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MEDICAL EVACUATION
AND WEAPON SYSTEMS

ARMY AVIATION

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AH-64D Apache Longbow



Production Rollout

March 21, 1997

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FORTHCOMING ISSUES

March-April 1997 — AAAA Annual Convention Issue.

May 1997 — Forging Ahead to Force XXI and Post-Convention Report.

Briefings

The Army Otter-Caribou Association will hold its 12th Annual Reunion in Albuquerque, New Mexico during the period August 20-23, 1997. Individuals who have served in an Army Otter or Caribou unit or were connected with the aircraft are invited to join the 800 member organization. Call 1 (800) 626-8194 for membership information.

The U.S. Army has modified the existing FlightSafety International flight training contract to include its Fixed Wing Multi-Engine Instructor Pilots Course. It is now the responsibility of FlightSafety to train all the Army's fixed wing instructor pilots at the FSI Dothan and Daleville Learning Centers in Alabama. The course includes academic, flight simulator, and in-flight training. Additionally, FlightSafety will provide C-12 simulator initial training and operate eight Army C-12 turboprop aircraft with which to conduct the flight training portion of the contract.

The 7th Infantry Division Association Reunion will be held 11-14 September 1997 at Colorado Springs, CO. For more information, contact Max Clayton, President, 9880 La View Circle, Roswell, GA 30075.

The Mid-Atlantic Air Museum's World War II Commemorative Weekend will be held on 6-8 June 1997 at Reading Regional Airport, PA. The show will include the recreation of a World War II Airfield. Interested persons should contact Pete Malashevitz, 11 Museum Drive, Reading, PA 19605, Tel: (610) 372-7333, or view the webpage at <http://www.avialantic.com/maamww97.html>

Terry Stinson, formerly president of Textron's Aerospace Systems and Components, has been named President of Bell Helicopter Textron, Inc. He succeeds Lloyd Shoppa, who has been elevated to the new position of Vice Chairman. Other changes include the promotion of James Schwalbe, now vice president for military business, to vice president for U.S. government business, with broader responsibilities for Bell's military tiltrotor and international business. James Rodgers will assume responsibility for commercial sales in the Americas, and for marketing the 609 civil tiltrotor.

The U.S. Army Aviation Center (USAAVNC), Ft. Rucker, AL, retired its last AH-1F Cobra on 6 September 1996. Cobra training had been conducted at Ft. Rucker since the end of the Vietnam War, when it moved from Savannah, GA in 1973. By 1994, USAAVNC had trained approximately 12,000 Cobra pilots, with the majority of the training conducted by the 1st Battalion, 14th Aviation Regiment, based at Hanchey Army Heliport. The Army National Guard will continue to conduct Cobra training at the Western Army Aviation Training Site (WAATS), near Tucson, AZ.

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FRONT COVER

Paid Advertisement: McDonnell Douglas Helicopter Systems. The first remanufactured AH-64D Apache Longbow will roll out for the U.S. Army on March 21 in a ceremony at the McDonnell Douglas Helicopter Systems facility in Mesa, Ariz. The rollout is another example of the promises kept by McDonnell Douglas and the U.S. Army-Industry Team. Photo by Bob Ferguson. Caption provided by Advertiser.

1997 AVIATION LEADERS TRAINING CONFERENCE OVERVIEW

Active and Reserve Component aviation brigade commanders, sergeants major, and safety officers worldwide participated in a conference hosted at Fort Rucker during the second week of January. The conference theme, "Training the Warfighter," kept us focused on current issues facing our branch from a warfighter's perspective.

We focused on our field leaders because their performance defines Army Aviation for the world. These great commanders and sergeants major told us what they need right now to best accomplish their mission. The conference gave them the opportunity to discuss issues and solutions not only with each other, but also with active and retired senior leaders of the Branch and the Army.

Past aviation senior leader conferences divided the brigade commanders and sergeants major into separate conferences during different times of the year. We changed that this year by combining the two. Additionally, the U.S. Army Safety Center (USASC) aligned their safety

*Focusing
on the
issues
from the
warfighter's
perspective.*

conference with ours and presented a block of instruction on protecting the force to the brigade commanders, sergeants major, and safety officers. Our goal was to identify issues in any area of Army Aviation that might require immediate attention.

The conference presentations centered on addressing current issues facing warfighters—lessons

learned from recent operations; CINC priorities and how Army Aviation meets those priorities; how aviation fights; training, manning, sustaining and equipping the force. The Directorate of Training, Doctrine, and Simulation (DOTDS) moderated a training panel led by LTG Leonard D. Holder, Jr., Commander, Combined Arms Command (CAC). His insights on training and warfighting were a highlight of the conference. In addition to the presentations, three separate forums were conducted with brigade commanders and sergeants major to address current issues. We documented the conference with a CD-ROM. It includes all open forum presentations, information papers, and

Right: MG Daniel J. Petrosky, Aviation Branch Chief and Commanding General, U.S. Army Aviation Center and Ft. Rucker, addresses the 1997 Aviation Leaders Training Conference at USAAVNC at Ft. Rucker, AL, in the second week of January.



Below: For the first time, this event combined the traditional Brigade Commanders Conference with the NCO Conference to form one event focused solely on the aviation warfighter. Here, USAAVNC CSM Marvin E. Horne (standing, far right) addresses the assemblage.





addresses our actions to resolve the issues surfaced during the conference. For those attendees who requested a CD-ROM, you should receive it in about three weeks.

All conference attendees were also invited to attend two significant events honoring our aviation soldiers—the annual Department of the Army LTG Ellis D. Parker Award Luncheon and the annual AAAA Aviation Center Chapter Awards Dinner. Fort Rucker was honored to have the Army Vice Chief of Staff, GEN Ronald H. Griffith, as the keynote speaker for the Parker luncheon.

As Army Aviation modernization continues to move forward at a rapid pace, we must make the tough decisions on what is urgent versus what can wait. That was the main purpose of the conference—identifying what aviation warfighters need now. I believe we were successful in this arena because we truly

listened to the field. We will not be able to do everything everyone wanted, but we will certainly work hard to get the issues working.

The AAAA Convention scheduled for 23-26 April will be the forum in which we focus on the future. In my mind, the success of this conference is just another step in the right direction in providing our great aviation soldiers the best training and resources available to accomplish their mission. The Army Aviation team—those in the field, at St. Louis, Fort Eustis, DA, Fort Rucker, our teammates from the Reserve and National Guard, and our industry—is committed to ensuring this happens.

★ ★

MG Petrosky is the Aviation Branch Chief and Commanding General, U.S. Army Aviation Center (USAAVNC) and Ft. Rucker, AL, and Commandant, U.S. Army Aviation Logistics School (USAALS), Ft. Eustis, VA.



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MAILBOX

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Dear Editor:

I found your guest editorial by GEN Bramlett and MAJ Rood interesting and informative. But, there is some additional information concerning the Centennial Olympic Games aviation support.

Elements of New Mexico, Tennessee, Alabama, Florida, and North Carolina RAID Teams and South Carolina's 1/151st Aviation Regiment (AAH) provided as many as eleven OH-58s (one-third of the Task Force's aircraft) and personnel to the Olympic's security.

RAID birds were scrambled and flew missions in support of police the night of the bombing, and four South Carolina Kiowas utilized half (approximately 250) of the Task Force's flight hours. Not a single OH-58 mission was scrubbed due to maintenance during this period, and personnel from all seven states worked side by side and with other Federal agencies to ensure a successful deployment and mission.

The support provided by the GAARNG and the Air Force Reserve were exemplary. Their facilities and personnel were heavily used and relied upon and the professionalism they demonstrated was fantastic.

*Ruppert G. Baird
SGT, SCARNG*

Dear Editor:

I just received my December 31 copy and read LTC Fardink's excellent Army history of the CH-54 "Crane." However, the printed title of the essay is quite misleading for your readers, many of whom are aware of the CH-54 but maybe not of its long history, outside of Army use, as a very effective and long living aircraft. Also, the essay does not

mention Joe Cribbins who played a remarkably dedicated role in the operational success of the CH-54 and who always had an appreciative interest in what it could do in the private sector.

The Sikorsky Skycrane has flown for twenty five years in commercial service. Erickson Air Crane Co. acquired the Type Certificate from Sikorsky in 1992 and started to manufacture new airframes, as well as remanufacture CH-54 airframes, into the commercial Erickson S-64 Air-Crane. Over the last four years the Erickson operational fleet of "Cranes" has grown from 4 to 14 operational and created the base for the growth of a large international commercial heavy lift company based upon the original Sikorsky Skycrane. Other surplus CH-54's that were acquired by other companies for restricted use probably amount to about twenty operational aircraft.

This is hardly extinction...it may be rebirth on a large scale as a continuation of the history of a remarkable piece of engineering and a fine commercial success. The Erickson Air Crane Co. has now grown beyond being a family business and it is being acquired by an investment group that plans to see the company grow into a major international business. All of your readers will be pleased to hear about this happy development and to know that a machine that won their hearts in its Army and National Guard days has both a bright future and a deserving commercial reward. Perhaps you will be hearing about the Crane's successes for another twenty years.

*Clive G. Whittenbury
Member of the Board, EAC*

T800 EARLY PRODUCTION

Recent agreement between senior active Army and National Guard Bureau (ARNG) leadership to re-engine Army Aviation Modernization Plan (AAMP) Force Package 1 UH-1H helicopters with Comanche T800 engines appears to be a true "win-win" for both ARNG aviation units and the Army's Comanche helicopter program.

The T800 Early Production And Fielding (EPAF) effort appears to be a successful NGB-Army aviation cooperative effort that keeps scarce Army aviation resources focused on Army Aviation modernization and the Aviation Restructure Initiative (ARI).

According to the recently signed DA DCSOPS-ARNG T800 Memorandum of Agreement (MOA), the Army will re-engine the ARI's Light Utility Helicopter (LUH) interim aircraft with the LHTEC T800-LHT-801 engine giving the NGB LUH aviation assets a more survivable, reliable, and cost effective propulsion system until the fielding of a new LUH becomes affordable. Concurrently, this initiative provides tremendous cost avoid-

*"...the
payback to
Comanche and
the NGB far
outweighs the
investment."*

ance for the Army's Comanche program by leveraging NGB funding to procure approximately (150) T800 engines and providing the Comanche PMO with significant risk reduction information before Comanche Production begins.

According to the Comanche engine schedule, this technologically advanced engine will receive it's

FAA Certification in March 1999 and will be designated, for the UH-1, as the CTS800-54. With very few exceptions, this engine is identical to the T800-LHT-801 earmarked for Comanche production. The MOA outlines a plan that will allow the NGB to re-engine the LUH fleet with CTS800-54 engines and return them to the Army as -801 engines for use in the Comanche helicopter after the UH-1H is retired.

The success of this program rests not only with the cost avoidance incurred with a reduced Comanche T800 procurement, but also with the valuable lessons learned from flying the engine ahead of Comanche. Additionally, this effort will keep the T800 industrial base warm

during the years following T800 development completion and the Comanche Production decision.

Most importantly, this program brings ARNG funding solidly into the active Army Aviation Mission Area contributing to both readiness and modernization. This effort does not represent any attempt to add a Service Life Extension Program (SLEP) to the aging UH-1H fleet but rather allows the ARNG to contribute to the over all Army modernization program while improving the UH-1s designated to serve as the interim LUH.

Starting with a 36 month qualification program, to ensure that the T800 is a good fit for the UH-1H aircraft, and subsequent procurement program starting in 2000, the T800 engine will demonstrate its effectiveness as a re-usable asset for the U.S. Army's Comanche helicopter fleet and provide a baseline for ECPs as Comanche moves toward a production decision.

Lessons learned from the 1994-95 UH-1 800 U.S. Border Patrol program proved that the UH-1H is an excellent platform to prove out T800 technology. Despite the limited Air Worthiness Release (AWR), the Border Patrol pilots racked up over 1,700 flight hours on the Baseline T800 enhancing their alien interdiction and counternarcotics missions while concurrently providing valuable data to the growth engine development program. The installation kit designed for the T800 and UH-1 aircraft during the Border Patrol program represents a solid baseline for the growth engine installation in the LUH UH-1H fleet.

The flight test program supported by the Army's ATTC will be much more rigorous than the Border Patrol flight test program. In this program, the Aviation and Troop Command's AVRDEC will

award an unrestricted Air Worthiness Release for the CTS800-54 installation upon successful completion of the flight test program in late 1999. This installation will not require any dynamic component changes to the aircraft or expand the performance envelope beyond the current -10 limitations. The performance inside the envelope will be significantly improved giving the LUH pilots a more reliable, safer, and efficient platform to perform their mission. With a nearly 35-40% improvement in fuel consumption over the T53 engine, LUH pilots will be able to fly further and re-fuel less with the same 209 gallons of fuel.

The program will be valued at over \$108M in procurement costs once all LUH aircraft receive the T800 engines. Although the cost of this program is substantial, the payback to Comanche and the NGB far outweighs the investment. Within the current flying hour program for the LUH, the installation will pay for itself in less than 6-7 years in UH-1H O&S costs alone. The Comanche program schedule and technical risk cost avoidance and subsequent engine procurement savings will far exceed the over all costs of this effort.

Given the current state of the DoD and Army budgets and subsequent outlook for the future, it is essential that active and NGB/Reserve Army aviation programs continue to work together to provide the Army Combined Arms Team with the most cost efficient aviation force possible in the next century. Re-use and dual use of aviation resources will remain a high priority in the aviation strategic management plan in order to keep Army aviation affordable. This truly is a step in the right direction!

★ ★

LTC Birmingham is the Aviation Product Manager, T800 Comanche Engine, St. Louis, MO.

THE UH-60Q: SAVING LIVES

"Hey sir, One-Six called requesting the CSAR task force."

CPT Avelino, the CSAR Task Force Air Mission Commander, sitting strapped in his AH-64, begins his engine start sequence as do the other aircraft in his force; two other Apaches and two UH-60Q MEDEVAC aircraft. The additional UH-60Q was assigned to provide backup if necessary.

This mission actually started the day before, when brigade passed down a mission for a deep attack. As the Battalion S-3 began his operation planning, he ensured that a CSAR Task Force (CSARTF) Air Mission Commander (AMC) was assigned concurrently with the Attack Force Air Mission Commander. These two AMCs then conducted their mission planning together. Based upon METT-T, they determined what the CSARTF's composition should be and how it would operate. They determined that in this case the CSAR TF would sit strip alert and be ready to respond.

The CSARTF AMC conducted their

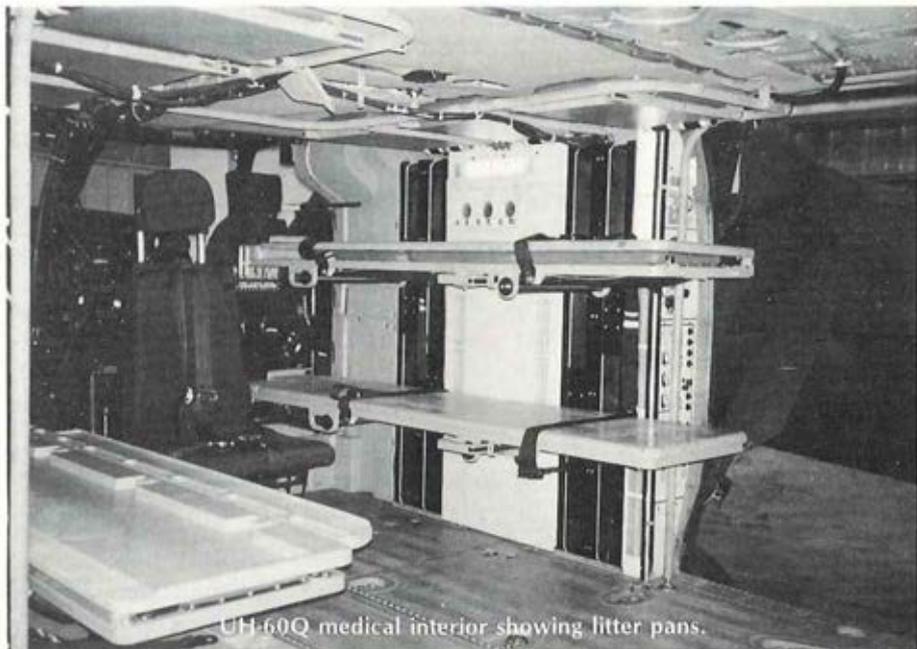
*A demonstration
of how the
new UH-60Q
is a
value-added
asset.*

planning utilizing the Aviation Mission Planning System (AMPS). The AMPS allowed them to plan routes, plot threat locations and fans, load commo frequencies, load primary and alternate routes, and checkpoints. All crews of both task forces would then have the same information which would simplify aircrew coordination and communication.

As the CSARTF departed they noted on their Multi-Function Displays (MFDs) the route selected and checkpoints they would hit enroute. Additionally, through the Improved Data Modem (IDM) they received an updated threat brief and plotted the information.

The weather was not the best in the world—dark, cold and snowy. Typical, the aviators noted, but realizing that all things considered, night and poor weather provided them with the advantage in a fight. All crews were utilizing FLIR and NVGs along the route of flight.

From 80 Nautical Miles (NM), the CSARTF AMC used the AN/ARC-220 NOE-HF radio to establish commo with



UH-60Q medical interior showing litter pans.

the on-scene commander, One-Six. This allowed them more time to prepare than in the "old days" of only having line-of-sight radios which limited their ability to communicate over more than several kilometers.

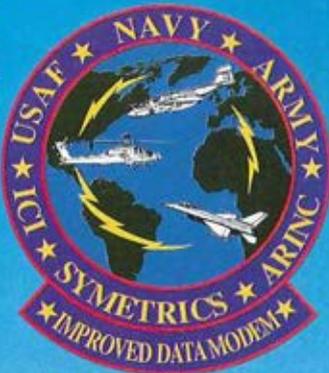
The on-scene commander briefed the CSARTF on the situation, location of the downed aircraft, and the fact that they had established commo with the downed crew. The pilot (PIC) was in pretty good shape with cuts and bruises, although the copilot/gunner (CPG) had a broken leg and was unconscious. The hilly terrain and forests made pinpoint location of their position difficult. Upon passing this information, One-Six also stated that, due to fuel constraints, they were leaving station.

As the CSARTF approached, the lead UH-60Q aircrew utilized their Personnel Locator System (PLS) to achieve bearing

and distance to the downed crew and provided that location information to the AMC in the lead AH-64. Within five kilometers of the rescue site, the CSARTF AMC briefed his aircraft on positions he wanted them to take, and the procedures he wanted the lead Q to follow upon arriving on scene. Although these procedures were part of the pre-mission brief, the AMC updated them based upon specific information received from the Attack TF AMC and the downed aircrew.

As they neared the site, positive commo was established and aircraft began taking up screening positions to provide support if needed. Once the CSARTF AMC felt the scene was secure, the lead Q was brought in. The Q pilots utilized their PLS and FLIR to track and establish a visual ID on the downed crew. It sure beat the days of talking to them on the

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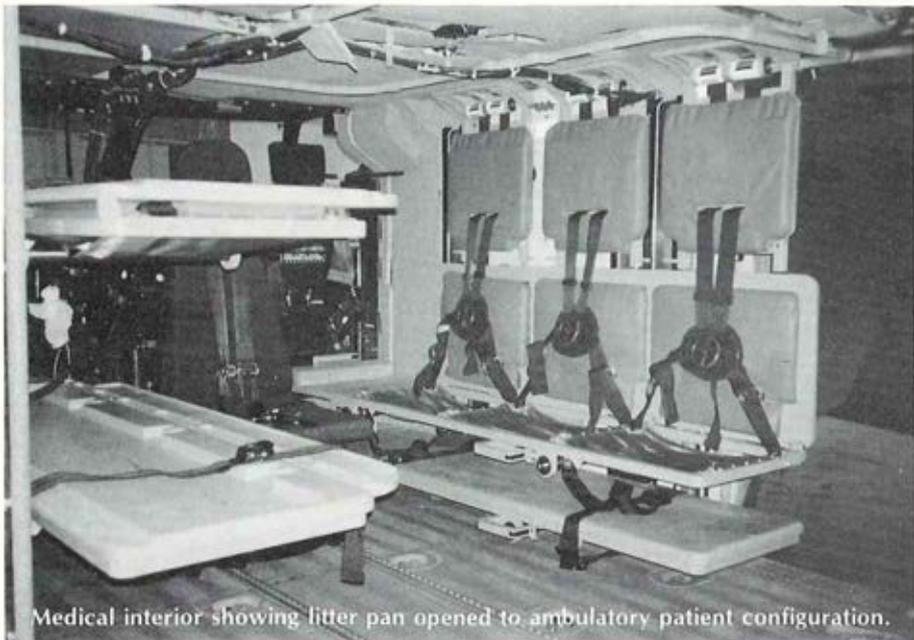


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Medical interior showing litter pan opened to ambulatory patient configuration.

ground and hearing "I hear you, come left 15 degrees, more to your right, 50 meters to your left, I think..." etc. The FLIR/PLS combination took the search out of Search and Rescue by allowing a quick in and out and minimizing exposure and time on site.

While progressing inbound, the MEDEVAC crew simultaneously prepared for a hoist mission. As the crew established a hover over the site, they utilized the FLIR in its "look down" mode to monitor the site while engaging the Hover Box symbology on their MFDs to assist in maintaining their hover. Flight medics and patients alike appreciated this new capability. By allowing the pilots up front to monitor the mission, they didn't get dragged through the trees so often while the crewchief tried to explain positional information to the pilots.

As the UH-60Q came to a hover, the

crewchief opened the cargo door. The flight medic attached himself to the hoist cable and exited the aircraft. As the crewchief lowered his fellow crewmember to the ground, he monitored the amount of cable payed out on the hoist pendant. This allowed him to slow the cable payout and provide the medic with a softer landing as he approached the ground.

Once the medic was on the ground with his gear, the cable was brought back in and the UH-60Q departed and flew several kilometers back to join the standby Q until the medic was ready for them. Had the threat been worse, the CSARTF AMC and the mission AMC may have included another Black Hawk with a squad of infantry to provide ground security, although getting them in and out of this site may have been difficult; the nearest potential LZ looked

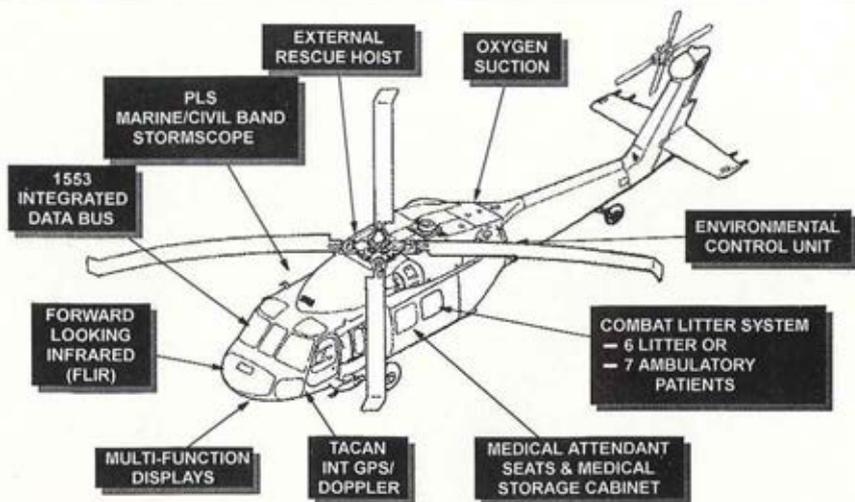


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to be about three kilometers distant.

Once the medic was on the ground, he completed his primary assessment and rigged the CPG in a Skedco litter. As he neared completion, he told his crew that he was ready for pickup. The Q quickly returned to the location, utilizing their integrated GPS/Doppler and FLIR. The crewchief lowered the hoist cable and brought up the Longbow pilot and his CPG, followed by the medic. As the medic was hoisted up, the CSARTF AMC prepared his TF to depart.

As they departed the area, the medic was already working on his patients. As he quickly cut the clothing off the CPG, he realized how much better the patient treatment environment was compared to past MEDEVAC aircraft. The cabin was warm enough to prevent the onset of shock thanks to the Environmental Control Unit (ECU). After all, the patient

was going to be semi-naked in what would otherwise be a freezing cabin, because of the need to apply splints and bandages.

It looked like the pilot would be able to return to duty, but the CPG was in more serious shape. The crewchief worked on the pilot as the medic treated the more seriously injured CPG. A compound fracture of the femur and other possible internal injuries placed him in serious condition. The improved ICS boxes and voice activated microphones allowed the crew to communicate hands-off while treating the casualties without disturbing the pilot's coordination of the mission.

As the flight medic worked on the CPG, he narrated vital medical information to the crewchief, who in turn passed it to the copilot. The copilot was able to transmit the information via the IDM and NOE-HF radio to the hospital.

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NAV/COMM bus controller in the Proof-Of-Concept UH-60Q Medevac Black Hawk, where it provides the pilots with logical and centralized control of varied subsystems and significantly increases mission effectiveness.



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As they passed back into friendly territory, the medic spoke with the pilots and told them the seriousness of the CPG's injuries and that they needed to get to a Level 3 hospital ASAP to save his life and possibly his leg.

The copilot pulled up his nav page on the Central Display Unit (CDU) and checked distances of medical locations on his MFD, and determined that the nearest suitable medical facility was a U.S. Navy ship sitting about 40 miles off the coast. Contacting operations, the copilot updated his flight plan and set up the GPS/Doppler to navigate direct while checking threat data and checkpoints on his MFD. The UH-60Q continued toward the ship as the rest of the CSARTF returned home.

The On-Board Oxygen Generation System (OBOGS) built into the aircraft made the medic feel better knowing his patients weren't going to run out of oxygen enroute. In the past, carrying bottled oxygen had been not just a crash hazard, but was difficult to refill on the battlefield.

As he approached the coast, the pilot contacted the ship on his multiband radio capable of marine band communication and tuned in his TACAN to the ship's frequency. The pilot reflected that they were much better off today in the UH-60Q than they had been in the UH-60A in Grenada and Southwest Asia. During those operations, Army helicopters had difficulty talking to the ships to which they were supposed to evacuate casualties. The constant movement of the ships combined with the Navy's security concerns made it difficult to locate the ship before fuel became an issue. Additionally, he transmitted the patient's medical data over the IDM so the Navy medical personnel would have a head start in preparing to treat their inbound

patients. Utilizing the FLIR, the pilots were able to visually acquire the ship.

After they made their approach, landed, unloaded their patients and shut down for refuel, the crew quietly reflected on how lucky their patients were. Less than two hours ago, the Longbow crew was flying their mission; now they were safely aboard a Navy ship being treated for their injuries. Practicing CSAR procedures with the Aviation Brigade at home station prior to deployment and the capabilities of the UH-60Q were both responsible for saving the lives of their fellow aviators.

The UH-60Q is a UH-60 helicopter optimized for the medical evacuation mission through the addition of modern communications, navigation, and medical components. It raises the standard of care and support to that provided in civilian emergency medical service. No longer are soldiers provided substandard medical support.

The UH-60Q is the Army Surgeon General's number one modernization priority. Although full production is not yet funded, four aircraft are currently being built in the integration and qualification phase of the program which will conclude with a Type Classification IPR scheduled for February 1998. The UH-60Q provides the United States Army, other services, allies, and civilians with a great return on investment whether it be in times of peace or war. This aircraft will be on duty with MEDEVAC units around the world 24 hours a day, seven days a week, 365 days a year, upholding the proud heritage of DUSTOFF.

★ ★

LTC Deets is the APM, UH-60Q, Utility Helicopters Project Management Office, St. Louis, MO.

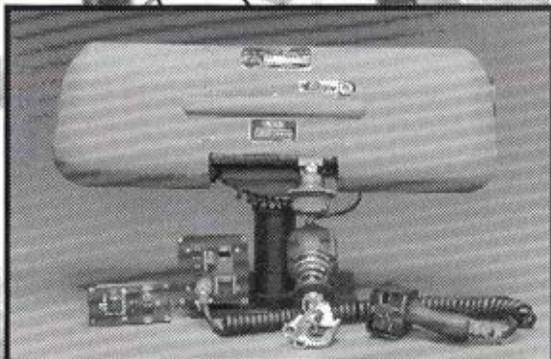
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MEDICAL EVACUATION OPERATIONS (THE OTHER GUYS)

Remember how the commissioned officers in flight school all seemed to look alike until it came time for assignments (or today, when flight students track into an advanced aircraft)? At some point it became obvious that there were a few officers that were not talking about the usual desire to fly the Apache, Cobra, or scout aircraft. They only talked about where they were going and whether they would fly the UH-1 or maybe get lucky and fly the UH-60.

Well, those "other guys" are Medical Service Corps officers. You could not see the difference when they were in a flight suit but when they wore BDUs or Greens they had a different insignia on their collar. It may not seem like a big deal but there is a huge difference. Medical Service Corps is the only branch in the Army that still maintains their own aviators apart from the Aviation Branch.

Rooted into the Army's medical evacuation aviators is a dual loyalty between Army Aviation and the Army Medical Department. Medical aviation units must still rely on Army Aviation for

"...there is a big difference in the work that we do when compared to our aviation contemporaries."

nearly all of its tactical and technical information and support. Unlike the aviation brigades, coordination of all medical evacuation requirements occurs at battalion level. An evacuation battalion falls under a medical brigade and usually under a medical group for ease of command and control.

Medical groups or brigades do not focus on

aviation requirements like A2C2, theater OPTEMPO, ASE, or aviation safety. There are no aviation intermediate maintenance units in the medical structure. All aviation coordination occurs at the battalion or unit level with a few minor exceptions. Unlike the aviation brigades, the medical groups and medical brigades have only one position for a medical aviation staff officer. That officer is usually not an aviation problem solver but a brigade staff officer who hopefully can be the point of contact between the evacuation battalions and the aviation brigades assigned in theater.

U.S. Army medical evacuation doctrine and structure have both changed immensely since inception during the

Vietnam War. The U.S. Army is still the only army in the world that has a dedicated MEDEVAC force within the medical team. Unlike even the U.S. Navy and the U.S. Air Force, the U.S. Army assigns aircraft and crews at the corps level for the sole purpose of providing aeromedical evacuation. The mission restrictions imposed by the Geneva Convention limit MEDEVAC to noncombatant activity. The officers that fly and command these MEDEVAC units are Medical Service Corps officers, not Aviation line officers. They spend their entire career in the medical field despite the additional requirements that involve Army Aviation.

The original concept for deployment was to form a detachment of six aircraft that would attach itself to a field medical facility for support and respond to MEDEVAC calls from that location. Later, the concept of medical aviation companies and evacuation battalions formed to consolidate command and control and support requirements. The medical aviation companies provide internal resources that the detachments and the supporting medical facilities could not. The company concept was a big change from the original design and provided a much stronger link for aviation support. Evacuation battalions take care of both air and ground evacuation companies. The structure now allows for a much quicker response to mass casualty situations and other combat emergencies. The evacuation battalion TOE came from an aviation lift battalion and includes changes directed at the medical mission. An evacuation battalion normally supports a corps but is flexible and can tailor itself to nearly any size support requirement.

The warrant officers that make up the majority of the pilots in Army aviation can float between MEDEVAC and any other Army aviation unit. The physical flying skills are not different in a MEDEVAC unit but the mission has a distinctly different focus. The U.S. Army School of Aviation

Medicine (USASAM) located in Lyster Army Hospital at Ft. Rucker, AL teaches a two week course for medical aviators. The course title is the Aeromedical Evacuation Officers Course (2C-F7) and teaches all medical aviators the medical evacuation doctrine, rules, and procedures for U.S. Army medical evacuation. The course is a requirement for all medical aviators. All 67J officers must take the course to be AOC qualified and all warrant officers must complete the course to be duty MOS qualified. The warrant officers receive an additional skill identifier of D (e.g., -153BD or 153DD).

Much like the recent Aviation Restructuring Initiative (ARI) for the U.S. Army Aviation Center, the U.S. Army Medical Department has conducted a Medical Re-engineering Initiative (MRI). Once again, a change has occurred that has an impact on medical evacuation. Under the MRI, a Corps Support Medical Battalion provides direct medical support to an Army division. The composition of these units will be mission dependent and will probably include a medical aviation company. That means that the medical aviation company falls under a non aviation battalion and has to do all of its own coordination for aviation support and aviation specific information. The evacuation battalions will still exist but will provide general support to a corps or to the theater. The plan also includes the addition of a high capacity air ambulance company in the evacuation battalions.

Another major issue in the medical aviation community has been the impact of the recent Off-Site Agreement. The majority of the medical forces in the U.S. Army are in the reserve components and the agreement reorganized the entire structure. The focus of the agreement was to center the Army Reserves on combat service support and center the National Guard on the missions (MEDEVAC — continued on page 29)

FIXED-FORWARD POINT WEAPON GUN SYSTEMS

Let me say at the outset that because I am the president of a fixed-forward point weapon gun system manufacturer, the following can be seen to be very self-serving. However, I believe the strengths of these arguments and your experience will prove my point.

Everyone knows that the proper selection of mission equipment is critical to the success of the mission. Combat, the ultimate test of man and machine, generates intense argument and discussion regarding the selection of the "best" weapon to engage a particular type of target. In Army Aviation, as in all other combat arms, this argument is ongoing. I will not try to settle this argument forever, but will offer a case for helicopter mounted, large caliber, fixed-forward "point" weapon (gun) systems.

Truths:

- In order to survive an encounter, it helps to be able to engage and hit the target before it can engage and hit you—also known as "standoff" capability.
- You have to hit the target to kill the target. With some targets and ordnance types, "close" is good enough—but with

*A
manufacturer's
view from
one of
AAAA's
industry
members.*

others, "close" may only get you killed.

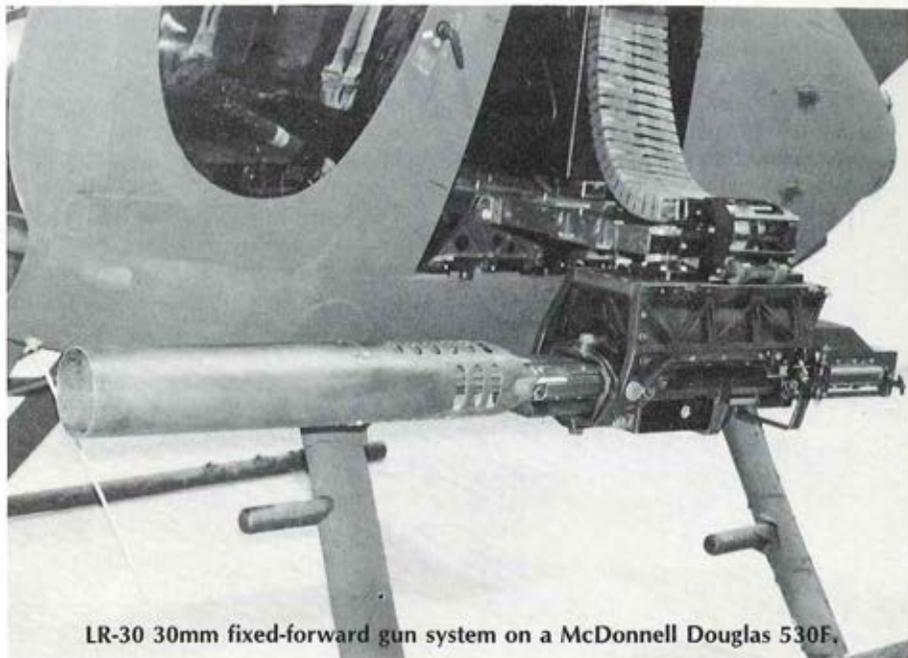
- If you are only "close" when shooting explosive projectile ammunition, the fuze must detonate the projectile in order to have any chance of damaging or killing the target.

Mission Planning Objective. Select the best weapon to allow you to kill the target before it kills you.

(Hellfire not included.) Stated another way: Kill the target as quickly as possible, with the smallest amount of ammunition/ordnance possible.

Turret-mounted guns, pintle-mounted door guns, and 2.75" rockets are "area" weapons—not point weapons. Lacking point accuracy, area weapons invariably use large quantities of ammunition/ordnance to affect a kill. The longer it takes to kill the target, the more you have to shoot. The more you have to shoot, the less ammunition/ordnance you have available to kill subsequent targets ... if you survive.

Weapon System Selection. Fixed-forward 7.62mm mini-guns have an effective range of only about 1,000 meters, have large projectile dispersion rates, and are not point



LR-30 30mm fixed-forward gun system on a McDonnell Douglas 530F.

weapons. 7.62mm ammunition is limited to non-explosive projectile Ball, AP, or Sabot Light Armor Penetrator (SLAP) varieties. Fixed-forward .50 caliber guns have an effective range of about 2,000 meters and can have point accuracy to about 1,000 meters if well maintained and boresighted. Ammunition is available in Ball, AP, and SLAP varieties, which are non-explosive projectiles, and the "Raufoss" explosive projectile variety. Unfortunately, Raufoss has the bad habit of premature detonation, often very close to the gun muzzle and airframe.

The combat effectiveness of 20mm gun systems is limited by relatively poor projectile ballistics and a poor projectile fuze that tends not to function (by not exploding the projectile) at low projectile impact (graze) angles and/or on soft target material. This high dud rate means that, for projectiles that don't explode, a near-miss on the target is

not even going to damage the target, much less kill it.

The effectiveness of 40mm gun systems is limited to, at best, 750 meters because of very low muzzle velocity (790 feet per second) and very poor projectile ballistics. The 40mm projectile is also handicapped with a poor projectile fuze, resulting in relatively high projectile dud rates.

A parallel issue involves 2.75" rockets that would be used to kill a target in lieu of a gun. Unguided rockets are area weapons, not point weapons. In addition, over the last several years, 2.75" rockets—particularly Mk-66s—have had numerous problems that affect their usefulness and usability.

Helicopters, by their very nature, have limited useful load capability that limits their ability to carry a large amount of ammunition/ordnance. Selection of the type of ammunition/ordnance to be carried on a particular mission depends upon, among



LR-30 without blast tube mounted on a Bell OH-58D Kiowa Warrior.

other things, confidence in the ability of the weapon system to deliver the desired ordnance onto the target. The point here is that a fixed-forward gun system gives the user a point weapon whose projectile impacts can be guided onto the target by maneuvering the helicopter platform from standoff range. On the other hand, if the helicopter is armed only with a limited number of 2.75" rockets, the rockets cannot be effectively maneuvered onto the target.

The concept of "large" caliber fixed-forward helicopter gun systems mounted in place of or in addition to turret-mounted guns is not new. In recent years, the Russian Mi-24 Hind helicopters have evolved from a four-barreled, 12.7mm turret-mounted Gatling gun to a fixed-forward pair of 23mm nose guns.

Perhaps the most well-known fixed-forward helicopter gun system is the Vietnam-vintage XM-35 20mm Cobra mounted

system. This system was very effective with its large caliber explosive projectile ammunition. Its poor 20mm fuze and high dispersion rate were overcome in most applications by the high rate of fire from its fixed-forward gun.

It would appear that the best choice of ordnance for many applications would be the large caliber (30mm) fixed-forward gun system with point accuracy, shooting large caliber, well fuzed, explosive projectiles—from standoff range, if necessary.

The ammunition is in inventory, i.e. M799 HE and M789 HEDP. This ammunition has good ballistics out beyond 2,000 meters and an excellent projectile fuze. For larger airframes, such as the UH-60, the M230 gun used on the AH-64 can be mounted in a fixed-forward system. For smaller airframes, my company, Contract Fabrication & Design, Inc. (CFDI) has (GUN SYSTEMS — cont. on page 33)

AIR VOLCANO!

*Emplacing
minefields
across
the FLOT
quickly and
accurately.*

In February 1996, the 101st Airborne Division (Air Assault), received a stack of green shipping containers. Inside these containers were three M-139 Air Volcano Mine Dispensing Systems. They give the Division the ability to emplace minefields across the FLOT, quickly and accurately. The mission was given to Company A, 6th Battalion, 101st Aviation Regiment.

The Air Volcano System is identical to the Ground Volcano with the addition of aircraft mounting hardware and a jettison kit. Armed with this information, we sought the assistance of the 101st Division's 326th Engineer Battalion. The engineers provided us invaluable instruction on mine employing operations.

Immediately following receipt of the Volcano systems, the New Equipment Training (NET) Team from Picatinny Arsenal, New Jersey supervised the required modification to all eight of Alpha Company's aircraft. Crew members were instructed on the installation; mounting, and operation of the system by the NET team over a one week period.

The Directorate of Evaluation and Standardization and the USAAVNC Department of Training and Doctrine sponsored a qualification course for unit instructor pilots. The Georgia Army National Guard at Winder, GA hosted the event. 6th Battalion sent a standardization instructor pilot to this training. Upon his return, we began our crew member qualification training using the draft Exportable Training Package (ETP) as the guide. The ETP recommends 1-3 hours to qualify air crew members, however our experience showed that 3-5 hours is a better planning figure.

All rated and nonrated soldiers were introduced to the system. Rated crew members training focused on performance planning, flight characteristics, emergency procedures, aircraft limitations, and mission planning. The nonrated crew members trained on system testing and the operation of the Dispenser Control Unit (DCU).

Flight training included both day and night vision goggle environments. We fly



M139 Volcano mine dispensing system mounted on a UH-60L Black Hawk.

the aircraft with a full complement of 160 M89 training canisters. The M89 canisters replicate the weight and drag placed upon the aircraft and electronically communicate with the DCU. This allows the DCU to simulate operation of the system without the actual firing of mines. Proper crew coordination and standardized terminology are critical to the success of the mission. The pilot navigating must give clear execution commands to the crewchief operating the DCU to assure accurate placement of the minefield.

The unit uses the UH-60 SFTS to train aviators with scenarios that replicate near maximum aircraft gross weight conditions. The SFTS allows the aviators to react to emergency procedures in the Volcano mission profile of 22,000 pounds.

Mission planning and execution deviate

only slightly from other assault missions in that the objective is a flight path over the planned minefield site rather than a pickup or landing zone. The flight route planning to and from the objective is similar to most tactical missions. From the route's release point (RP), the aircraft flies to the minefield initial point (IP), approximately 1,000 meters from the start point (SP) of the minefield. At the IP, the aircraft is aligned with the mine laying ground track. Air crews adjust airspeed and altitude to the planned profile. The minefield's dimensions and the desired mine density determine the airspeed and altitude for execution.

Passing the IP, the navigator identifies the minefield start point (SP). The pilot receives flight path adjustments from the navigator prior to reaching the SP. At the SP the navigator commands the DCU operator to execute. If planned properly,

the programmed mine laying will end as the aircraft passes over the minefield release point. The aircraft then joins the egress route and returns to the tactical assembly area.

The DCU is programmable to execute missions at 20, 30, 40, 55, 80, and 120 knots ground speed. Our experiences determined the best profile for laying a minefield is 55 knots ground speed and 100 feet above ground level (AGL). The aircraft handles well at 55 knots and allows the navigator and pilot optimum time to precisely adjust the flight path as they near the SP. One hundred feet AGL provides adequate obstacle clearance under most conditions and allows the pilot to concentrate more on maintaining a stable platform and less on obstacle avoidance.

Following qualification training, air crews planned and executed a dummy mine firing exercise using the M88 practice mine canisters. The M88 canisters, identical in outward appearance to the M89, contain charges which actually fire plastic mines. Since we have yet to be allocated training ammunition, the 326th Engineer Battalion graciously provided M88 canisters for the dummy mine fire. Site selection for the fire exercise also posed a problem due to requirements to recover the M88 mines. Mine recovery ruled out using the impact area to shoot the Volcano system. Additionally, we wanted to walk the minefield and observe the pattern and mine density first hand. We selected an inactive landing strip for the training which proved to be an excellent site for the exercise. Any similar open space with short grass provides an excellent training area.

Due to limited dummy mine availability, we were only afforded ten

canisters for the firing exercise. We placed about five M88 canisters at the beginning and end of the firing order on each side of the aircraft. The balance of each rack was full of M89 canisters. This enables the crew to design a minefield, see the displays on the DCU, and inspect the mines on the ground marking the limits of the minefield.

The dummy mine fire exercise was a complete success. All of the system components worked as designed. The flight crew only feels a slight "kick" as the canisters fire. This "kick" has no effect on the crew flying the aircraft. The low level noise does not distract the crew. The only condition not replicated is the 4,900 pound weight loss when firing a full complement of mines.

During the firing exercise, we walked through the handling of live rounds. The live canisters themselves are very stable and safe to handle. Prior to loading, we positioned the canisters on each side of the aircraft, just beyond the rotor disk, at a 45 degree angle forward of the racks. After grounding the aircraft, the four crew members each carry a single canister, holding the muzzle end away from other personnel and the aircraft. The canisters easily attach and lock on to the racks within a matter of seconds.

For two weeks in October 1996, during the 101st Airborne Division's Mega Gold Field Training Exercise (FTX), the Battalion flew Air Volcano missions nightly in a variety of roles. During deep attacks, we followed AH-64s across the FLOT employing minefields to shape the engagement area. During air assaults, we employed minefields in the vicinity of a developing forward operating base, blocking enemy avenues of approach.

During this FTX we struggled with the logistics of this mission. The MTOE

6TH BATTALION, 101ST AVIATION REGIMENT

The 6th Battalion, 101st Aviation Regiment is the 101st Airborne Division's Command Aviation Battalion. It is one of the most diverse and unique battalions in the Army. In addition to three flight companies it includes an Infantry Pathfinder Company. The missions of the Battalion include Long Range Surveillance Detachment (LRSD) insertions/extractions, pathfinder operations, volcano employment operations, command and control, emergency aircrew extractions, and logistical support. Our customers span the entire Division, supporting each major command, performing critical tasks with a variety of special mission equipment.

structure of the command aviation battalion does not resource the battalion with the equipment or personnel required to move and handle mine munitions. During the FTX, unit supply personnel hauled and delivered weighted boxes to simulate the canisters. However, while we did include arming time into each mission time table, we did not have the crew practice the upload and download tasks. The M89 canisters were loaded prior to the FTX and were not removed until the end of the exercise. In future exercises, our training objectives will include installation and removal of the M89 canisters after a mission to simulate loading and arming the Volcano system to more accurately replicate the time needed to perform these tasks.

We are currently staffing different courses of action to resolve logistical support requirements. One possible solution is to increase the cargo carrying capacity of the

battalion. Another possible option is to fly the aircraft to the Division ASP, have ASP personnel move the load to the helipad with their organic transportation assets, and then have the flight crew arm the aircraft at this helipad.

Our systems are presently mounted on the UH-60A airframe. The aircraft weight exceeds 21,000 pounds when loaded with a full rack of canisters, a three man flight crew, and a full fuel load. At higher temperatures and/or pressure altitudes, neither single engine capability nor hover power is available. This requires a location that will allow a rolling takeoff, a situation not normally available in the tactical environment. The UH-60L would provide a greater power margin at these high gross weights.

Maintaining aircraft within center of gravity limits has also posed problems due to a tendency for the aircraft to be forward of the allowable center of gravity limits. To

resolve this problem, we placed five gallon water cans in row five of the rear cabin, or in the stowage compartments of the aircraft. We are working with Black Hawk and Volcano project managers on a possible counterweight in the tail pylon. Making a small counterweight part of the system should resolve this problem.

Despite the issues noted above, our Volcano experience has been rewarding. We have taken a new system out of its boxes and turned it into a multi-faceted combat multiplier for the 101st Airborne Division (Air Assault). Our flight crews have seen the system in action and know it is a great addition to the commander's arsenal. We hope others fielding this equipment might learn from our experiences. We would appreciate any comments and suggestions from the other Air Volcano units in the field. AIR ASSAULT!

★ ★

CW4 Walsh was the Aviation Battalion Standardization Officer, 6th Battalion, 101st Aviation Regiment (Air Assault), Ft. Campbell, KY when this article was written.

CW4 Smith was the Standardization Officer, A Company, 6th Battalion, 101st Aviation Regiment (Air Assault), Ft. Campbell, KY when this article was written.

MEDEVAC

(Continued from Page 21)

of combat and combat support. The medical assets were all destined for the Army Reserve with one exception: medical aviation. All of the Army Reserve medical aviation units inactivated and the mission transferred to the National Guard. Now, the reserve medical support is predominately in the Army Reserves excluding the medical aviation companies that activated in the National Guard. The decision clearly delineated that medical aviation is more of an aviation asset than a member of the medical team.

Under our current doctrine and structure, the U.S. Army places great emphasis on immediate medical response and delivery to definitive care as soon as possible in the war zone. As Army aviators and members of the Army medical team, aeromedical evacuation officers have always served two masters. It is possible however, that someday, due to severe budget constraints or a radical change in our philosophy that all aviators will be line pilots and that the only difference will be the missions they fly.

I take great pride in being a medical aviator and I hope that our Army will not lose sight of the valuable example that we set for the rest of the world. The contributions of all aeromedical evacuation officers involve timely and rapid patient movement and medical resupply. Medical aviators are non-combatants in accordance with the Geneva Convention and carry identification cards to verify our non-combatant status. In that respect, even though we wear the same flight suit, there is a big difference in the work that we do when compared to our aviation contemporaries.

★ ★

MAJ Schwalbe is the S2/S3, 429th Medical Evacuation Battalion, Savannah, GA.

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FIELDING OF THE HELLFIRE SYSTEM TEST SET

In response to a Department of the Army "Urgent Readiness Requirement" (Mar 94), the Air-to-Ground Missile Systems (AGMS) Project Office has successfully completed the fielding of a Hellfire System Test Set (HSTS) to all Apache battalions. The readiness deficiency, originally discovered during Operation Desert Shield, was the inability to detect mission-critical failure modes in the Hellfire launcher and helicopter-mounted equipment. This test set, known officially as Test Set, Guided Missile System (TSGMS): AN/TSM-205, provides this test capability and provides the MOS 68X maintainer a tool to determine the "true" readiness posture of the Hellfire system and to fault-isolate to systemic failures.

During extensive contractor testing before and after Operation Desert Storm, we unexpectedly discovered that 54 percent of all Apache aircraft were incapable of launching a Hellfire missile from every launcher rail. A thorough investigation of the problem concluded that the aircraft Built-in-Test (BIT) could not adequately identify failure modes in the Hellfire

"How lethal is an Apache without an operational Hellfire system?"

system (less missile). Consequently, a unit-level test set was required. In the interim, we furnished Contractor Field Service Representatives (CFSRs) with their engineering development-era test set to provide this capability until the organic test set could be procured and fielded. With this interim test capability, the "true" readiness posture of the

Apache fleet - the ability to launch missiles from all rails - increased from 46 percent to 92 percent.

A Non-Developmental Item (NDI) was selected for the user's HSTS requirement. The Hellfire launcher manufacturer, Marvin Engineering Company, Inc., in Inglewood, CA, had developed an armament systems test set in response to perceived needs of Army aviation platforms. The procurement and fielding of this NDI test set required an Automatic Test Equipment (ATE) waiver from Army standard policy for Test, Measurement, and Diagnostic Equipment (TMDE). Funding for the test sets and support package was provided by the Apache Attack Helicopter Project Office.

The test set is a two-man, portable, flight-line tester that is capable of performing full parametric, functional testing of the Hellfire System (less missile) on the AH-64A Attack Helicopter. This testing is accomplished by monitoring and tracing signals from the launcher's umbilical connector through the pylon connectors and Remote Hellfire Electronics (RHE) to the weapon control panels. Specific test functions include squib firing signals tests, stray voltage tests, laser coding circuitry, missile emulation, misfire and hangfire simulation, direct and indirect fire modes, and firing exclusivity tests.

In the typical test scenario, a Remote Control Unit (RCU) is used by the operator to control the AN/TSM-205 from within the AH-64A's pilot and copilot/gunner (CPG) stations. The test set prompts the operator with simple on-screen instructions of the required actions to complete the test. It monitors the signals resulting from the operation of the pilot or CPG controls through interaction with the AH-64A BIT, the Fault Detection/Location System (FD/LS), by emulating missile-generated signals.

The test set can either be used in a "quick/acceptance test" mode (to determine if missiles can be launched) or a "system test" mode (to fault isolate to failures). Typical test times for a two-launcher aircraft configuration are 30 minutes for the quick test and 45 minutes for the system test. A convenient, additional test feature is the ability to test launchers as a stand-alone item.

The test set was built with environmental and wartime conditions in mind. Government qualification tests proved that the test set would operate in ODS-like temperature extremes (+145 F), an achievement unmatched by any other known aviation test equipment. On the low end, the test set will operate at -45 F. Additionally, the test set's rugged design was qualified to withstand the

physical punishment of flight-line operations, all-weather handling, and transportation movements.

The AN/TSM-205 Test Set has a modular configuration that allows for quick maintenance and repair. The test set has a two-level maintenance concept: organic Aviation Unit Maintenance (AVUM) and contractor depot maintenance. AVUM will perform all preventive maintenance and limited corrective maintenance actions by exchange of Line Replaceable Units (LRUs), typically plug-in/plug-out circuit card assemblies. The test set manufacturer, Marvin Engineering, will provide lifetime depot maintenance on the LRUs.

Since funding limitations allowed only one test set per battalion, a complete spares package was procured and fielded with each test set to ensure a high, test set availability. The 26-item spares package was fielded in 2 storage cases. Reliability predictions for the test set indicate that it should significantly exceed the Mean Time Between Failure (MTBF) requirement of 500 hours.

The Test Set has a maintenance data collection capability of storing up to 100 complete Hellfire System tests. This data can be displayed on the remote control unit or can be printed by connecting any IBM compatible external printer to the AN/TSM-205.

The importance of routinely using the test set for aircraft and Hellfire system maintenance must be emphasized. System readiness and safety are at stake. We want to avoid a repeat of our ODS experience when BIT was declaring our systems Fully-Mission-Capable (FMC) and half of the aircraft could not launch one or more missiles. After all, how lethal is Apache without an operational Hellfire system? The readiness criteria for Hellfire is being updated to require the use of the test set to confirm that all eight rails on two Hellfire launchers are (HELLFIRE — continued on page 50)

LONGBOW APACHE: READY FOR FIRST DELIVERY

On March 21, the first production AH-64D Longbow Apache will be delivered to the United States Army ahead of schedule.

That's good news, but it comes as no surprise because Longbow Apache is a good news story from start to present.

It's the story of a Department of Defense/Industry team that promised U.S. Army soldiers a much more capable and maintainable aircraft; promised acquisition reform and a shortened timeline to fielding; all promises we have kept.

- Six prototype Longbow Apaches that all flew on or ahead of schedule.
- Operational testing completed on schedule with demonstrated unprecedented lethality and survivability
- A unique ability to rapidly "see" and share information on the digital battlefield
- Dramatic improvements in reliability, availability and maintainability.

The March 21 delivery ceremony, to take place at the McDonnell Douglas Helicopter Systems facility in Mesa, AZ, will culminate many years of hard work by this outstanding team that has become a model for future U.S. Army programs to follow.

*Promises
kept
and ahead
of
schedule.*

While the AH-64D Longbow Apache is preparing for its entry into the spotlight, our AH-64A Apaches continue to prove that they are capable of adapting to the changing and expanding roles. From the battlefields of DESERT STORM to the Peace Enforcement role in Bosnia, the AH-64As display superiority across the entire spectrum of conflict.

Today, two prototype Longbow Apaches, flown by Army aviators, are at the NTC. From August through December 1996, those two aircraft with Army crews were stationed at Ft. Hood, TX. They proved time and again to be the premier piece of equipment on the digital battlefields of west Texas. The 4th Infantry Division attack helicopter battalion commander, LTC Doug Eller, says it's not fair to compare Longbow Apache results with the rest of the "digital appliqué" systems because Longbow Apache has six years of digital experience, and it's here now!

The Longbow Apache is a totally integrated weapon system with incredible new combat capabilities. It is a fully digitized 21st Century Weapons System.

The system allows the commander to

detect, classify, display, prioritize, formulate a fire distribution plan, digitally transmit over the Improved Data Modem the target data in a graphical format (a picture is worth a thousand words), pass fire zones and no fire zones to other AH-64Ds in the flight, and initiate a coordinated precision attack ... all in less than 30 seconds. And in weather and obscuration conditions that would render other aircraft ineffective.

Longbow Apache takes Apache readiness and makes it better. During development, we have focused on increasing aircraft availability through improved reliability, greatly enhanced fault isolation and providing a robust Maintenance and Flight Data Recording (MDR/FDR) capability on the aircraft for post flight, off-aircraft diagnostics and maintenance support. The Longbow Integrated Maintenance Support System (LIMSS), five years of Interim Contractor Support (ICS), and Interactive Electronic Technical Manual (IETM) coupled with the MDR/FDR will revolutionize aviation maintenance. Once fielded, the Longbow Apache will have a totally integrated, paperless maintenance system, and will be the first major weapons system in the world with a Class IV IETM.

In the past, the capabilities and operating costs of the Longbow Apache has been unfairly compared to the Cobra and the Huey. Longbow Apache is a revolution in helicopters, more sophisticated than most high-tech fighters and bombers, a fact echoed by Mr. Art Money, Air Force Acquisition Executive, after a recent Longbow Apache flight.

In August 1996, a five-year, multi-year contract for 232 Longbow Apaches was signed with MDHS. The contract stabilizes the industry production base and delivers 50 additional Longbow Apaches in the five-year contract period without requiring an increase in the Army's out-year production budget. Many new product improvements were also

added to the aircraft during this negotiation.

After a highly successful 70-month development and testing program, Longbow Apache production has begun. Twenty-four Apaches have begun the induction process, 11 have been disassembled and prepared for remanufacture. The first seven Apaches are in the remanufacture phase and the first remanufactured aircraft is a 10-year-old Apache that served with the 82nd Aviation Brigade during JUST CAUSE in Panama and DESERT SHIELD/DESERT STORM in the Gulf War. It was inducted for Longbow remanufacture in August 1996 and will be delivered on March 21. The monthly rate will increase to three a month in 1998 and peak at six a month in 2001.

Over the past several years a hard working TRADOC, PEO, DA, OSD and industry team promised a world class attack helicopter for the increasingly difficult to define digital battlefields of the 21st century.

Longbow Apache's success can be summed up in two words: Promises Kept.

★ ★

LTC Rykes is the Product Manager, Longbow Apache, Apache PMO, St. Louis, MO.

GUN SYSTEMS

(Continued from Page 24)

developed the low recoil LR-30, which will soon be available for fixed-forward mounting applications on the OH-58D, MD500, and UH-1H airframes, among others.

The 30mm M230 gun and/or the 30mm LR-30 gun mounted in a fixed-forward manner, using M799 and/or M789 ammunition, can give the user an excellent, stand-off range capable, point weapon system with the capability of killing the intended target.

I believe the fixed-forward 30mm gun may be the best choice for many applications.

★ ★

Mr. Sanderson is the President, Contract Fabrication & Design, Inc. (CFDI), Princeton, TX.

SUCCESS ON THE ROAD TO WAR

It was 2200 hours, with zero illumination and high winds. The eerie howl of the desert wind was broken by the crackling sound of a radio. It was the Intelligence Officer of the First Cavalry Division's Apache Battalion. As usual the Battalion Commander was waiting patiently to execute the destruction of his enemy. "Attack 6, this is Attack 2. Named Area of Interest (NAI) 14 confirms movement of enemy Motorized Rifle Division (MRD) Reserve from their Assembly Area west."

"Roger Attack 2. Break. Attack 3 this is Attack 6, bring Reapers and Vampire elements to REDCON 1 and the Avenger element to REDCON 2."

"Attack 6, this is Attack 2. Lead elements of the 11th MRD Reserve have crossed Decision Point 6 continuing movement to the West."

"Roger Attack 2. Break. Reaper 6, this is Attack 6, move to and occupy Battle Position (BP) 20. Vampire 6, this is Attack 6, move to and occupy BP22. Attack 3, this is Attack 6, bring Avengers to REDCON 1 and have Avengers occupy holding area Ann."

*"The devil
is in
the
details."*

Simultaneously, a Quick Fix intercept of radio traffic between Krasnovian Long Range Surveillance Detachment (LRSD) outpost (Strohs 6) and the Krasnovian Regimental Commander (Iron Horse 6): "Iron Horse 6 this is Strohs 6. Strohs 6 is observing 15 Apaches departing Assembly Area, heading east."

"Strohs 6, this is Iron Horse 6, that's impossible—recount. No Apache Battalion can be flying 15 of 18 Apaches on the 14th day of combat."

"Iron Horse 6, this is Strohs 6. I confirm 15 Apaches heading east." Once again, it was going to be a long night for the Krasnovian Regiment. As First Attack of the First Cavalry Division flew east to destroy the enemy, and clearly demonstrate to the Krasnovian Forces that as long as First Attack and the First Cavalry Division remained in Country, Mohavia was secure and would remain an unattainable Krasnovian objective.

In order to survive, fight, and win as in the actual events that occurred above, units must train as they fight. Success in the theater of Mohavia (NTC) or success

in Combat are one in the same. Frequently units confuse NTC as just a training event. After their first engagement with the Krasnovian Army however, units quickly realize that this is not a simple training event but in fact a war zone. Unfortunately, for those units the Krasnovian Army has won the war before it has started, and the next 14 days of this "training event" becomes a lesson in humility. The best way to maximize the value of this situation can best be found in the words of the Chinese Philosopher Sun Tzu "know the enemy and know yourself; in a hundred battles you will never be in peril."

During the NTC 96-04 rotation, 1-227 Attack Helicopter Battalion (AHB), First Attack, First Cavalry Division demonstrated Sun Tzu's words of wisdom still apply on the modern battlefield. As First Attack arrived in the country of Mohavia, the Battalion set the standard during Reception, Staging, Onward Movement, Integration (RSOI) operations and continued to set the standard throughout the deployment. A few of these accomplishments include: "the best RSOI deployment and redeployment operations in 19 rotations," defeating the Krasnovian Forces in every battle but one, setting the record for the most kills by an Attack Helicopter Battalion (219), maintaining the highest Apache Operational Readiness (OR) rate and launching at a minimum of 15 of 18 Apaches for every mission, maintaining the highest ground vehicle OR rate during a deployment of 98%, successfully conducting two China Lake Missions ... the list goes on. Perhaps the most impressive accomplishment was the entire operation was conducted without any accidents or serious injury to First Attack Soldiers.

The most important facet of the accomplishments above is not the statistics

themselves, but First Attack's training plan that facilitated the battalion to achieve the top of the "training band of excellence" prior to deployment. The training plan developed by LTC Kim Summers is unique in regard to the standard Army training model. Even though the plan was METL based, the execution of the plan centered around the Combined Arms Training Strategy (CATT-S). 1-227 AHB was selected by HQDA to be the test unit for this training strategy. This CATT-S strategy outlines the task, condition, and standards, and frequency of training required from the battalion/staff collective level down to the individual soldier. In addition, the CATT-S program incorporates a detailed matrix that provides a quantitative/qualitative cross walk between type events. For example: if a field training exercise (FTX) is the highest level quality training event scheduled, but the unit is unable to execute an FTX for any number of reasons, then the commander has alternative events, choices executed in sufficient iterations that substitute for the lack of FTX's. Another example; how many combat mission simulator (CMS) periods would it take to equal a training session in the aircraft?

These tasks are outlined in three major areas, deploy, fight, and sustain. This CATT-S strategy formulated the basis of the First Attack training plan. Additionally, embedded within the First Attack training plan was the concept of training total preparedness for war by using a "road to war" training strategy. The Battalion motto of "SURVIVE, FIGHT, AND WIN" was an indivisible triad that focused on total soldier readiness. The key battle focus was preparing the soldier mentally/physically, training the soldier in tactical as well as maintenance operations, and finally preparing the soldier's family for the upcoming deployment to the coun-

try of Mohavia.

With a period of eleven months to implement and complete the First Attack "Road to War Training Strategy," a training framework was required to ensure the Battalion remained focused on its objective endstate of total warfighting readiness. The training framework to implement this unique plan was based on the standard model found in Battle Focus Training FM 25-101. This framework consists of the following three phases: assess the level of training, train to standards, evaluate effectiveness of training/retrain those tasks not to standard.

Beginning in March 1995 First Attack went through an extensive 4 month assessment program which clearly identified those areas in which to invest the battalion's resources to achieve the maximum benefit. Tools that were used to make this assessment were Bde/Bn level field training exercises, Apache Combat Mission Simulator, Staff exercises such as Division level warfighters, gunnery, team level and company level battle drills, and individual training at soldier and pilot level. The standards used to assess the level of readiness of the Battalion are outlined in the Apache Attack Battalion Mission Training Plan and the CATT-S strategy plan. At the end of the assessment period, it was clear the Battalion while capable, was well below the level of readiness required to defeat the most sophisticated and best trained enemy in the world, the Krasnovian Army. In summary, the Battalion's status at the completion of the assessment period was as follows:

"Gunnery skills were weak and slow. The tactical standard operating procedures were antiquated and did not allow quick decisive battalion level maneuver techniques. Night flying skills were adequate. The staff had experienced a 100%

turnover to include the Bn S-3 and Bn Chief of Staff (XO). The staff was totally untrained. Night Bn level flying skills were weak. Companies trained aimlessly with no focus towards achieving Battalion level goals. Finally, the mental agility and family preparedness of the soldiers of First Attack was well below standard."

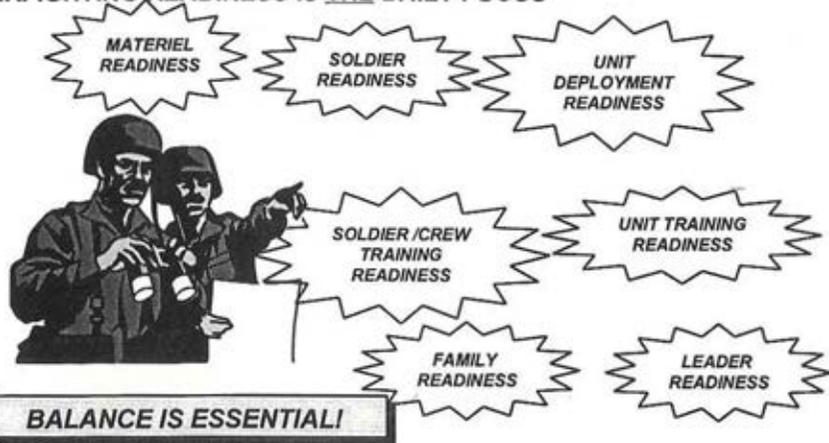
In short, the Battalion did not have a daily warfighting readiness focus and was "out of balance." The chart in Figure 1, developed by MG Leon J. Laporte, Commanding General, First Cavalry Division best describes his Commander's Guidance concerning daily warfighting readiness focus and "unit balance." The completion of the assessment period in July 95 concluded that the newly formed First Attack team had a tremendous amount of training to accomplish in a very short period of time.

The training phase began in July 1995 with the deployment of the Bn Commander, primary staff, and company commanders to Mohavia for a leaders reconnaissance referred to as the Leader Training Program (LTP). This training event set the trend for the upcoming months and enabled the Bn Commander to focus on his company commanders and staff while simultaneously beginning to learn about the sophisticated Krasnovian enemy. The week of LTP was filled with basic how to fight doctrine, a Janus exercise, as well as extensive terrain and logistics TEWTs where Commanders and staff analyzed terrain and fought imaginary battles. In addition, First Attack also participated in a Krasnovian how to fight seminar conducted by the Krasnovian Regimental Commander and observed an actual battle from Brigade hill. Throughout this training the designated battalion scribe took detailed notes. Upon the Battalion's return to Ft. Hood the detailed notes were transcribed and studied in depth. It was from



COMMANDING GENERAL'S GUIDANCE

WARFIGHTING READINESS IS THE DAILY FOCUS



these notes, the Battalion Commander's training assessment, and the experiences of past Apache Battalions deployed to Mohavia, that the First Attack Road to War Training Plan was refined and finalized.

The finalized "Road to War Training Strategy" implemented from July through November 1995 consisted of three components. These three components of preparing a soldier mentally/physically, training in tactical and maintenance operations, and family preparedness training, were done simultaneously, in a calculated, controlled pace. As First Attack Soldiers became more proficient in the three component areas, the training pace increased. This facet is critical to the Road to War Training Strategy because the synergistic effect synchronizing simultaneous training requirements and events prepared the soldiers for the complicated, diverse, fast

pace of combat operations.

The first component in the First Attack Road to War Training Plan is preparing the soldier mentally/physically. Physically preparing the soldier was accomplished by conducting Physical Training four times a week and a Battalion Run monthly which validated the soldier's physical readiness by conducting runs of increasing length and pace. Mentally preparing the soldier is a bit more challenging. The first step is instilling in the soldiers that the Battalion is not simply going to the National Training Center but deploying to a theater to conduct Combat operations. To begin this process the Battalion had to possess individuals that were experts in the Krasnovian doctrine. First Attack accomplished this by sending the Bn S-2 section to the OPFOR Academy. Upon CPT Robin Ferguson's (Bn S-2) return, the Battalion immediately began mental

preparation of its soldiers. Through conducting equipment classes, Krasnovian how to fight classes, studying Krasnovian past battles, Mohavian news clip viewings, posting the Krasnovian regimental and key leader biographies throughout the Battalion, continual terrain analysis of the battlefield, developing enemy courses of actions and wargaming these actions in depth, fighting the Krasnovians in every training exercise, preparing every soldier with press cards and explaining the correct media encounter procedures, developing a Krasnovian handbook that outlined how a Krasnovian soldier fights from the individual level to the regimental level, and finally instilling in the soldiers of First Attack a physical and mental toughness that focused our soldiers on the business at hand of "knowing the enemy," anticipating the enemy, and killing the enemy under any condition. Once this was accomplished the soldiers of First Attack were mentally and physically ready to conduct combat operations.

The second component in the First Attack Road to War is training the soldiers in tactical as well as maintenance operations. In the area of tactical training the Road to War initially focused on staff and Company level training and then gradually integrated both elements of the Battalion together at the Battalion Collective level. The Battalion used such events as First Team Time (a concentrated one day, half day a week sergeants training session), crew/team training with linked TSTT, weekly warfighter seminars focused on First Attack as well as Krasnovian "how to fight" doctrine, Observed fire trainer for calling artillery, small arms and crew served weapons ranges, Battalion Janus Staff planning exercises, NTC terrain board exercises, MILES gunnery (exercises to learn how to fight and kill with the MILES/AGES), integration

of the Phototelesis system into the Apache to provide near real time imagery of the fight, and finally Battalion STX and Field Training exercises which focused on collective level skills. As a result of this extensive training the Battalion rewrote its how to fight doctrine and developed a new tactical standard operating procedure (SOP) that facilitated decisive and rapid maneuver. In the area of maintenance operations the Battalion philosophy of "training is maintenance and maintenance is training" enabled the Battalion to maintain the training pace with high equipment availability.

Using the maintenance doctrine developed by COL(P) Richard Cody of P4T3 (Problem, Parts, People, Plan, Time, Tools, and Technical Inspector), each and every maintenance problem both ground and air were thoroughly analyzed using this doctrine prior to beginning a maintenance procedure on a piece of equipment. The end result was a highly efficient, cost effective maintenance program in the field or garrison, that ensured high equipment availability rates.

Additionally, the philosophy of operational readiness in First Attack was focused around the concept of launch, recover, launch. If an aircraft was not capable of doing multiple missions it would not endure the rigorous pace of combat. Therefore, the ability to thoroughly identify and fix a problem correctly the "first time" enabled the Battalion to meet its Apache operational readiness standard. This standard is defined as 15 of 18 Apaches for 14 days of Sustained Combat Operations. This fundamental philosophy of maintaining is training and training is maintaining proved to be the basic blocking and tackling drill that enabled First Attack to negotiate its Road to War Training and succeed in Mohavia.

The last component of the First Attack

"Road to War" training plan is family preparedness. The key to success in conducting combat operations is being able to maintain 100% soldier focus on the task at hand. Without this focus, successful sustained combat operations is unattainable. While the first two components stated above greatly assist in achieving this focus, a soldier that deploys leaving behind a family that is unprepared for the deployment will eventually become ineffective in combat and risk the life of himself as well as his fellow soldiers.

In the area of family preparedness, First Attack spouses hosted numerous family support meetings and activities prior to deployment to ensure the family support network was well established. The Bn Commander hosted monthly Battalion Family Support "town hall" meetings which covered everything from the Battalion mission and the enemy the battalion would be fighting, to assisting families with predeployment readiness by providing legal services such as wills, and powers of attorney. To assist the Battalion's families during the deployment, First Attack developed a deployment handbook that clearly outlined what to do if assistance is required, how to contact the deployed spouse, key individuals in the family support chain of concern, and the key leaders of the Battalion's Rear Detachment. The First Attack Rear Detachment is by far the most important element to ensuring family preparedness.

The selection of the Officer in Charge (OIC) and Noncommissioned Officer in Charge (NCOIC) of the Rear Detachment is critical. The Battalion Commander's criterion was, "it has to hurt" to be the Rear Detachment Commander/Rear Detachment NCOIC. These soldiers will be required to solve a myriad problems ranging from family death/illness to indebtedness. The Rear Detachment soldiers

are the Battalion Commanders "first on the scene" rescue squad in times of family crisis. The ability of the Rear Detachment to care for families and solve complex problems at their level allows the Battalion to remain battle focused and is a true combat multiplier. In the case of First Attack, the Rear Detachment OIC and NCOIC were thoroughly trained by serving as Rear Detachment throughout the entire First Attack Road to War Training at home station. As a result these individuals were experienced and well known to all the spouses in the unit as a central point of contact in case of emergency or family problems. The most important facet of First Attack's Rear Detachment was the deploying First Attack soldiers had trust and faith in the rear detachment's abilities to handle any situation and take care of First Attack families. The end result was that all families in First Attack were prepared and ready to conduct a deployment as well as maintain a focus that provided a synergistic effect on the battalion's combat power.

As the Road to War Training Plan for First Attack approached November, it was time to begin the final stage of the Battalion Training framework, evaluating the effectiveness of the Battalions training. The tool that was used to conduct this assessment was the Combat Aviation Training Brigade's (CAT-B) unit recertification program. This training event began with a one week pre-test field training exercise which included the use of the MILES/AGES gunnery system. This one week field exercise gave a clear indication what areas the Battalion met standards and what areas required additional training. The following two weeks consisted of retraining those weak areas identified in the pretest phase via Terrain Board and staff battle drills. The recertification culminated with a one week field

exercise resulting in certification of the Battalion as a combat ready unit.

With the Battalion Road to War Training Strategy completed, the next challenge was to prepare for deployment and deploy the Battalion to the country of Mohavia. The key to First Attack's success in this phase of the operation can best be summed up using a quote, "The devil is in the details." The Battalion continued to execute the staff planning process to develop a detailed logistical support plan that addressed aircraft maintenance support, personnel and equipment deployment, as well as equipment draw from prepositioned stocks.

In the area of aircraft maintenance, a maintenance support plan was developed using P4T3 as its cornerstone. Each and every probable failure that was expected to occur in First Attack's future deployment was wargamed in detail. The result of this wargame was a crosswalk between the Aviation Unit Maintenance (AVUM) and Aviation Intermediate Maintenance (AVIM) tool sets and Prescribed Load List (PLL) repair parts. This wargame ensured all required tools were on hand. In the area of repair parts (PLL) the wargame identified the repair parts First Attack had on hand as well as those repair parts not on hand requiring delivery of the parts from the supply system. Additionally, a source for those critical repair parts not on hand were clearly identified, as well as the parts pipeline and ship times for those critical repair parts from item managers direct to Mohavia. The result was a well calculated plan that when executed enabled First Attack to launch, recover, and launch to the standard of 15 of 18 Apaches for 14 consecutive days of sustained combat operations.

In the area of personnel and equipment deployment and preposition equipment draw, the battalion developed a logistical

support plan that first identified those critical vehicles required to be shipped by rail and those pieces of equipment required to be drawn from the equipment preposition yard in Mohavia. This was a unique challenge since the Battalion was restricted to 14 rail cars. Once the vehicle support plan was established, the next phase of the logistical support plan was to develop the execution matrix of personnel and equipment flow into Mohavia to support Reception, Staging, Onward Movement and Integration (RSOI) operations.

Based on the infrastructure of Mohavia and the expected threat level, the intent of the plan was to lead with personnel and equipment to establish a logistical and maintenance support base prior to the Battalion's Apaches arriving in country. The Battalion decided to establish a Log Base (Log Base Warrior) at Bike Lake from its initial inception into Mohavia. This was a change from the traditional methods exercised by previous Attack Battalions. Traditionally Attack Battalions established a base of support from the "dust bowl" and then relocated their logistics base to Bike Lake just prior to aircraft arrival.

The early establishment of Log Base Warrior at Bike Lake enabled First Attack to immediately focus on the RSOI tasks to be accomplished. Additionally, the Battalion was able to continue to train and sharpen its basic combat skills throughout the RSOI operation. To be successful in establishing the Battalion's initial lodgment at Bike Lake independent from the life support of the dust bowl, the staff conducted extensive logistical wargames. These wargames reviewed every detail of the proposed plan. As a result, an execution matrix delineated personnel flow and individual assigned tasks during RSOI operations. It also calculated the flow of

equipment from all modes of transportation (rail, strategic airlift, and self deployment) and preposition equipment draw.

The key to success of this plan was to have the basic life support equipment and supplies (food and water) prepositioned at the proposed Log Base Warrior location (Bike Lake) prior to the Battalion's advance party arrival. To accomplish this, the wargamed logistical support plan outlined the need to line haul this critical equipment and supplies into theater. As a result, First Cavalry Division approved and funded the line haul requirements for First Attack and the Warrior Brigade. With this initial prepositioning of equipment and supplies, the First Attack advance party was able to quickly establish Log Base Warrior at Bike Lake, Mohavia. In the days that followed, First Attack equipment and personnel flowed into country as planned. First Attack was able to build combat power in country, secure its logistical base, and thoroughly train/prepare for future combat operations.

As the First Cavalry Aviation Brigade deployed from Log Base Warrior to Tactical Assembly Area Hammer, First Attack participated in another NTC first. For the first time, two Maneuver Brigade Headquarters operated simultaneously in the "maneuver box." These Maneuver Brigades were the Third Brigade Combat Team and the Fourth Brigade. Never before had an Aviation Brigade headquarters deployed with the mission to conduct combat operations in Mohavia. The Fourth Brigade task organization commanded by COL(P) Dick Cody, consisted of TF Lobo (composed of UH-60s, CH-47s, and an AVIM Slice), 1-227 Attack Helicopter Battalion and HHT 4th Brigade. This task organization was extremely effective. It proved to be the ideal force module to project forward as a part

of Division (-) Brigade Combat Team package in times of real world deployment/combat operations. As First Attack deployed from Log Base Warrior, weapon, vehicle, and aircraft pre-combat checks were complete. The soldiers of First Attack clearly understood their mission: **SURVIVE, FIGHT, AND WIN!**

Survive, Fight and Win is exactly what First Attack accomplished during the 14 days of combat operations. The first three missions consisted of live fire exercises against various targets ranging from a Forward Detachment to a Division Artillery Group. Upon completion of the live fire phase First Attack moved the Battalion across the deserts of Mohavia to establish TAA Killeen and reconfigured its Apaches to MILES/AGES configuration. During this time period, the Combat Aviation Training Brigade recertification training experience benefits were clearly demonstrated. The ground move was flawless, including ground maintenance recovery procedures. The conversion of the Apaches to Miles Ages weapon system was fast and efficient. Due to the CAT B experience, First Attack pilots were already trained and proven as deadly Miles Ages killers. Finally, in the area of Force Protection, the unit's assembly area proved to be impenetrable by the Krasnovian threat as First Attack handed them defeat upon defeat throughout this operation.

During the next 11 days First Attack conducted force on force operations. The staff used an efficient variant of the deliberate planning process based on Decision Point Tactics. To develop in-depth operations orders they used tools such as "Terrabase" to develop routes, battle positions and engagement areas. The staff developed plans through in-depth mission analysis followed by an extensive war-

gaming and rehearsals. The successful execution of the staff's plan was due to First Attack's well trained platoons and crews, and the use of their scouts to attain mounted/dismounted continuous reconnaissance/counter reconnaissance to predict and anticipate enemy actions. As a result First Attack was able to get inside the enemy decision cycle, gain and maintain the initiative and defeat the Krasnovian Forces in 8 of the 9 battles. In the area of generating combat power, First Attack launched at a minimum 15 of 18 Apaches for every mission. Over the 14 days of sustained combat operations First Attack averaged an Apache operational readiness rate greater than 85%, an average ground operational readiness rate of 98%, and set the National Training Center record for the most kills at 219. Upon completion of the Combat Phase the First Attack Soldiers accomplished LTC Kim Summer's Commanders intent, to SURVIVE, FIGHT, AND WIN!

At the completion of Combat Operations and the defeat of the Krasnovian Army, First Attack received orders to redeploy to Log Base Warrior. While the operational war was complete, the logistical war was just beginning. Once again, First Attack implemented a detailed and thoroughly wargamed logistical plan. First Attack would remain at Log Base Warrior until the final night prior to the departure from Mohavia. At that point, the trail party relocated to the "Dust Bowl" and redeployed to home station. The advantage was the total focus of the 4th Brigade's assets on redeployment operations and security of Log Base Warrior. It was essential that the Apaches rapidly depart the theater via self deployment. This enabled the Battalion to focus on shipping its Apache logistical support on the first train to depart from Mohavia. This ensured Apache maintenance capability

arrived at home station as soon as possible. Secondly, the rapid departure of the Apaches enabled the Battalions manpower pool to focus on preparing/turning in prepositioned equipment and rail loading operations. The turn-in of reposition equipment was executed with precision. The basis for this successful turn-in was the excellent maintenance of the equipment while assigned to First Attack. From diligent PMCS operations at the soldier level to outstanding organizational level maintenance conducted by the Battalion Motor Officer (CW2(P) Robert Carter), every vehicle was thoroughly prepared for turn-in/rail load operations.

As the Battalion closed on Home Station and its deployment to the theater of Mohavia came to a close it is important to note that this did not end the Road To War for First Attack. The experiences in Mohavia enabled every soldier and leader in First Attack to learn about the unit's strengths/weakness and most importantly soldiers learned about their own capabilities as soldiers. The completion of this deployment for First Attack did not mark the end of its road to war training strategy. This deployment just marked the end of the first mile of a continuous highway that leads to the total preparation of a unit to successfully conduct Combat Operations at a moment's notice. As a result of the First Attack deployment, First Attack continues to train using its "Road to War" strategy to ensure total soldier readiness, unit balance and maintains its ability to SURVIVE, FIGHT, AND WIN in any theater of operations.

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MAJ Saver is the S-3, 1-227 Attack Helicopter Battalion, 1st Cavalry Division, Ft. Hood, TX.

SINAI "NOMADS"

"Center North, this is MFO 3546. We have just departed Sector Control Center four with the Colombian patient—all life signs are stable. Estimate OP-18 in 42 minutes for crossing to Beer Shiva Hospital, over."

"MFO 3546, this is Center North. I check that you are departing with the patient and will call crossing at OP 1-8. Will contact you once we receive border crossing clearances from Israel and Egypt, call operations normal next 15."

It is a moonless night in the deserts of the Sinai Peninsula, and a red and white U.S. Army UH-1 is in the process of conducting an emergency aerial medical evacuation of a Colombian soldier under night vision goggles. This is just one of the many missions the Aviation Company, 1st U.S. Army Support Battalion conducts in support of the Multinational Force and Observers (MFO) in the Sinai Peninsula, Arab Republic of Egypt. An assignment to the Aviation Company and the MFO is unique and very challenging. Modern day combined peacekeeping operations started here and has continued to uphold the peace for 14 years

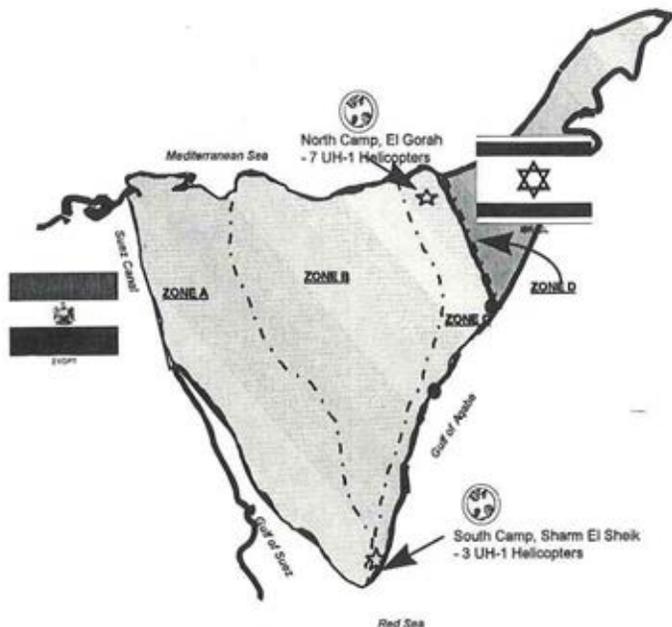
A report from the Aviation Company, 1st U.S. Army Support Battalion (Sinai).

in this strategic and historic region.

The MFO is an eleven nation peacekeeping force charged with the mission to monitor the peace between Israel and Egypt in accordance with the 1979 Camp David Accords. The contributing countries are: Australia; Canada; Colombia; Fiji; France; Hungary; Italy; New Zealand; Norway; Uruguay; and the United

States. The mission is accomplished by constant patrolling of the Sinai and monitoring activities from check points and observation points within the Sinai. The 1st U.S. Army Support Battalion is part of the 507th Corps Support Group, 1st COSCOM, XVIII Airborne Corps. It is permanently located in the Sinai, under the Operational Control of the MFO with the mission to provide all necessary Combat Service Support and rotary wing aviation support to the Force. This requires constant interaction with the other contingents and provides a strong sense of mission accomplishment.

The Aviation company is perhaps the most visible asset within the MFO. We provide general support aviation for the MFO throughout the Sinai region. The Sinai



Aviation Company Area of Operation

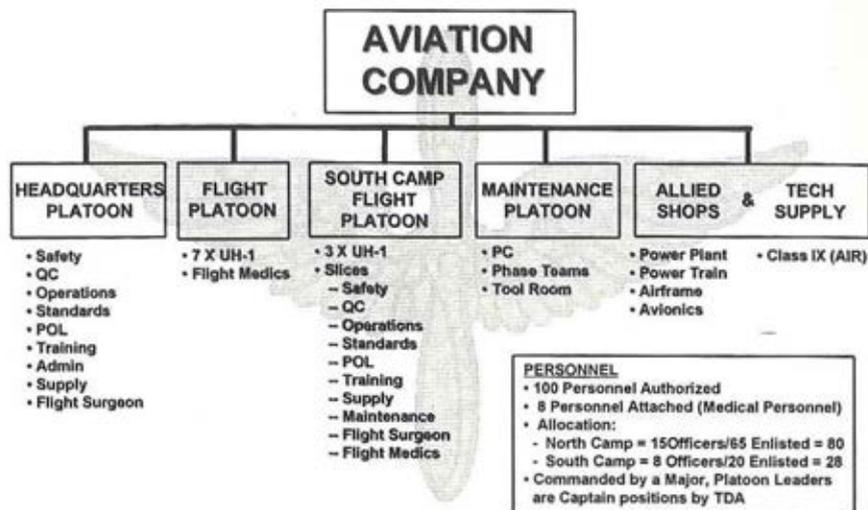
peninsula is the 37,500 square mile land bridge connecting Israel and Egypt. It is bordered on the east by Israel, the south by the Gulf of Aqaba, the west by the Suez Canal and the Gulf of Suez and the north by the Mediterranean Sea.

The Company's mission includes: Medical Evacuation; Search and Rescue; treaty reconnaissance, verification and violation investigations; aerial resupply, Explosive Ordnance Disposal support, Quick Reaction Force security operations, and VIP transportation. The missions are extremely taxing on aircraft and crews. Along with formidable terrain, extreme heat, sandstorms and geopolitical factors, many of these missions are no notice with minimal planning which complicates the missions. The Company's assets are critical to the peacekeeping mission along the highly volatile border between Israel and Egypt.

Aviation Company History. Rotary Wing

support for the Multinational Force and Observers (MFO) began immediately with the creation of the Force. In the early days of the MFO, U.S. Army Aviation provided rotary wing support only in the southern portion of the Sinai. At that time, each rotating Battalion for the United States brought along its own aviation support for its six month rotation. Army level planners determined that the unique mission of the MFO demanded a fixed aviation unit to provide safe professional aerial support. In the fall of 1987, the Aviation Company formed under the U.S. Army Logistical Support Unit at Ras Nas Rani Airport (now Sharm E. Sheikh), South Camp. Until the spring of 1991, U.S. Army Aviation support continued to serve the southern half of the peninsula.

Organizational changes in the Force required the Aviation Company to take over all rotary wing support for the northern half



Aviation Company Organization

of the Sinai as well as continuing its mission in the south. Since then the Aviation Company has served the whole of the MFO, providing aerial support for reconnaissance, troop insertions, resupply, command and control, and 24 hour MEDEVAC aviation support.

Supporting the Force By Air. The Aviation Company's structure matches its unique mission requirements. The company is split into two elements separated by over 250 miles of one of the harshest environments in the world, the Sinai Desert. The company headquarters, maintenance platoon, shops/tech supply platoon and a flight platoon (seven UH-1s) are located at North Camp, El Gorah, Egypt. The remainder of the company is a robust flight platoon (with three UH-1s) located at South Camp, Sharm El Sheikh, Egypt. Aircraft and personnel are transferred between camps to support surge missions.

The maintenance assets must perform AVUM, AVIM and limited Depot level maintenance. It maintains its own warehouse with over 3900 lines of authorized stockage worth over \$3.9 million and over \$99,000 of bench stock all maintained at an average zero balance of 2 percent. The company is isolated by poor communications, unimproved roads and some of the most heavily landmined areas on Earth; its personnel overcome these obstacles daily. The company's higher aviation maintenance support is over 8000 miles west at Fort Bragg, NC with the 4th Battalion, 159th Aviation Regiment. All support requirements and flights must be finely coordinated to cross sensitive international borders which require maintenance and mission planning to be anticipatory, flexible and performed to the strictest standards.

The quality of soldiers and aviators is incredible. The POL, maintenance and

support soldiers have great attitudes and do their mission 24 hours a day, seven days a week, unlike some CONUS assignments. Both POL sections provide the MFO with 24 hour a day Aviation POL support throughout the Sinai. The North Camp POL section conducts forward refueling operations at two remote locations in the western Sinai as well as providing the Colombian Battalion with aircraft refueling training in Spanish at a remote check point in the northeastern Sinai.

Additionally, the South Camp POL section provides 24 hour Hot Refuel operations halfway up the eastern coast of the Gulf of Aqaba at yet another remote observation post. The officers are very experienced and for the majority all volunteers for this assignment. The Company has one of the highest OPTEMPOs of any comparable unit in the U.S. Army. The Company flies over 2800 hours annually requiring an average of 22 phases each year on the ten aircraft fleet.

This year the company flew the 2870 hour flying hour program to + or - zero hours. In doing so, the company flew over 1380 missions and 2870 accident/incident free flight hours. In addition, the company has conducted over 48 MEDEVAC missions, four Search and Rescue missions, and over 120 Civilian Observer Unit reconnaissance/verification flights.

To support this extremely high operational tempo, the company has conducted 28 phase maintenance programs inspections maintaining an operational readiness rate of 84%, 9% above the Department of the Army standard for the UH-1 helicopter. This was done with assigned soldiers, no contractors. What makes this so noteworthy is the fact that the 67N strength within the Company averaged 67% fill for the entire year.

The Aviation company is absolutely crucial to provide the necessary support required by the MFO and to its host nation, Egypt. Twenty-one lives were saved last

December during one mass casualty when 50% of the company was launched within one hour of notification. The victims were from three different nationalities and had to be evacuated to three different hospitals in two countries. The company provides all the life support for one of the most isolated outposts in the southern sector. All food, water, POL, personnel and supplies are carried either internally or externally to the mountain top outpost monitoring the sea lanes in the southern sector. This year alone the Company conducted over 1,600 sling loads, hauling over 700 tons of supplies to the U.S. battalion stationed in the southern sector.

An assignment to the Aviation Company is one year in length filled with outstanding flight and aviation training opportunities. The average aviator flies over 200 hours, and the crew chief flies well over 150 hours. Our maintenance personnel have the opportunity to cross-train in numerous low density MOSs and learn more about their craft as maintainers than in several years in any other location. The year in the Sinai also provides tremendous travel opportunities to places often dreamed of but seldom experienced—Cairo, Luxor, and Mt. Sinai in Egypt; Jerusalem, the Dead Sea in Israel; and Petra in Jordan. All truly historic places which are easily accessed. An assignment to the Company will not only be professionally, but personally fulfilling.

The Aviation Company call sign is "Nomad." It is called that for one simple reason: the company is always on the move, supporting the Force by air. Team Aviation of the 1st U.S. Army Support Battalion is proud and honored to support the 11 nation Multinational Force and Observers in its historic mission, preserving the peace in the Sinai.

★ ★

MAJ Garrison was the Commander, Aviation Company, 1st U.S. Army Support Battalion (Sinai) when this article was written.

LETTERS FROM THE DARK SIDE: THE SYSTEMATIC SLAUGHTER OF SACRED COWS

The officer was light years ahead of his time—a visionary. He found himself in an entirely new branch of the combat arms, an avenue of martial endeavor only recently birthed by the advance of military technology. His soldiers wore uniforms different from those of their more conventional brethren and operated in a dimension of battlespace heretofore unoccupied on the battlefield. The tactics he espoused were radical and untried, and his efforts to employ his new weapons and vehicles to their fullest capability very nearly cost him his career.

The man kept his dream alive in spite of the most radical military drawdown his nation had ever seen. Within a matter of a few hectic years, his army had shrunk from one of the most feared on the planet to an ineffective shell, lacking the funds and national will to support even the most rudimentary training and recruitment. While others lamented their sorry state and nursed their careers at the expense of their soldiers, this man religiously kept abreast of the international state of the military art and preached his gospel of

*The third
prize
winner
of the
1996 AAAA
Essay
Contest.*

military revolution to any of his countrymen who would listen.

He was blockaded at every turn by old guard officers bent on subjugating his complex, expensive, and revolutionary machines to a supporting role for their own particular combat arm. He faced a nearly insurmountable intellectual inertia in attempting to twist the con-

temporary strategists' thinking from the antiquated tactics of the past to the fluid doctrines of combat in the future. In a time when conformity was the norm, he flaunted the uniqueness and individuality of his highly-trained, elite soldiers. In the face of truly overwhelming political odds, the officer persevered, and in so doing changed the face of warfare for the rest of time.

The officer was Heinz Guderian. The time was the interwar period in Germany. The wondrous advance in military technology with which he had allied himself was the reliable internal combustion engine combined with the moderate-weight automotive engineering and flat-trajectory, high-velocity guns in the form

of the main battle tank. The old guard officers who actively impeded his progress were Prussian infantrymen and horse cavalrymen. The tactics he developed at the complete jeopardy of his career went on to become the Blitzkrieg. Guderian's Lightning War eventually annihilated the most respected armies of Europe and fathered the modern concept of combined arms warfare.

We stand on the threshold of another military evolution. The unrestrained advance of technology has again eclipsed conventional concepts of warfare, increasing the potential lethality of man-portable weapon systems to the point at which anachronistic employment of military hardware will soon be unsurvivable. For the global thinker with a creative bent, however, this time in military history represents a coveted opportunity, an opportunity to make history.

Modern technologists theorize that within the next 25 years, advances in microelectronics and room-temperature superconductors will produce man-portable hyper-velocity rail guns and directed-energy weapons that will almost assuredly negate a nation's advantages in high-dollar armor and fixed-wing aircraft. Any military vehicle not capable of maneuvering on the battlefield at tactically significant speeds while masking itself behind meaningful quantities of terra firma will be fodder of these eminently transportable weapons and their artificially intelligent fire control systems.

By their very nature, these weapons will be uncontrollable in their distribution. While initial development costs will be prohibitively expensive for all but the most advanced nations, production models will be within the financial grasp of any number of financially-endowed international miscreants. The inherent smuggleability of a weapon that will collapse to

the size of checked baggage ensures that worldwide proliferation is a foregone conclusion.

The same developments in microelectronics which render our personal computers obsolete short months after they are purchased translate into weapon system effectiveness and lethality only dreamed of in the past. Guidance packages and target acquisition sensors will become small and cheap enough to be retrofitted on a variety of existing munitions and military vehicles, transforming even underfunded third-world nations into serious military threats. With many of the world's high-tech weapons producers short on both cash and scruples, we should soon expect the threat from any number of previously unsuspected avenues. With these remarkable advances in readily-available, ultra-lethal weapon systems, it will soon be time to rethink the hierarchy of tanks and aircraft on the battlefield.

As Army aviators in the 1990s, we occupy a position in the order of battle which could euphemistically be described as tactically equivalent to our combat arms brethren. The reality of the issue, however, is that we are almost without exception subjugated to a supporting role for the tankers and infantrymen for whom we fly. Armor and Infantry headquarters control the employment of aviation assets in keeping with conventional doctrine of two decades past. The adage of two up, one back, and send the attack helicopters deep has become ingrained within us as the battle-tried tactical starting point for the schoolhouse offensive engagement.

We professional aviators actively foster this artificial subservience to our fellow branches in our doctrine and our mindset, manifesting our lust for conformity outwardly in our ABDU flight suit. Petty bickering about perceived comfort and

utility aside, the most common argument I have heard for this expensive new uniform is to enhance credibility for aviators operating in an Infantryman's TOC.

I would assert, however, that a naked aviator who is comfortably conversant in all aspects of combined arms warfare replete with historical anecdotes is significantly more credible to an Infantry commander than is an aviator who is disguised as a grunt but not similarly focused professionally. In these days of evaporating procurement dollars, we could well find a more useful outlet for our increasingly-limited funds. Upgraded survival radios, ballistically-protective flight helmets, or a decent personal defense weapon are but a few possibilities.

We enjoy what is arguably one of the most effective safety programs of any military service worldwide. There are countless aviators alive today solely because the Army leadership of two decades back mandated a much-needed emphasis on safety in all military operations. The current danger lies in a developing timidity among aviators to demand reasonable versatility and performance from their machines for fear of being caught in a perceived safety violation. Aviation operations are increasingly designed with the inevitable eye towards what an accident investigation board would conclude should the mission go awry, rather than toward the most tactically-sound employment of our machines. Accidents involving materiel failure or external conditions are almost inevitably construed to be at least partially the fault of the aircrew in question, the members of which are many times fighting for their very lives at the time of the mishap.

We must strike a balance between the recognized benefits of cautious, safety-oriented operations and the military necessity of conducting tactical operations

which are inherently risky. We should keep in mind the fact that the definition of risk is the probability, whether it be remote or not, of something undesirable occurring. As such, while we should do everything possible to minimize the risk, we should not be surprised when, based possibly on nothing more than an act of God, there will be accidents that are simply unavoidable.

The system we have fostered does not readily lend itself to radical innovation. We have come to reward steadfastness over innovation, safety over initiative, and appearance over function. In the zero-defects Army of the 1990s, innovative thinkers operate in spite of the system rather than with its assistance. Erich Hartmann, the leading fighter ace of all time with 352 Allied aerial victories to his credit, destroyed seven German aircraft in training accidents and combat miscalculations before destroying his first Allied plane. Audie Murphy was accepted for military service on his third attempt, having been told by the Marines and the Airborne forces of his day that he was not physically fit for military service. These legendary heroes would never have survived in the U.S. Army of today.

Our officers are focused on corporate-style staff duties and are, as a result, judged more on their ability to deliver an absurdly detailed Quarterly Training Brief or Unit Status Report than on their facility at forging a cohesive combat team. We attempt to foster the warrior spirit while vehemently discouraging our soldiers from owning personal weapons. We attempt to sanitize the violence from the profession of arms. We look to Corporate America for efficiency and quality-assurance techniques when we are fully capable of developing such things for ourselves.

We are the best and brightest. As a

branch, Aviation is arguably the most competitive in the Army and has been so for some while. Our officers, NCOs, and enlisted soldiers are among the most capable soldiers in the service. We have all the talent and tools necessary to enact the radical changes that our new millennium will demand. Our Army will of necessity be smaller, but history shows that military revolution requires radical thinking much more than it does radical technology or radical funding. The original airborne and airmobile doctrine were developed using creative applications of existing technologies.

We stand on the edge of a new dawn while the future pleads for a hero. The technological cycle has reached a new peak and provided an opportunity for some charismatic visionary to catapult the Aviation Branch into its rightful position as the premier weapon on the battlefield. We move faster, hit harder, and are more versatile than any other branch extant, yet we persist in employing our lift assets as though they were airborne trucks and our attack aircraft as flying tanks.

I would assert that employment of aviation assets should be relatively autonomous from maneuver boundaries imposed by ground components, and that the future battlefield will be shaped primarily by the capacity of Army Aviation to maneuver audaciously. We are capable of changing the way wars are fought if we only allow ourselves to think in the abstract, to unlearn what we have learned.

To reach our fullest potential, we need leaders who can "think outside the box" and are willing to seize the initiative, taking sound, calculated risks in spite of the zero-defects peacetime environment in which we find ourselves. Most of these soldiers will fail, sacrificed on the altars of the status quo, the expectation of infallible judgment, and political correctness.

Someone will slip through, however, and that warrior will have earned a place in the history books of tomorrow with the great military luminaries of the past. The time is right for an aggressive, creative visionary to rethink the way human beings forcibly impose their national will.

Will anyone step forward, accept the challenge fully knowing that the stakes are all or nothing, and take up the gauntlet? The history writers of tomorrow anxiously await an answer.

★ ★

CPT Dabbs is the Operations Officer, B Company, 4th Battalion, 123rd Aviation Regiment, Ft. Wainwright, AK.

HELLFIRE

(Continued from Page 31)

operational before Hellfire can be FMC. Also, we are adding a requirement to perform a quick-test prior to all live-fire training exercises. With over 1500 missiles being launched annually in training, the use of the test set to confirm operational safety is a critical requirement.

The Air-to-Ground Missile Systems (AGMS) Project Office and U.S. Army Missile Command are fully committed to supporting this test set. We encourage your questions, comments, and suggestions for improvement and request that you contact us directly for problem resolution. Our points of contact are Andy Perez, (DSN 746-7243)/E-Mail aperez@redstone.army.mil, Greg Bliss, (DSN 788-0923)/E-Mail gbliss@redstone.army.mil, and MSG Wilson Ho, (DSN 788-0286)/E-Mail wilsonho@redstone.army.mil.

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Mr. Lemuel L. LaRue
Mr. Mike McCurdy
Mr. Paul M. Olson
Mr. Andy White
Mr. Dean Wycough

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SALEM, OREGON**
MAJ Bernard F. Gerding
Mr. Edward M. Reiman

**PHANTOM CORPS
FORT HOOD, TX**
CWS Glenn R. Neal
COL Nathan W. Noyes

**PIKES PEAK
FORT CARSON, CO**
CWS Jan D. Chalupsky

1SG Guillermo Cruz
CPT Jeffrey M. Mills
1LT(P) Troy A. Notz
1LT Tom W. O'Connor
LTC Kurt S. Story

**POTOMAC
ARLINGTON HALL STN, VA**
CWS Robert L. Carneyale

**RISING SUN
CAMP ZAMA, JAPAN**
CPT Hiroko Kuro
LTC Katsuo Kurokawa
MAJ Kazuo Obata
COL Hiroyuki Sumi
Mr. Takeki Yamaoka

**SAVANNAH
FT STEWART/MAAF, GA**
SFC Johnathon W. LaFavor
**SOUTHERN CALIFORNIA
LOS ANGELES, CA**
Mr. Barry R. Bale

**VIRGINIA MILITARY
INSTITUTE
LEXINGTON, VA**
CDT Clarke L. Edwin
CDT John F. Ferguson
CDT Daniel C. Gibson
CDT Matthew J. Kukis
CDT Jason P. Lamb
Ms. Catherine C. McMillan
Ms. Ruth A. Romillo

**WASHINGTON DC
WASHINGTON, DC**

Mr. Colin S. Clark
LTG Merle Freilag, Ret.
CPT Reginald Fulwood, Jr.
**WRIGHT BROTHERS
COLUMBUS, OHIO**
Mr. Geoffrey Bing
Mr. Wayne D. Flory
Mr. Steve Galberg
Mr. Norman Mazurek
Mr. Charles Shanklin

**MEMBERS WITHOUT
CHAPTER AFFILIATION**

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Mr. Meindert Anderson
Mr. Dan Carnevale
Mr. Steven Chansky
Mr. Scott Ciccone
SPC Scott A. Galeazzi
CW3 Keith D. Genter
Mr. Kenneth Goss
Mr. Paul Grabill
Mr. James Hvizd
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Mr. William A. Lawler
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Mr. Mike Leary
Mr. Ken Lobo
LTC Beth Marchman, Ret.
Mr. Brian Muse
Mr. David Nelson
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Mr. Mario C. Suarez
COL Frank T. Taddonio
Mr. Jeff D. Tonnenmacher
LTC William A. Tucker
SGT Angelo B. Villavicencio
Mr. Bill Walters

AAAA President's Message

(Fifteenth in a Continuing Series)

MG Richard E. Stephenson, Ret.

My apologies for missing my January column deadline in ARMY AVIATION Magazine. With the venerable Joseph P. Cribbins on the cover, it's sure to be a collector's item!

The Aviation Leaders Training Conference at Ft. Rucker, AL, hosted by our Aviation Branch Chief, MG Daniel J. Petrosky, was a great success. Brigade commanders and their sergeants major brought issues relevant to current operations, and the conference addressed those issues in open and closed forum sessions. These issues, currently being worked by the Aviation Center Team, include taking a closer look at the integration of the Reserve Component and Active Component, optimizing air traffic services, equipment shortage needs, personnel manning, and training—just to name a few. Final resolution of these issues lies ahead, but the Branch has continued moving forward.

The 1997 Aviation Symposium in the Washington, DC area was the second annual success story as the top Army leadership shared the forum with aviation industry and our developers, trainers, and operators. Our great ASARDA, the Honorable Gil Decker, and his superb support of the forum have made the program an enduring activity to pass Army Aviation in review. GEN Bill Hartzog kept his promise on establishing the Aviation Battlelab, thereby creating a pivotal leadership role and responsibility for the Branch and its leaders as Force XXI evolves into the Army After Next (AAN). This move brings the triumvirate of the Branch Chief, the PEO, and the moving ATCOM closer together as Army Aviation moves into the future.

The 23rd Annual Joseph P. Cribbins Product Support Symposium in St. Louis was another high watermark as the aforementioned icon and cover person himself was there to bid farewell to St. Louis as ATCOM begins ramping up for the move to Huntsville, AL. MG Emmitt E. Gibson and Mr. Paul Bogosian have a very, very difficult transition ahead—with special emphasis on making it happen without degrading mission readiness, and exercising proper care and concern for the movers and non-movers. The move makes the Aviation and Missile Command (AMCOM) of 1 October 1997 the largest Major Subordinate Command in AMC.

With the introduction of flight pay insurance and the establishment of the Army Aviation Scholarship Foundation (AASFI) Corporate Scholarship Program, one can expect increased membership, retention, and corporate interest in AAAA Scholarships. Three corporate scholarships have already been established and will be awarded in 1997—congratulations to Sikorsky, Westar, and DynCorp. Corporate scholarship candidates will receive preferential focus on their company's sponsored scholarship selection, so corporate individual memberships should increase to compete for these \$1,000 scholarships.

We still hope to forge a new contract with AAPI and with our new Executive Vice President of AAAA in place by convention time. There's a lot to get done; however, the priority cannot be higher between now and convention time. That's all for now. As always, "Above the Best."

**Looavull.
Luhvul.
Lewisville.
Looaville.
Looneyville.
AAAA.
Quad-A.**

Army Aviation Association of America.

**There are a lot of ways
to say
SUCCESS!**

**Don't miss the AAAA Convention!
April 23-26, 1997
Louisville, Kentucky**

**Contact the AAAA National Office for details:
Army Aviation Association of America, Inc. (AAAA)
49 Richmondville Avenue
Westport, CT 06880
Telephone: (203) 226-8184
Ext. 130 for General Info or Ext. 131 for Exhibit Info
FAX: (203) 222-9863 • Email: aaaa@quad-a.org**

MUSEUM FOUNDATION DONATIONS



At the 1996 AAAA Annual Convention in Fort Worth, TX, a number of very generous donations to the Army Aviation Museum Foundation were received from industry. At left, BG Rodney Wolfe, Ret., Manager, Ft. Rucker Customer Center, Hughes Aircraft Co., presents a check for \$1,000 to MG Benjamin L. Harrison, Ret., President of the Foundation, as then-Aviation Branch Chief MG Ronald E. Adams looks on.

At right, Mr. Jeff Wishik, Manager, Business Development, Fire Control Systems, also donated \$1,000 on behalf of Lockheed Martin.



At left, COL Dave Carothers, Ret., Vice President and General Manager, Contract Field Teams, donated \$500 to the Foundation from UNC Lear Services.

New AAAA Chapter Officers

Aloha:

1LT Gretchen B. Hiemstra
(Treasurer).

Edwin A. Link:

CW3 Fernando Martinez,
Ret. (Secretary).

Greater Atlanta:

CW5 Robert M. Peterson,
Ret. (VP, Memb); LTC
James B. Blunk, Jr. (VP,
USAR); LTC-Thomas M.
Lee (VP, PAO).

Greater Chicago Area:

LTC Clark M. Delavan
(VP, Membership).

Iron Eagle:

LTC William M. Wilkinson
(Pres); MAJ Paul J. Wood
(VP, Memb. Renew); MAJ
Michael M. Pacheco (VP,
Memb.); MAJ James P.
Ludowese (VP, Chapter
Awards); LTC James P.
McGaughey, IV (VP,
Industry).

Iron Mike:

MAJ Robert D.
Marcinkowski (VP,
Awards).

Morning Calm:

CW5 Leon C. Whitehurst
(Treasurer).

Rising Sun:

MAJ Wesley D. Potter,
Ret. (VP, Programs).

Sinai:

COL Frank T. Taddonio
(Pres); CW4 Jay Bellamy
(SrVP); SGT Angelo B.
Villavicencio (Secy); CPT
Donald M. Reedy (Treas);
CW2 Patrick A. Garrard
(VP, Memb. Enrollment).



Above: Members of the AAAA's newly-activated Sinai Chapter, Cairo, Egypt, pose for a photo opportunity before a UH-1H belonging to the Multinational Force and Observers. From left to right: CW2 Patrick A. Garrard, VP, Membership Enrollment; SGT Angelo B. Villavicencio, Secretary; COL Frank T. Taddonio, President; CW4 Jay Bellamy, Senior VP; and CPT Donald M. Reedy, Treasurer.

Below: Blue Dragon Run pay off! MG Claude Ivey, Ret., Honorary President of the Iron Mike Chapter, Ft. Bragg, NC, presents two \$500 checks to local Boy Scouts and Girl Scouts at the Ft. Bragg "Scout Hut." The race attracted nearly 900 runners and proceeds provided \$4,000 for AAAA scholarships. The second annual Blue Dragon Run is scheduled for Saturday, 12 April 1997.



**AAAA Aviation
Soldier
of the Month**

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

SSG Ronnie Casebeer

(Land of Lincoln)

January 1997

**SPC Matthew C.
Herterick**

(Narragansett Bay)

January 1997

**SSG Harrington M.
Gordon**

(Narragansett Bay)

February 1997

**New AAAA
Industry Members**

Avion, Inc.

Bridgeton, MO

Hill Industries, Inc.

Chatsworth, CA

Panametrics, Inc.

Waltham, MA

Aces

The following persons have
been declared Aces in
recognition of their signing
up five new members each.

Ms. Mary M. Akers

**MAJ Kim Graham
Fuschak**

CPT John R. Kenefick

CPT Susan M. Lind

Ms. Liz A. Murtaugh

**CPT Neal J.
Zuckerman**

In Memoriam

COL David E.

Baeb, Ret.

LTC Bernard A.

Cobb, Ret.



Above: Six Officer Candidates were branched and commissioned into Army Aviation in a ceremony held on 23 JAN 97. AAAA provided the newly-commissioned officers with their first set of Aviation Branch insignia. From left to right: 2LT Jay A. Humphrey, 2LT Brian F. Peterson, 2LT Matthew P. Cashdollar, and 2LT Chris A. Buckner.

Below: AAAA member CPT Bruce Ollstein (seated) is now flying around the U.S. signing copies of his bestseller, *Combat Golf*. The book declares that golf is war and has been read by virtually all the Pentagon brass and countless troops in the field. Bruce is pictured at a recent book signing.



1996 Chapter Membership Enrollment Competition

The tabulations on the 1996 "Chapter Membership Enrollment Competition" have been completed. They are:

Master Chapter Category

Morning Calm Chapter

Seoul, Korea

CY96 Net Member Gain of 307 members

COL Thomas F. Stewart, Chapter President

Mr. John H. Bae, VP Membership

Senior Chapter Category

Flying Tigers Chapter

Ft. Knox, KY

CY96 Net Member Gain of 61 members

LTC Larry D. Maynard, Chapter President

CW3 Gregory A. McDonald, VP Membership

AAAA Chapter Category

Black Knights Chapter

West Point, NY

CY96 Net Gain of 53 members

MAJ Rex A. Russell, Chapter President

MAJ Keith R. Darrow, VP Membership

AAAA "Top Gun" Individual Membership Recruitment

Mr. John H. Bae, Morning Calm Chapter

enrolled 530 new members

CPT Susan M. Lind, Aviation Center Chapter

enrolled 292 new members

CW3 Dale E. Stroud, Aviation Center Chapter

enrolled 118 new members

MAJ Andrew B. Nocks, Leavenworth Chapter

enrolled 75 new members

CW2 Russell O. Stark, Aviation Center Chapter

enrolled 74 new members

The Chapter and Individual Members will receive their awards at the AAAA Annual Membership Meeting, Thursday, 24 April 1997, at the Kentucky Fair and Exposition Center in Louisville, KY.

Hall of Fame Nominations Due July 1, 1997

An AAAA-sponsored Army Aviation Hall of Fame honors those persons who have made:

- an outstanding contribution to Army Aviation over an extended period;
- a doctrinal or technical contribution;
- an innovation with an identifiable impact on Army Aviation;
- efforts that were an inspiration to others, or
- any combination of the foregoing, and records the excellence of their achievements for posterity.

All persons are eligible for induction, except active duty Generals and Colonels. Membership in AAAA is not a requirement.

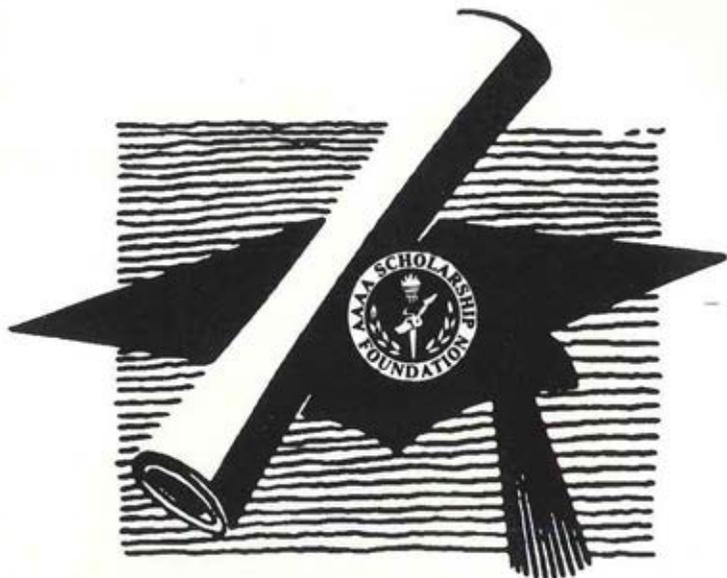
Contact the AAAA National Office (203-226-8184) for Nomination Documentation requirements. All nominations must be postmarked no later than 1 July 1997.

An eight member Board of Trustees is responsible for selecting a specific number of candidates from all nominations received for placement on the Army Aviation Hall of Fame ballot. The ballot will be mailed to AAAA members with two or more years of current continuous membership in the Fall of 1997.

AAAA National Executive Board Nominations

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

AAAA SCHOLARSHIPS AVAILABLE



Scholarships "dedicated" to
Enlisted, Warrant Officer, Company Grade Officer,
and Department of the Army Civilian Members.

Funds also available for spouses, siblings,
& children of AAAA members.

Contact the AAAA Scholarship Foundation, Inc.,
49 Richmondville Ave., Westport, CT 06880-2000

Tel: (203) 226-8184 • FAX: (203) 222-9863

E-MAIL: aaaa@quad-a.org
for complete details.

Application Deadline: May 1, 1997

AAAA Annual Essay Contest

The fourth Annual AAAA Essay Contest is underway. The contest is designed to encourage the writing of original essays on topics that further the general knowledge of U.S. Army Aviation. Suspense date is 1 July 1997.

DOCUMENTATION

The official application form should be used and is attainable from the AAAA National Office, 49 Richmondville Avenue, Westport, CT 06880-2000; Telephone (203) 226-8184; FAX, (203) 222-9863. The forms may be reproduced locally.

AWARD PRIZE

First prize earns \$500 honorarium; second prize earns a \$300 honorarium; and a third prize earns a \$200 honorarium.

PRESENTATION

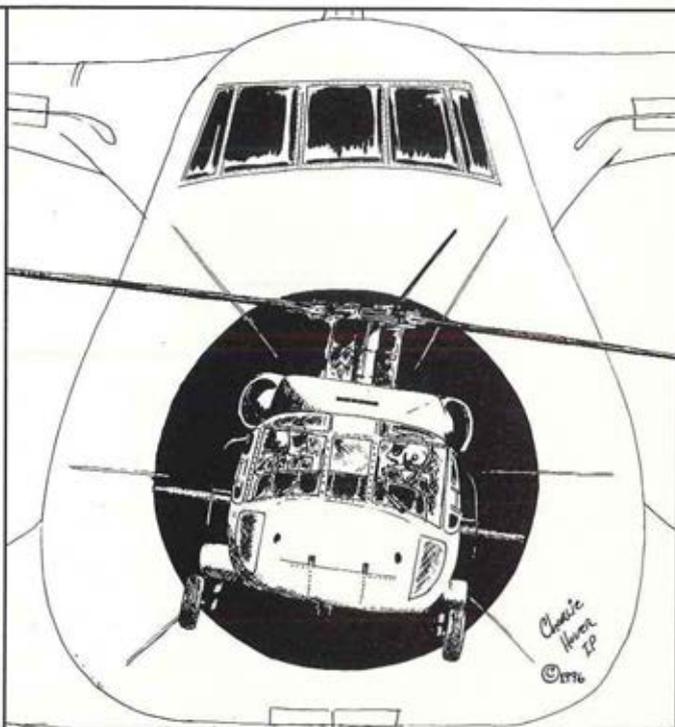
The three winning essays will be published in ARMY AVIATION Magazine. Essays not awarded prizes may also be published in ARMY AVIATION. The winning essay may also be considered for presentation at the AAAA Annual Convention.

ABOUT CHARLIE HOVER

Charlie is a member of AAAA and originally published cartoons for the *Aviation Digest* in the early 1980s.

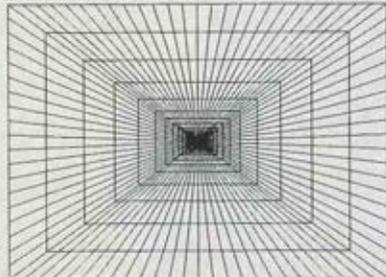
Let us know what you think of Charlie's cartoons:

Tele: (203) 226-8184;
FAX: (203) 222-9863;
E-MAIL: aaaa@quad-a.org



Relax...ATC has you on the scope.

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CAREERTRACK • CAREERTRACK

Active AAAA members may have a 30-word classified employment ad published in two consecutive issues of **ARMY AVIATION** free of charge.

If you'd like to take advantage of the AAAA CareerTrack employment referral service, but you're not yet a member of AAAA, the solution is simple. Request an AAAA membership application with your CareerTrack application.

For further information, contact:

AAAA, 49 Richmondville Avenue,
Westport, CT 06880; Telephone: (203)
226-8184; FAX: (203) 222-9863.

Recently retired 38-year-old Master Sergeant, A&P rated, BS Degree, has extensive helicopter maintenance, flight experience, supervisory, and management skills, 4 years experience as an aviation logistics program manager.

97-02-01

AAAA HOME PAGE!!!

The Army Aviation Association of America now has its own home page on the World Wide Web at:
<http://www.quad-a.org>

AAAA CALENDAR

A list of upcoming AAAA Chapter and National events.

February 1997

- Feb. 7. AAAA Scholarship Board of Governors Executive Committee Meeting, National Guard Readiness Center, Arlington, VA.
- Feb. 8. AAAA National Awards Selection Committee Meeting to select 1996 National Award Recipients, National Guard Readiness Center, Arlington, VA.

April 1997

- Apr. 11. AAAA/Aviation Ball, Hilton Hawaiian Village, Waikiki, HI.
- Apr. 12. AAAA Morning Calm Chapter Army Aviation Birthday Ball, Hyatt Hotel, Seoul, Korea.
- Apr. 23-26. AAAA Annual Convention, Kentucky Fair and Expo Center, Louisville, KY.

July 1997

- July 18. AAAA Scholarship Board of Governors Executive Committee Meeting, National Guard Readiness Center, Arlington, VA.
- July 19. AAAA National Scholarship Selection Committee Meeting to select 1997 National Scholarship recipients, National Guard Readiness Center, Arlington, VA.

April 1998

- Apr. 1-4. AAAA Annual Convention, Charlotte Convention Center, Charlotte, NC.



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