise money for its annual spring Aviation Ball held in Fairbanks.

Ken Feiereisen graciously donated his time and energy, but most of all his money, to pay for the T-shirts given to all runners who participated in the event. The 5K run was dedicated to the memory of MAJ Eric Wahlgren (Ret.), who was a friend and loyal supporter of the Fort Wainwright community while serving as a member of the First Command Team. His wife Shinsook (left) started the runners on their 5K journey around the airfield at Fort Wainwright by firing the starter pistol. More than 120 runners participated in the run, and although the weather did not fully cooperate, a great time was had by all. All the proceeds went to the chapter to raise money for its annual spring Aviation Ball held in Fairbanks.



Applicants Needed!

Up To \$48,000 Per Hour!



www.quad-a.org

It is no joke!

AAAA applications take about 5 minutes. A \$1,000 scholarship for 4 years would equate to \$4,000 for 5 minutes of work. That is \$48,000 per hour. So what are you waiting for? Go to www.quad-a.org now and download an application.

Up to 65% of applicants receive scholarships.

Applicants Needed!

Up to \$48,000 per hour!



AAAA Scholarship Foundation, Inc.

755 Main Street, Suite 4D • Monroe, CT 06468-2830

www.quad-a.org • email: aaaa@quad-a.org

(203) 268-2450 • Fax: (203) 268-5870

Ad written and designed courtesy of
DynCorp— A CSC company.



AAAA PRESIDENT'S MESSAGE

I have had a great six months as your President. In May as you know I presented the AAAA USMA Cadet of the Year award at West Point. In June the AAAA Executive Group met with the AUSA leadership to discuss closer cooperation between our associations particularly in the area of membership representation to decision makers. In September I had the great honor to attend the Change of Command of our first four-star general aviator, GEN Doug Brown, Commander SOCOM, and also attended the National Guard Association of the U.S., (NGAUS) later that month.

But now, summer is at an end and the pace is really going to get serious as we head toward our busiest time of year culminating in the AAAA Annual Convention 24-27 March 2004. A few days ago we held our October AAAA Board meeting during the AUSA convention in Washington, DC. The next few months will bring the ATC, Aircraft Survivability, and Mission Equipment Symposium in Nashville, TN, in November; the AAAA/AUSA Aviation Symposium in January in Washington; and the Joseph P. Cribbins, Product Support Symposium in Huntsville in February.

The October Board meeting verified that your association is doing very well on all fronts. Membership remains over 14,500 the highest in 6 years. Revenue is also up from last year's convention and bodes well for funding our end of year requests like the AAAA Scholarship Foundation, the Army Aviation Museum at Fort Rucker, and the "Wings of Liberty" Museum at Fort Campbell. Most importantly, AAAA's efforts to represent your issues continue to bear fruit on both veterans' and current soldier issues.

Most recently, we went to bat for our soldiers who were wounded in combat. Specifically, an outstanding Warrant Officer who accepted the Unit of the Year award for the 3/101 at our last convention, brought to our attention a clear inequity and injustice in the "system". CW2 Emanuel Pierre who was wounded in Afghanistan along with CW3 Stuart Contant were hit with multi hundred dollar bills upon their release from Walter Reed for something called "Total Care". Turns out after some research on our part it was actually the \$8.10 per day for "meal charges". At this point our Executive Director, Bill Harris, met with Connecticut Congresswoman Nancy Johnson's staff member Steve Markowski who is also an M-Day Guardsman in the Connecticut Army National Guard to see what could be done. Shortly thereafter, House Appropriations Committee Chairman, Rep. C.W. "Bill" Young of Florida experienced a similar situation with a Marine at Walter Reed. The Military Coalition, (TMC) and our representative, COL(R) Sy Berdux, also helped push the issue forward.

Long story short, Chairman Young has proposed and Rep. Johnson has co-sponsored legislation to correct this situation going forward. Bottom line: the bill has now passed as we go to press.

So, the next time someone asks what AAAA has done lately, let them know.

Andy Andreson
Major General, Retired
President, AAAA

AVIATION CENTER CHAPTER

Entries are now being accepted for the Aviation Center Chapter's annual Chili 5K and Cookoff at Fort Rucker, Ala. Runners and chili chefs can get detailed information online and register, too. Details on both events and secure on-line registration are at a special web site, www.chili5k.com.

Admission is free and open to the public. Runners who register early pay just \$13 and are assured of a colorful Chili 5K T-shirt on race day. Registration the day of the races is \$15. Chili-cooking teams can register for a \$15 donation, and serious competitors will want to sign up early because spaces are limited.

This year's event is the 12th annual, and organizers have already begun preparations to make it the biggest and best yet. The day includes a professionally run 5K road race and a competitive chili cook-off. Families can look forward to activities and demonstrations for kids and grownups alike, some great-tasting chili and numerous door prizes drawn at random throughout the day.

There's also a one-mile Fun Run that's mainly recreational. Medals are awarded to top runners in a wide range of categories for both the 5K and the Fun Run. Runners and chili teams can also register through the mail. Just request a hard-copy form through the registration page at the web site.

Entry forms and information for runners are also available through Rich Tanner at tannerr@rucker.army.mil

Chili chefs can contact Richard Haggerty at richard.haggerty@rucker.army.mil

12th ANNUAL AAAA CHILI 5K

NOVEMBER 1, 2003

Fort Rucker, Alabama

EVENTS INCLUDE

5K ROAD RACE
1K FUN RUN
WORLD FAMOUS CHILI COOKOFF
5K'S OBSTACLE COURSE
(CLOSEST TO THE PINK GOLF COMPLEX)

TO SEE A FULL LIST OF EVENTS,
ATTRACTIONS AND TO OBTAIN REGISTRATION
INFORMATION VISIT:

WWW.chili5k.com

OR

CALL RICHARD HAGGERTY, (334)255-5066

richard.haggerty@rucker.army.mil

- Nov. 4-6. AAAA Aviation Survivability, ATC and Mission Equipment Symposium, Gaylord Opryland Convention Center Nashville, TN.
- Nov. 4-6. AES Aviation Infotech 2003 Conference & Exhibition, Dayton, OH.
- Jan. 5-7, 2004. AUSA/AAAA Aviation Symposium, Crystal Gateway Marriott, Arlington, VA.
- Jan. 17. 2004 Army Aviation Ball, Grand Hyatt Hotel, Seoul, Korea.
POC: 1LT Michael Lind — Email: lindm@usfk.korea.army.mil
- Jan. 27-29. AFCEA TechNet Orlando 2004, Orlando, FL.
- Jan. 30. AAAA Scholarship Executive Committee Meeting, National Guard Readiness Center, Arlington, VA.
- Jan. 31. AAAA National Awards Selection Meeting, National Guard Readiness Center, Arlington, VA.
- Feb. 11-12. Cribbins Product Support Symposium, Huntsville, AL.
- Mar. 15-17. HAI Heli-Expo 2004, Las Vegas, NV.
- Mar. 24-27. AAAA Annual Convention, Gaylord Opryland Convention Center, Nashville, TN.



Army Aviation Hall of Fame

The Army Aviation Hall of Fame sponsored by the Army Aviation Association of America, Inc., recognizes those individuals who have made an outstanding contribution to Army aviation. The actual Hall of Fame is located in the Army Aviation Museum, Fort Rucker, Ala., where the portraits of the inductees and the citations recording their achievements are retained for posterity. Each month Army Aviation Magazine will highlight a member of the Hall of Fame. The next triennial induction will occur in the spring of 2004. Contact the AAAA National Office for details at (203) 268-2450

LTC George L. O'Grady Army Aviation Hall of Fame 2001 Induction

LTC George L. O'Grady excelled both on the battlefield and in combining his combat experience and engineering talent to improve equipment.

On his first Vietnam tour he commanded the "Cobras," the gun platoon of the 114th Assault Helicopter Company. Almost daily, the Cobras were committed to air assaults into base areas at night to protect villages and outposts under attack. The Cobras became so well known their call sign was given to the Army's first attack helicopter — the Bell AH-1. On his second tour O'Grady commanded B Troop, 1st Squadron, 9th Cavalry. His troop provided reconnaissance and long-range patrols blocking three major infiltration routes leading south out of Cambodia. His heroism was recognized by many awards, including three Silver Stars, four Distinguished Flying Crosses, two Bronze Stars and two Presidential Unit Citations — one for the 13th Aviation Battalion and the other for the 1st of the 9th Cav.

Between and following his combat tours, O'Grady drafted the Army's first field manual on helicopter gunnery, helped set up the first instrumented helicopter firing range at Fort Rucker, Ala., and established the first door gunner training program.

Hardware innovations were a constant during O'Grady's aviation career. He designed a flight helmet shield to block flare light, constructed helicopter cargo door airflow adapters to reduce buffeting and drag, modified an M-39 cannon for helicopters, performed classified work on the Hellfire missile, redesigned the M-5 ammunition box, utilized the XM-3 smoke adaptor to load tear gas grenades into the rocket system and applied a microphone sensing system to develop a hostile fire indicator. He also developed a Relative Wind Air Data System for more accurate rocketry and smoother flight that is in use today on attack helicopters.

This master Army aviator had 5,000 flight hours, of which 1,900 were combat.





AT 16,000', IT'S ALL CHINOOK.

Today, the rigors facing combat forces can't be overstated. High altitude missions, extreme terrain, unpredictable weather and visibility. Without exception, Chinook has been a rock of confidence. The only helicopter strong enough and tough enough to deploy forces, fire power and equipment in and out of combat under such extreme conditions. The only one capable of performing this mission. Chinook is a power troops rely on, however fierce the challenge. And that makes all the difference, at any altitude.