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AVIATION ELECTRONIC COMBAT**

# ARMY AVIATION

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## Briefings

The Army's AH-64D Apache Longbow has flown for the first time equipped with four color flat-panel multipurpose displays (MPDs). Built by Allied-Signal Guidance and Control Systems of Teterboro, N.J., the MPDs will replace the standard cathode-ray tube multifunction displays currently fitted to the AH-64D.

On October 18, 1997 **The Women's Memorial** honoring the women who have served in our nation's Armed Forces was dedicated at Arlington National Cemetery. Located at the main entrance of Arlington National Cemetery, The Women's Memorial and its Education Center will be a place for service-women, historians, scholars, teachers, children and the general public to come and participate in discussions, view films and photographs, and gain information on women in the military. For more information, contact Women in Military Service For America Memorial Foundation at (703) 533-1155, Dept. 560 Washington, DC 20042-0560.

**Raytheon Aerospace** has won a one-year, \$16.7 million Department of Justice contract to provide total aviation support services to the Drug Enforcement Administration's Office of Aviation Operations. Raytheon Aerospace will be located at the main operating site in Fort Worth, Texas, and at other field operating sites as mission responsibilities dictate. The contract contains four one-year options; if all are exercised the total value of the contract will be approximately \$84.7 million.

**W. James McNerney** has been named president and chief executive officer of General Electric Aircraft Engines (GEAE), headquartered in Evendale, Ohio. In September, GEAE won a multi-year Department of Defense contract for T700-GE-401C and -701C turboshaft engines, the former for Navy CH-60 helicopters and the latter for Air Force HH-60G and Army UH-60 helicopters. The contract has a potential value of \$200 million and covers the period 1998 through 2000, with optional customer extension through 2002.

The Hasbro Toy Company has introduced a **female Army Aviator action figure** as part of a projected 16-soldier series. The 12-inch-tall articulated figure comes with a flight suit, dog tags, helmet, load-bearing vest and 9mm Beretta pistol. The helicopter pilot figure will retail for \$24.99, and is scheduled to hit stores this month [October].

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## ARMY AVIATION: A TRAINED AND READY FORCE

Since the fall of the Berlin Wall in 1989, we have witnessed a decline in active duty Army strength by 36 percent, while missions have increased sixteen fold. This operational pace is indicative of our increasing involvement in and total commitment to defending our nation's interests around the world.

The Army's primary mission is to fight and win America's wars, a role it has fulfilled ably since the birth of our nation. In the modern era, that role has expanded to include defending U.S. interests on a global scale. These missions call for a force capable across the full spectrum of operations, whether responding to a call for humanitarian assistance, forward deployed in a deterrent role, or engaged in conventional combat.

I am proud to say Army Aviation has and continues to be an integral part of our power projection Army. Competent leaders and quality soldiers conducting tough realistic, mission-focused training have given

### *Defending U.S. interests on a global scale.*

us the trained and ready force necessary to respond rapidly to crisis at home and throughout the world.

Forward deployed Army forces represent U.S. commitment to its allies and serve as our nation's strongest preventive measure.

Among the U.S. soldiers deployed to Bosnia, implementing the Dayton Peace Accords, we find units like the 11th Aviation Regiment, 4th Brigades of both the 1st Armor Division and 1st Infantry Division, and the 229th Attack Helicopter Regiment.

Having deployed from Fort Bragg, NC in January of this year, the 229th has already participated in ten named operations in support of Stabilization Forces, including aerial gunnery and CALFEXes with the United Kingdom and our newest member of NATO, the Czech Republic. Among their ranks are great soldiers like CW4 Ron Moring. As the Task Force's Master Gunner, CW4 Moring developed a Table VIII qualification for Black Apaches and door gunnery for the Black



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Hawks. CW4 Moring conducted mission essential tasks analysis and balanced mission requirements with situational awareness to create challenging scenarios in the SFOR environment, thus sustaining gunnery proficiency.

In the Republic of Korea, as part of the Combined Forces Command, 17th Aviation Brigade and 4th Aviation Brigade, 2nd Infantry Division, stand alongside our forces, ready to deter aggression and promote stability on the Korean peninsula, as we have for more than forty years. The 6th Cavalry, for instance, stands ready with all 42 Apache crews qualified and ready for combat. Training for their ever present mission, they recently completed over-water Hellfire training off the southwest coast of Korea, rear area operations at Kunsan Airbase, and deep operations against a moving OPFOR, while utilizing real world intelligence assets available in theater.

In addition to executing missions abroad in support of national policy, Army Aviation is lending support at home. In Colorado, the assault troop of 4-3 ACR is credited with 12 search and rescue missions, as well as 20 fire fighting missions this year. One of its members, SGT James Shostedt, a UH-60 crew chief, is currently pending an Army Soldiers' Medal for his role in rescuing a 67 year old woman, who had been lost for five days. On a similar note the Squadron's Medical Evacuation Company, the 571st Air Ambulance, received the United States "Dustoff Association" Rescue of the Year Award for its role in the rescue of a lost hunter in

extremely hazardous weather conditions.

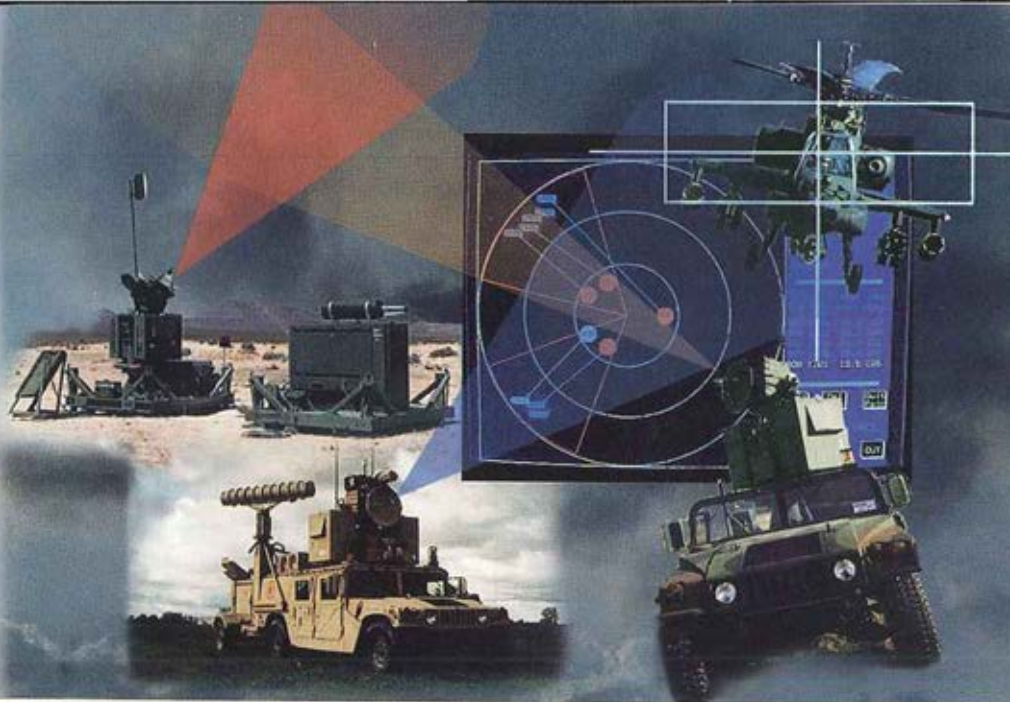
In counterdrug operations along America's southwest border, Army Aviation flies in support of counterdrug activities. The Combat Aviation Brigade of the 10th Mountain Division, for instance, recently participated in such a mission, in support of JTF-6 while directly contributing to the seizure of over 1200 pounds of marijuana and aiding in the apprehension of over 800 illegal aliens.

In the meantime, the 4th Brigade, 4th Infantry Division lead by COL Steve Ferrell, fought a successful 21st Century fight at the National Training Center. America's Army has changed significantly to meet the challenges of our uncertain world. Today's smaller Army requires increased operational and personnel integration of the active and reserve components. The reserve components provide essential capabilities not always found in the active force. For

instance, in July 97, personnel from the National Guard MACE and the 1106th AVCRAD of the CA ARNG deployed from home stations to Jacksonville, FL and 3d Port, Fort Eustis, VA in support of the XVIII ABN Corps "Sea Emergency Deployment Readiness Exercise" (SEDRE). These personnel trained soldiers from the 101st Airborne Division in disassembling, packing, and shrink wrapping a total of 30 aircraft. After transport on two separate Army vessels, aircraft were then off-loaded and reassembled, at which time the 101st Aviation Brigade took them back into operations.

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Today's Army is truly America's Army—a total and balanced force of active Army, Army National Guard, and Army Reserve. Within this force, quality people remain as the cornerstone. Quality people enable the Army to fulfill its worldwide strategic mission with a relatively small structure that has the versatility and adaptability to perform a wide range of operations. It's people like 1LT Patrick Rogers of 4-3 CAV, who was recognized for excellence during a recent ARMS inspection while receiving a Best in FORSCOM rating for his outstanding fuel and ammunition management, which included over 430,000 gallons of JP8 expended and over 160,000 rounds of ammunition transported.

It's people like SGT Shostedt and CW4 Moring who exhibit the kind of values upon which our Army survives. These common values of selfless service, courage, duty, and

respect are what create the bonds that make our soldiers successful and capable of meeting the demands of our nation and it will be these values that take us into the 21st century.

Army Aviation has accomplished much in FY 97 and for that you should be proud. I personally commend you on your accomplishments and thank you for your devoted service.

Above the Best!

\* \*

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

## The Association recognizes members and chapters dedicated to membership growth through a variety of membership programs.



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## AVIATION ELECTRONIC COMBAT

This is my first article as the Project Manager Aviation Electronic Combat. I want to share with you my philosophy and vision for the future as well as a brief overview of the accomplishments over the last year.

Some of you have not met me. I took over the reins of the AEC PMO on 1 August from COL Pat Oler. COL Oler and the AEC team continued the great tradition for working hard to provide the best available aviation electronics equipment to the aviators. Indeed, the accomplishments I will discuss below are a result of their hard work and dedication.

Although I am the new guy in AEC I am no stranger to the Army or aviation having spent more than 30 years working in the Army, 29 of which have been in Army aviation. Prior to selection as the AEC PM, I served as the Deputy Project Manager for Black Hawk for 5 years. I have also served as the Project Manager for Avionics, Deputy Project Manager for Cobra, Chief of the Technical Division in Cobra and a technical manager in the Special Electronic Mission Aircraft (SEMA), CH-47, and Heavy Lift Helicopter (HLH) PM offices.

My philosophy and vision are shaped by

### *The Information and Electronic Warfare Integrators for Army Aviation*

my aviation experience and a belief in the importance of the electronic products provided by the AEC PMO to Army aviation. This philosophy is reinforced with the Army's current emphasis in the direction of digitization. If anything, you will see a

renewed investment in and commitment to the integration of these common products on all of PEO Aviation platforms. No matter how good the product is, if it does not integrate on the aircraft and interoperate reliably and effectively with other subsystems it does not meet the user's needs.

Current projected Army budgets show little planning for new Army aircraft to provide our soldiers with the decisive winning edge. I believe enhancing the decisive edge during the next 15 years will come from the development, production and installation of sophisticated electronics and digitized systems which will allow us to have the most effective warfighters known to date. The AEC PMO is uniquely positioned within PEO Aviation to deliver a common set of Avionics and EW products applicable to all Army aviation platforms. The Avionics and Aircraft Survivability Equipment (ASE) Products which are being developed, produced and



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fielded today form a base of common products. These common systems provide advanced capability for all Army aircraft while investing minimum R&D dollars and providing significant life cycle cost avoidance through common logistical support and training.

**Accomplishments.** The past year has been extremely busy. Not only did we have major efforts in support of TF XXI but we also had to take care of all of our normal development and production programs.

**TF XXI AWE.** Several PM AEC products were major players in TF XXI. We had six different pieces of equipment participating in the experiment. There was at least one piece of AEC equipment on every Army Aviation platform and in many cases three.

The overall results were very positive for the future of the digitized battlefield. The experiment provided excellent feedback which emphasized

existing problems as well as successes. There were some very positive lessons relating to the level of automation incorporated into many tasks which reduced the work load of both the flight crews during the mission and the ground crews prior to the mission.

Additionally, this level of automation definitely leads to the ability of the digitized force to execute its mission more accurately and rapidly. The information level across the battlefield was improved. On the down side however, it was very apparent that information overload was a definite potential problem and that very tight control on the release of software changes on all Army systems was needed in order to insure interoperability.

Although a significant amount of integration between systems had taken place, many systems that have great potential in reducing work load were not adequately integrated, making automation of some tasks impossible during the exercise.

A particular standout in the experiment was the Army Airborne Command and Control System (A2C2S). The A2C2S was one of only 11 systems, out of more than 80 participating in the TFXXI AWE, selected by the Chief of Staff of the Army to receive Warfighter Rapid Acquisition Program (WRAP) funds to accelerate fielding of that system. I encourage you to read the accompanying article on page 26 in this special issue which goes into more detail on the A2C2S program.

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**Taking Care of Business.** We have had more than TFXXI to keep us busy this past year. In addition to all the hard work that went into supporting TFXXI the AEC team had a

full years workload doing what PMs get paid to do. In other words, even without TFXXI, our scheduled development, testing, production and fielding of systems to meet established Operational Requirements.

On the production and fielding side we completed fielding of Have Quick II. Production of the Embedded GPS Inertial (EGI) continued and fielding of the EGI was initiated on the AH-64A and OH-58D. Production quantities of the Doppler GPS Navigation System (DGNS) were increased as a result of a Congressional plus up which allows fielding on UH-60s and CH-47s to be completed by early 2000. Fieldings of the AVR-2A and antenna upgrades to the APR-



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in the work we do here.  
But then again,  
look at the aircrews  
we're doing it for."

Andy Whitaker,  
ATIRCM/CMWS  
Program Director



At Sanders, protecting aircrews means mission success. We're now developing the Advanced Threat Infrared Countermeasure (ATIRCM) system, a next-generation laser-based countermeasure system, and the Common Missile Warning System (CMWS) to sense and defeat even the most advanced threats. This cutting-edge technology will ensure more pilots make it home, and their aircraft along with them. ATIRCM and CMWS are just two of the revolutionary products we're working on for military and commercial markets. And they're two examples of how Sanders is building inventions for life.

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39A have also continued.

Development and testing is on schedule for two very important Avionics products and two very significant ASE products. One of the Avionics products is of course A2C2S. You will find more about it in the separate accompanying article I mentioned earlier. Additionally the ARC-220 completed operational test this year and will have completed its Milestone III by the time you read this article. Both the Suite of Integrated Radar Frequency Countermeasures (SIRFC) and the Suite of Integrated Infrared Countermeasures (SIIRCM) completed their critical design reviews.


**The Future of AEC.** In broad terms, my vision for the future of AEC is to leverage the base of common products being developed and fielded now. Utilizing some of the same electronics and much of the software that are part of that base, I believe we can

incrementally develop a family of standard electronics modules that will fit into a common backplane resulting in common modular aviation electronics. There will likely be a need for some unique elements but I believe we must strive to develop an open architecture that will minimize, if not eliminate, aircraft unique electronic elements. This will allow the inclusion of new contractor developed capabilities by the insertion of a module and the associated controlling software. It will be a big challenge but the potential pay off is even bigger. The accompanying articles in this issue from both the Avionics and ASE Product Managers provide some specific examples of future plans.

\* \*

*Mr. Johnston is the Project Manager, Aviation Electronic Combat, Huntsville, AL.*





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## ELECTRONIC ARMOR FOR ARMY AVIATION

The current suite of aircraft survivability equipment (ASE) available to the Army Aviator was developed to identify and defeat anti-aircraft threats from the former Soviet Bloc. All systems were designed and built during the 1970s and 1980s, and the technologies applied represent the state-of-the-art for the period.

When our current ASE gear was fielded, it was the finest in the world. It defeated the threats that opposed NATO and met all the objectives set forth for each program. However, all systems were built with single functions in mind, and no major efforts were made to apply system integration methodologies. Additionally, because of the nature of the threat, available technologies, and a lack of a clear need for rapid re-programming, funding and schedule constraints, the systems were not developed with the ability to change rapidly with the threat as countermeasure effectiveness improved. The result is that U.S. Army Aviation has a complete series of ASE, which consists of federated boxes that can defeat a constrained set of threat systems.

During the 80s and 90s there have been

### *Aircraft Survivability Equipment (ASE) is the key to survival*

tremendous advances in technology. A significant growth in the use of the frequency spectrum for target acquisition, fire control and terminal guidance mandates innovations in U.S. countermeasure design and application. The proliferation of

advanced weaponry to third world countries and the increase in complex operations, (Operations Other Than War) have been key to a shift in the U.S. Army's execution of Electronic Combat.

Within the Project Management - Aviation Electronic Combat (PM-AEC) office, we have made a conscious commitment to quickly develop and field a new generation of effective, Warfighter focused Electronic Warfare systems. As the focal point for Army Aviation avionics and ASE development, we have adopted a policy to develop integrated, mission configurable ASE gear to meet the future needs of Army Aviation. Within PM-AEC, the Product Manager-Aircraft Survivability Equipment (PM-ASE) and the Product Manager-Avionics (PM-Avionics) are responsible for the implementation of our vision, with PM-ASE leading the efforts towards advanced systems integration.

The current suite of ASE falls into five

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general categories: radar warning, radar countermeasures, infrared (IR) countermeasures, and missile warning, and laser warning.

From a radar warning receiver (RWR) perspective, the U.S. Army has two basic systems, the AN/APR-39A (V)1 and the AN/APR-44 (V)1/3. Together, they have the ability to indicate the relative bearing of pulse and continuous wave (CW) radar threats. Using 1970s technology, a limited number of factors were available to discriminate between complex radar types, and the precision of the directional measurements taken by the system. As a result, the RWRs are limited in the amount and accuracy of the information they provide the pilot.

The radar countermeasures currently available to Army Aviation are the AN/ALQ-136 pulse jammer and AN/ALQ-162 CW jammer. Each of these systems was designed with a specific band of threats in mind and cannot be "grown" to counter the more modern and sophisticated systems currently available around the world. As a pilot, I felt that a jammer must jam everything, or it wouldn't be called a jammer. The fact of the matter is that even if your aircraft had both systems installed, the architecture and system limitations would not provide unlimited protection against today's air defense threats.

In a similar fashion, the ALQ-144A IR jammer was designed to counter earlier generation heat seeking missiles. The system operates continuously with no detection or reporting capability, limiting its effectiveness against newer IR threats that have on-board anti-spoofing algorithms.

Finally, the current generation missile warning device, the ALQ-156 is essentially an active airborne radar that detects missiles as they home in on an aircraft. When a threat is detected, a flare is launched from the M-

130 dispenser to decoy the incoming missile. Since the system is an active radar, it is vulnerable to detection by off-board sensors.

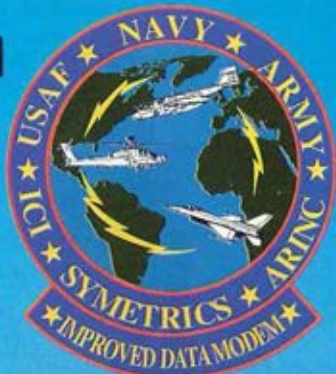
All of these systems were designed to operate autonomously, and have limited ability to integrate with other systems. Integration efforts within the Special Operations community have maximized the interaction between the components, but none can take advantage of sensing and processing done by other systems. Additionally, multiple controls and a lack of integrated displays and advisories can make aircrew situational assessments difficult. The PM-ASE has the mission to field and sustain these systems; but our goal is to improve their shortcomings, by taking advantage of new technologies which allow ASE gear to contribute to winning the information war both now and in the future.

Within PM-ASE, there are three programs that provide the engineering backbone to meet the challenges of defeating advanced anti-aircraft systems — the AN/AVR-2A Laser Warning System, the ALQ-212 Suite of Integrated InfraRed Countermeasures (SIIRCM), and the ALQ-211 Suite of Integrated Radar Frequency Countermeasures (SIRFC), Figure 1 (pg. 22).

The AN/AVR-2A system is Army Aviation's first laser detection and warning device. The system is capable of characterizing lasers by their application (rangerfinder, designator, or beamrider), prioritizing the signals by lethality, then reporting the situation to the aircrew and onboard aircraft systems. The AVR-2A is currently being fielded to Apache and Kiowa Warrior units.

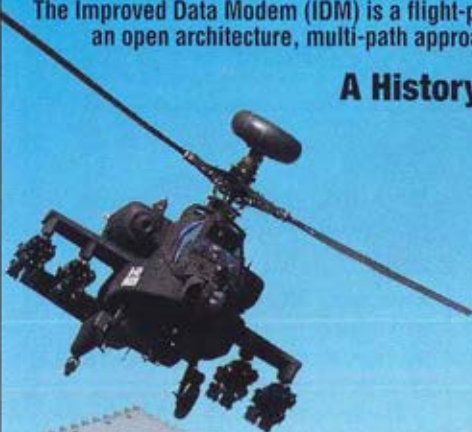
The SIIRCM systems combine the functions of missile warning and IR Jamming in a suite that will defeat modern IR guided threats. As a joint development with the USAF and Navy, the SIIRCM system will

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# ASE/Avionics Integration

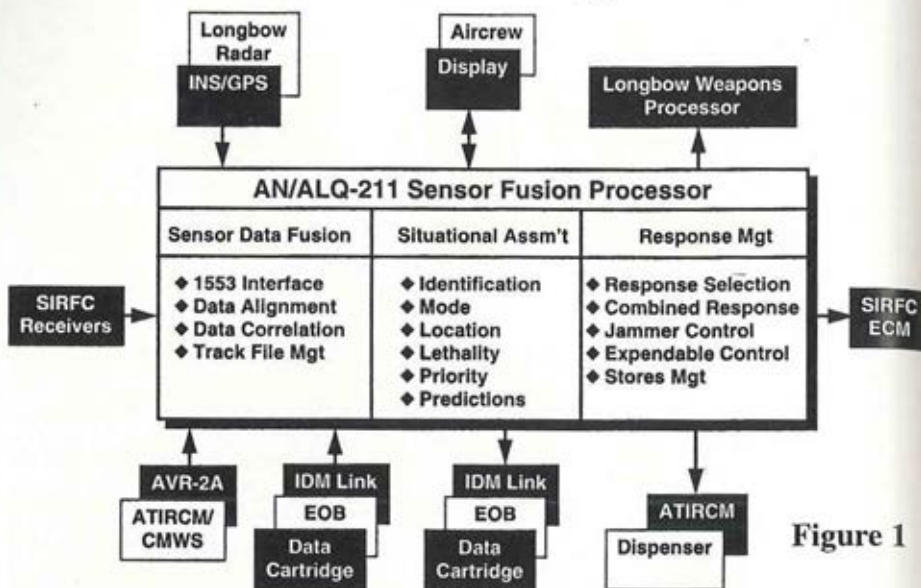


Figure 1

provide advanced capabilities to all services. The Common Missile Warning System (CMWS) portion of SIIRCM is a passive system that detects and characterizes missile launch and flight based upon motor plume signatures. The data gathered by CMWS has high enough detail and accuracy to allow the system to identify the incoming missile, then direct the suite to apply the appropriate IR countermeasure. If an IR threat is detected and is coming toward the aircraft, the Advanced Threat IR Countermeasure (ATIRCM) system is cued to counter the threat surgically with a directed jamming signal.

Since the system is passive except when the ATIRCM is jamming, and the jamming signal is highly directed, there is no need to worry about being a beacon to the enemy's detection systems. The high directional accuracy and precision threat assessment

achieved by SIIRCM allows the collection of information on threat order of battle. This information can then be passed on to other processors for evaluation.

The system that PM-ASE will use to fuse and process anti-aircraft threat data, (Laser, IR and RF) is the ALQ-211 Suite of Integrated Radar Frequency Countermeasures. The SIRFC system couples high accuracy radar emitter identification and precision direction finding to locate specific and multiple threat radars. This provides a radar warning function far superior to any available today. When a threat to the aircraft is detected, and the aircraft is within lethal range of the threat, the ALQ-211 applies a jamming signal to defeat the threat. The jammer portion of the system is effective against a large population of modern threat systems, and can be electronically reprogrammed to

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## Project Manager Aviation Electronic Combat SIRFC, SIIRCM, CMWS & AVR-2A

### Tomorrows Integrated ASE Suite

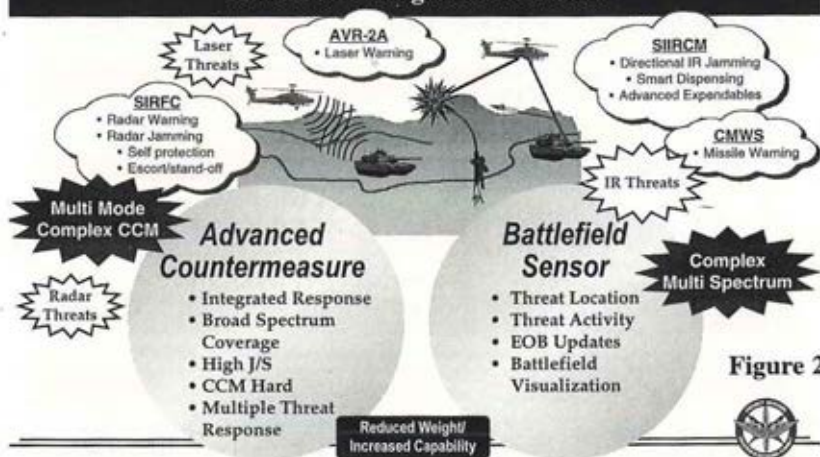


Figure 2

maintain pace with threat system changes. The ALQ-211 is expected to be in the hands of the Warfighter at the turn of the century.

The SIRFC prime contractor, ITT Avionics, in conjunction with PM-ASE, PM-Avionics and Communications and Electronics Command (CECOM), has integrated software from the Radar Deception and Jamming (RD&J) advanced technology demonstration (ATD) into the SIRFC sensor fusion processor. This software aligns and correlates inputs from the various ASE systems with sensor data available on the aircraft 1553 databus. The result is a situational assessment of the anti-aircraft threat that can be used to cue weapons, pilot response, countermeasure response, control expendables and report the Order of Battle over tactical nets. The extent to which this can be done depends on the legacy systems hosted on current airframes. When coupled with

future capabilities better pilot vehicle interface is possible (digital maps), real-time reporting of electronic threats can be done (MATT radio and IDM), and automatic target servicing can be performed. An example of this application for the Longbow Apache is shown in figure 2.

A complete and detailed integration of ASE and avionics provides a great enhancement to the aviator's ability to defeat the enemy, but these advanced capabilities come with penalties — those typically being cost, weight and power requirements. Through the use of modern technologies, a great deal can be done to reduce the weight and power impacts to the platform. For example, the jamming techniques and architecture used by SIRFC are already used in the B-52, but at a weight of 2000 pounds! Production SIRFC systems will weight 97 pounds plus installation kit weight. There will still be situations



where 98 pounds may be too much, for example, on an OH-58 Kiowa Warrior.

With the support of the U.S. Army Aviation Center, PM-ASE is approaching ASE from a mission configurable standpoint. Our systems are being developed in such a way that line replaceable units (LRUs) can be used on a mission requirement basis. For example, on the Longbow Apache, all aircraft will have SIRFC installation kits including antennas and the receiver/processor unit. This provides an advanced RWR capability and sensor fusion for the platform, allowing the aviator to better see and avoid the threat. The LRUs required to perform jamming functions, the countermeasure transmitter and the advanced countermeasures module (ACM) will be installed on a mission requirement basis. This allows a commander to make the same weight trade-offs that we have historically made with fuel and ammunition. A similar approach will be taken in aircraft such as the OH-58 Kiowa Warrior where we intend to replace the APR-39 with a RWR only variant of SIRFC, providing greatly enhanced radar warning and location capability within similar power and weight constraints. Similar approaches for SIIRCM installation are being studied for possible implementation.

PM-ASE's vision carries further into the future than fielding of the above systems. In conjunction with CECOM, PM-ASE is working on advanced countermeasure technologies for application in the 2010 time frame. The Night Vision and Electronic Sensor Directorate at CECOM will conduct an Advanced Concept and Technology Demonstration (ACTD) beginning in 1998 that will identify advanced jamming techniques and weight reduction technologies for future implementation in the AVR-2A, ALQ-211, and ALQ-212. These technologies

include fiber optic installation kits, transitions from LRUs to standard electronic modules (SEMs), multi-band sensor apertures, IR micro jam-heads, and expanded coverage radar jamming to defeat anticipated advances in anti-aircraft technologies. The most promising concepts will be transitioned to PM-ASE for implementation as product improvements to AVR-2A, ALQ-211, and ALQ-212.

The ASE Product Management Office supports soldiers in the field today, and is working to develop and field world class ASE in the near and far term. Because of the organizational structure of PM-AEC, and the great working relationship with the aircraft PMs and CECOM, PM-ASE is in a unique position to leverage advanced technologies, and integrate future electronic suites, making them more effective for, and supportable by, soldiers in the field.

\* \*

*LTC Lovett is the Product Manager for Aircraft Survivability Equipment, AEC PMO. MAJ Wirth is the Assistant Product Manager, Suite of Integrated Radio Frequency Countermeasures (SIRFC), AEC PMO, Redstone Arsenal, AL.*



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## ARMY AIRBORNE COMMAND AND CONTROL SYSTEM (A2C2S)

The United States Army took a quantum leap forward into the Information Age during the Task Force XXI Advanced Warfighting Experiment which culminated with a rotation at the National Training Center in March 1997.

Information era technologies and capabilities require exciting, creative and innovative approaches to developing, testing and fielding new weapons systems for our soldiers. The Army Airborne Command and Control System (A2C2S), a major participant in TFXXI, is using a creative streamlined acquisition approach to deliver new technologies to the field as quickly as possible.

The A2C2S is a UH-60 Black Hawk-based system for the maneuver commander (corps, division, brigade and attack battalion). The aircraft will be equipped with a five person suite of robust computers and more communications receivers/transmitters and intelligence receivers than any other mobile platform on the battlefield.

Two A2C2S demonstration/validation prototypes participated in Task Force XXI. These prototypes were equipped with the latest "black box" radios and were equipped with four Sun Sparc based ruggedized

### *A2C2S participation in TFXXI and initial fielding.*

portable computers with 4.2GB hard drives and 256MB of RAM. Each aircraft was also equipped with one Pentium based ruggedized Applique' computer. The A2C2S communications suite consisted of the following radios: (3) airborne SINC-

GARS-SIP, (2) HaveQuick II, (1) High Frequency, (1) Surrogate Data Radio, and (1) Enhanced Position Location Reporting System. The Multi-Mission Tactical Terminal (MATT) was included for receiving intelligence information.

Initial fielding of the A2C2S will be to Task Force 160th at Ft. Campbell, KY and the 4th Infantry Division at Ft. Hood, TX in FY2000. The systems delivered to these units will have more capability than the TFXXI prototypes with better computers and state of the art avionics. The Joint Combat Information Terminal (JCIT), under development by the Naval Research Laboratory for the A2C2S, will offer revolutionary new technologies to Army and other military services. No longer will aircraft and other weight/space limited platforms be information limited by separate black boxes for each radio, but instead, will be populated with a single combat information terminal which

contains dynamically programmable (i.e. reconfigurable) cards that can function as many different radios.

This reconfigurable concept is similar to the personal computer that sits on your office desk. During one application the computer might run a word processing software and seconds later the same computer might run a spread sheet or internet access application. Similarly, the JCIT card might run SINCARS software one second and SATCOM software the next. The final version of JCIT will have up to 12 dynamically programmable cards. The Aviation Applied Technologies Directorate is faced with the challenges of developing the Maneuver Commander's Environment and an optimal antenna configuration. The antenna problem is especially challenging with multiple, simultaneous radio transmissions coming from such a small platform.

Task Force XXI gave the A2C2S program a chance to get significant user input at the early stages of the system development. Soldiers from the Directorate for Combat Development at Ft. Rucker and the 4th Infantry Division at Ft. Hood had significant input into the design of the TFXXI system. Since most of the software on the A2C2S was developed by Team Monmouth, the A2C2S team was in close contact with their engineers. Beginning in August 1996, the 4th ID conducted four major training exercises leading up to the NTC rotation in March 1997. More than 100 new systems were used by the division during these exercises. The new systems ranged in complexity from upgraded radios all the way to the star performer of TFXXI, the Longbow Apache.

The A2C2S was one of the more complex new systems requiring user feedback to better understand how the combination of new capabilities may be employed in realistic warfighting scenarios. Among the top lessons

learned by the material development community during the TFXXI experiment was that new information dominance systems must be networked together to be effective. To the material developers, this means that each new system currently under development must be designed to connect to that network. For TFXXI, that central network was called the Tactical Internet.

Combat effectiveness and value added was the "bottom line" measure of success for the Task Force XXI experiment. The A2C2S used for TFXXI proved to be very effective. Commanders were provided a potent communications suite and timely situational awareness on a highly mobile platform, the Black Hawk. However, as can be expected with any prototype system, the TFXXI prototypes had some shortcomings. Additional work is being done to improve the communications suite and antenna configuration.

The Division XXI Advanced Warfighting Experiment is being used to get user input for proposed changes to the Maneuver Commander's Environment. The A2C2S team is working with other project management offices to remain abreast of changes in software and other hardware programs. Even as the improvements are made, the A2C2S program moves forward. The prototypes proved valuable enough to be one of eleven systems selected to receive acceleration funding as part of the Army's Warfighting Rapid Acquisition Program. With this additional funding, the A2C2S program is on schedule to be fielded for the 21st century Army.

\* \*

*MAJ(P) Healy was the APM for the A2C2S when this article was written. He is currently serving at HQ TRADOC as Chief, Integration Division; Battlefield Integration Technical Concepts Director.*

## AVIONICS MODERNIZATION WITH AATI

There are several key technology and acquisition issues that face the U.S. Army as it develops plans to provision warfighters with computing power to enhance combat power in the next century. This harnessing of computing power for improved command and control (C2) is the crux of the Army's "digitization" efforts.

The Project Manager for Aviation Electronic Combat (PM AEC) is posturing to meet the technical and acquisition challenges associated with Army "digitization" and the even larger challenges of aircraft electronics modernization. These larger aircraft electronics modernization challenges encompass far more than improved C2. By engaging in an internal strategic planning process, PM AEC has defined a product-oriented electronics modernization strategy that leverages Acquisition Reform methodologies such as open standards-based architecture definitions and cost-savings through hardware and software reuse.

Winning the future "Information War" will require technology to acquire, exchange, and exploit information. Our systems will be "better" than the enemy's if they allow the

### *How the Advanced Technology Insertion (AATI) System Delivers*

soldier to gather relevant information about the battlespace, quickly interpret that information, and accurately use that information to gain a decisive combat edge.

The Army has initiated two important efforts that facilitate this infusion of

battlefield computing and communications capabilities: the Force XXI Battle Command Brigade and Below software system and the Army Technical Architecture (ATA).

Force XXI Battle Command Brigade and Below (FBCB2) represents a set of capabilities that includes, among other things, near real-time "situational awareness," command-and-control messaging, and mission planning. In order to more cost-effectively procure FBCB2 and other "digitization" capabilities for the multitude of Army host platforms, the Army has established a "Technical Architecture" to help ensure that the procured technical solutions are interoperable and feature technology reuse.

The Army's concept of a "technical architecture" can be distilled to the establishment of a document that contains a master list of "preferred" technical design specifications and standards (military and commercial) for use in the acquisition process. This list of

preferred standards is conveyed to industry as part of an acquisition solicitation and is meant to help focus industry's technical response to the Government's requirement.

In response to Aviation's need for platform electronics modernization and increased demands for real-time information warfare capabilities, PM AEC is pursuing the development of an integrated, multi-function avionics device that can encapsulate real-time information exchange and information processing functionality such as FBCB2 in a common chassis that complies with ATA technical design standards.

This device will deliver these capabilities at a relatively lower life-cycle cost than discrete devices and other integrated avionics devices that are designed to meet more technically demanding requirements. The device employs "common cards" and features system control through a multiplexed command-response MIL-STD-1553B data bus. This device, the Advanced Avionics Technology Insertion (AATI) system, will help PM AEC to achieve its goal of providing the Aviation fleet with a cost-effective, automated, flexible, electronic system.

The system will furnish interoperable battlespace connectivity by supporting, at a minimum, the protocols, messages, waveforms, and other capabilities currently incorporated in the discrete radios such as the Single Channel Ground-Air Radio Communications System/System Improvement Plan (SINCGARS SIP), the Multiple Subscriber Equipment (MSE), and the

Improved Data Modem (IDM). This information exchange and processing device will also have "Tactical Internet", joint information exchange, communications security, and civil law enforcement and maritime communications interoperability. Beyond improved C2 functionalities, processing requirements for the Global Positioning System (GPS), the future Global Air Traffic Management System (GATMS), on-board mission management functions, and other automated airspace management capabilities can easily be accommodated by the AATI open system hardware and software design.

*“[This]  
(AATI) system  
will help PM AEC  
to achieve its goal  
of providing the  
Aviation fleet with  
a cost-effective,  
automated, flexible,  
electronic system.”*

In the spirit of cost-saving Acquisition Reform initiatives for technology "reuse", AATI will expand upon the baseline functional capabilities found within the Army Airborne Command and Control System's (A2C2S) Joint Combat Information Terminal (JCIT) and the Improved Data Modem (IDM). Currently, the JCIT device and the IDM

have similar software architectures and feature a significant degree of electronics architecture commonality. Present investments in digital interoperability software for the JCIT and IDM can be carried forward to AATI. The efficient packaging of AATI capabilities should prove attractive to aviation platforms and even ground platforms because the product will reduce on-board electronics space, weight and power requirements and thus reduce the platforms' overall life-cycle costs.

AATI's expandable architecture can readily host Force XXI Battle Command Brigade (Modernization W/AATI -cont'd. on pg. 45)

## A PARADIGM SHIFT: CAVALRY AS A FUNCTIONAL AREA

**C**avalry facilitates the corps or division commander's ability to maneuver divisions, brigades, and battalions, concentrate superior combat power, and conventionally apply it against the enemy at a decisive time and place. In operations other than in war, that role of the cavalry is even more vital when the enemy situation is vague or unknown. Cavalry clarifies, in part, the friction of battle. Cavalry is, by its role, an economy of force. The flexible capabilities of Cavalry allow the commander to conserve the combat power of divisions, or brigades for engagement where he desires (FM 17-95, Cavalry Operations).

The roles and capabilities of the Cavalry require well-trained and experienced warriors that exceed normal career progression. It is true that highly effective and well-rounded military leaders are developed in the Army today but faced with the opportunity to put the best team on a smaller playing field, why not send in experienced Cavalry officers

### *The marriage of air and ground cavalry*

to fill Cavalry roles?

Presently, there is a definite lack of Cavalry expertise available to operational level planners and commanders. This problem can readily be solved as FM 17-95

explains, "Experience, history, and current modeling indicate the most effective reconnaissance, surveillance and screening operators (Cavalry officers) consist of an air and ground mix".

Aviation and Armor branches were founded out of Cavalry warfare and tactics.

The Armored Force came quietly into existence at Fort Knox, Kentucky, on 10 July 1940, by direction of the Secretary of War. Congress did not designate it as a separate combat branch until the Army Reorganization Act of 1950 when, as the Armor Branch, it officially replaced the horse cavalry, and the Office of the Chief of Cavalry. The chief of Cavalry doctrine at the Armor center is now a major's position, while true branches have a two star general in command. The end of an era had come for the horse, but the U.S.

Cavalry never lost its mission or its focus to provide real time intelligence and reconnaissance information to maneuver commanders.

Today, the Cavalry has replaced the horse with other combat platforms including the HUMMV, Bradley, and the Kiowa Warrior and is slowly phasing out the rugged and reliable AH-1 Cobra/Kiowa team. All the divisional Cavalry squadrons in the structure will soon field the Kiowa Warrior, and in a few years, the Comanche helicopter (8 ea. x 3 troops = 24 in a heavy Cavalry squadron) will greatly enhance Cavalry capabilities and "Recon-pull".<sup>(1)</sup>

Fort Knox is still the home of the U. S. Armor Center and the U.S. Cavalry; but the perpetuation and the proficiency of the professional Cavalry officer has all but disappeared. Most officers see no more than two Cavalry assignments in a career and are then rarely asked to use this base of operational knowledge for the Total Force. Sometimes Squadron commanders are placed in position with *no* Cavalry experience.

Again as stated in FM 17-95. "To properly organize scouting activities is the first and foremost duty of any commander". There are inherent problems in the system if the Cavalry is not a major contributor to combat information gathering.

The execution of "Recon-pull" requires training junior grade maneuver leaders on the battlefield to locate and rapidly exploit enemies' gaps during offensive operations. More importantly, it is necessary to develop senior officers with greater levels of Cavalry experience throughout the Total Force.

Force oriented reconnaissance is gaining momentum among Army leadership as terrain-focused reconnaissance efforts decrease. Finding the enemy is a function of the Cavalry while the decisive force commander (DFC) fixes and destroys. To quote LTC

John R. Buchanan, Ret. in "Aviation Position on Division Cavalry", AVN MSG to Combat Branch Schools Commanders 1989, "Security and reconnaissance are the missions of the Cavalry, you cannot fight and gather intelligence at the same time, you lose objectivity, focus and become decisively engaged. Division Cavalry and air reconnaissance squadrons are principally tasked by G2/G3s, who, like the various other aviation users, lack the experience to command and control, employ, and logistically support the cavalry. "[Most] tactical experts agree that combat information gathering is the primary U. S. challenge on the modern battlefield."

The Cavalry is the unit ideally suited at the Division level to provide the combat information and intelligence gathering necessary to meet the commander's needs. Reconnaissance and economy-of-force operations are even more important than ever. Total joint assets do not provide the commander with the same level of confidence he gets when a scout reports on what he has personally observed. Human Intelligence (HUMINT) compliments hi-tech intelligence gathering systems. Once the Cavalry reports in, then "hi-tech" intelligence sources (targets) can be confirmed or denied and maneuver assets directed towards gaps. The mis-use of the Cavalry by combined arms planners weakens the scope of reconnaissance operations and reduces the military dimensions of surprise, agility, audacity, exploitation and thus, success.

There have been numerous suggestions on how to build a professional Cavalry officer since King Assurnasirapli II of Assyria first created a Cavalry force out of his infantry between 883-859 B.C. for greater mobility and penetration. However, the current force structure best supports the use of a Functional Area to meet this requirement.

Adding the Cavalry back into the structure as a combat branch would have zero momentum. With no program intact to protect additional skill identifiers (such as Cavalry), a Functional Area assignment is an ideal solution. This would at least allow for the management of cavalry officers across the Total Force by a centralized component.

A recent Force XXI redesign initiative has explored many options for the future organization of modernized aircraft into the combat arms teams. One such idea is an Air Cavalry Attack Helicopter Brigade (or Heavy Aviation Reconnaissance Brigade) which includes an Air Reconnaissance Squadron (Comanche), an Attack Helicopter Battalion (AH-64D), an Armored Cavalry Squadron (ground), and a support battalion (utility aircraft, intermediate maintenance & supply).

What branch should command a projected Comanche equipped, heavy Cavalry squadron, Aviation or Armor? A Cavalry combined arms officer is a good answer.

Take a new officer and follow his rise through the ranks as an Armor or Aviation officer, at least at first. After basic branch qualification and an aeroscout/ground scout platoon command (and/or being a Scout Platoon Leader's Course graduate), he would then attend the opposite Advanced course for his branch (15A attends AOAC/ 12A attends AVOAC and even flight school, if selected) and become a Cavalry Leader's Course graduate. His follow-on assignment must be as a Cavalry troop commander (basic branch qualifying).

At least one each of this officer's assignments must be in a heavy and a light Cavalry squadron. In his sixth or seventh year of commissioned service, this officer will be selected among his peers along with as many as 20-25 others in a year group to a Cavalry Functional Area, i.e., FA 55 (Cavalry

Operations and Plans). This Cavalry officer would serve in Cavalry assignments for the rest of his career and would be eligible for command and staff positions at every level. With Armor and Aviation working together, the army will have qualified cavalry officers, with experience in both air and ground, to command Cavalry units. The Infantry could even produce a Cavalry officer (SPLC qualified recon platoon leader attending AOAC/AVOAC/ CLC and follow on criteria).

Cavalry branched officers would be managed by this functional area in conjunction with the basic branches or would be assigned against 'Cavalry billets'. These officers could be released from the Cavalry FA later in their careers and return to their branch of origin if so desiring. Cavalry branch assignments could include; but not be limited to the following:

- **Captains** - Brigade, Division and Corps Plans or Operations; Regimental and Cavalry Staff positions; CLC, SPLC, service school, or basic branch instructors; (possibly limited ACS; Foreign service schools/assignments and troop Command).

- **Majors**: Squadron/Bde S3's, XO's (Squadron and regimental XO, S3, and CMD positions would be branch-of-origin immaterial, [except Aviation/Armor pure Cavalry squadrons, i.e., ACRs, AASLT Cavalry, etc.]); Divisional and Corps Plans or Operations; Joint assignments (JSO qualifying); DA/FA assignments; SAMS and CGSC.

- **LTCs**: Squadron Command (competitive Army category Cavalry branched officers will be offered Squadron command first, all else being equal); Regimental XO, S3's; JSO/NSC/Foreign cavalry assignments; FA/Cavalry School/DOTD Chief; Divisional and Corps G-3/operations officers; Aviation/



Armor competitive assignments & FA 55 release.

● **Colonels:** DA/FA Branch Chief; Divisional/TRADOC (Ft. Rucker/Ft. Knox) Chief of Staff; JSO/Joint chiefs staff, Regimental & Brigade Commands.

● **COL (+):** Army competitive category assignments and needs of the Army.

A small structure change would have to occur to meet current Functional Area (and other) requirements and to support a new FA. If an Infantry officer has to fill what had been an Aviation officer's functional area such as FAO, then Aviation could backfill a Brigade S3/ G3 Air or like position. The greatest common threat to a Cavalry FA validation would be inter-branch rivalry over a few billets in a Cavalry FA.

Individual branch officers are so often fixated on their own branch perpetuation that any change, however minor, would overwhelm serious consideration. Cavalrymen do not want a *special* place in the Army, only a platform which provides cavalry experience throughout the Total Force and provides combined arms contributions at higher echelons.

Even with repetitive Cavalry assignments, these officers would not be any more competitive for Squadron command, than say Field Artillery officers would be for battalion command, but they would be more qualified and experienced Cavalry leaders who could operate across the spectrum of operational assignments.

In a down-sizing military, officers are versatile, flexible and capable of a lot more, but they are less specialized jack-of-all-trades. Job saturation and diversification often result in specific skill decay. With fewer and fewer Battalion commands available, commanders should have the greatest levels of experience available to them throughout a career. A

good case is made by CPT George Salerno for branch specialization in ARMOR - May-June 1994, "*Is Well-Rounded Actually Better?*" The Cavalry Branch FA is a shift towards this reality.

Senior cavalry leadership have been close to the Army with officers like GEN Frederick M. Franks, Ret., GEN Gary E. Luck, Ret., and LTG Leonard D. Holder, Jr. but Cavalrymen are disappearing faster than their forefathers at Little Big Horn. For example, let's review the career path of two of these successful Cavalrymen.

Before DESERT STORM, then VII Corps Commander, LTG Franks, called his regimental commander, COL Don Holder, and told him, "Don, your regiment's motto is *Toujour Prets* (French for 'Always Ready'). I hope you are, because I'm giving you twenty-four hours to begin moving the 2nd Armored Cavalry Regiment to the railhead for deployment to Saudi Arabia. This is for Real!"

Their career paths were virtually parallel: GEN Franks was assigned to the 11th ACR as platoon leader and troop Commander in 3rd Reconnaissance Squadron. After IOAC, he served once again with the 2-11th ACR in Vietnam as an operations officer. He also commanded 1-3rd ACR, before returning to the 11th ACR as the Regimental Commander. While in Germany, he became the Commanding General of the 7th Army Training Command. He was later the director of Operational Plans and Interoperability (J-7) on the Joint Staff, the 1st AD Commander, and eventually, VIIIth Corps Commander, and TRADOC Commander.

Before commanding the 2nd ACR during DESERT STORM, LTG Holder was the Commander of 1-3rd ACR. He also has served as the G3, 2d AD, and Commander, 3d ID (Mech). Later LTG Holder became the

Commanding General, U.S. Army Combined Arms Center, Fort Leavenworth, KA. While being a Cavalryman did not necessarily make either of these men great officers, successful back to back command and operational Cavalry assignments gave them the expertise and experience necessary to systematically employ and operate Cavalry forces across the Total Force in training and in war, at all echelons.

A paradigm shift requires addressing DTLOMS; or doctrine, training, logistics & material, organizations, leadership development, and soldier changes. Repetitive cavalry assignments will take care of most training issues. The indoctrination of "Recon-pull" throughout the army is consistent with cavalry operations and structural changes and assets would shift internally for a zero-sum gain. Soldiers and leaders alike would benefit from more experienced cavalymen and the presence of Cavalry staff officers at the Division and above levels.

This would help coordinate the multiple layers of recon assets and help insure that vital intelligence is passed concurrently (driven bottom-up vertically and horizontally) through maneuver commanders regardless for whom the recon element works.

What are some other advantages to a Cavalry functional area? The Total Force would benefit from this increased level of Cavalry expertise. Division commanders would gain experienced planner/operator battle captains and watch commanders working with the G2/G3 planners before and during operations. This would free up Squadron Commanders and S3s to fight and lead their squadrons and to execute the division commander's intent. This consolidation of reconnaissance assets (not structurally, but in an operational sense) will help in developing R&S plans, op-plans,

and in coordinating intelligence managers/gatherers and their efforts under a Chief of Reconnaissance (COR) G2/G3. This would create a level of reconnaissance and security driven to support brigade and maneuver commanders in information gathering (to fill gaps) and Division commanders in intelligence interpretation (follow-on employment) *simultaneously*.

In summary, the marriage of air and ground Cavalry officers into a functional area presents more opportunities than liabilities. The primary mission of Cavalry is reconnaissance. Emerging doctrinal revisions renew emphasis on reconnaissance and security operations which are even more important in Force XXI on the digitized battlefield.

This paradigm shift will integrate professional Cavalry into the Total Force. Selection of officers to a Cavalry Functional Area is a dynamic and viable solution to the lack of Cavalry expertise. The United States Army leadership should break this paradigm and immediately gain another opportunity to aggressively synergize combat arms.

\* \*

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<sup>1</sup>Recon-Pull - Seeking the Path of Least Resistance, Monograph by Major F. R. Klenie, INF, For the School of Military Studies.

## ATTACK AVIATION IN RESTRICTED TERRAIN

*Know yourself, know the enemy, but always analyze and apply the effects of terrain.* These are seemingly simple enough terms for the professional warrior. However, knowledge of the terrain and the effects it can have on a military operation is a skill that is increasingly becoming clouded by modernization.

The purpose of this article is to provoke some thoughts on the proper use of attack aviation in restricted terrain using the Korean peninsula as a template. While FM 1-112, Attack Aviation Helicopter Battalion, includes METT-T in all of its tactics, techniques and procedures (TTPs), it primarily focuses on open terrain with little relief. Korea, which is punctuated with rough mountains, large streams, and rugged narrow passes with only about 20% of the peninsula suitable for cultivation, quickly brings renewed emphasis for understanding METT-T.

The Korean Peninsula comprises numerous ridgelines and hills that afford excellent cover from direct fire and ground observation. Restricted terrain affords attack aviation little chance for success unless properly controlled and employed. The proper use of

### *The realities of the Korean Peninsula.*

command relationships, attack reconnaissance and battlefield synergism can mean the difference between mission accomplishment and failure.

In Korea, the 2nd Infantry Division has one Aviation Brigade with one AH-64 Attack Helicopter

Battalion assigned. The OPCON of this extremely lethal asset is usually accompanied by the same unintended restrictions, "Don't Piecemeal Apaches" and "Husband the Resource".

Unfortunately, ground commanders as well as attack helicopter commanders adhere to this restriction a bit too literally. A Division Commander would OPCON an attack battalion to a ground maneuver brigade only after careful consideration and analysis. The Division Commander may need to improve the correlation of forces (COFMS) ratio but realizes that the ground commander who owns the terrain is the most suitable agent to coordinate the attack of ground and air assets. He may visualize that the ground commander needs the unique capabilities of the AH-64, unrestricted maneuver and night visionics with magnification, to conduct reconnaissance or a preemptive strike to desynchronize the enemy.

The Division Commander may even OPCON them to the ground commander in a '911' situation where ground forces are taking heavy casualties due to an unsuccessful breaching operation. Korean terrain offers the Division Commander many possibilities for the OPCON of attack assets.

Korea's many defiles make the AH-64's unique capabilities a primary asset to ensure force protection in the close fight. However, the ground force commander will seldom be able to employ a complete Apache Battalion in mass in this type of terrain. He may employ AH-64's in small lead-wingman teams or he may use the entire battalion in the one-third rule. Apaches lead-wingman teams flying some 3-5 KMs ahead of ground scouts can be employed at night to find the enemy and alert ground forces to ambushes, disposition, etc. This would still leave the ground commander sufficient combat power in the Attack Battalion to execute typical missions such as destroy the counterattack force or reserve.

Unfortunately, this type of employment poses a quandary. Doctrinally, an Attack Battalion can be OPCON to no lower than a ground maneuver brigade. However, tactics dictate that the ground commander in contact is the best agent to control or integrate Apaches' fires into the fight, to preclude fratricide and to take measures to synchronize direct and indirect fires. The maneuver brigade commander should control the asset for planning, but during employment and execution, the AH-64s must talk and work specifically with the ground force commander, regardless of the size of that force. Moreover, the brigade commander must ensure that the attack and ground force commanders are executing within his intent.

This concept is not new and has successfully been employed by Special Operations

Attack Aviation on numerous 'real world operations', to facilitate command and control, increase lethality and prevent fratricide.

In deep operations, commanders caution against "trolling for tanks" and appropriately allow Apaches very little flexibility to maneuver beyond the assigned engagement area and designated routes. If the attack battalion, in support of the maneuver brigade, is told to attack the reserve in EA Stuart, then we expect the reserve to be on the move long enough for us to detect, identify, and track the enemy formation.

Unfortunately, Korean terrain negates this detection by usually providing the enemy reserve a covered and concealed route to the engagement area. The enemy reserve may have to move in a typical scenario only 2500 meters, hardly enough distance to detect, identify and track. A more viable mission is to orient the attack helicopters on the enemy force. A moving enemy reserve would normally not have time to make defensive preparations nor have a robust ADA threat, allowing AH-64s to discover the formation even in daylight from standoff range. This type of mission allows attack aviation to fully negate and exploit the advantages that restricted terrain provides to the enemy.

Battlefield synergism may not necessarily mean simultaneous synchronization. An NTC environment forces the ground commander to synchronize his total combat power in one or two engagement areas—simultaneous engagements to destroy the enemy in mass. However, simultaneous synchronization in restricted terrain is extremely difficult to control and very vulnerable to fratricide.

A far better plan is to destroy the enemy reserve as a preemptive measure since the reserve is probably not dug in and would not

**Restricted Terrain - cont'd on pg. 42**

## COMBAT NET RADIO INTERFACE IN OPERATION JOINT ENDEAVOR

Communication is the key to success on today's battlefield. General Omar Bradley once said, "Congress can make a man a general, but only communications can make him a commander." As the Battle Captain for 2-227th AVN (ATK) in Operation Joint Endeavor, I realized the importance of communications, information flow, and "battle-tracking" early on. Our battalion learned to maximize the use of available communications equipment as we increased our ability to command and control operations at extended ranges with systems such as the Combat Net Radio Interface (CNRI) system.

Our tactical operations center (TOC) was located in the Tuzla Bowl, surrounded by hills. Our line of sight (and communication) was limited. Aircraft beyond 10-15 kilometers had to either leave their mission profile and climb to uncomfortable altitudes or wait until they were closer to call the TOC. Unless they had a time-sensitive report, the crews normally opted to wait until they were close enough to call from low altitude rather than exposing themselves by climbing to altitude. Of course, any directions or information from the TOC to the aircrew also had to

*CNRI  
allowed 2-227th  
AVN to stay low.*

wait until the aircraft had line of sight (LOS) with the TOC. Without the communication link, aircrews were essentially "out of the fight."

Although there were several retransmission (retrans) sites in the area of operations, they were controlled by the division headquarters and operated on Division Command and Division Operations and Intelligence (O & I). We normally only used these retrans sites when reporting directly to Division. We also possessed the capability to generate our own retrans site at the battalion level. We only exercised this option during a few missions (such as running a small arms range) due to the security and equipment requirements.

Many of our missions came with short notice and short response times. Some of these missions could be most efficiently completed by crews already conducting a mission, if we could contact them. For example, we were once tasked to conduct a hasty area reconnaissance (ASAP) in response to a report of "a big white missile 5 kilometers west of Tuzla Main on the approach path." The report had been made by an inbound C-130. We were able to contact a team inbound from a zone of separa-

tion (ZOS) reconnaissance and diverted them to perform the mission. This reduced the response time and saved us from having to launch our reserve team (which was on a one hour standby). Once contacted, the crew was able to quickly recon the area and find the reported "missile" (which turned out to be a Muslim mosque). On many other occasions, however, we were unable to contact airborne crews due to our location and the limitations of our radios. Once we learned how to use the CNRI system, we were able to communicate with the aircraft at extended ranges (within certain areas) while they remained below 500' above ground level (AGL).

The CNRI system essentially combines the capabilities of the mobile subscriber equipment (MSE) network and the Single Channel Ground and Airborne Radio (SINCGARS). Personnel in the TOC can call an operator over a mobile subscriber radio-telephone terminal (MSRT), request a combat net interface "patch," and talk directly to an aircraft over their SINCGARS. There are many other variations to the system, but the MSE-SINCGARS connection worked best for our unit, for both air and ground operations.

The MSE system is an area-switched communications system. It is designed to provide communications for a notional five-division corps in an area of operations up to 15,000 square miles, extending from the corps rear all the way to the forward line of troops (FLOT). The system is digital, secure, highly flexible, and contains features that support rapid movement of users. The network architecture forms a node grid system capable of providing alternate communication paths throughout the area of operation which ensures a higher degree of system survivability. The system provides subscribers with a means to conduct command and con-

trol, and exchange intelligence information in a dynamic tactical environment. With the CNRI, helicopters can link into the system and take advantage of its capabilities.

Setting up an MSE network takes a signal battalion which is normally assigned at the division level but works for the maneuver brigades. The MSE network is composed of four node centers (see fig 1). Each node center is typically composed of a node center switch, four small extension nodes (SENs), two radio access units (RAUs), and a complement of line-of-sight (LOS) radio assemblages. The node centers are placed across the area of operations, normally about 50 kilometers apart (METT-T dependent). All major elements of the MSE system are interconnected by LOS radio links, forming a grid network that provides service to all fixed and mobile subscribers in the area. Once linked into the MSE network via the CNRI, you have access to all parties within the network coverage.

The SEN is the access point for wire subscribers, the commercial office, and combat net radio access. From the air, a SEN looks like a couple of HMMWVs with hardback mounted shelters, two generators (5 & 10 kw), and several antennas.

The "middle man" for the CNRI system to work is the combat net radio (CNR) operator who is also located at the SEN. The operator receives the call from either MSE or a frequency modulated (FM) radio and contacts the second party using the appropriate mode. The operator provides the second party with any necessary instructions and connects the two parties using a combat net radio interface unit (KY-90). The KY-90 switches transmissions from an MSE line to FM frequency and vice versa. Once the link is established, the two parties can communicate in a secure (or non-secure) mode and the operator is there to

assist if necessary.

During the call, each party uses proper radio procedures, beginning each transmission with "Hey you, this is me,..." and ending with "Over" or "Out." This cues the operator to perform the switching function to allow the next person to transmit. The MSE telephone handset is used as if it was connected to an FM radio and the push-to-talk (PTT) button on the side of the handset is pressed to transmit. There is normally a 2-3 second lag at the lag at the beginning of the transmission while the switching function is performed.

To maximize the use of this system, our Signal Officer (SIGO), 2LT Tarasevitch provided each crew with a list of the locations of each CNRI operator, their call sign and frequency, and MSE phone numbers for our TOC. To use the system, the crew simply had to contact the CNRI operator on the CNRI FM frequency and request a combat net patch to Hunter TOC at 550-5032 (our MSE number). Normal lag time depended on the operator's proficiency, the crew maintaining LOS with the SEN, and the ability to get through on the TOC line. All of the CNRI operators operated on the same frequency and their call signs mirrored the ground units they were located with, so once you were familiar with the system, it was very easy to use effectively.

Of course, the CNRI system does have limitations. The CNR operator's FM radio and the distant station (aircraft's) radio must remain within range of one another, normally within 20 kilometers (depending on altitude and terrain). Using the system "ties" an aircraft to the vicinity of the SEN with the CNRI capability during the patch. There are only a limited number of CNRI stations available to conduct the interface, and they are in fixed locations which may or may not be in a position to support the mission. Whether or not the system can be beneficial during a mission can

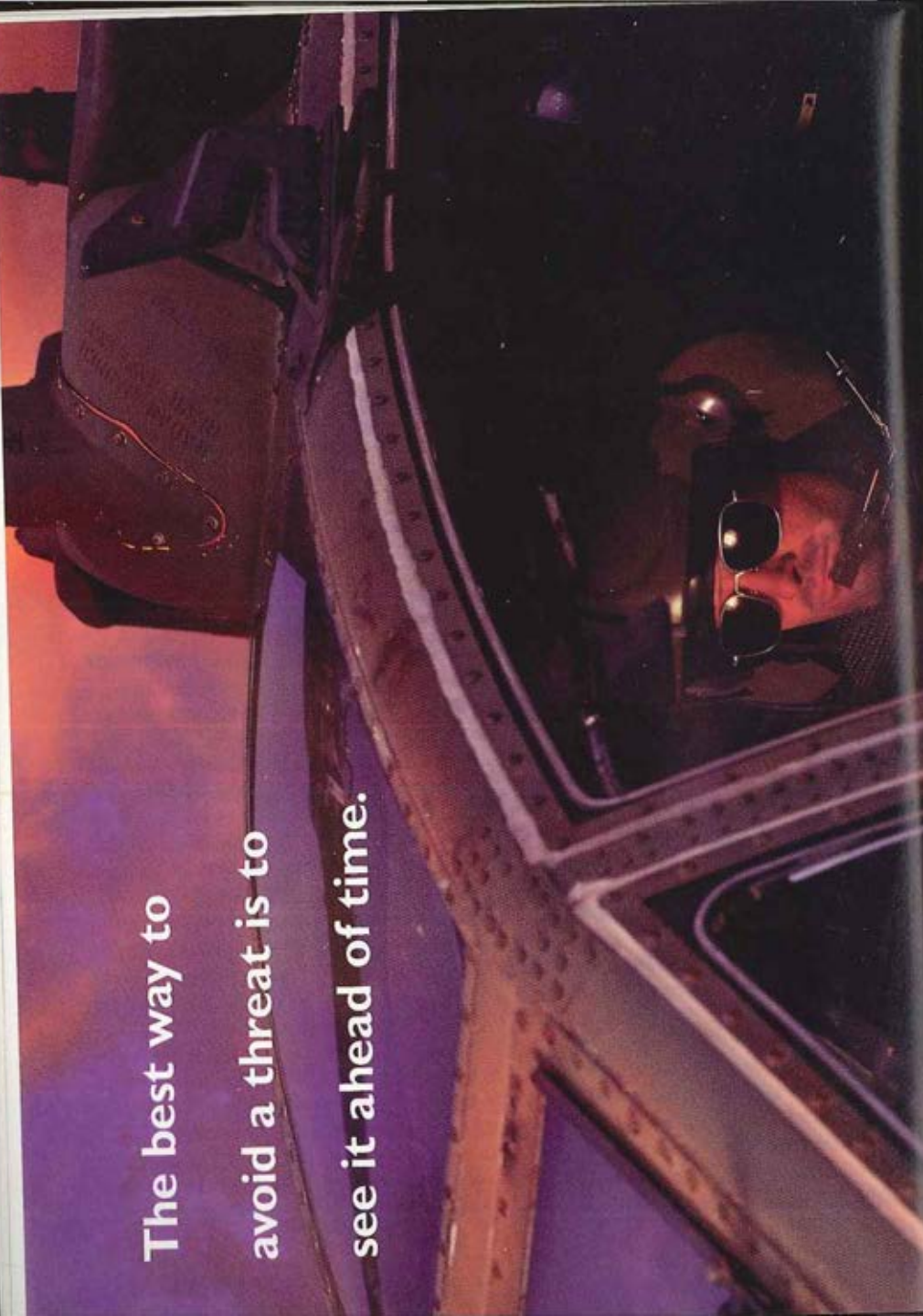
normally be identified in the planning phase. Crews that understand the system and have the necessary information available (location, frequency, and call sign of CNRI operator) can use the system to their advantage.

Although we did not use the CNRI system on every mission, it helped us out on several occasions. One of our missions was to provide convoy security for a United Nations Humanitarian Care and Relief (UNHCR) bus traveling from Banja Luka to Tuzla and back. The bus originated in Serb territory and passed through the ZOS to Muslim territory to provide unhindered movement for any interested Serbs or Muslims. We were concerned that the bus may be attacked by belligerents somewhere along the route, and we determined that the most likely area for an attack was the area in and around the ZOS. One of our essential mission tasks was to report to division headquarters when the bus was 15 kilometers outside of the ZOS to provide early warning for a military police escort.


The bus entered the ZOS at a location over 70 kilometers away from our TOC, well beyond the range of our radios. Luckily, there was a CNRI operator located nearby. The AH-64 crews on the mission contacted the CNRI operator, requested a patch, and made the required reports in a timely manner. The crews remained at mission altitude (300' AGL) and maintained continuous coverage for the bus with minimum assets. The military police received the update and were ready to escort the bus as it arrived at the ZOS. The mission was a success.

Our ground assets were also able to employ the CNRI system. As the convoy he was traveling in moved towards Glamoc for gunnery, our TOC NCOIC used the CNRI system to make position reports from over 75 kilometers away. These reports allowed for effective tracking and adjusted take-off times

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for aircraft providing convoy security as the convoy passed through Muslim, Serb, and Croatian territory as well as crossing through U.S., NORDPOL, Turkish, and British sectors. The convoy security could have been performed without the updates through CNRI, but the mission was performed better because of the updates.

To effectively command and control, we must be able to pass information without delay. As aviators in an imminent danger environment, leaving the terrain level to make a radio call often means breaking off from your current mission and exposing yourself to threats that you'd rather avoid. The CNRI system allowed the 2-227th AVN to remain low and maintain contact with higher headquarters in areas well beyond normal radio range. It is a system that is already fielded, is available now, and it is worth using.

\* \*

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### **Attack Aviation in Restricted Terrain** (continued from page 36)

have to move any appreciable distance to enter the intended engagement area. In essence, the AH-64s would find and destroy the reserve as the enemy's main body crossed the LD and was engaged by direct

fire weapon systems. The synergistic effect of this operation is that the enemy would have to deal with a close fight as well as operations in his rear, simultaneously.

Adjusting command relationships, modulating attack reconnaissance and sequencing synchronization may not be suitable for desert operations or doctrinally correct by our manuals, but they are extremely effective in desynchronizing the enemy in restricted terrain. The old adage that the only good tactic is the one that works is quickly reinforced by the restricted terrain on the Korean peninsula where METT-T analysis can mean the difference between victory and defeat.

\* \*

*MAJ Werthman is the Squadron Executive Officer, 4th Squadron, 7th Cavalry Regiment, Korea.*

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## PLANNING IN THE DIGITAL BATTLEFIELD: AN AVIATION CAPTAIN'S PERSPECTIVE

Information accurately gathered and clearly articulated at all stages of the Military Decision Making Process is paramount and considered our greatest combat multiplier. There are many lessons to learn from previous battle staffs and commanders in utilizing all available technologies to paint an accurate picture to both the Task Force commander and the individual combat maneuver companies. This process has and will continue to be, the decisive aspect of all military operations. Planners are the critical link between the Task Force of tomorrow and the other members of the joint/combined arms teams. As planners in the Digital Battlefield we must learn from the battle staffs of past wars and conflicts without restricting ourselves to their conventional planning methods.

The systems available to today's combat mission planner utilize technologies that were not even conceptual to the planners of past. The Maneuver Control System/Phoenix (MCS/P), All Source Analysis System - Reconfigurable Work Station (ASAS-RWS), Aviation Mission Planning Station (AMPS), Advanced Field Tactical Data System (AFA-TADS), and Applique are systems integrated

*"Learning from the past, but not restricted to the conventional"*

into the Aviation Tactical Operations Center (AVTOC). The AVTOC, through these integrated technologies, provides increased situational awareness, a detailed picture of battlespace, shared information, enhancements to aviation mission

planning and execution, increased flexibility, and enhanced resource management.

When the planning process is set into motion two or even three commands higher, it can take hours for the information to trickle down to the maneuver commander's level. Therefore, information given in such a manner can often be vague. However, with digital information systems, the maneuver battle staff is able to become aware of the event as soon after it occurs as possible, enabling the battalion staff to implement the appropriate parallel planning measures well before the receipt of the warning order.

These enhancements to mission planning assist in providing warning orders and operational overlays early in the decision making/orders process, thereby allowing subordinate commanders the opportunity to begin course of action development and wargaming earlier than previously possible. This digital information is accurate and updated con-

tinuously, giving subordinate commands the luxury of additional detailed planning time.

The mission analysis process, as we know it today, often takes longer than necessary due to a lack of preparation by the battle staff. Delays in the military decision making process can often be tied to mission analysis and the S-2's enemy situation template. The situation template must be as accurate and complete as possible prior to the mission analysis brief. ASAS provides a medium for the G-2/S-2 of higher headquarters to gather accurate information on enemy locations with multiple digital systems thereby simplifying the passing of information to the maneuver units.

ASAS's accuracy is embedded in its ability to accept digital spot reports through Applique from all reporting units down to the platoon level. MCSP's abilities come into play by facilitating the consolidation of this information, and by providing updates to the commander, ultimately reducing briefing times. LNO's, with a clear picture of the higher headquarters plan, assist immensely in this portion of the mission analysis. If an LNO is unable to participate, he can be integrated into the process by sending critical planning information digitally. This practice is much more practical than lengthy radio conversations and ensures the integration of the LNO in the planning process.

AFATADS gives updated enemy and friendly situation to the ASAS via a digital link. It allows quick dissemination of fire support coordination measures both permissive and restrictive to all applicable units via a digital distribution list. This integration allows individual maneuver commanders access to scheme of fires for planning purposes at a much earlier stage in the military decision-making process. AFATADS is also capable of a computerized force-to-force

ratio between enemy and friendly artillery. The system also allows for digital dissemination of high-value targets and high pay-off targets, sets target selection standards, and sets priority of fires through multiple phases of a planned operation. The ability of the system to coordinate fires between adjacent units during a battle reduce planning and reaction time for all planned targets and allows for concurrent future-operational planning. These systems attributes allow for multiple contingency planning and execution.

The AMPS system is an end-user tool that allows individual maneuver companies to take advantage of the integrated digital computer systems being utilized by their higher headquarters. AMPS is capable of completing planning tasks that are normally performed at above the company level such as intelligence data processing, route-planning, communication planning, navigation planning and detailed terrain analysis.

For example, individual line pilots can gain a feel for prominent terrain along the route to be flown by reconnoitering routes as well as viewing the intervisibility line-of-sight between proposed battle positions and engagement areas without ever leaving the work station. The AMPS system can also utilize its Tactical Communications Interface Module (TCIM) to view Video Image Crosslink (VIXL) imagery sent from scout assets for premission planning. Other tasks that the system can perform include aircraft performance planning, weight and balance calculations, flight planning and crew endurance planning. The system also acts as a digital link between the Battalion future-operations planning cell and the individual company planning cells via secure FM radio.

These digital systems empower both planners and commanders with accurate and up-

dated information in the initial stages of the military decision-making process. Digital information is an excellent combat multiplier with numerous combat advantages, however, some limitations of the systems can have significant effects on a force that relies solely on the digital aspects of planning.

A good analog back-up plan should always be in place and well-rehearsed. Software changes and military personnel with a lack of basic computer operating experience can hinder the effectiveness of a digital planning staff. A continuous education process for both trained and untrained soldiers will ensure that a unit's susceptibility to these limitations are kept to a minimal level. By integrating computer system education at all levels of military training, the Army will take the first steps of truly integrating its entire force structure into the digital battlefield of the XXI century.

\* \*

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### **Avionics Modernization with AATI (cont'd. from pg. 29)**

and Below (FBCB2) functionalities in addition to the other "digitization" functionalities and on-board mission and airspace management processing capabilities. Packaging this

spectrum of computing and information exchange functionality within a common chassis will better enable Aviation planners to deal with complex relationships that form the "bigger picture" of Force XXI-and-beyond electronics modernization.

Army "Digitization" focuses on command and control; however, because of platform integration issues, "Digitization" impacts far more than command and control. "Digitization" is only one part of a larger platform electronics and embedded software modernization issue.

The addition of sophisticated "Information Warfare" functions to Aviation platforms requires savvy system engineering and system integration to prevent adverse effects upon existing platform man-machine integration, lethality, survivability, and overall mission effectiveness. AATI will satisfy "digitization" and overall electronics modernization needs. PM AEC's AATI product is being designed to deliver a wide range of computing and information exchange capabilities within the context of program management that is sensitive to the programmatic and on-board ripple effects of such a technology infusion.

\* \*

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## DISTINGUISHED FLYING CROSS AWARDED TO CW4 HANK AINSWORTH

Russ Wilson could never forget Hank Ainsworth. As a draftee near the beginning of the Vietnam War, Wilson was bitter towards the military and concerned only with surviving in order to return to his family and to his life. Unfortunately, a bullet, shot into his ankle at the beginning of a particularly fierce battle, nearly shattered Wilson's only concern: survival.

Thankfully for Wilson, who was a specialist at the time, CWO Hank Ainsworth piloted his Huey helicopter into a dangerous landing zone and flew Wilson and his other wounded comrades to safety. This heroic act was never far from Wilson's thoughts, the last man to jump onto Hank's aircraft, but it was forgotten by the U.S. Army; forgotten after Hank's service in Vietnam; forgotten after his retirement; forgotten even during the intervening 32 years. That is, until a few months ago, at a quiet Fort Carson ceremony, when Hank received the Distinguished Flying Cross for gallant aerial service in Vietnam.

Presented to Ainsworth by Fort Carson's commanding general, MG John Pickler, July 11, 1997, the Distinguished Flying Cross recognized Ainsworth's particularly gallant actions on Nov. 17, 1965, during the Battle of the Ia Drang Valley. Participating in one of the first battles of the Vietnam War as a member of the 1st Armored Cavalry Division, Ainsworth volunteered to medically evacuate several wounded soldiers. Flying

a heavily encumbered command and control Huey, Hank assumed the mission when the unit's specially equipped Medevac aircraft refused to fly at night in near zero-visibility weather with hostile fire surrounding the landing zone. Guided only by a single flashlight shown from below, Ainsworth landed into LZ X-Ray and whisked away seven wounded soldiers.

"I never thought we would get off the ground," said Wilson, "The longer we sat on the ground, the surer I thought I would die." However, Hank managed to take off in the pitch-black night, even though his Huey was weighed-down beyond the aircraft's capabilities. When asked whether or not he knew that the Huey could carry so many men, Ainsworth said: "It had to be done. There was no one else to save them." In attendance at the ceremony were Ainsworth's wife, his children and grandchildren, several military friends, and officers and soldiers from various units across Fort Carson.

Although the Battle of the Ia Drang Valley occurred in November 1965, no decoration was awarded to Ainsworth at the time. It was not until 1996, when LTC (retired) James Spires, Ret., operations officer of the unit which requested Ainsworth to fly into LZ X-Ray, wrote a letter to the U.S. Army's Military Awards Branch, requesting that it consider Ainsworth for the Distinguished Flying Cross. With corroborating information presented by Joseph L. Galloway, the co-author



GWO Hank Ainsworth, Ret. (center) receives Distinguished Flying Cross Award from MG John M. Pickler (left), then Commander of Fort Carson, CO as Mrs. Ainsworth looks on.

of We Were Soldiers Once...and Young, which chronicled the travails of the Battle of the Ia Drang Valley. The Army deemed Ainsworth worthy of the decoration and officially awarded him the medal in February 1997, nearly 32 years after the incident. The presented award, the Distinguished Flying Cross, is the highest medal available for aerial flight in a combat environment.

Ainsworth, who had joined the Army as an enlisted man in 1957, continued to serve as a pilot until his retirement in 1977 at Fort Carson, when he moved to Monument, CO. Never boastful of his own accomplishments or concerned about recognition for his actions in Vietnam, Ainsworth humbly received the award, "in honor of the 234 members of my unit who did not return." Ainsworth's words, choked up behind 32 years of submerged memories, brought many others in the crowd

to feel similar emotions, not least of which was Wilson.

Although Wilson kept a tight emotional bond with Ainsworth, it was not until a recent reunion of their unit that they rekindled their friendship. Since that reunion, their camaraderie has helped to heal scars that both have carried since Vietnam.

Wilson looks upon Ainsworth, as did all those who attended his award ceremony, with great admiration, awe and thankfulness for an ordinary man who performed an extraordinary feat. But for Ainsworth, his actions on Nov. 17, 1965, simply constituted for him, "his duty."

\* \*

*CPT Zuckerman is the Installation Aviation Officer and also serves as V.P. of Membership for the Pikes Peak Chapter of AAAAA.*

# ARMY AVIATION WARFIGHTING BULLETIN

4th Quarter FY97

**MESSAGE FROM THE BRANCH CHIEF...**As we press into the final quarter of this fiscal year, I want to take the opportunity to thank the soldiers and leaders of Army Aviation for your hard work and dedication. Aviation Warfighting is certainly a demanding business and is one that will continue to be important to our Army as we look to the future.

Unlike our Cold War posture, today we see our Nation committed to its world leader responsibilities, which has caused our Army to be deployed more often and in greater numbers than ever before. In this same light, I see Army Aviation deploying in more JTF's and in smaller formations in the future. Our troops need to understand these concepts and plan accordingly, for this is part of taking care of soldiers.

I believe in taking care of troops and I believe in leadership by getting out and about. This is the best way to see what is going on in one's areas of responsibility. You as leaders should do the same often, and I know you do.

Take care of soldiers and ensure you reinforce our Army values with our new officers and soldiers. Many of our new soldiers arrive with a set of values they may have gotten from Hollywood. We must show them what "right" looks like in Army Aviation and our Army. Leaders at all levels must take time to teach and instill these values.

This fall we start a new OER system. All of us have the responsibility to learn what the new OER looks like and how it differs from our current system. Plan ahead, have a close-out plan, get a teaching plan out, and be ready to start the new OER system; I see this as a way of taking care of our soldiers. Those of us who are Senior Raters will be called upon to ensure the OER works. Do your job.

One of my major objectives this coming year is to establish both predictability and stability into training and operations. The key to this is forecasting training activities, incorporating these activities into a master planning calendar, and executing the training per established doctrine found in FM 25-100/101. The bottom line: predictability fosters a healthy training environment while improving the quality of life for our soldiers.

In closing, I will say it again; the health of our branch is the best it has ever been. The quality of soldiers and leaders we have serving in Army Aviation today is the highest I have seen in my 31 years of service. Despite more frequent deployments, a higher OPTEMPO, and tougher mission requirements, missions are being completed safely and to standard. I congratulate all soldiers and leaders for your achievements and am extremely proud to be part of your Army Aviation Team.

## DOCTRINE

- FM-1-100...**Army Aviation Operations, dated 21 Feb 97. TRADOC printed and distributed the manual in early Feb 97. POC is MAJ Hall, DSN 558-3292, e-mail: heyward\_hall@rucker-emh4.army.mil.
- FM 1-108...**Army Special Aviation Operations. Author's draft complete and is in worldwide staffing. POC is CPT Bristol, DSN 558-9350, e-mail: clark\_bristol@rucker-emh4.army.mil.
- FM 1-111...**Aviation Brigades. In editing and should be sent to TRADOC by 31 Jul 97. POC is CPT McHugh, DSN 558-2482, e-mail: john\_mchugh@rucker-emh4.army.mil.
- FM 1-112...**Attack Operations, dated 2 Apr 97. TRADOC printed and distributed the manual in early Mar 97. POC is Mr. Manning, DSN 558-9575, e-mail: ronald\_manning@rucker-emh4.army.mil.
- FM 1-113...**Utility Operations, CG approved on 15 Jan. The manual is in editing and should be



sent to TRADOC in Jul 97. POC is CPT McHugh, DSN 558-2482, e-mail: john\_mchugh@rucker-emh4.army.mil.

**-FM 1-114...**Air Cavalry Squadron/Troop. Author's draft complete and is in worldwide staffing. POC is CW3 Shaffer, DSN 558-9346, e-mail: robert\_shaffer@rucker-emh4.army.mil.

**-FM 1-300...**Flight Operations. Revising manual to include changes and comments from worldwide staffing. POC is SFC McLendon, DSN 558-2358, e-mail: michael\_mclendon@rucker-emh4.army.mil.

**-FM 1-564...**Shipboard Operations, dated 29 Jun 97. TRADOC printed and distributed the manual in early Jun 97. POC is Mr. Manning, DSN 558-9575, e-mail: ronald\_manning@rucker-emh4.army.mil.

**-TC 1-200...**Revision to the coordinating draft of TC 1-200 (formerly TC 1-210), Commander's Guide to the Aircrew Training Program, is completed. Significant revisions were made to chapters 2, 3, 4, 5, and 6. Appendix A was added and all ATP forms were moved to this appendix. In July 1997, the final draft with a "Summary of Changes" will be staffed. A major proposal in this draft is to increase the hourly requirement for NVG continuation training without increasing the minimum flying hour requirements. POCs are CW4 Soffe or CW3 Hammel, DSN 558-9660/9661 or COM (334) 255-9660, e-mail: ATZQATM@rucker-emh4.army.mil.

**-TC 1-238...**In April 1997, the coordinating draft of TC 1-238 (formerly TC 1-214), AH-64A, ATM was staffed worldwide for review. If any unit would like a copy, please e-mail your request to us at ATZQATM@rucker-emh4.army.mil, and we will e-mail you a copy in MS Word format. POC is CPT Bheodari, DSN 558-9663.

**-DEVELOPMENT OF TACTICS, TECHNIQUES, AND PROCEDURES (TTP)...**Directorate of Training Doctrine and Simulation (DOTDS) is continuing the development of TTP for the Digitized Aviation Brigade (DIV XXI AWE) and the Digitized Aviation Task Force (TF XXI) using lessons learned from the TF XXI Aviation Warfighting Experiment (AWE). TTP integrates digital systems into aviation operations. Digital TTP manual supplements updated versions of the FM 1-111, FM 1-112, FM 1-113, and FM 1-114. Distributed updated version 5.0 of the ATF Digital TTP (ST I-EX4) November 1996. Version 2.0 is the current version of the Divisional Digitized Aviation Brigade (DIV XXI AWE), (ST 2-EX4). Concurrently, DOTDS is developing and executing digital AVTOC exercises in the Aviation Test Bed and Aviation Warfighting Simulation Center. These exercises integrate and assist both digital and analytical staff planning, rehearsals, digital TTP and command intent. POC is LTC Forshag, DSN 558-1048 or CPT Smiley, DSN 558-9740; e-mail: russell\_forshag@rucker-emh4.army.mil or richard\_smiley@rucker-emh4.army.mil.

**-WARSIM 2000 OPERATIONAL REQUIREMENTS DOCUMENT (ORD)...**The WARSIM 2000 ORD version 3.5 will be available on the CAC Fort Leavenworth Home Pages under National Simulation Center, WARSIM Directorate (<http://www-leav.army.mil/nsc/warsim/index.htm>). Submit recommended changes to the WARSIM 2000 ORD to Mr. Richard Lawhon, DSN 552-8324 (lawhonr@leav-emh1.army.mil) or Ms. Rarick, DSN 558-3148 or e-mail: marilyn\_rarick@rucker-emh4.army.mil.

**-STANDARD ARMY TRAINING SYSTEM (SATS) ORDERING...**The Project Manager, SATS, has renotified units to submit SATS 4.1 ordering information and to identify unit request information for the Field Manual/Training Circular CD-ROMs suites for distribution. Each CD ROM suite contains 367 FMs and 33 TCs. If your organization is ordering for the first time, use the form "Trainer's Unit Support System." ATSC advises: "SATS 4.1 should only be requested and distributed to installation, state TAG, Reserve Support Command or (no less than) separate brigade levels. Many requests have been received for separate AC battalions and RC separate companies. Roll-ups to the best determined level will be made by this office." POC is Angel Dickerson, DSN 927-4166 (ext 224), Commercial (757) 878-4166 (ext 224), FAX (757) 878-2453/4140 or e-mail: dickersa@emh22.eustis.army.mil.

**-HELICOPTER GUNNERY CONFERENCE...**A Helicopter Gunnery Conference is tentatively scheduled for 21-23 Oct 97 at Fort Rucker, sponsored by the DOTDS Gunnery and Aviation Systems

Division. Purpose is to address issues/present information on helicopter gunnery training. Master Gunners, SIPs from Corps, all Aviation Brigades, including Active Duty, Reserve, National Guard, and Department of the Army agencies that deal with STRAC munitions and aviation gunnery type training devices need to attend. Battalion level personnel and below are also invited. Planned agenda includes working/discussion groups on helicopter gunnery issues, proposed changes to FM 1-140 and ST 1-140-1, Simulator/C-COFT, as well as information briefings on HELLFIRE missile, AWSS/LASS, APKWS, Simulation, STRAC, Door Gunnery, and Schoolhouse gunnery training. Sent 2028s on FM 1-140/ST 1-140-1 on helicopter gunnery related issues for working group topics. If planning to attend, send name, rank, unit, position, address, work phone, FAS number to be put on list and receive updates. POC is CW4 Rivers, DSN 558-2755, COM (334\_ 255-2755, e-mail: patrick\_rivers@rucker-emh4.army.mil.

## TRAINING

**-STANDARD ARMY TRAINING SYSTEMS (SATS) TRAINING...**To receive information on having SATS training brought to your organization, call the SATS help desk (800 201-7287 or DSN 927-4744). The SATS newsletter is a valuable source of information. The ATSC provides SATS trainers for one week to groups of 2-30 at no cost to the requesting unit. The USAAVNC POC for further information is Ms. Rarick, DSN 558-3148 or e-mail: marilyn-rarick@rucker-emh4.army.mil.

**-AVIATION MISSION PLANNING STATION (AMPS) COURSEWARE...**AMPS Courseware is in the analysis phase for incorporation into the 93P AIT, NCOES, AOCs and Officer Professional Development. POCs are CPT Craig, SFC Cox, and SSG Kakatin, DSN 558-9654/9674/9675, e-mail: eric\_craig@rucker-emh4.army.mil.

**-AH-64D LONGBOW APACHE...**Courseware review for IPC supplemental complete, awaiting developed materials for MPC from MDTs. POC is CPT Garrett, DSN 558-9680, e-mail: james\_garrett@rucker-emh4.army.mil.

**-AVIATION WARRANT OFFICER ADVANCED COURSE (AWOAC) REVISION ANALYSIS...**STATUS: Ongoing. REMARKS: Task Analysis Worksheets (TAW) are being completed by contractor. Ten of 59 AWOAC specific tasks have TAW complete. POC is CPT Craig, DSN 558-9653, e-mail: .

**-WARRANT OFFICER ADVANCED COURSE (AWOAC)...**Contracted course revision is underway. POC is CPT Craig, DSN 558-9653, e-mail: eric\_craig@rucker-emh4.army.mil.

**-AVIATION MAINTENANCE MANAGER COURSE (AMMC)...**Course review and revision is underway. POC is CPT Craig, DSN 558-9653, e-mail: eric\_craig@rucker-emh4.army.mil.

**-DOTDS HOME PAGE...**The Directorate of Training, Doctrine and Simulation (DOTDS) Home Page is up and running and the address is (<http://www-rucker.army.mil/dotds/>). DOTDS is the proponent for all Army Aviation training development, doctrine development and simulation initiatives. Any and all Army Aviation training, doctrine, and simulation questions can be directed to this site. Additionally, you will find points of contact for Army Training XXI, Warrior/Warfighter/Warrior XXI and related supporting strategies and execution plans. POC is CPT Craig, DSN 558-9653, e-mail: eric\_craig@rucker-emh4.army.mil.

**-MOS 67 CMF40...**The critical Task Site Selection Board was held 12-16 May 1997. The media selection process tasks (Distance Learning), is scheduled to take place July 1997. POC is SFC Macklin, DSN 558-9688, e-mail: lionel\_macklin@rucker-emh4.army.mil.

**-MILITARY TRAINING OPEN ALLOTMENT...**The Military Training Open Allotment (MTOA) has been the tool by which HQDA disburses TDY funds to MACOMS/Installations for training. Effective 1 Oct 97, MTOA will be replaced by the Military Training Specific Allotment (MTSA). The MTSA provides TDY funding only for DA priority specified courses. The gaining installation pays the bill for TDY personnel enroute to another PCS location. Two sets of orders will be issued with two separate fund cites (one for the PCS, and one for the TDY) for TDY enroute soldiers. This will ensure that only the costs associated with the training are charged to the MTSA. No change under MTSA for

TDY and return personnel. This new process will not have a negative impact on the soldier. Scheduling of training will stay the same and sufficient funds are being distributed to ensure required training is provided to soldiers who need it. Soldiers will settle at the same place and manner as with any other travel event. A complete subject matter reference guide and hand book is provided on the internet at [HTTP://WWW.ASAFM.ARMY.MIL.](http://WWW.ASAFM.ARMY.MIL.), under publications, then, select the letter M in the alphabet. POC is Mr Edward Brown, DSN 558-9387, e-mail is [edward\\_brown@rucker-emh4.army.mil](mailto:edward_brown@rucker-emh4.army.mil).

#### MATERIEL

**-ARMY AIRBORNE COMMAND AND CONTROL SYSTEM (A2C2S)**...Replacement system for AN/ASC-15B/C...will provide voice, data, and imagery comms on-the-move...provides situational awareness and C2 on-the-move for corps, division, maneuver and aviation brigades, and attack battalion commanders...displays direct broadcast intelligence on map background...two prototypes successfully participated in the Task Force XXI Advanced Warfighting Experiment (AWE) "Ivy Focus" 15-29 Mar 97 ...one prototype to participate in the Division XXI AWE Nov 97...CSA approved Warfighting Rapid Acquisition Process (WRAP) dollars for early fielding (21 months early) of six systems for Division 2000, allowing first unit equipped date of 4th Qtr FY 00...milestone decision review set for 3d Qtr FY 99 and Initial Operational Test & Evaluation currently planned for 1st Qtr FY 99. POC is MAJ Paulino, DSN 558-0168. e-mail: [Kenneth\\_Paulino@rucker-emh4.army.mil](mailto:Kenneth_Paulino@rucker-emh4.army.mil).

**-AVIATION MISSION PLANNING SYSTEM (AMPS)**...Provides automated mission planning, mission rehearsal, and battlefield synchronization tool...a lightweight, ruggedized LCU version for use in units is currently being fielded to units with software Version 4.0 installed...AMPS program is transitioning to an Evolutionary Acquisition program, allowing hardware to be fielded, and testing required only on subsequent versions of software...the Operational Requirements Document is in revision to reflect the change in acquisition strategy and incorporate observations from TFXI...Initial Operation Test & Evaluation on Version 4.0 slated for February 1998...Version 5.0 slated for release in November 1998...Milestone III review and full materiel release slated for May 1998. POC is CPT Bray, DSN 558-0167, e-mail: [Dennis\\_Bray@rucker-emh4.army.mil](mailto:Dennis_Bray@rucker-emh4.army.mil).

**-IMPROVED CARGO HELICOPTER (ICH)**... will extend the life of the CH-47D until the 2020-25 timeframe...improvements include vibration reduction and the capability to operate on the digitized battlefield supporting Army XXI...CG, USAAVNC, approved the ICH Operational Requirements Document on 13 Sep 96, followed by TRADOC's approval on 17 Nov 96...current plan to begin fielding by the 2004 timeframe...POC is MAJ Brown, DSN 558-2704, e-mail: [Robert\\_Brown@rucker-emh4.army.mil](mailto:Robert_Brown@rucker-emh4.army.mil).

**-UH-60 BLACKHAWK IMPROVEMENT PROGRAM**...program was initiated with the establishment of an Integrated Concept Team (ICT) on 20 May 1997...purpose of the effort is to determine modernization requirements necessary to enable the UH-60 Blackhawk helicopter to remain operationally effective well into the 21st century (2025-2030)...the product of this 18 month study will be the UH-60 Operational Requirements Document (ORD) ...anticipate completion of ORD in December 1998... POC is Mr. Chuck Gant, DSN 558-9115, e-mail: [Charles\\_Gant@rucker-emh4.army.mil](mailto:Charles_Gant@rucker-emh4.army.mil).

**-KIOWA WARRIOR**...several improvements are scheduled for incorporation into production line aircraft, the (OH-58D+), beginning July 97...improvements include the R3 Engine and TF XXI initiatives...Kiowa Warrior fielding "Tiger Team" has developed several courses of action for possible redistribution of these advanced aircraft...issues that may effect changes in the current fielding schedule include digitized division/corps requirements, unit readiness (least disruptive schedule), engine (high/hot) performance requirements, force package one units, training base requirements, and "refresh the fleet" requirements...LTC Miller (DAMO-FDV) briefed these courses of action to MG Adams (DAMO-FD) and LTG Shinseki (DSCOPS) on 11/12 June 97, expect a decision in the next

two weeks... POC is CPT(P) Worshek, Kiowa Warrior System Integrator, DSN 558-3808, e-mail: Curtis\_Worshek@rucker-emh4.army.mil.

**-UC-35A PROCUREMENT...**first UC-35A Medium Range jet aircraft delivered December 1996...a commercial off-the-shelf Cessna Citation Ultra V...performance: range = 1500 to 1800 NM, cruise speed = 330 to 450 KTAS, service ceiling = FL450, gross weight = 16,300....seven aircraft on contract with a requirement for thirty-five...initial fielding plan includes three for Atlanta, two at Fort Hood, and two for USAREUR...two of the seven aircraft have been fielded. POC is Mr. Robert Nelson, DSN 558-2571, e-mail: Robert\_Nelson@rucker-emh4.army.mil.

**-ADVANCED PRECISION KILL WEAPON SYSTEM (APKWS)...**will provide Army aviation with a low cost, highly accurate weapon for engagement of light-armored and soft point targets...uses a laser seeker and guidance package coupled to a 2.75" rocket like the Army's current M66 motor and a 10 pound HE warhead...offers high single shot probability of hit against medium to long range point targets (1 km to > 6 kms)...weapon greatly enhances aviation's capability and lethality in all roles, especially MOUT, early entry, and aerial fire support missions...current plan, funding permitting, calls for fielding of APKWS in FY02...POC is CPT Jim Bowie, DSN 558-9115, e-mail: Jimmy\_Bowie@rucker-emh4.army.mil.

**-AVIATION GROUND SUPPORT EQUIPMENT (AGSE) INTEGRATED CONCEPT TEAM (ICT)...**AGSE Management Board formed an ICT to conduct a comprehensive review of all AGSE items...purpose of review is to identify obsolete items and formulate a plan to eliminate them and/or replace them with new AGSE items...examples of items being reviewed are gasoline-powered compressors and heaters...units responded to questionnaire field survey...two more on site surveys will be conducted at Fort Hood and Fort Drum this summer...final report in October...POC is Mr. Gene Isaak, DSN 558-9276, e-mail: Gene\_Isaak@rucker-emh4.army.mil.

**-REARM/REFUEL INITIATIVES...**Aviation Ground Support Equipment Branch has prepared an Operational Requirements Document (ORD) for Remote Rapid Rearm/Refuel Deployment System (R3D2S)...submitted for approval in May...capabilities to use an electric fuel pump and 230 gallon tanks on a Blackhawk as a system to refuel Kiowa Warriors...also mentions capability to carry missiles/rockets in a non-firing configuration for use in rearming...expect approval this summer...also prepared an ORD for Extended Range Fuel System II...ORD is being staffed worldwide/complete in June...provides crashworthy self-sealing internal fuel tank capabilities for use in CH-47 units...POC is Mr. Tom Foster at DSN 558-9276, e-mail: Thomas\_Foster@rucker-emh4.army.mil.

**-AIRCRAFT CLEANING AND DE-ICING SYSTEM (ACDS) ORD...**the ORD for the ACDS was approved by HQ TRADOC in March 97...ACDS will be a portable multi-fuel flight line aircraft washing system that allows for recovery/recycling of effluents and runoff...the system will possibly be funded for procurement in FY 99...POC is SGT Lawton at DSN 558-9276, e-mail: Edward\_Lawton@rucker-emh4.army.mil.

**-COMBAT SURVIVOR/EVADER LOCATOR (CSEL) PROGRAM...**a U.S. Air Force led joint service program to support the recovery of downed aircrew members and ground personnel...consists of three segments: (1) over-the-horizon (OTH) satellite voice/data communications (UHF SATCOM, COBRA, and SARSAT), and GPS precise geopositioning, (2) communication between UHF SATCOM base station, Joint Search and Rescue Center (JSRC), Rescue Control Center (RCC), and the survivor/evader, (3) the user which consists of the CSEL hand-held radio (HHR), CSEL planning computer (CPC) with a HHR loader adapter (HLA)...Army scheduled to initially procure 9,000 HHRs beginning in Mar 98...total Army requirement is 17,000+...POC is Mr. Bernie Roberson, DSN 558-9130, e-mail: Bernard\_Roberson@rucker-emh4.army.mil.

**-AIR WARRIOR (AW)...**an integration of all aviation life support equipment (ALSE), clothing and individual equipment (C&IE), NBC protection, and mission equipment. Integration is designed to improve mission capability, comfort and endurance, aircraft and aircrew-station interface, and safety of flight...a modular design to permit tailoring for mission requirements, to minimize weight and

bulk, and facilitate maintenance and support...Operational Requirements Document was approved by TRADOC 1 Jul 96...MS I approved 7 Apr 97 and MS II scheduled for Sep 98...POC is Mr. Bernie Roberson, DSN 558-9130, e-mail: Bernard\_Roberson@rucker-emh4.army.mil.

**-COCKPIT AIRBAG SYSTEM (CABS)**...will use inflatable bags to encapsulate the aviator in a protective air cushion...improved restraint system will protect aviators in potentially survivable aircraft accidents by reducing or eliminating the crash strike envelope of the crew member...Operational Requirements Document was approved by TRADOC 1 Nov 96...low rate initial production is scheduled to begin in Jul 97...POC is CW4 John Popovich, DSN 558-9130, e-mail: John\_Popovich@rucker-emh4.army.mil.

**-AVIATION TACTICAL OPERATIONS CENTER (AVTOC)**...provides commander and staff Army Tactical Command and Control Systems (ATCCS) automated environment...plan, direct, coordinate, and control aviation operations...one brigade-size CP prototype participating in Div XXI SIMEX # 1 ...will participate in Division XXI in Nov 97...program has merged with all other Army TOC programs under PEO C35 and TPIO-ABCS...program milestones and fielding dependent upon Army Digitization Modernization Plan and funding...CPT(P) Maria Quintanilla, DSN 558-3973, e-mail: Marisal\_Quintanilla@rucker-emh4.army.mil.

**-SUITE OF INTEGRATED INFRARED COUNTERMEASURES (SIIRCM)**...next generation infrared countermeasures system...replaces the AN/ALQ-144, AN/ALQ-156 or AN/AAR-47, and the M-130...consists of the Common Missile Warning System (CMWS), a missile seeker jammer, an improved countermeasure dispenser and the improved IR flare munitions...multi-service program...SIIRCM will direct jamming signals and/or flares at approaching IR seeking missiles...interfaces directly with the Suite of Integrated Radio Frequency Countermeasures (SIRFC) to increase aircraft survivability...lead platform for SIIRCM is the MH-60K with follow-on platforms being the AH-64D, OH-58D (CMWS only), UH-60A/L, CH-47D, and MH-47E...POC is Mr. John Rhein, DSN 558-9238, e-mail: John\_Rhein@rucker-emh4.army.mil.

**-HIGH FREQUENCY NAP-OF-THE-EARTH COMMUNICATION SYSTEM**...Includes the AN/ARC-220 aircraft radio and its ground counterpart (for aviation TOCs), the AN/VRC-100... state-of-the-art radio features improved reliability and enhancements to reduce operator/aircrew workload...these enhancements incorporate both voice and data communications options, automatic link establishment (ALE), link protection, anti-jam (electronic counter-countermeasures) and secure (with KY-100 AIRTERM) capabilities...the radio's embedded modem data capability includes transmission of GPS position, or other data messages, at transmission rates up to 2400 bits per second...radio will store up to 10 preset "send" messages, and 10 received messages...maximum message length is 500 characters per message...planned basis of issue is one (1) ARC-220 radio per cargo (CH), utility (UH), SEMA (EH), and Medevac aircraft; and one (1) ARC-220 radio for every two (2) attack (AH) and reconnaissance (OH/KW/AH) aircraft...three (3) VRC-100's are authorized for aviation brigade tactical operations centers (TOCs), and two (2) VRC-100's for aviation battalion and separate company TOCs...TEXCOM completed Initial Operational Test and Evaluation of the radio in MAY 97 and a Milestone III type classification, production, and fielding decision is scheduled for 4QFY97...POC is Mr. Jerry Sweitzer, DSN 558-2110, e-mail: Jerry\_Sweitzer@rucker-emh4.army.mil.

**-SUITE OF INTEGRATED RADIO FREQUENCY COUNTERMEASURES (SIRFC)** ...multi-service radio frequency countermeasure system for aircraft consisting of two subsystems; the Advanced Threat Radar Jammer (ATRJ) and the Advanced Threat Radar Warning Receiver (ATRW). ACAT III program with OSD oversight...currently in EMD phase... Milestone III decision expected in FY99...POC is CPT Pilgrim, DSN 558-9238, e-mail: Allen\_Pilgrim@rucker-emh4.army.mil.

**-GLOBAL POSITIONING SYSTEM (GPS) NAVIGATION SYSTEMS**...AN/ASN-128B Doppler/GPS Navigation System (DGNS)...provides a combined GPS/Doppler navigation capability through the embedding of a six channel GPS receiver into the signal data converter of the currently fielded AN/ASN-128 Doppler navigation system...H-764G Embedded GPS/Inertial Navigation System

(EGI)...tri-service, United States Air Force led effort to provide an integrated navigation solution for aircraft equipped with a MIL-STD 1553 digital data bus...embeds a 5 channel GPS receiver into a ring laser gyro inertial navigation system...total system weight of only 17.9 pounds...mean time between failure is guaranteed by the manufacturer to be at least 6,500 hours...POC is CW3 Chris Miller, DSN 558-2110, e-mail: Christopher\_Miller@rucker-emh4.army.mil.

**-IMPROVED DATA MODEM (IDM)**...digital data transfer system that will allow both air and ground forces to exchange complex battlefield information in short, coded bursts...a modulator/demodulator (modem) which permits digital communication of information from tactical radios, onboard sensors, and processors...replace Airborne Target Hand Over System (ATHS)...stand-alone component weighing 14 lb...simultaneously transmits/receives using four different radios, interface with the MIL-STD 1553 data bus, transmit data rates at 16K bits per second (bps), and process messages up to 3500 characters in length...POC is SFC Mathews, DSN 558-9238, e-mail: Alfred\_Mathews@rucker-emh4.army.mil.

**-SECOND GENERATION FLIR**...also known as Improved FLIR (IFLIR)...provides improved range, resolution, and maintainability...these improvements are achieved by replacing the 1st generation common module components with digital components...SGF is key feature of Comanche...no current program to provide SGF to other Army aircraft, however ongoing efforts to fund a retrofit for AH-64 aircraft. POC is Mr. Danny Mason, DSN 558-9238, e-mail: Danny\_Mason@rucker-emh4.army.mil.

**-AIR TRAFFIC SERVICES (ATS) MANPOWER CRITERIA (MARC) STUDY**...study is being conducted by United States Army Force Management Support Agency (USAFMSA), Fort Leavenworth, with DCD assist...purpose is to determine minimum mission essential wartime staffing criteria for ATS functions in Tables of Organization and Equipment (TOE) ...DCD hosted a subject matter expert (SME) panel on 5 June 97...approximately sixteen USAAVNC SME's (MOS 93C and AOC 15B) participated...provided input to support proposed staffing criteria for airspace information services, terminal services, forward area support services, air service to Army Airspace Communications and Control, and ATS training and evaluation...final study will be staffed in July 1997 and forwarded to DA DCSOPS for final approval in September 1997...POC is Mrs. Shirley Watford, DSN 558-9509, e-mail: Shirley\_Watford@rucker-emh4.army.mil.

**-FORCE DESIGN UPDATE (FDU) 97-1**...DAMO-FDV notified DCD that the Electronic Equipment Test Facility (EETF) FDU, conversion from TDA to augmentation TOE's, is approved by DA... POC is MAJ Mark Funk, DSN 558-9785, e-mail: Mark\_Funk@rucker-emh4.army.mil.

#### USAALS

**-DEVICE ENHANCES UH-60 TRAINING**...The UH-60 Blackhawk Maintenance Trainer (HMT) has been developed and manufactured to enhance the training of 67TIO thru 67T30 students...This trainer simulates the operational functions of the UH-60A/L aircraft, to include electrical, hydraulic, automatic flight control, powerplant, powertrain, rotor, and utility systems...The BHMT can be utilized to demonstrate the various aircraft systems, for component removal/replacement tasks, systems troubleshooting through the completion of maintenance operation checks by the insertion of over 100 faults...The BHMT consists of the student station (simulated aircraft); the power cart, providing all AC, DC, and hydraulic requirements; and the instructor/ operator station, used to power the trainer systems, and insert/remove trainer faults. POC is Mr. Weaver, DSN 927-6605; e-mail: weaverr@eustis-emh10.army.mil.

**-USAALS TRAINING PERSPECTIVE INTERACTIVE CD-ROM**...developed by personnel within USAALS, released to all aviation brigade commanders in Apr 97...Interactive multimedia CD-ROM contains a recently produced information video of the Aviation Logistics School, a fully functioning "snapshot" of the USAALS Home Page, and informative video clips of certain aviation related MOSS. POC is MAJ Monsees, DSN 927-4932; e-mail is monseesk@eustis-emh10.army.mil.

**-THE USAALS HOME PAGE...**On-line since March 1996...Temporary address for server modifications is <http://atscweb.alsc-amry.org/usaals>...Original URL will return around Aug 97... Recent additions to the Home Page include interactive maintenance trivia questions, and a USAALS wide inquiry system which allows user interface with the school via e-mail...The Web Director for USAALS is Ms. Visconti, DSN 927-4746; e-mail is [webdirector@eustis-emh10.army.mil](mailto:webdirector@eustis-emh10.army.mil).

**-BASIC NONCOMMISSIONED OFFICER (BNCOC) PRERESIDENT/PREREQUISITE PILOT TEST...**Presents common aviation maintenance subjects for first line supervisors actively engaged in supervising work performed by apprentice and journeyman aviation maintenance personnel...Reduces the amount of time for BNCOC completion... Upon arrival at BNCOC, a diagnostic test will be given...A score of 70 percent must be achieved...One retest will be given)...If retest is failed, student will be sent back to the unit...However, since this is a test, soldiers will not be penalized and will be given a chance to attend BNCOC again...First packets were mailed in Jun 97 to students scheduled to attend the Oct 97 course...Test will run for one year. POC is Mrs. Roach, DSN 927-2726, e-mail is [roachj@eustis-emh10.army.mil](mailto:roachj@eustis-emh10.army.mil).

**-TOTAL ARMY TRAINING SYSTEM-COURSEWARE (TATS-C) UPDATE...**TATS-C for 67T, 67Y, 67U MOSQ are completed...Interim TATS-C for Common Aviation Maintenance lessons for 67T, 67V, and 67Y BNCOC has been sent to EAATS and WAATS to ensure valid training products are available to support the training needs of the field...RC3 courses are no longer current...USAALS can no longer accept the risk that is associated with training obsolete RC3 course material. POC is Mrs. Roach, DSN 927-2726, e-mail is [roachj@eustis-emh10.army.mil](mailto:roachj@eustis-emh10.army.mil).

**-USAALS DISTANCE LEARNING SURGES FORWARD...**The end of June will mark the halfway point for 17 soldiers enrolled in the first distance learning class of 67T20/30 transition students from the Kansas and Iowa Army National Guard...The Department of Aviation Systems Training (DAST) will complete the first of two scheduled ADT or annual training periods on-site in Salina, KS on 14 Jun 97, and another video teletraining (TNET) session on 28-29 Jun 97...This will give these soldiers approximately half the total hours required for completion of MOSQ...This first USAALS distance learning aviation course is scheduled for completion in November...USAALS POC for obtaining read-ahead packets and TNET requirements is Mrs Mack, e-mail is [macke@eustis-emh10.army.mil](mailto:macke@eustis-emh10.army.mil). DAST POC for obtaining specific course information and requirements is Mr. Jarman, DSN 928-1174.

**-UH-60 67T20/30 TRANSITION TRAINING UPDATE...**Instructor from USAALS Department of Aviation Systems Training recently completed courses graduating 36 National Guard Technicians from Tennessee and Nebraska...In addition, the first course taught to an active duty unit was completed in Dec 96...Nine soldiers from the 283d Medical Detachment (Dustoff) Fort Wainwright, AK were awarded the 67T MOS...The same course has already graduated technicians in Oregon, North Carolina, Nebraska, and Tennessee...Courses have been scheduled for training during the next FY in Colorado and Wyoming. POC is Mr. Honaker, DSN 927-4808.

**-DATT/SPD...**The Structures and Pneudraulics Division, DATT, is developing a training program to transition 68Ps to 68Ks in airframe repair. POC is SGM Rich, DSN 927-3695.

**-AH-64 ARMAMENT MAINTENANCE TECHNICIAN COURSE (4D-SQIE)...**A major revision of the course was completed 10 Mar 97...The 13 week course is designed for warrant officers in the 152F and 151A MOS...The course was revised to reflect a new emphasis on troubleshooting the AH-64 weapon system...Students now receive extensive training on wire diagrams, basic troubleshooting theory, and system knowledge...The new course also includes a new emphasis on aviation management training...In support of these and other changes, the instructor staff has been replaced by all warrant officer staff. POC is CW3 Anderson, DSN 927-3331.

#### WESTERN ARMY NATIONAL GUARD AVIATION TRAINING SITE (WAATS)

**-WESTERN ARNG AVIATION TRAINING SITE HOSTS 1-150TH ATTACK HELICOPTER BATTALION ANNUAL TRAINING...**The WAATS recently hosted an Annual Training for the 1-150th Attack

Helicopter Battalion, New Jersey Army National Guard. This support was requested by the unit commander as a method to leverage the Attack expertise at the WAATS conducting TRADOC training to the readiness enhancement of a FORSCOM unit. The following training was conducted. Attack Helicopter crews completed Table V, VII and VIII qualification on the Gila Bend range complex consisting of 2.6 million acres of ranges that are electronically scored and provide numerous targets in tactical formation. Air Crew Coordination training was conducted for 22 aviators using WAATS instructors and on-site Cobra flight weapons simulator. Additionally, two initial Gunnery qualifications were completed for students. Enlisted readiness of the unit was enhanced by the following training: 67Y BNOG CAM, 67Y transition, Battle Focused Instructor Training Course and Small Group Instructor training. The expense of providing this training was greatly offset by the 1-150th falling in on WAATS equipment. The WAATS provided: aircraft, dormitory rooms, messing, GSA vehicles and office space for entire unit. This allowed the unit to deploy using DOD opportunity airlift to reduce transportation expenses. This training is available for the Total Force Attack and Air Cavalry community. AH-64 units can also be supported with the WAATS Combat Mission Simulator and other organic AH-64 training resources. Units interested in Training at the WAATS can contact Major Scott Miller DSN 853-4574 Com 520 682-4574.

#### **OPERATIONAL SUPPORT AIRLIFT COMMAND/FIXED WING TRAINING SITE**

**-CONDUCTS RATED CREWMEMBER TRAINING...** Aircraft Qualification in C-12, C-23 and C-26...Differences Training for Fixed Wing Instructor Pilots in C-12, C-23 and C-26...Initial Fixed Wing Instructor Pilot Qualification Training in C-26 and

C-23...Fixed Wing Instrument Flight Examiner Course in C-12, C-23, C-26. Providing category specific IE training...C-23 Pilot Parachute Procedures Course...Pilot and Instructor Pilot Standardization Training in C-12, C-23, C-26...Aircraft Recurrent Training in C-12, C-23 and C-26. POC is CPT Brian Love, DSN 366-6592. No E-Mail.

**-CONDUCTS ENLISTED, NON-RATED CREWMEMBER TRAINING...**67G Transition/C-23 Flight Engineer Qualification...C-23 Flight Engineer Instructor Course...C-23 Flight Engineer Parachute Procedures Course...C-23 Flight Engineer and Flight Engineer Instructor Standardization Training...Provides "Post-Graduate" Fixed Wing Training to all Army Components (ATTRS School Code 960A). POC is CPT Brian Love, DSN 366-6592. No E-Mail.

#### **TSM-COMANCHE**

**-COMANCHE FLIGHT TESTING...**Air Vehicle #1 disassembly at the West Palm Beach Flight Test Facility was completed and the reassembly is in progress. The disassembly was a scheduled part of the flight test program and allowed for a 100 percent inspection of the complete air vehicle prior to continuing into the next phase of the flight test. It also provided an opportunity to incorporate fixes/improvements identified from the previous phases. The next scheduled flight of air vehicle #1 is the second week in July. Air vehicle #2 is approx. 85 percent complete and is scheduled for rollout in Jan '98. POC is LTC McVeigh. DSN 558-2160, e-mail: Joseph\_McVeigh@rucker-emh4.army.mil.

**-PROGRAM MANAGER CHANGE...**BG Snider was selected for Major General. He recently passed the PM controls to BG Bergantz as he continued on to his new job as PEO Aviation. BG Snider was a true supporter of the needs of the user in his role as PM Comanche. He will be able to provide an even greater impact to Army Aviation as the next PEO. POC is LTC McVeigh, DSN 558-2160, e-mail: Joseph\_McVeigh@rucker-emh4.army.mil.

**-COMANCHE PORTABLE COCKPIT (CPC)...**Is a full scale version of the Comanche cockpit and can demonstrate aircraft operations, both physically and operationally, through a Distributed Interactive Simulation (DIS). The CPC is mounted on a semi-trailer and can be set up and operational in hours. It will be visiting the following sites during 4th quarter '97: Fort Drum (20-22 July), Newport, RI (27-31 July), Fort Rucker, AL (3-11 Aug, 12-24 Aug), Fort Eustis, VA (25-27 Aug), Fort Monroe, VA (27-



29 Aug), Fort Campbell, KY (3-5 Sept), Fort Leavenworth, KS (8-10 Sept), Fort Sill, OK (15-19 Sept). Come see the capabilities of the Army's future reconnaissance/attack helicopter when it visits your area. POC is LTC McVeigh. DSN 558-2160, e-mail: Joseph\_McVeigh@rucker-emh4.army.mil.  
-TSM COMANCHE...COL James Herberg assumes the duties and responsibilities as the next TRADOC System Manager-Comanche 30 June '97. Welcome aboard! POC is LTC McVeigh. DSN 558-2160, e-mail: Joseph\_McVeigh@rucker-emh4.army.mil.

#### TSM-LONGBOW

-AH-64D LONGBOW FIELDING PLAN...The Army will field the first battalion, 1-227th Attack Helicopter Battalion (AHB), Fort Hood, in FY98-followed by the 2-101st, Fort Campbell...Fielding continues through FY09...up to 3 BN's per year...All Force Package I units, including RC, complete in FY07...First production aircraft was delivered 21 Mar 97, total now is three. POC is MAJ Pelczynski, DSN 558-2167, e-mail anthony\_pelczynski@rucker-emh4.army.mil.

-LONGBOW IN TF XXI...Advanced Warfighting Experiment (AWE) - TF XXI AWE concluded in March...Longbow Apache identified as a "High Achiever"...Two prototype aircraft performed beyond all expectations...100 percent availability and 96 percent mission capable rate...Longbow used in a broad spectrum of mission profiles - success in all...Validated Phase one design of the Longbow Tactical Engagement Simulation System (TESS) for Combined Training Center participation...emerging insights reflect that Longbow is optimized for the NTC terrain and is a very capable reconnaissance as well as attack platform...TTP refinement in progress and will continue in DIV XXI AWE. POC is MAJ Pelczynski, DSN 558-2167, e-mail, anthony\_pelczynski@rucker-emh4.army.mil.

-DIVISION XXI - SIMEX 1...completed 11 June 97, follow on exercises are on track...actual AWE scheduled for OCT/NOV 97. Aviation issues include the reduction in force organization to only one attack battalion per division and the existence and location of the Division Aviation Support Battalion (DASB). As in Task Force XXI...connectivity of the Army Tactical Command and Control Systems (ATCCS) continues to be the cornerstone issue of the digital force. POC is MAJ Pelczynski, DSN 558-2167, e-mail, anthony\_pelczynski@rucker-emh4.army.mil.

-LONGBOW TRAINING PROGRESS...First Instructor and Key Personnel Training (IKPT) total success...15 pilots completed of whom 10 completed follow-on IPC...A Company, 1-14th, prepared to begin flight training for 1-227th pilots starting in

Aug 97...67R Longbow mechanics course set to begin 26 Jun 97 and 68X Armament/Electronic Specialist scheduled to begin in Oct 97...Development of the Longbow Crew Trainer Prototype continues...Government Integrated Acceptance Test is scheduled for Aug 97...Development of the maintenance training devices is proceeding on course...Transition to Full Training Phase at Fort Rucker and Fort Eustis scheduled for 1 Oct 99. POC is MAJ Pelczynski, DSN 558-2167, e-mail, anthony\_pelczynski@rucker-emh4.army.mil.

#### USAATCA

-TACTICAL TERMINAL CONTROL SYSTEM (TTCS)...The TTCS is providing the Army with a terminal capability for tactical landing areas, drop zones, and pickup zones. Number of systems fielded: 10. Remaining 52 systems will be fielded by Jun 97. Initial operational capability (IOC) for TTCS is third quarter, 1998. POC: Mr. Ronnie Tucker, (334) 255-1115/9067; e-mail: ronnie\_tucker@rucker-emh4.army.mil.

-AIR TRAFFIC NAVIGATION, INTEGRATION, AND COORDINATION SYSTEMS (ATNAVICs)...ATNAVICs provides the aviation force with a nonprecision and precision approach and landing capability at tactical landing areas. System is in prototype development with IOC, third quarter, 1999. Prototype testing is scheduled for government testing Nov/Dec 97. POC: Mr. Ronnie Tucker, 334-255-1115/99067; email: ronnie\_tucker@rucker-emh4.army.mil.

-TACTICAL AIRSPACE INTEGRATION SYSTEM (TAIS)...System is in prototype development and

recently participated in Prairie Warrior. TAIS is scheduled to participate in SIMEX II and Division XXI, Advanced Warfighting Experience for 1997. TAIS user-functional description is out for local staffing. User-interface requirement is contracted out. POC: Mr. H. Bruce Peterson, (334) 255-1115/9067; email: bruce\_peterson@rucker-emh4.army.mil.

**-MOBILE TOWER SYSTEM (MOTS)...**MOTS operational requirements document is being released for worldwide staffing. Army is in joint interest with the Marine Corps for acquisition of Marine Corps mobile tower. POC: Mr. Ronnie Tucker, (334) 255-1115/9067; email: ronnie\_tucker@rucker-emh4.army.mil.

**-FM 1-303, AIR TRAFFIC CONTROL FACILITY OPERATIONS AND TRAINING...**Coordinating draft distributed to the field 2 May 97. Comments/feedback should arrive at USAATCA NLT 15 Aug 97. POC: Mr. Frank Dennis, (334) 255-9067/1115; email, Frank\_dennis@rucker-emh4.army.mil.

#### BRANCH CSM UPDATE

**-YES DRILL SERGEANT...**The drill sergeant is the corner stone for basic and individual training in all branches of service. The challenge and responsibilities of a drill sergeant requires a highly motivated, well disciplined, qualified professional to serve as cadre at location, such as : 1) Installations conducting Initial Entry Training (IET); 2) U.S. Army Corrections Activity, Fort Riley, KS; 3) Defense Language Institute English Language Center at Lackland AFB, TX; 4) USAR Training Divisions and Separate Training Brigades...Under the Drill Sergeant Program, drill sergeant duty is a part of normal career development. Only qualified Active Army soldiers will be nominated by their respective career branches for Drill Sergeant School, based on a review of records maintained by U.S. Army Personnel Command (PERSCOM). Active Army soldiers who qualify also may volunteer for the program...Since the drill sergeant is the primary representative of the Army during the formative weeks of an enlistee's training, only the most professionally qualified soldiers will be assigned these duties. Entrance into the program and successful completion of the Drill Sergeant School Course of Instruction will result in: 1) A stabilized assignment to an installation where drill sergeants are authorized; 2) Award of the Drill Sergeant SQT "X"; 3) Eligibility for Special Duty Assignment Pay; 4) Authorization to wear the distinctive drill sergeant hat and badge. POC is MSG Garza, DSN 558-2653, e-mail: raymond\_garza@rucker-emh4.army.mil.

**-DRILL SERGEANT PROGRAM...**To be eligible to enter the Drill Sergeant Program, all candidates must meet the following prerequisites except for those USAR candidates: 1) Be prepared to take a diagnostic Army Physical Fitness Test (APFT) shortly after arrival at Drill Sergeant School. Before graduation, candidates must pass the APFT (no substitution of events). Volunteers for entry into the Drill Sergeant Program must have successfully passed the APFT within the last 6 months and must furnish a copy of their physical fitness test scorecard (DA Form 705) with their applications. Weight limits are prescribed in AR 600-9. The minimum physical profile guide for selection is 211221 without drill sergeant restrictive assignment limitations; 2) Have no speech impediment; 3) Display good military bearing; 4) Have no record of emotional instability as determined by screening of health records; 5) Be a high school graduate or possess the GED equivalent; 6) Have demonstrated leadership ability during previous tours of duty; 7) Have no record of disciplinary action or time lost under 10 USC 972 or letter of reprimand filed in OMPF during current enlistment or in last 3 years, whichever is longer; 8) Have demonstrated capability to perform in positions of increasing responsibilities as Senior NCO in the Army, as reflected on NCO Evaluation Reports...All the prerequisites are listed in AR 614-200, AR 600-9 and AR 350-15...The drill sergeant is the instrument that sets the foundation to transform a civilian trainee into a professional soldier. The days are long, however, the rewards are immeasurable. The Aviation Branch has always met its quota for drill sergeants with the highest quality of professional NCOs. POC is MSG Garza, DSN 558-2653, e-mail: raymond\_garza@rucker-emh4.army.mil.

**-CHANGE IN NCO STRUCTURE (CINCOS)...**Proposal is moving along, on 4 June 97, CINCOS was

presented to Council of Colonels (COC) for review. The next review of CINCOS proposal will be on 13 June 97, at the Pentagon by General Officer Steering Committee (GOSC). POC is MSG Garza, DSN 558-2653, e-mail: raymond\_garza@rucker-emh4.army.mil.

**-"HOW DO I GET A MODERNIZED MOS?"**...Transition Course for modernized aircraft systems targeted SL2/3 soldiers in non-mod MOSs. Modernized Aircraft "Shortfall seats" are for highly qualified soldiers in non-mod MOSs, unit selected, but the training is no longer DA funded, and units must make the following statement on the soldiers 4187: **(Unit will provide funding for the training)**. Training is TDY and return, after completion of course, soldiers must submit 4187 requesting reclassification to new MOS. Once soldier receives the new MOS be ready for PCS orders for the needs of the Army. Soldiers requesting modernized MOS must understand, they are volunteering for any open "Shortfall" seat available at that time, for example a soldier holding MOS 67N may receive a seat for 67R course. This is not a total fix to the non-mod dilemma, but it has been a success story for the Aviation Branch FY96 and FY97. POC is MSG Garza, DSN 558-2653, e-mail: raymond\_garza@rucker-emh4.army.mil.

**-REENLISTMENT BONUS...**We now have seven MOSs with SRB multipliers of A-1 bonus. The affected MOSs are:

MOS	SPC	SGT	SSG-SFC	ASI	SQI
67R	X	X	X		
67S	X	X	X		
68D	X	X	X	2/N2	
68G	X	X	X		
68J	X	X	X		
68X	X	X	X	W/W5	P
93C	X	X	X		

All reenlistment bonuses were posted as of 25 April 1997. For more information on SRB contact your unit Retention NCO. POC is MSG Garza, DSN 558-2653, e-mail: raymond\_garza@rucker-emh4.army.mil.

DANIEL J. PETROSKY  
Major General, USA  
Chief, Aviation Branch

## Join the Professionals - Join AAAA!

ARMY AVIATION ASSOCIATION OF AMERICA (AAAA)					AAAA ANNUAL DUES	
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Citizenship _____ Nickname _____ Sponsor's Name _____						
Date of Birth (Mo/Yr) _____ Social Security No. _____						

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**Let them try and call that a MISS!!**



## MAILBOX



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Dear Editor:

The unique thermal imaging capability of the Forward Looking Infrared System (F.L.I.R.) and its subsequent widespread military and civil application has become quite prominent and newsworthy since military declassification during the Gulf War (DESERT STORM). However, I cannot further tolerate the U.S.A.F. taking full credit for F.L.I.R. development as recent documentary T.V. programs would imply.

In the rush by various individuals and organization (civil and military) to take credit for this system, it seems that the distinctive pioneering effort of the Aerojet General Corp. (Azusa, CA Facility) to develop, produce and field original U.S. Army F.L.I.R. systems installed on armed UH-1 helicopters for combat test in 1967-1968 has become lost in the shuffle of history.

I participated in this combined Army/Industry "ENSURE/BRICKBAT 01" effort as the Army's first line, Night Vision Program Manager within the U.S. Army Materiel Command's "PROJECT IROQUOIS" for both the F.L.I.R. and INFANT systems (Iroquois Night Fighter and Night Tracker) - an ambient light intensifier system in the visible light spectrum with surveillance, target acquisition and fire control objectives similar to F.L.I.R.

The Aerojet General Corp. should have ample archival documentation of its unique contribution to the development of F.L.I.R. technology and weapon interface and should not hesitate to make this information available to official military historians as well as civilian documentary film producers.

*LTC William A. Smith, Ret.*

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I certify that the statements made by me in this statement and dated September 26, 1997 are correct and complete.  
Lynn Coakley, Publisher



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# AAAA President's Message

## MG Dave Robinson, Ret.

AAAA is on the move on a number of fronts ranging from membership benefits to raising our profile in the nation's capitol. Our new National Executive Board (NEB) team is in place and we have formed the membership Committee around the Chairman, MG Carl McNair, AAAA Senior VP, and Vice Chairman, COL Tom Johnson, Ret. We are in the process of calling all our Chapter Presidents and polling them specifically on what benefits we at the National Level can help deliver to you at the local level. If you haven't spoken to your chapter president lately, please do so immediately and have them share your thoughts with us. You may also call the AAAA National Office (203) 226-8184 extension 123 and talk to Acting Executive Director Bill Harris or email us at [aaaa@quad-a.org](mailto:aaaa@quad-a.org) directly.

Expect to see the first mailing of our new AAAA affinity MasterCard Credit card program in December. These cards can be customized with images of Apache, Black Hawk, Chinook, and Kiowa Warrior. Pick your favorite aircraft when you sign up. A percentage of your annual purchases will go to benefit the AAAA Scholarship Foundation, Inc. The new AAAA flight pay insurance program is also now in effect. Contact the AAAA National Office (203) 226-8184 or the AAAA web site (<http://www.quad-a.org>) for more details.

The USAREUR Region is also really moving out. Under the leadership of AAAA Region President COL Dave Sale, Ret., membership recruitment is already on the rise. The AAAA National Executive Group has agreed to Dave's request to support his new AAAA Membership drive by providing round trip air fare to the 1998 AAAA Annual Convention in Charlotte, NC for the top USAREUR member recruiter. The AAAA USAREUR Region will provide all other resources in terms of transportation and housing.

We have also been busy in the professional meeting arena. November 4-6, 1997 we host the 15th Annual AAAA Aviation Electronic Combat Symposium, at the Opryland Hotel in Nashville, TN, under the theme, "Focus on the Warfighter, Today and Tomorrow" which will really serve as a forum and update for our Electronic Warfare Officers throughout the force. To help brochure Army Aviation in the nation's capitol, we hosted the Second Annual AAAA/AUSA Simulation Symposium in Washington, DC, last month. This event showcased the successes and challenges of our recent and pending Army Warfighting Experiments, yet didn't lose focus on the soldier on the ground. The following week, we were back in the DC area hosting the Congressional Airpower Caucus Breakfast for Members of Congress and their Senior Staff members on the Hill. We look forward to more AAAA sponsored Congressional events like this soon.

As you know, we joined with a number of other military associations to form The Military Coalition (TMC) last year and have recently taken stands and written to Congress on issue ranging from the House proposal for uncapped active duty pay raises beginning in 1999; to 30 year paid up Survivor Benefit plan premiums and Forgotten Wives SBP in the Senate version of the Defense Authorization bill. See the full story by our TMC Representative, COL Sy Berdux, Ret. on page 68.

Finally, I'd like to bring you up to date on the latest rumors of a pending increase to the Aviation Career Incentive Pay (ACIP) from the current cap of \$650.00. Recently, the AAAA National Office has fielded a number of calls from concerned members wondering what the sta-





AAAA sponsored the Congressional Airpower Caucus Breakfast 11 September 1997 in the Rayburn House Office Building. AAAA Senior VP, MG Carl H. McNair, Jr., Ret., addressed the assembled congressmen on AAAA's efforts to support out nation's defense. Left to right Rep. Terry Everett (R) AL-2, Rep. Buck McKeon, CA-25, Rep. Saxby Chambliss (R) GA-8, Caucus Co-Chairman, GEN Dennis J. Reimer, Chief of Staff, U.S. Army, guest speaker, and MG McNair.

tus is and what AAAA is doing about it. The facts are that the current cap has not been raised since 1990. Senator John McCain has indeed proposed an amendment in S.936, the FY 98 Authorization Bill, that the ACIP cap be raised to \$840.00 to take effect 1 October 1998. We are reliably informed that this effective date may slip to 1 January 1999. The additional \$190.00 is proposed to be available to those aviators beyond 14 years of service. Again, if this passes, it will be an entitlement for all aviators regardless of service branch. Also part of this amendment is an increase in Bonus Discretionary Accounts, from which the services may elect to offer bonuses for re-ups in aircraft for which we are suffering shortages of aviators. The current cap is \$12,000 per year. Senator McCain proposes to raise it to \$25,000 per year. We have just formed a AAAA Resolutions Committee of the National Executive Board (NEB) under the Chairmanship of LTG Jack Mackmull. The committee will establish an official AAAA position to be approved by the full AAAA NEB as their first order of business. Speaking as President of this organization, I can assure you that I will do everything I can to make sure that we support equality of any possible increase in benefits for ALL Army Aviators, regardless of rank. More to follow.

So, my message to you is that AAAA is on the move. We are aggressively starting new membership initiatives, and are seeking a higher profile for the AAAA in representing the entire Army Aviation Community to our nation's decision makers. We are even investigating the establishment of a Washington, DC office. However, we will need your support to increase our effectiveness. When you renew your membership or recruit a friend to become a member of AAAA, you are helping to give us the clout to deliver the Army Aviation Community's message. With your help, we can best represent your professional, and many times specific, Army Aviation interests. The Army Aviation Association of America is here to serve you.

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## HALL OF FAME CANDIDATES SELECTED



The Board of Trustees of the Army Aviation Hall of Fame, chaired by MG George M. Putnam, Jr., Ret., has selected 18 candidates from 53 nominees for inclusion on the ballot for the 1998 Hall of Fame induction. Some 9,000 AAAA members having two or more years of consecutive AAAA membership will be mailed ballots which contain the candidates, photos and biographical sketches within the next few weeks. The elected candidates will be inducted into the Hall of Fame in Ceremonies to be held Thurs., April 2, 1998, at the AAAA Annual Convention in Charlotte, NC.

The 18 candidates who are being considered for the 1998 induction are: COL Robert F. Cassidy, Ret.; CW3 Jesse C. Cozart, Ret.; COL Rudolph D. Descoteau, Ret.; CW4 William T. Hargrove, Sr., Ret.; CW5 Randolph W. Jones; MG Richard D. Kenyon, Ret.; PFC Garfield M. Langhorn (deceased); SP4C Joseph G. LaPointe, Jr. (deceased); LTC Donald F. Luce (deceased); MG James H. Patterson, Ret.; Mr. Jack G. Real; Mr. S. Harry Robertson; SFC Louis R. Rocco; MG Harold I. Small, Ret.; BG Joseph B. Starker (deceased); MG Richard E. Stephenson, Ret.; CW5 Benjamin A. Van Etten, Jr.; CSM Willy Wilson, Ret.

The Army Aviation Hall of Fame honors those who have made outstanding contributions to Army Aviation and records the excellence of their achievements for posterity. The actual Hall of Fame is located at the U.S. Army Aviation Museum at Ft. Rucker. AL.

# Legislative Action and the AAAA

by

## COL Sy Berdux, Ret., AAAA Representative to The Military Coalition

The AAAA is a participating member of The Military Coalition (TMC) and as such participates in furthering its goals and objectives. The Military Coalition represents more than five million current and former members of the seven uniformed services - active, reserve and retired - plus their families and survivors. Besides AAAA, the Coalition is a consortium of 27 military and veteran's organizations including the Assn. of the US Army (AUSA), US Army Warrant Officer Assn. (USAWOA), National Guard Assn. of the US (NGAUS), Reserve Officers Assn. (ROA), The Retired Officers Assn. (TROA), The Retired Enlisted Assn. (TREA), Veterans of Foreign Wars (VFW), Air Force Assn. (AFA), Fleet Reserve Assn. (FRA), National Military Family Assn. (NMFA), Navy League of the US, Marine Corps League, etc.

We urge members of Congress to introduce legislation, to support bills of interest to the membership and to authorize and appropriate funds for them.

At the present time the House and Senate conferees are meeting in Joint Conference to resolve their issues on the Authorization Bill. This will then be followed by the Appropriations cycle. A few of the major actions this year of particular interest to the AAAA membership are:

**Military Pay Raise:** Both the House and Senate Authorizers proposed a 2.8% raise in January 1998. As of 1999, the House bill would tie military pay raises to the average pay growth (this has been one of TMC's top active force priorities) and end the automatic pay caps that occur under current law; the

Senate bill would keep the current pay raise calculation.

**30-year paid up Survivor Benefits Plan Premiums:** Provides "paid-up" coverage under the Survivor Benefit Plan when the member has paid 30 years of premiums or is 70 years of age.

**Federal Employees Health Benefit Program (FEHBP) Study:** The Senate report directs the SECDEF to conduct a demonstration at two sites in order to gain data to study the cost and feasibility of authorizing FEHBP for all non-active duty beneficiaries, including active duty dependents and retirees. The report is due 1 March 1998. TMC believes this could provide another forum to explore the feasibility of extending FEHBP to Medicare-eligible retirees. DOD has previously stated it would not object to conducting such a test outside of military hospital service areas.

**Medicare Subvention:** This legislation has been a TMC goal for eight years. Subvention is an important component of our ultimate aim of obtaining health care equity for those service members who have dedicated themselves to the service of their country. The Balanced Budget Act of 1997 authorizes DOD to test subvention for three years at six sites around the country, starting in January 1998. Test sites will be named later by DOD, but our sources indicate San Antonio, TX; Keesler AFB, MS; Fort Sill, OK; and Fort Lewis, WA are under primary consideration for inclusion. San Diego and Colorado Springs, CO also are on the "short list." The Military Coalition is very grateful to those in the Administration and Congress who helped bring this legislation to

fruition over these many years. But as important as this first step is, much remains to be done to achieve our health care equity goal. It's important to remember that subvention can only help 40 percent of Medicare-eligible retirees in even the most optimistic case; other options are needed for those who can't or prefer not to use military facilities.

**Family Separation Allowance** is increased from \$75/mo to \$100/mo.

**Absentee voting rights:** Both the House and Senate bills include provisions to protect voting rights in local, state and national elections for active duty members who are state residents but whose service duties have kept them away from their voting residences for an extended period.

**Special Pay for Hardship Duty:** The House bill gives the SECDEF authority to continue paying the Basic Allowance for Subsistence (BAS) and/or establish a discretionary special pay of up to \$300 per month for service members assigned duty at designated hardship locations. TMC believes this would provide an important latitude to address the current inequity under which members may suffer a pay cut (because BAS stops) when they are deployed.

**"Increase in Minimum Monthly Rate for Hazardous Duty Incentive Pay for Certain Crew Members"** which provides no less than \$150/mo for aerial flight crew members and for all others entitled to hazardous duty pay under Section 301 of Title 10 U.S.C.

**"Dislocation Allowance (DLA)"** Sets the dislocation allowance rates as those in effect in 1997 and requires the SECDEF to increase the rates by the percentage equal to the rate of change of the national average monthly cost of housing. This is important as it helps offset the out of pocket costs associated with PCS moves.

**Space "A" Travel for the Guard and Reserve:** TMC strongly recommends preserving the House provision in the FY 1998 National Defense Authorization Act that would extend space available travel benefits to members of the Guard and Reserve components and their dependents on the same basis as active duty members and their dependents. There is no corresponding language in the Senate bill. (At present members of the Reserve components are limited to CONUS Space "A" travel plus Alaska, Hawaii, and Guam).

**Ready Reserve Mobilization Income Insurance Program (RRMIIP)** ("mobilization insurance"), TMC strongly supports language in Authorization Conference to: 1) make the DOD study mandatory; 2) authorize payments to those Reserve component members awaiting involuntary orders or serving on active duty on the date of enactment; and 3) refund premiums to all others who have not collected benefits.

The House and Senate versions suspend mobilization insurance but differ in their treatment of payments, refunds, and the study.

The above is only a small portion of the legislation that The Military Coalition is involved in. How can you as a member of AAAA help? Opportunity knocks. Speak or write to your legislators, stay abreast of the issues, remember Congress affects you, your family and others in many ways. Thanks for the opportunity to represent you.



*COL Sy Berdux, Ret., is a National Member-At-Large of the National Executive Board and is AAAA's representative to The Military Coalition (TMC). Sy will be providing regular updates on what AAAA is doing to represent our members through the TMC.*

## Solicitation now under way for CY 97 AAAA National Awards: NOMINATIONS DUE AT THE AAAA NATIONAL OFFICE ON OR BEFORE JAN. 15, 1998

### "Award Presentations"

Up to eight AAAA National Awards for accomplishments made during Calendar Year 1997 will be presented at the 1998 AAAA Annual Convention in Charlotte, NC. Senior members of the U.S. Army will be invited to present the AAAA's top awards to the 1997 winners.



### "Outstanding Aviation Unit Award"

Sponsored by the Boeing Company, Mesa, Arizona, this award is presented annually by the AAAA "to the Active Army Aviation unit that has made an outstanding contribution to or innovation in the employment of Army Aviation over & above the normal mission assigned to the unit during the awards period encompassing the previous calendar year." Any Active Army Aviation unit that has met the foregoing criteria is eligible for consideration.

### "ARNG Aviation Unit Award"

Sponsored by Allied Signal Engines, this award is presented annually by the AAAA "to the Army National Guard aviation unit that has made an outstanding contribution to or innovation in the employment of Army Aviation over and above the normal mission assigned to the unit during the awards period encompassing the previous calendar year." Any Army National Guard aviation unit or organization that has met the foregoing criteria is eligible for consideration.

### "USAR Aviation Unit Award"

Sponsored by AlliedSignal Engines, this award is presented annually by the AAAA "to the U.S. Army Reserve aviation unit that has made an outstanding contribution to or innovation in the employment of Army Aviation over and above the normal mission assigned to the unit during the awards period encompassing the previous calendar year." Any U.S. Army Reserve aviation unit or organization that has met the foregoing criteria is eligible for this award.

### "The Robert M. Leich Award"

Sponsored by the Northrop Grumman Corporation, this award is named in memory of Brigadier General Robert M. Leich, USAR, the AAAA's first president (1957-59) and its Awards Committee Chairman for 23 years. It is presented periodically to a unit for sustained contributions to Army Aviation, to a unit or an individual for a unique, one-time outstanding performance.

### "Army Aviator of the Year Award"

Sponsored by the Sikorsky Division of United Technologies Corporation, this award is presented annually through the AAAA "to the Army Aviator who has made an outstanding individual contribution to Army Aviation during the Awards period encompassing the previous calendar year." Membership in AAAA is not a requirement for consideration. A candidate for this award must be a rated Army Aviator in the Active U.S. Army or Reserve Components, and must have made an outstanding individual achievement.

### "Aviation Soldier of the Year Award"

Sponsored by Bell Helicopter Textron, this award is presented annually by AAAA "to the enlisted man serving in an Army Aviation assignment who has made an outstanding individual contribution to Army Aviation during the awards period encompassing the previous calendar year." Membership in AAAA is not a requirement. A candidate for this award must be serving in an Army Aviation assignment in the Active U.S. Army or the Reserve Components, and must have made an outstanding individual achievement.

### "James H. McClellan Aviation Safety Award"

Sponsored by GE Aircraft Engines in memory of James H. McClellan, a former Army Aviator who was killed in a civil aviation accident in 1958, this award is presented annually "to an individual who has made an outstanding individual contribution to Army Aviation safety in the previous calendar year." The award is NOT intended to be given for the accumulation of operational hours without accidents by an aviation unit.



### "Joseph P. Cribbins DAC of the Year Award"

Sponsored by Boeing Helicopters, this award is named for Mr. Joseph P. Cribbins, the award's first recipient in 1976. It is presented annually by AAAA "to the DAC who has made an outstanding individual contribution to Army Aviation in the awards period encompassing the previous CY." A candidate for this award must be a current Department of the Army Civilian.

### Administrative Details

ACCOMPANYING DATA FOR INDIVIDUAL AWARDS: A standardized "Nomination Form for Submission of All AAAA National Awards" is the sole form utilized by the Awards Committee in its selection of annual AAAA National Awards winners. Copies may be obtained from any Chapter Secretary or by writing to AAAA, 49 Richmondville Avenue, Westport, CT 06880-2000.

The forms should be accompanied by a recent photo and biographical sketch of the nominee. Photos of the commander and the senior NCO must accompany each unit nomination. The "Nomination Form for Submission of all AAAA National Awards" and the accompanying photo(s) must be received at the AAAA National Office on or before January 15. Please use stiffeners to protect the photo(s) being submitted. The receipt of each nomination will be acknowledged by the AAAA. However, awards nominations materials - to include photographs - cannot be returned.



## SECOND ANNUAL AAAA/AUSA ARMY AVIATION SIMULATION SYMPOSIUM



Banquet Speaker GEN William W. Hartzog, (left) TRADOC Commander, views the exhibits at the recent AAAA/AUSA Army Aviation Simulation Symposium in Arlington, VA. Seen briefing GEN Hartzog on the Army National Guard's simulation initiatives is CPT James D. Webster, Aviation Operations Officer, National Guard Bureau, Arlington, VA.

The Second Annual AAAA/AUSA Army Aviation Simulation Symposium co-sponsored with the AAAA Potomac Chapter was held at the Crystal Gateway Marriott 2-4 September 1997 in Arlington, VA. Under the theme, "Army Warfighting Experiments and Beyond", the day and a half long event featured professional programming, as well as exhibits from government and industry. The event's keynote address was delivered by COL(P) Thomas F. Metz, Assistant Division Commander (Support), 4th Infantry Division, Fort Hood, TX, who gave a comprehensive warfighter's view of the success of the recent Army Warfighting Experiment, Prairie Warrior.

The rest of the first day focused on AWE lessons learned. Panels from the Department of Training, Doctrine and Simulation (DOTDS), Fort Rucker, AL; Program Executive Office Aviation, Huntsville, AL; and U.S. Army Simulation Training and Instrumentation Command (STRICOM), Orlando, FL, and Industry. Briefers included: MG James R. Snider, PEO Aviation; COL William W. Powell, Director DOTDS; COL Gary S. Coleman, Deputy Director, Air Maneuver Battle Lab; COL Stephen G. Kee, PM, Advanced Attack Helicopter; COL Robert E. Godwin, Deputy Assistant Commandant, National Guard, USAAVNC; COL Stephen J. Ferrell, Commander, 4th Aviation Brigade, 4th ID, Fort



AAAA President, MG Dave Robinson, Ret, (left) introduces Keynote Speaker, COL(P) Thomas F. Metz, Assistant Division Commander (Support), 4th Infantry Division (Mechanized), Fort Hood, TX, at the recent AAAA/AUSA Army Aviation Simulation Symposium.



Hood, TX; Mr. Larry Johnston, PM Aviation Electronic Combat; MAJ Edward A. Healy, Jr.; CPT Donald J. Lee, Longbow Platoon Leader, 1-4 Avn; and CPT Kenneth T. Royar. Kiowa Warrior, AWE Cav Troop Commander.

COL Hawk Ruth, Director, Army Model and Simulation Office, ODCSOPS addressed the "Synthetic Theater of War (STOW) and High Level Architecture", during his luncheon speech.

The Banquet that evening featured a performance by the Army Chorale and a speech by GEN William W. Hartzog, Commanding General, U.S. Army Training and Doctrine Command, Fort Monroe, VA. GEN Hartzog explained TRADOC's vision of training for the Force XXI Battlefield and introduced personal anecdotes that illustrated the challenges for training different generations of soldiers with different attitudes toward high technology, especially with regard to their level of trust in the fidelity of the digital information presented to them.

The second day focused on the future. The Breakfast speaker was BG William L. Bond, Director, Army Digitization Office, Office of the Chief of Staff, Army. Two panels rounded out the symposium, one on future training issues and the other on future hardware issues. Speakers included: BG Joseph L. Bergantz, PM Comanche, COL Donald S. Burke, Jr., Assistant PEO Aviation, COL Thomas M. Harrison, PM Utility Helicopters, and Mr. Randy L. Buckner, Deputy for Digitization, PM AEC.

The wrap up was provided by Mr. James M. Skurka, Deputy to the Commander, STRICOM, who briefed "Future Support to the AWE Battlefield".

Next year's Simulation Symposium is being planned for the second week of September, again at the Crystal Gateway Marriott. Mark your calendars!

# ARMY AVIATION

## U.S. ARMY AIRCRAFT SINCE 1947

Since 1947 - An Illustrated Reference

Stephen Harding

*U.S. Army Aircraft Since 1947* is the only comprehensive, up-to-date guide to the 124 types of helicopters, fixed-wing aircraft and experimental flying machines used by the U.S. Army since 1947. After a concise yet thorough introductory history of U.S. Army Aviation, the author discusses each aircraft type used by the Army's air arm, which is the largest, most technologically advanced and most combat experienced force of its kind in the world today. Within each chapter the author includes information on aircraft serials, markings, weapon systems, operational history and other technical data. Illustrated with more than 220 color and black and white photographs, *U.S. Army Aircraft Since 1947* is the definitive reference source on its subject and a must-have volume for all military aviation historians and enthusiasts. [Schiffer Publishing Ltd. Size: 8 1/2" x 11", 264 pages, hard cover; ISBN: 9-7643-0190-X]



## YEAR OF THE HORSE: VIETNAM

1st Cavalry in the Highlands 1965-1967

COL Kenneth D. Mertel (USA, Ret.)

*Year of the Horse: Vietnam* is the day-to-day story of the Jumping Mustangs - 1st Battalion, Airborne, 8th Cavalry, of the 1st Air Cavalry Division. After describing the activation of this then revolutionary airborne division at Fort Benning, GA on 1 July 1965, COL Mertel gives a vivid picture of the building of his own Jumping Mustang Battalion, the rigorous training of officers and men, and, finally, the long voyage across the Pacific to Vietnam. Now the test. The answer came quickly and dramatically in a rapid succession of search and destroy operations. COL Mertel pays tribute to the many acts of heroism of his men, who lived, worked and fought together in some of the world's most inhospitable conditions. He also writes movingly of those who never came back. [Schiffer Publishing Ltd. Size: 6"x9", 384 pages, hard cover; 59 color photographs, 9 maps; ISBN: 0-7643-0138-1]

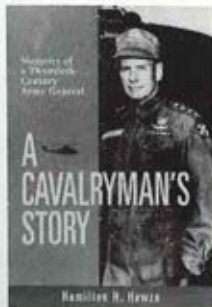


## A CAVALRYMAN'S STORY

Memoirs of a Twentieth Century Army General

Hamilton H. Howze

*A Cavalryman's Story* is the memoir of a professional soldier, born into the lineage of West Point and recognized today as the father of U.S. Army Airmobile tactics and doctrine. With understated charm and humor, GEN Howze writes of his polo-playing years in a 1930s Army that still relied on horses, and then of the sudden, almost remarkable transition to armored divisions, when the U.S. entered WWII. It was in the mid-1950s that GEN Howze emerged as one of a handful of perceptive Army officers who recognized the potential of a sky cavalry. As the first director of Army Aviation GEN Howze promoted the concept to industry, the government, and the public. His vision came to fruition in the 1960s when he presided over the U.S. Army Tactical Mobility Requirements Board, known as the Howze Board, which proved the viability of sky cavalry in combat. *A Cavalryman's Story* provides an authoritative look at the forging of the modern Army and a wry perspective on the perennial absurdities of military life, whether in peace or war. [Smithsonian Institution Press. Size: 6"x9", 316 pages, hard cover; ISBN: 1-56098-664-6].



# BOOK STORE

## Breaking the

A New Design for  
Landpower in  
the 21st Century

Douglas A. Macgregor  
Foreword by Donald Rumsfeld

## BREAKING THE PHALANX

Douglas A. Macgregor

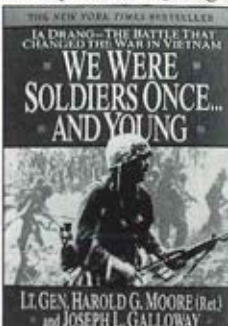
This work proposes the reorganization of America's ground forces on the strategic, operational and tactical levels. Central to the proposal is the simple thesis that the U.S. Army must take control of its future by exploiting the emerging revolution in military affairs. The analysis argues that a new Army warfighting organization will not only be more deployable and effective in Joint operations; reorganized information age ground forces will be significantly less expensive to operate, maintain, and modernize than the Army's current Cold War division-based organizations. And while ground forces must be equipped with the newest Institute weapons, new technology will not fulfill its promise of shaping the battlefield to American advantage if new devices are merely grafted on to old organizations that are not specifically designed to exploit them. [Praeger

Publishers. Size: 6"x9 1/8", paperback, 283 pages, ISBN: 0-275-95794-2]

## WE WERE SOLDIERS ONCE... AND YOUNG

Harold G. Moore and Joseph L. Galloway

*We Were Soldiers Once ... And Young* brings the war back home with unforgettable stories of those who lost family members to combat. This devastating account rises above the specific ordeal it chronicles to present a picture of men facing the ultimate challenge, dealing with it in ways they would have found unimaginable only a few hours earlier. It reveals to us, as rarely before, man's most heroic and horrendous endeavor. [Harper Collins Publishers, Size 5 1/2"x8". 483 pages, paperback. ISBN: 0-06-097576-8



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WE WERE SOLDIERS ONCE...AND YOUNG - Moore and Galloway	# _____	\$20.00*	\$ _____
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## NEW NEB INSTALLED

During the AAAA Annual Convention in Louisville, KY, the new members of the National Executive Board were installed. The officers are **MG John D. Robinson, Ret.** (President); **MG Carl H. McNair, Jr., Ret.** (Senior Vice President); **LTG Merle Freitag, Ret.** (Secretary-Treasurer); and **William R. Harris, Jr.** (Acting Executive Director).

Ret. Presidents include: **LTG William H. Forster, Ret.**; **MG Robert S. Frix, Ret.**; **CW5 Ronald W. Gerner**; **MG Clyde A. Hennies**; **LTG Jack V. Mackmull, Ret.**; **Daniel J. Rubery**; and **James P. Schwalbe**.

MG Robinson appointed the following as National Members-at-Large: **COL Michael A. Bendas**; **BG Harry H. Bendorf, Ret.**; **COL Sylvester C. Berdux, Jr., Ret.**; **COL Eric W. Braman**; **SGM Jeffrey R. Culp**; **COL Robert E. Godwin**; **CSM Marvin E. Horne**; **COL Thomas E. Johnson, Ret.**; **CW5 Randolph W. Jones**; **LTC Beth Garrity Marchman, Ret.**; **William J. May, III**; **LTG Ellis D. Parker, Ret.**; **CW4 Joseph L. Pisano, Ret.**; **MG John M. Riggs**; **SFC Pamela L. Shugart**; **MG James R. Snider**; **COL Harry W. Townsend, Ret.**, and **COL Howard W. Yellen**. Additionally, **Mr. Joseph P. Cribbins** and **COL John J. Stanko, Jr., Ret.** serve as National Members-at-Large Emeritus.

AAAA Past Presidents who serve in perpetuity, include: **GEN Hamilton H. Howze, Ret.**; **LTG Harry W. O. Kinnard, Ret.**; **LTG John M. Wright, Jr., Ret.**; **LTG Robert R. Williams, Ret.**; **MG George S. Beatty, Jr., Ret.**; **COL John W. Marr, Ret.**; **MG James C. Smith, Ret.**; **MG George W. Putnam, Jr., Ret.**; **MG Story C. Stevens, Ret.**; **BG James M. Hesson, Ret.**; **MG Charles F. Drenz, Ret.**; **MG Benjamin L. Harrison, Ret.**; and **MG Richard E. Stephenson, Ret.** The Past Executive Vice President, **Arthur H. Kesten**, also serves in perpetuity on the NEB. USAREUR Region President **COL David F. Sale, Ret.**

The Presidents of Chapters with more than 150 members fill the remaining seats on the 73 member board.

## SCHOLARSHIP BOARD ANNOUNCED

The AAAA Scholarship Foundation Board of Governors also met during the Annual Convention in Louisville, KY. The current officers are: **MG Robert S. Frix, Ret.** (President); **BG Stuart W. Gerald, Ret.** (Vice President); **COL John J. Stanko, Jr., Ret.** (Secretary); **COL Harry W. Townsend, Ret.** (Treasurer); and **William R. Harris, Jr.** (Acting Executive Director).

Governors include: **Dan R. Bannister**; **LTC Michael L. Bell**; **COL John N. Bertelkamp, Ret.**; **LTC Frank S. Besson III, Ret.**; **COL Eric W. Braman**; **COL Edward L. Carnes, Ret.**; **COL Dave Carothers, Ret.**; **Carolyn Chapman**; **CPT Curt S. Cooper**; **Joseph P. Cribbins**; **COL Joe I. Durant, Ret.**; **Jose J. Guzman**; **Paul L. Hendrickson**; **Dorothy Kesten**; **Ronald V. Kurowsky**; **COL John A. Lasch III, Ret.**; **COL Gerald E. Lethcoe, Jr., Ret.**; **Ruth Luce**; **LTC Beth Marchman, Ret.**; **MSG Tom M. Migliozi, Ret.**; **CW4 Joseph L. Pisano, Ret.**; **William Pollard**; **LTC Frank H. Radspinner, Ret.**; **LTC Ralph W. Shaw, Ret.**; **LTC James O. Woodard, Ret.**; and **COL Howard W. Yellen**.

Presidents Emeritus who serve in perpetuity include: **MG John L. Klingenhagen, Ret.**; **COL Rudolph D. Descoteau, Ret.**; **MG George W. Putnam, Jr., Ret.**; **MG Richard E. Stephenson, Ret.**; and **COL John W. Marr, Ret.**

**AAAA****Aviation Soldiers  
of the Month**

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

**SPC Mary A. Orloff**

July 1997

*(North Country Chapter)*

**SGT Franco P. Camacho**

August 1997

*(North Country Chapter)*

**New AAAA  
Chapter Officers**

**Aviation Center:**

COL Robert L. Gore  
(President); MAJ(P) Bruce D.  
Redline (Treasurer); MAJ  
James R. Bullinger (VP  
Publicity); CPT(P) Lisa A.  
Hudon (VP Scholarships)

**Corpus Christi:**

COL Dennis A. Williamson  
(President)

**Flying Tigers:**

CPT Christopher B. Carlile  
(Treasurer)

**Iron Mike:**

COL Michael C. Flowers  
(President); CPT Cindy M.  
Doane (Secretary)

**Leavenworth:**

MAJ Gregory A. Brockman  
(Secretary)

**Lindbergh:**

COL Kenneth E. Kellogg, Ret.  
(Senior Vice President)

**North Country:**

CWS Thomas P. Gadomski  
(VP Membership)



Above (left to right) AAAA President MG Dave Robinson, Ret. and LTG Ellis D. Parker, Ret., honor BG Thomas J. Konitzer with a Gold Order of Saint Michael during his retirement dinner at Ft. Rucker Officer's Club on June 26, 1997. A retirement ceremony the following day was hosted by LTG John Dubia, Director of the Army Staff. BG Konitzer served 31 years on active duty.

Roger Winslow, below left, reads the citation for the Bronze Award, Order of Saint Michael, presented to 1SG William G. Tulloch, Ret., center, and LTC Charles T. Brown, Jr., Ret., right. Tulloch and Brown received the award for "distinguished service to the Aviation community during more than 20 years active Army Aviation service". The awards were presented on 2 August 1997 during a reunion of the "Knights of the Air", (114th Aviation Company Association) held in Louisville, KY.



**New AAAA  
Chapter Officers**  
(cont'd. from pg. 77)

**Oregon Trall:**

COL Herbert J. Sims (Pres);  
SGT James R. Morris (Secy);  
CW4 James O. Jackson  
(Treas); CPT Jeffrey R.  
Linscott (VP Membership)

**Taunus:**

LTC Kenneth M. Irish (Pres)

**Sinal:**

MAJ David C. Cheney (Sr.  
VP); CPT(P) Bob Kiser (Secy)

**New AAAA  
Industry Members**  
Semcor, Inc.  
St. Ann, MO

**Honorary**

**AAAA Members**  
COL(P) Michael J. Squier  
MG William A. Navas

**In Memoriam**

CW2 Larry Todd Reese  
LTC Preston G. Gant  
Earle J. Buckner



**2 for 1**

*AAAA now offers a two  
year membership  
for the price  
of one for all first-time  
new members*

**Join the  
Professionals!  
Join AAAA**



**AAAA LOCATOR**

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

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

I am a Vietnam era veteran. I am attempting to locate a Vietnam veteran, with whom I worked. I have a book on "How to Find Anyone in the Military." I have used all of the resources in the book, but have not been successful. I even called all of the people with his name in the state I think he may live -- 32 of them!

I hope you can help.

Name: Robert Kraft (don't know if there is a middle initial).

Birthdate: 1941 (approx.)

Birthplace: Hawaii (I am not sure, but believe this is where he said he was from, and that his father was a naval commander).

Served: Fort Baker, CA/U.S. Army Air Defense Command/6th Region, ARADCOM, Sausalito, CA.

Dates: I worked with him there in 1965 and 1966.

I was told he went to helicopter pilot school, and then to Vietnam in 1966. I don't know how many tours of duty he served, or when he got out (or even if he did). I understand he would have been a warrant officer, upon graduation from helicopter pilot school.

I would be so grateful for any assistance. I have found nine friends I was with in the Army but cannot find this one last person!

Please contact: Alice M. Carleton  
914 Fairview, Rochester, MI 48307

# AAAA CALENDAR

A Listing of Upcoming  
National and Chapter Events

## November 1997

Nov 4-6. Annual Aviation Electronic Combat Symposium - Opryland Hotel, Nashville, TN.

## January 1998

Jan 28-30. AAAA Joseph P. Cribbins Product Support Symposium, presentation of Logistics Support Unit and Industry Awards, Marriott Space & Rocket Center, Huntsville, AL.

Jan 30. AAAA Scholarship Board of Governors Executive Committee Meeting, National Guard Readiness Center, Arlington, VA.

Jan 31. AAAA National Awards Selection Committee Meeting, National Guard Readiness Center, Arlington, VA.

## April 1998

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



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

Please consider making a CFC-sponsored contribution to the AAAA Scholarship Foundation this year.

## TOP CHAPTERS

The 1 October 1997 Membership Enrollment Competition standings have the following chapters ahead with two months left in the CY97 contest ending 31 December. The rankings are based on CY97 net membership gain.

Master Chapters (170+ Members)	Senior Chapters (80-169 Members)	AAAA Chapter (25-79 Members)
1. Arizona Chapter . . . . .10	1. MacArthur Chapter . . . . .4	1. Ragin' Cajun Chapter . . .15

## TOP GUNS as of 1 OCTOBER 1997

The member who sponsors the greatest number of new members during the contest year ending 31 December 1997 wins an all expense-paid trip to the AAAA Annual Convention, as well as a \$300 cash award, and receives a plaque. Please note that the Top Gun program has been expanded to include prizes for 2nd place, \$400; 3rd place, \$300; 4th place, \$200; 5th place, \$100.

CW2 John P. Garske . . . . .164	Mr. William J. Cannon . . . . .26
Mr. John H. Bae . . . . .102	MAJ John J. Brooks . . . . .15
CPT Susan M. Lind . . . . .99	Ms. Mary M. Akers . . . . .13
CPT Daryl A. Doberstein . . . . .74	CW3 Ronald E. Klusacek . . . . .12
CPT Vernon H. Miles . . . . .48	SFC Pamela L. Shugart . . . . .10



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The EMERGENCY is designed to foil any handling mistakes and to protect the transmitter from even violent jarring.

121.5 MHz transmitter power reserve at  $\geq 30$  mW : 48 hrs

243 MHz transmitter power reserve at  $\geq 25$  mW : 24 hrs

Thermal operating range :  $-10^{\circ}$  to  $85^{\circ}$ C.

Transmitter water resistance : to 30 m (3 atm)

Transmitter power source : 2 x 3V independent lithium batteries.

Watch : electronic movement with 12/24 hr analog & digital display; chronograph to 1/1000th sec.; countdown timer; 2nd timezone; alarm signal; battery end-of-life warning.

Case : one-piece, matt titanium; water-resistant to 30 m (3 atm).

Sapphire crystal, glassproofed front and back.

FOR ALL INFORMATION: BREITLING SA - P.O. BOX 1132 - 2540 GRENCHEN - SWITZERLAND - PHONE +41 32/654 54 54 - FAX +41 32/654 54 00

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