

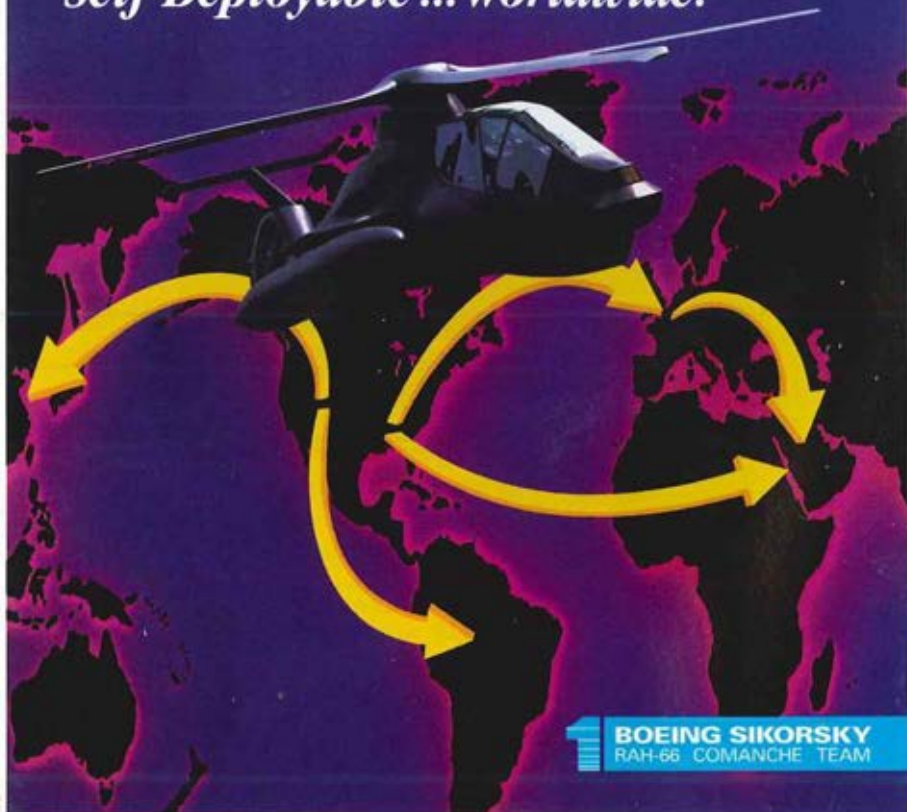


SPECIAL FOCUS: DESERT STORM— LESSONS LEARNED

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Moving the Army into the 21st Century

By General Gordon R. Sullivan

The following is excerpted from GEN Sullivan's Keynote Address at the 1992 AAAA Annual Convention Professional Sessions.

It is clear that the world in which we live has changed and is continuing to change dramatically. No one here could have predicted the events of the past several years: the fall of the Berlin Wall, Operations JUST CAUSE and DESERT SHIELD/DESERT STORM, and the

dissolution of the Soviet Union.

These events—coupled with the budgetary crisis—have led to a situation that no longer demands that we maintain our Armed Forces—active or reserve—at the levels we built up to during the final decade of the Cold War. Moreover, these changes have caused our Nation to adopt a new National Military Strategy—one that reflects the collapse of the bipolar threat and displacement of the strategy of containment. Nonetheless, we stand victorious; the preeminent land force in the world.



However, we also face some crucial decisions. Victory has also brought change, and we need to consider carefully how we

GEN Sullivan is Chief of Staff, United States Army, Washington, D.C.

will proceed in the face of substantial risk to shape the Army for the future while accommodating the changing environment. I want to address how we are changing and the importance of continuity in preserving our ability to respond when the nation calls.

Confronting the Change

In the Ia Drang Valley in 1965, then-LTC Hal Moore, commander of the 1st Squadron, 7th Cavalry of the 1st Cavalry Division, faced the life or death challenge of moving his unit successfully through combat. Joe Galloway, a reporter who was with the unit at the time, reported that Moore sat with his back against an anthill and shifted position as the fighting raged, depending on the direction of fire. He almost went into a trance contemplating the situation. Later, Moore wrote in his after action report that he tried to focus on what was happening,

what wasn't happening, and what could he do as a leader to influence the action?

As the Chief of Staff, I find myself in a situation somewhat analogous to Moore's. I am contemplating the same questions as I consider all the change and what it means and what I should be doing. What's next? I don't know. We can't predict. In the next decade, we can expect that the strategic environment will be dynamic, uncertain, and unstable.

The Changing Battlefield

While there has been tremendous attention given to the changes in the geopolitical environment and how that is precipitating change, we are also confronting tremendous and far-reaching change on the battlefield. Warfare has shifted from the industrial era based on attrition and mass to what I call a post industrial period—one characterized by the microprocessor and precision targeting.

The modern battlefield is becoming increasingly complex. We can conceptualize the battlefield as a cube with three dimensions—space, speed, and time. Today, the cube is expanding rapidly. Thanks to advanced technology, combat operations today take place in larger areas (greater width, depth, and altitude), more rapidly and more continuously than ever before in the history of warfare. Enemy and friendly actions (both maneuver and fires) take place on the ground, in the air, and across the electromagnetic spectrum at an astonishing rate.

The overall effect of this expanding battlefield is greatly increased complexity for the commander who is charged with exerting control on every element in his sector in all three dimensions—while having to be aware of an increasing number of activities outside of his sector.

At the same time, the very complexity of the systems that we use to elevate the level of warfare make it almost impossible for us to mass produce the commodities we need to wage decisive battle.

This changed environment—both the geopolitical and modern battlefield—causes us to place a premium on balance—the

ability to respond to the unexpected, the unpredictable. We must balance the competing demands for continuity and change. As we balance continuity and change, we must remember the "first rule of wing walking"—never let go with both hands at the same time.

Vision

One way to establish balance is to ensure that there is a clear vision of the future that is firmly rooted in what has brought us success in the past. Our vision is: a *Total Force trained and ready to fight; serving America at home and abroad; and a strategic force capable of decisive victory.* There is a lot of substance in that vision statement. In an unstable world, this vision is our beacon. It is our common expectation of what the Army of the 21st Century will be.

The Army is in the process of accommodating the changes in the world and on the battlefield so that we can deliver decisive victory. And Army Aviation has a key role in the new Army's ability to deliver decisive victory.

A Changing Army

The Army is changing in fundamental ways. We are already moving forward toward the next century. We are not simply becoming a smaller Army with our vision still focused on the demands of the Cold War. We are building a new Army.

The Army's strategy to achieve our vision and implement change has four elements:

- Maintain the edge. In the near term, we deal with change by ensuring that we are training, but we have to consider the evolution of our doctrine and look to changes in technology that can have revolutionary impact on the battlefield in the future. Today, we are working hard to refine our war winning doctrine to incorporate those experiences from recent conflict that transcend the unique aspects of the contingency operations in Panama and the Gulf.
- Reshape the force. From a force of 5 corps and 28 divisions with its bulk forward deployed overseas, we are rapidly moving

to 4 corps and 20 divisions as part of the DoD Base Force. We have already taken 4 divisions and a corps out of the force structure. The majority of our force will be stationed in the continental United States, with a small forward presence in critical places.

On the personnel side, there are almost 100,000 fewer soldiers on active duty today than in June of last year. We face the pain and turmoil of asking soldiers who have served faithfully to leave the service earlier than they would have liked. Many of them take critical skills and experience out the door. We have to react. What we cannot do is allow the Army to become untrained and unready in the process.

- Provide resources. We have made the basic decision to cut force structure to maintain readiness. Resources are clearly not enough to meet everybody's expectations. We must do first that which is most important. Our measure of effectiveness is not how well we distribute a shrinking pie; our measure of effectiveness is how well we use what we have to do those things that must be done to maintain readiness.

- Strengthen the Total Force. We learned a lot about the strengths and weaknesses of our mobilization process and the training approach for the Reserve Components during DESERT SHIELD and DESERT STORM. We must build on the successes. Operation BOLD SHIFT has already gone into effect to ensure that one standard exists throughout the Total Army. We have already conducted three pilot Operational Readiness Exercises and identified 281 pilot units to implement this program. Moreover, we are devoting more AC personnel to assisting the RC.

Recently, I instituted the Ellis D. Parker Award for excellence in aviation. This award which is given to both active and reserve Army Aviation units recognizes the common standard that must exist in the force. I applaud the aviation community for being among those leading the way toward a common standard of excellence.

One of the initiatives that I have directed to help to evaluate our progress toward accommodating change is what I call Louisiana Maneuvers. In 1940, Chief of Staff

of the Army, George Marshall, held a series of exercises to evaluate the state of the Army and higher staffs' ability to mobilize and fight. This was conducted against the backdrop of the outbreak of war in Europe.

Today, although our threat is not so well defined, it is just as important that we measure where we are. Therefore, we will establish a process that will focus the Total Army and help us to assess progress, demonstrate new capabilities, and experiment with new concepts. Unlike the 1940 Maneuvers, we will rely heavily on netted simulations to help us replicate the demands of our responsibilities to train, organize, and equip forces for use by the warfighting CinCs. I foresee that an important part of this will be what we learn from simulations about the leverage that Comanche, in coordination with other equipment, will give our smaller force on the battlefields of the future.

Continuity

As we move forward with accommodating change we have to ensure that we don't lose touch with those things that provide continuity to the Army through difficult times.

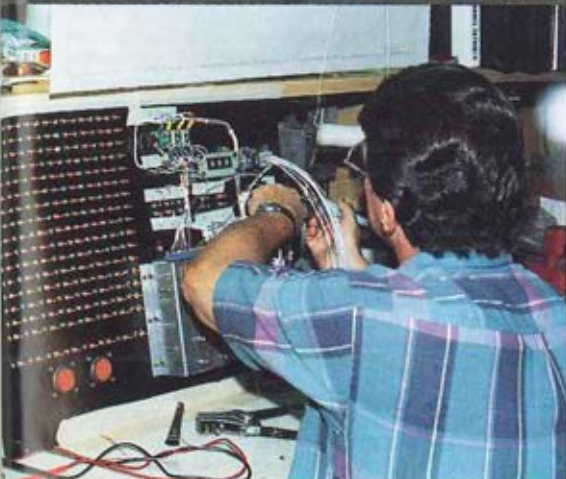
One element of that continuity is the basic principles that guided the building of the unsurpassed force that we have today. We must continue to have a quality force that is trained to a razor's edge, based on a solid warfighting doctrine, with modern equipment, having the proper mix of forces, led by competent sergeants and officers. It is these six imperatives, maintained in proper balance, that have guided us in building the unsurpassed force that we have today.

Another element of that continuity is our values. I don't have a definitive list of our values, nor do I intend to suggest one, but I do know where to look. I am drawn to the symbols of our Army:

- Lexington Common. The Minute Man statue built upon boulders from the rock wall behind which the first American soldiers made their stand. The militia

(21st Century — continued on page 35)

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Lessons Learned

By Major General John D. Robinson

A crucial function of the United States Army Aviation Center (USAAVNC) is to optimize Army Aviation's contribution to the combined arms team. In the changing strategic environment, we have the perspective of the Cold War era and recent combat experiences against which to consider aviation's role in the operational continuum for the remainder of this century. Operations DESERT SHIELD/STORM (ODS/S) provided useful lessons. However, we must not create unreasonable expectations based on these operations. The decisive victory in the Gulf looked easy, but we all know that it was difficult to achieve. It took 20 years to develop the capability for decisive victory.

Deployment, train-up, and combat operations have produced useful lessons which will impact our thinking well into the next century. We have been reviewing and studying these lessons with other members of the combined arms team to help focus our efforts on doctrine, organization, training, materiel, and leadership initiatives.

As we sift through the events of ODS/S, we are passing each lesson through two qualifiers. First, we ask if the lesson will help us meet the Army's strategic mission in the current National Military Strategy. Our

military planning is based on power projection with U.S.-based contingency forces capable of executing flexible deterrent options ranging from nation building to full-scale war. How can the events of ODS/S help us to be a ready, projectable force capable of readily deploying lethal, flexible, deterrent options across the operational continuum?

Second, we recognize ODS/S was a unique war. As such, we are cautious not to assume that future conflicts will emulate it. We were fortunate to have superb ports, a network of modern, in-theater airfield facilities, and the significant "on-call" host nation support that Saudi Arabia provided. Our forces enjoyed a lengthy, uncontested build-up, realistic training, and faced a poorly-led ground force that endured a one-sided air war. The sea lines of communication were unharassed. The terrain was mostly free of major natural obstacles to air and ground maneuver, and we were spared the effects of long term combat. With all this in mind, we have tempered the lessons learned with METT and divided them into three categories: deployment, warfighting, and sustainment.

Deployment

Lethal, early arriving reconnaissance and security assets are good "returns" on "air-lift investment". Aviation assets provided the "cover" light contingency forces needed

MG Robinson is Chief, Aviation Branch, Commanding General, U.S. Army Aviation Center and Ft. Rucker, AL and Commandant, U.S. Army Aviation Logistics School.

while they waited for heavy forces to arrive by sea movement. Deployment sequencing of logistics is critical. Selected logistics packages must be deployed early to have adequate on-site support as the early deployers arrive in theater. A rapidly generated credible deterrent requires mastery of "deployment physics".

Deployed National Guard and Ready Reserve forces performed exceptionally well. However, the full potential of reserve components was not exploited. Their activation, mobilization, and deployment time-lines must be anticipated to avoid the adverse impact of untimely notification on critical mission skills, preparation time, and soldier-employer relations.

Operations DESERT SHIELD/STORM confirmed the need for reserve component elements. In the aviation functional area, we need immediate access to the resources necessary to execute training base augmentation plans, as well as those deemed critical to the operations and sustainment of arriving units. Plans are being developed now to share training facilities and selected peacetime missions to confirm the integration of the Total Force.

Warfighting

ODS/S validated the combined arms concepts of AirLand Battle and our doctrinal base. Unrestricted maneuver in three dimensions is key to both mass and surprise. Corps and division commanders effectively maneuvered ground, air, and fire support elements massing fire power with lethal results. Armed helicopters, synergistically integrated into the scheme of maneuver to hit discrete objectives deep in the enemy's territory, proved indispensable. The effect of massed combined arms fire was manifested in less frequent close-in direct fire fights, which minimized casualties. To assist senior leaders and staff in effectively integrating aviation into the ground battle, we are publishing an aviation primer.

During ODS/S, Army forces demonstrated that they are the CinC's tactical night fighting capability. Although inherently more dangerous, operating at night saves lives and valuable warfighting assets. Unfortunately,

our C3I systems are inadequate to fully support the time, space, joint, and combined dimensions of the battlefield. Battlefield information systems and communication links are absolutely essential to command and control of the force. Critical battlefield information must get into the cockpits of our aircraft.

A Joint Airspace Control System is essential to coordinate multiple airspace users. In its current configuration, the 36-hour Air Tasking Order (ATO) cycle slowed the pace of battle in the ground regime, especially in relation to indirect fires and air maneuver. Rapidly changing situations demand rapid reactions.

Intelligence assets adequately identified stationary targets but the accuracy and detail of precise information needed for the Air Force weapons was more difficult to attain in the fluid situations of moving formations and relocatables. Air maneuver forces filled voids in intelligence, often providing the combined arms commander with his sole source of exploitable combat information.

Mobility

The combination of advanced intelligence systems and reconnaissance by air maneuver may also provide a level of detail necessary for maneuver units to transition directly from an "approach march" into fighting positions/formations eliminating the necessity for a "movement to contact". Commanders and staff must "stay in the loop" utilizing ground and air maneuver assets to help cope with "fuzzy" targeting information.

Mobility enhances the efficiency and effectiveness of battlefield operating systems, especially when long distances or undeveloped/contested transportation networks are involved. ODS/S required many ground units to affirm the fundamentals of air assault and air movement. Current doctrine calls for using units to supply their own slings, nets, and expertise. Only the 101st Airborne Division was able to do this on a consistent basis. Mechanized units need to utilize air movement assets on a large scale at the Combat Training Centers

(CTCs) so they can evaluate the benefits and possible problems associated with the operation.

Sustainment

Long-established maintenance and logistics doctrines and structures, designed for a European defensive strategy and overlaid with "peacetime" efficiencies, did not work as efficiently as they could have in ODS/S. AVIM and AVUM units lacked the mobility and personnel to perform effective support; most units could only move 30% of their assigned equipment at any one time. On the positive side, the Aviation Support Battalion (ASB) concept proved its worth. The maintenance flows of the two brigades that enjoyed a full-up ASB were better at the end of the war than any time during DESERT SHIELD. We are working on placing an aviation support battalion in the DISCOM in direct support of the division's aviation brigade.

ODS/S confirmed that current TOEs are inadequately structured to provide the depth in critical specialties necessary to support 24 hour operations. Aviation units were understaffed and poorly equipped to control missions across the width and depth of division and corps sectors. We do not have high enough crew-to-seat ratios, levels of maintainers, or Class III/IV support personnel. Complex equipment requires experienced technicians to diagnose and repair it. Enlisted soldiers at skill levels 30 and 40 need to be placed forward in a concept known as "stripes for the flight line."

These technicians need the appropriate career path that will keep them focused on maintaining our advanced equipment. We must put more experience on the flight line even if it is at the expense of normal "up or out" NCO promotion policies. We are working on the hollow Army of Excellence (AOE) designs and intend to adjust available forces to produce robust deployable units.

Repair parts visibility and distribution also need improvement. Red-tagged, Aircraft-On-Ground (AOG) parts were stranded in up to 5,000 MILVANS stacked at Dhahran.

Unit teams traveled hundreds of miles to rummage through backlogged parts, then hundreds of miles back to their unit. Inter-theater cargo backed up while waiting to form full pallet loads to justify the use of a C-141. A military equivalent of a deployable "Federal Express" is required to move low-density, "war stopper" parts.

Implications

Many of the lessons learned show the strengths and weaknesses of our tactics, techniques, and procedures. Doctrine is the engine of change; lessons from combat operations help us to charge this engine and find common ground applicable to a broad range of contingencies. With this in mind, we are reviewing force structure, fleet modernization priorities, and toughening our training regimes.

We realize our CTCs do not easily replicate the "pain and gain" of true three dimensional joint and combined operations. It is also difficult to adequately duplicate the pressures and problems of full scale deployment, warfighting, and sustainment. We are working on a gunnery scoring system and recent testing at the NTC shows improvements in our MILES/AGES equipment.

Simulation and simulators are essential to prepare for future contingencies. Our high technology systems are expensive to operate. . . simulation, distributed interactive simulators, and embedded training systems offer enormous advantage to force readiness.

Our goal is to create an interactive simulation environment that permits aircrews to practice crew and battle drills with other members of the combined arms team in a variety of threat scenarios. The technology is available. . . it awaits our creative energies and has the potential to provide enormous training savings.

The lessons of Operations DESERT SHIELD and DESERT STORM serve to guide commanders, trainers, developers, and industry to ensure our force is rapidly deployable, sustainable, and capable of quick and decisive victory wherever we are called to fight.

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Third Army View of DESERT SHIELD/STORM

by Major General Robert S. Frix and Major Ronald A. Carter

President George Bush ordered American military forces to Saudi Arabia on 7 August 1990. By 11 August, 13 Army helicopters had arrived in country. By the time the ground war began on 24 February 1991, XVIII Airborne Corps had 920 aircraft in Saudi Arabia, VII

Corps had deployed 808, and Echelon Above Corps (EAC) and Army Special Forces had 160 for a Theater total of 1,888 Army aircraft. During the period of August 1990 through March 1991, 2,010 Army aircraft flew 182,960 hours as part of the Army team. Ten aviation brigades directly participated in combat operations and other aviation forces provided essential combat support and combat service support to the theater.

On 16 January 1991, AH-64 Apache helicopters from the Aviation Brigade, 101st Airborne Division (Air Assault) conducted a deep operation to destroy Iraqi radar sites to help clear the way for the massive air operation to begin in the



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early moments of 17 January 1991. The missiles fired by the Apaches were the first shots fired in the Gulf War.

Aviation made significant contributions throughout the entire Gulf operation. Aviation units exercised their ability to deploy to the Theater as elements of rapid deployment task forces. Aviation assets allowed the ground commander to extend his area of influence, observe his area of operation, and project his firepower to a degree never before realized. By providing an additional maneuver dimension to the ground commander, aviation forces extended the corps and division commanders' ability to project combat power deep into Iraqi territory



MAJ Ronald A. Carter is ARCENT Aviation Officer, Ft. McPherson, GA.



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and, through armed reconnaissance, gathered real-time intelligence to facilitate operational and tactical planning. At the operational level, aviation combat and combat support forces quickly shaped the battlefield by cutting off the withdrawal of the Iraqi Republican Guard forces, facilitating their defeat.

At the tactical level, the aviation brigade and attack battalions were fully integrated into division commanders' schemes of maneuver as essential components of the combined arms force. Tactical maneuver was redefined as attack battalions integrated their combat power into the division attack. The partnership of the AH-64A Apache, M1A1 Abrams tank, and the M2 Bradley was an awesome fighting force. Armor, infantry, and combat aviation melded together as a maneuver fighting force that will underpin the architectural framework for AirLand Battle Operations.

Combat service support aviation forces were essential to sustain the tempo of the ground battle. Establishment of initial forward operating bases over 100 KM into Iraq and initial aerial resupply of fuel and ammunition allowed corps commanders to extend combat power forward to flank the Iraqi army and set the conditions for success. Medium lift helicopters moved tons of equipment, supplies, and combat soldiers forward to support the ground campaign. The cargo and utility fleet were workhorses and proved the value of this essential combat multiplier. Over 980 utility and cargo helicopters supported combat operations in Southwest Asia.

Peacetime training is directly responsible for much of the success enjoyed by Army Aviation. The effectiveness of standardized attack battalion training, night training programs, and extensive use of simulators has been validated by aircrew performance in combat. The Army's development programs have produced outstanding, technically and tactically competent leaders at every level in all branches.

Technology has provided aviation with a generation of aircraft capable of operating reliably in extreme conditions. The Gulf War tested and validated the current family of

aerial platforms, extremely lethal high technology weapons systems, and some theretofore still developmental and/or unfielded systems.

Vital Ingredient

The most vital ingredient for success was the absolutely superb men and women that served. The dedicated, smart, and courageous aviation soldiers made it happen, no matter how tough or complicated the situation.

The overall blend of quality soldiers, tactics, training programs, leadership, and equipment was a formula for Army Aviation success. However, recognition and improvement of areas of weakness is extremely important to future battlefield success. Failure to do so may prove costly in lives and equipment. The remainder of this article will summarize a few key issues which are symbolic of the many impacting on the aviation community. This is by no means meant to be a comprehensive discussion of lessons learned from the Gulf War.

The Aviation Brigade at both division and corps established themselves to be key players during Operations DESERT SHIELD and DESERT STORM. They were only limited in their ability to plan and execute missions by thinly-manned Brigade Headquarters. The capability of the Aviation Brigade to fight deep, close, and rear operation battle 24 hours a day was limited by minimum personnel manning. The current series MTOE needs to be more robust. This need would have been more obvious had the ground battle continued for a longer sustained period.

The current policy of resourcing pilots at the rate of one pilot per seat does not meet the requirements of full combat operations. Limited pilot availability equates to a limitation of combat capability and flexibility for the ground commander. Aircraft availability is effectively reduced to eight flying hours per day (up to 50% less under more strenuous conditions such as night vision systems flying). As a result of the pilot constraint, aircraft were generally limited to flying, at best, 32 hours out of the 100 hour ground war without having to take

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excessive risks caused by aviator fatigue. Commanders employed their aviation assets judiciously with troops available often carrying greater weight than the enemy portion of METTF.

The topographic characteristics of Southwest Asia made navigation difficult, if not impossible in some areas, for both air and ground systems. On-board navigational equipment and navigation techniques, even LORAN, proved marginal on Army aircraft in the desert environment. The Global Positioning System (GPS) navigation system was the solution. The GPS, installed in the aircraft or hand-held, enabled crews to fix their locations with pinpoint accuracy. Aviation units applied this navigation capability to target acquisition, target engagement, and enroute navigation. The result was a positive synergistic effect on virtually all battlefield operating systems.

Command and Control

Command and control of aviation assets during DESERT STORM operations was difficult due to the complexity of missions, low flying altitudes, and great distances between tactical assembly areas and objectives. The corps communications network was stretched to the extent that units without satellite communications capability were less effective in the decision making process. Command and control would have been greatly enhanced by employment of Airborne Command, Control, and Communication aircraft (ABCCC). The ABCCC must be equipped with long range communication systems and with pilotage systems which allow them to move with the shooters they control (e.g. night vision systems). We also lack the ability to get real time information directly to the shooters. The "quick fix" for C² of aircraft was retransmission of command radio nets.

VII Corps deployed with its one authorized CH-47D medium lift helicopter company (16 aircraft). That lift support was not sufficient to support a heavy corps in Southwest Asia. DESERT STORM proved the necessity of being able to rapidly transport priority cargo over long distances. The CH-47D helicopter proved to be a

critical support asset. It would be very difficult for a heavy corps to be able to sustain high OTEMP AirLand Battle operations without an increase in medium lift helicopters or without more fixed wing intratheater airlift assets to offset the demands placed on CH-47D units organic to the corps.

Operation DESERT STORM clearly demonstrated the need for theater level aviation refueling equipment and operators. The distances flown in theater rear areas by MEDEVAC, support aircraft, and units deploying forward required additional refueling points beyond those established by corps. Major shortages were identified in Forward Area Refueling Equipment (FARE) and personnel. AirLand Battle dictates rapid movement of forces on a non-linear battlefield. The concept is valid, but severely strained tactical aviation unit and corps FARE assets. Current MTOE changes have deleted FARE equipment and personnel from COSCOM and SUPCOM quartermaster units. Taking refueling equipment and personnel out of tactical units would degrade the war-fighting capability of forward units. Equipment was eventually received from CONUS but qualified personnel remained a critical shortage throughout the operation. Dedicated aviation refueling systems and operators should be incorporated into COSCOM and SUPCOM QM units to support future theater combat operations.

Fixed Wing

Fixed wing Army Aviation assets also contributed to the success for the ground campaign. Aerial exploitation units provided commanders with valuable intelligence, and operational support aircraft provided critical courier and passenger service between major headquarters. Since these aircraft are required to fly above the established coordination altitude, their missions must be incorporated into the theater Air Tasking Order (ATO). Timely distribution of the ATO to all using units is essential for mission and airspace coordination. The Army currently has very limited access to the distribution system now in use by the USAF for the ATO. The problem is exacerbated

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DESERT STORM: LESSONS LEARNED



One Year After the STORM

by Colonel Thomas W. Garrett

One year ago, the last elements of the Aviation Brigade, 101st Airborne Division (Air Assault), closed on their home station, Ft. Campbell, KY, after an eight month deployment as a part of Operations DESERT SHIELD and DESERT STORM. What lessons still

stand out in our minds from that experience as we have recovered, re-cocked, and re-focused on our worldwide contingency mission? Some thoughts on equipment, personnel, and operations follow.

As budgets shrink and our Army downsizes, our focus on procurement of "big ticket" items will necessarily shift to affordable ways to make our current and near-term equipment and organizations more effective. This effort is long overdue. Some of our most critical gear is antiquated Vietnam-era equipment, such as the Forward Area Refueling Equipment (FARE) systems.



Our toughest task is Nap of Earth (NOE) navigation, especially at night. The answer to our aviators' prayers showed

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up in limited quantities during DESERT SHIELD—Global Positioning System (GPS). This single piece of equipment has done more for successful mission accomplishment than any other single piece of hardware to be introduced during my 20+ years in Aviation. We have been using the general purpose SLGR. A mounting kit, aircraft antenna, and power connection would be nice; but the point is that the thing is a quantum leap in navigation capability. The reduced pilot work load, confidence in ability to fly planned, risk minimized routes, and capability to hit multiple LZs with precision, make GPS not only a significant tactical enhancement, but also an obvious and powerful SAFETY device. Every aircraft should have one. GPS was essential in the desert. We have found that it is a combat multiplier in all environments.

Refueling equipment remains the weakest link in our sustainment chain. The HEMTT

is wonderful, but for contingency operations, deep operations, or forced entry scenarios, it has deployment limitations. We had to "make it up" in the desert. We mixed and matched equipment, people, and organizations, and bought commercial equipment to get the job done. This aspect of aviation operations is so vital to success that our units should have many options to choose from to support any given mission, and have back-ups to the back-ups in terms of hardware.

Another aspect of this issue is extended range systems for our aircraft. We entered a whole new world of combat capability when we began conducting missions with "ferry" tanks installed. Extending the time an aircraft can stay aloft has been an aviation challenge since Kitty Hawk. We should be exploring and capitalizing on every conceivable way to lengthen our tethers.

Night vision technology has proceeded at a rapid pace and our Army has been quick to take advantage of it. In Aviation, we have taken the capability to the limit. Don't get complacent though—this stuff is hard. As a community, we all must keep the pressure on and the priority high on night vision enhancement—acuity, field of vision, sensor fusion—we need it all. We fly almost every night at Ft. Campbell. I still have crewmembers in PVS-5s.

Environmental Concerns

Somewhere along the way from Vietnam to DESERT STORM, we lost the grip on the need and ability for controlling blowing dust and sand. Environmental concerns are rightly more of an issue today, but even with the green light to try anything in Saudi Arabia, no measure short of paving was even remotely effective. Readiness was substantially affected, not to mention the huge bucks it is costing us to restore the fleet. A reasonably-priced, environmentally safe, unit applicable (55 gallon drum feeding a spray bar on the back of a HMMVV) solution is in the "must have" category.

Operationally, DESERT SHIELD/STORM transformed theory into reality for the modern 101st and for Army Aviation in general. Extended cross-FLOT deep

operations, JAAT, the Aviation Brigade as a maneuver force, the night advantage—all were battle-tested. Several areas highlighted by our experience deserve attention.

The how-to of aviation force protection was a major concern in Operation DESERT STORM and remains a challenge for contingency operations. Aviation forces are lean outfits and have little self-protection capability while actively engaged in maintenance and tactical operations (which is all the time). The art of building revetments needs to be revived, along with the materials to do so. The safety aspects of operating our new UH-60 and AH-64 aircraft in and around revetments in terms of revetment design and spacing needs testing. Hasty and deliberate designs are required. We could do more thinking about remote area operational basing from ISBs to FOBs and all the "Bs" in between.

The limitations of our research on crew endurance hit us between the eyes in DESERT SHIELD/STORM, and comes up again with every exercise. Individual differences, the benefits of breaks, or a nap, the use of sleeping aids to insure quality rest, the use of drugs to extend endurance . . . the list of ideas needing testing is endless. We know we can't be at our peak all the time. Just how degraded can we get and still fly in various environments? Can we extend endurance through training? How does individual experience or battle-rostered crewing effect endurance? Can the crew of a UH-60 go longer than a crew of an OH-58? Are our units manned for continuous 24 hour operations? (No.) The old 12-on/12-off and One NVS hour=Two Day hours doesn't get the job done.

Command and Control

In DESERT STORM we were deployable, flexible, fast, and lethal; but we were out of control. We remain in the grease pencil and acetate, "count 'em when they come back across the FLOT" mode of command and control. This whole area is so far behind that every aspect of it requires both immediate, short-term fixes as well as longer-range, integrated answers. Computers, communication, liaison, planning, intelli-

gence linking—all will enhance beyond our imaginations the effectiveness of limited sized aviation forces. Start by looking at our own Field Artillery and their system of liaison and communication. Light Tacfire might have direct application for the short term.

Operations against threat forces armed with radar-aided anti-aircraft weapons remain a major concern. From detecting and tracking these systems on the battlefield (in a timely manner at the execution level) to neutralizing or defeating radar systems, we don't feel warm and fuzzy. The answers may lie in individual Aircraft Survivability Equipment (ASE), Army escort or support detection and jamming, Unmanned Aerial Vehicles (UAVs), and/or anti-radiation weapons. We feel we can substantially strengthen this area.

Personnel

Finally, a word on personnel. Our current aviation organizations are just too thin. Worse, our personnel system can't seem to keep our units up to authorized strength. Even more critical, the shortages almost always occur in the "skill" positions (IPs, IFEs, MTPs, and Safety) and low density technical MOSs vital to quality sustainment. The combined effect is that superhuman effort is required on a routine basis by the great folks we do have, day in and day out (and we only add requirements; we never delete, simplify, or streamline anything).

Now add the absences caused by our military education system (CAS3, ANCO, PLDC, aircraft transitions) at both local and Army level, and throw in 15-20% turbulence per quarter, and figure out how many people of the appropriate skill level, grade, and experience are executing and sustaining those NVG air assaults out there every night. The answer isn't good. We can't continue to ask what we do of our people and units without minimal resourcing. It's unsafe.

It's foolish to ask for more people when the Army is drastically downsizing, but we know we have a problem here. If the personnel system can't fill the authorizations, then there aren't enough people, there are too many authorizations, or people are being misassigned. I personally like the

COHORT system for getting the most out of people in organizations and breaking through the training plateau where turbulence traps you. Ask commanders that took units through single station Apache fielding how good their units can get if they can stay together for awhile.

I hope nothing new popped out at you from this article. Most, if not all of these issues, are being worked, and worked hard. It is always a worthwhile exercise to pause and reflect on where we have been, where we are, and where we need to go. Aviation's great success in the desert was no accident. We have great equipment, winning doctrine, and tremendous people. As we institutionalize our maturing branch as a necessary and essential member of the combined arms team, we need to take every measure affordable to resource our units in the field for success. ■■■■

Third Army View (continued from page 16)

when fixed wing units are located great distances from the corps headquarters where the ATO distribution terminal is located. A critical need exists for an ATO distribution system available to all units required to fly their missions off the theater ATO. There is a need to develop and field such a system to enhance operations and minimize safety hazards.

In conclusion, Army Aviation was an integral component of DESERT SHIELD and DESERT STORM. AirLand Battle doctrine underpinned all aspects of combat operations during the conflict and provided a bridge of transition to future AirLand Battle Operations. Armor, Infantry, and Combat Aviation worked together as an awesome combined arms team and demonstrated the effectiveness of operational maneuver. There are still some problems to be resolved and challenges to be met. With their resolution and a continued emphasis on the integration of quality people, realistic, demanding training, and advanced technology, it is clear that aviation will become and remain a full-fledged partner in the Combat Arms. ■■■■



Supporting a Contingency Operation

by Colonel Robert N. Seigle

Here we are, more than one year later, and DESERT STORM is becoming a distant memory. The Air Force came home immediately, declared a victory, reorganized its Force, redesigned their uniforms, and readied themselves for reorganization of the Depart-

ment of Defense in the year 2000, while the Army hasn't even told its story yet!

DESERT STORM was an outstanding American success, and I've heard all the comments that I need to hear about how we were lucky the war lasted only 100 hours, or that we couldn't have gone much longer because our logistics systems were about to fail. Nothing could be further from the truth, but as others will attest in this issue as to how the Apache came of age and proved its value on the Combined Arms Team, how good our doctrine was, and how magnificent it was that we could

move 450,000 troops and all their equipment and support pieces 8,000 miles around the world and fight and win quickly, I want to

take a minute to remind you of some changing programs in Army Aviation that will make us that much better in the future.

One problem still facing the Army and clearly illuminated in Operation DESERT STORM was our logistics system. It did not work as designed and even though it worked, it requires a major overhaul before we fight again.

Aviation maintenance has always been a special commodity program within the Army, and that's why we train aviators to maintain our warfighting machines. While the Army logistics system is designed to ship large quantities of combat materiel into a theater, the aviation Class IX repair parts system needs to be able to identify individual things in lieu of tons.

Aviators who were the first to arrive in country during DESERT SHIELD were supported by those things that they brought from their home stations, and then



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individually supported in their aircraft maintenance through a telephone link to Aviation Systems Command (AVSCOM). AVSCOM contracted with an international express mail company called DHL, and high priority parts were delivered directly to Dhahran Airport to the civilian side of the air terminal. They were then trucked around to the military ramp for Army transportation to the correct unit. This processing was completely outside the Army logistics system, but it worked.

Other aviation supplies that came through the normal supply system were palletized on a cargo aircraft coming into Dhahran airport and were marked with a fluorescent blue 8' X 8' sticker that had the Aviation Branch symbol emblazoned on it. Through this, aviation parts could be identified on any pallet off-loaded into Dhahran. This simple identification system, designed by MG Donald R. Williamson, CG, AVSCOM, and then-BG Dewitt T. Irby, Jr., DCG, AVSCOM, worked well initially, but throughout the war it had to be augmented with additional identification systems when a couple of hundred aircraft in Saudi Arabia increased toward 2,000. The normal requisition system of the Army, even through AVSCOM, was overwhelmed with high priority, go-to-war requests from within Saudi Arabia, and some control needed to be exercised over those requests.

Individual Impact

As often happens in circumstances like this, the system is not responsive until one individual steps out of a normal role and beats the system at its own game. That one individual in the XVIII Airborne Corps was CPT(P) Hope Jones, plucked out of ROTC duty in SW Missouri State, PORd through Ft. Hood, TX and assigned in September 1990 as a member of the 4th MMC, supporting the first COSCOM in the Corps. She was the Aviator Repair Parts Manager, and she took it upon herself to clean up the requisitioning mess created by the units. With only her personal determination and conviction that the problem could be solved, the logistics system of the United States Army was brought under control for

all aviation units operating in the XVIII Airborne Corps.

She took her team of nine enlisted soldiers and divided them into telephone dialing wizards. One team spent all its time on the phone talking directly to maintenance officers in units to verify aircraft mission status and to validate requisitions that were absolutely necessary for aircraft currently grounded. Another team spent its time feverishly dialing back to AVSCOM through any means available to pass only those requisitions that were absolutely needed to get aircraft off the ground. The third team was then sent out to track status from the Logistics Information File (LIF) in CONUS and then to walk the pallet yards in Dhahran looking for blue-stickered aviation parts.

At about the time CPT(P) Hope Jones came into country and got her system initiated, the Air Force's TRANSCOM Commander heard about Army Aviation's DHL Express connection and asked if the Air Force could provide that service with a dedicated C-141 daily from Charleston AFB to Dhahran. General Williamson agreed, and the Desert Express was born.

At about the same time all aviation parts coming into Dhahran and through the port of Ad Damman were clearly marked with their blue stickers, but even that was not quick enough to identify those parts needed immediately to bring aircraft up from a grounded status. Consequently, MG Williamson developed a second bright orange sticker, titled Aircraft On Ground (AOG), that was slipped on every part that had been ordered through CPT(P) Hope Jones' call-in system. A third yellow Desert Express sticker was put alongside the other two in an attempt to move the more critically needed parts for AOG by Desert Express. By the time CPT(P) Hope Jones' system was in full effect, it was possible to call in a requisition number for grounded aircraft, to relay that call in a requisition number for a grounded aircraft, to relay that call and that requisition telephonically to AVSCOM, and to have a series of National Guard aircraft fly throughout the U.S. and pick up that part from either the manufacturer or depot and deliver that part to

Charleston AFB so that it would be on the Desert Express within 72 hours. This process would have worked well for aviation parts throughout any length of war, even though it was outside the normal Army logistics system.

It is important to understand what part Army Aviation Maintenance Officers played in developing this system within a system. Had CPT(P) Hope Jones not taken "the bull by its horns" and seized the opportunity to solve the problem and ramrod a solution, the aviation resupply in XVIII Airborne Corps would have been lost in the tons of supplies shipped to theater.

MG Williamson's experience goes back over a much longer period of time. In 1983, then-Colonel Williamson, as the Cobra PM, dispatched two captains from his office to get on one of the 82nd Airborne Division's deploying aircraft to Grenada. Their sole mission was to find out what Cobra parts were critically needed in Grenada, find a telephone, and call him. He then identified the part, had it expeditiously delivered to Ft. Bragg, NC with instructions to have it hand-carried on the next Air Force log bird from Pope AFB to Grenada. Based on that experience and his knowledge of aviation repair requirements in contingency operations, he reasoned that Army Aviation needed a dedicated aircraft to deliver parts in any wartime situation. By 1989, as the CG, AVSCOM, he had continued to make that argument for a dedicated aircraft, but to no avail. With some warning from early deployed units to Panama, he was again able to accumulate critical aviation parts and ship them to Ft. Bragg so that they could be taken in prior to hostilities. Before the short conflict was initiated, he attempted to establish a dedicated airlift for aviation parts but was turned down again. The result: of the 189 critical repair parts needed to fix aircraft in Operation JUST CAUSE, not one part was received by a unit. With the consequences of two contingency operations behind him, and with multiple requests for dedicated aircraft turned down, he knew that any future war would require a unique solution from AVSCOM to solve the Aviation Class IX

parts problem. This sequence led to the development of DHL and Desert Express, and that's a lesson that we cannot allow ourselves to forget. As much of a success as Desert Express became, it was in danger of being smothered by a well-intended but cumbersome peacetime logistics system that was working overtime to ship everything it could to Saudi Arabia.

The multi-colored stickers instituted for Aviation AOG Desert Express parts were only useful as long as those parts were packed on a pallet that was clearly visible once off-loaded. By the time the logistics system got into full gear and began to ship the thousands of back-ordered parts to Saudi Arabia, the only economical means of transportation was to ship these loads in sealand van into theater. By the time the war ended thousands of parts were captured in sealand vans at the Port of Adamam, and no one had any idea what was where.

As I told you at the beginning of this article, I was sick and tired of comments that the war had lasted only 100 hours and many thought the logistics system was about to bring us to our knees. The truth of the matter is that we just never had the need to unleash old Hope Jones and her nine soldiers on solving that problem. She would have found a solution.

I remain convinced that a peacetime logistics system cannot respond to the wartime tempo required in our next conflict. MG Williamson and CPT(P) Jones developed a workable and dynamic system that met the needs for Saudi Arabia. Before we have to fight again, we need to develop their experiences into something like our own Federal Express system. If we downsize our force to pay a peace dividend, it will cost us spare parts and a back-logged logistics system. We will need, in our next fight, an ability to communicate our need immediately from the battlefield to a purchasing agent or a warehouse that can provide overnight delivery of the specific part to the unit that ordered it. In the civilian world, overnight delivery of critical spares is commonplace. Let's make it the same for the military—before Hope Jones retires!

IIII

DESERT STORM: LESSONS LEARNED



The Loved Ones We Left Behind

by Captain Thomas M. McCann

Every one of over 500,000 Americans deployed on Desert Shield and Desert Storm had one difficulty in common: they left someone behind.

For families of soldiers from the 10th Aviation Brigade, 10th Mountain Division (Light Infantry), Fort Drum, NY,

going to war meant saying goodbye on the tarmac at nearby Griffiss Air Force Base just as frontier Army families once stood at the gates of Fort Leavenworth or Fort Riley to watch blue-clad cavalymen ride off across the plains.

These modern soldiers had something that their 19th century comrades did not, the knowledge that a strong, organized family support system existed to help their families back home.

For Chief Warrant Officers Daniel L. Pinkava and Stephen D. Baker, and Sergeants Grover W. Ireland and Robert A. Bero of



Company B, 2nd Battalion (Attack Helicopter), 25th Aviation, and their families, deployment brought multiple anxieties.

CPT McCann is PAO, 10th Aviation Brigade, 10th Mountain Division (LI), Ft. Drum, NY.

First, they and 23 other soldiers from their battalion deployed as replacement AH-1 crews and had no way of knowing which units would pick them up. Pinkava and Bero went to the 1st Squadron, 4th Cavalry, 1st Infantry Division; Baker and Ireland went to the 2nd Squadron, 17th Cavalry, 101st Airborne Division. Baker said that they travelled like nomads their first two weeks in-country, going to three different replacement centers before receiving assignments.

Second, they did not know which post would provide support to the families. Their battalion, stationed at Griffiss Air Force Base, is 80 miles removed from its parent brigade at Fort Drum. This meant that most support would come from Air Force organizations already committed to supporting their own deployed units.

Sgt. Bero had an additional anxiety. His wife, Sandi, was expecting their second child and was entering her third trimester.

The ordeal began on 10 January 1991, when the battalion alerted them for deployment. The days and weeks that followed tested the endurance of soldier and family member alike. When they arrived for their first family support briefing on the evening of 16 Jan 1991, they learned about the first air strikes on Iraq.

From alert to departure, each day meant more activities. To complete their personal readiness checks the soldiers had to travel 80 miles to Fort Drum.

As the soldiers prepared for war, their wives prepared for the equally tough task of maintaining family life in their absence. They found strength not only in their personal families, but in their military family.

Tawania Kovacs-Pinkava, Mr. Pinkava's wife, said that at battalion level, family support worked well throughout the crisis, largely due to the outstanding efforts of Sherry Cripps, wife of the Battalion Commander, LTC Dennis Cripps.

"I called Mrs. Cripps whenever I had a question," she said. "If she couldn't give me the answer, at least she heard what I had to say."

Some support did come from the Family Support Center at Griffiss Air Force Base. An important highlight occurred on 12 February 1991, when Mrs. Barbara Bush, the First Lady, visited the base to speak at a 416th Bomb Wing-sponsored gathering of members and family. The Family Support Center ensured that the Army families could attend and meet Mrs. Bush.

Once the soldiers departed, the worst part began for the families. It took seven weeks to learn about their soldiers' destinations.

Mrs. Bero attended weekly meetings organized by SCOPE—Spouses Capable Of Practically Everything—the spouse support group at Griffiss Air Force Base. She said that she assisted as much as possible, and praised this organization for its help with her and other wives, providing child care during their weekly meetings, planning trips, potluck suppers and other activities.

Sgt. Ireland's wife Rebecca said that once

she knew where her husband reported, she was able to call Fort Campbell, KY, where she received information about his assignment, where to write him, and a toll-free number to receive additional information.

Mrs. Kovacs-Pinkava maintained constant contact with the unit family support network by holding informal meetings every Friday evening during the deployment. Here the wives, and the girlfriends of single soldiers deployed from the battalion, could dine together, pass on information, and generally cling to one another for support.

When Mr. Baker's wife, Penny, returned to Florida to stay with her family during the deployment, Mrs. Ireland

and Mrs. Kovacs-Pinkava kept in contact.

Mrs. Kovacs-Pinkava helped not only her fellow wives but also the families of other deployed soldiers from the area. She served as a volunteer coordinator with the Utica, NY chapter of the Red Cross, assisting families of local Army Reserve soldiers.

She said that the Red Cross directed much of its efforts toward individuals, and praised the high level of local support, due to the large number of communities represented



First Lady Barbara Bush meets Nicholas Bero, 5, during a visit to Griffiss Air Force Base, N.Y. on Feb. 12, 1991. His father, Sgt. Robert A. Bero, 2-25 Attack Helicopter Battalion, 10th Aviation Brigade, 10th Mountain Division (LI), was deployed on Operation DESERT STORM. Mrs. Bush visited the base as part of a family support tour of units deployed to Saudi Arabia.

by soldiers from deploying reserve units.

"I hadn't gone through Vietnam," she said. "I never knew what to expect. The Red Cross was a godsend." She added that the local chapter is still holding post-DESERT STORM meetings today to help soldiers and their families re-adjust.

When Mrs. Bero encountered complications with her pregnancy, family support not only helped her cope but helped bring her husband home. She recalled contacting him in Saudi Arabia to alert him about her condition, then receiving a call from him several days later to let her know that he was enroute home. She praised the Red Cross for its help in getting him back to New York. She had a healthy baby boy, Brad, on 13 May 1991.

Her husband's absence also affected their five-year-old, Nicholas.

"He used to dream and wake up crying," she said, apparently worried from all the Desert Storm stories he saw on television. She added that the strength she drew on during his absence helped both her and their son.

"You learned to appreciate what you had at home," she said.

Mail became another source of anxiety, due to the uncertainty about their soldiers' destinations. Mrs. Kovacs-Pinkava said that some of the letters she sent to her husband did not catch up with him until February 1992.

An important lesson from their crisis is the need for a strong unit family support network. Given their battalion's position, torn between two posts, the efforts of family members such as Mrs. Cripps, Mrs. Bero and Mrs. Kovacs-Pinkava made a great difference in their ability to endure DESERT STORM. It is as basic as a family phone tree or as broad as a full family support plan with detailed sources of assistance.

Probably the best lesson is that uncertainty is the most certain thing about any deployment. Those who prepare best for it do a great service by ensuring that unexpected problems are minimized; that people know what is expected of them and how to cope with crises, and by providing a source of strength and stability in an otherwise confusing and frightening situation.



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Friendly Fire: A Different Look



by First Lieutenant Kenneth G. Moreno

The concern over casualties suffered due to friendly fire during the Gulf War has once again surfaced. It has long been an issue that is difficult to understand or comprehend. This is especially true for those who have lost soldiers, friends, or loved ones to

this terrible reality of war. Unfortunately, the intense strains of combat can not be compared to any other experience in life. Stress is extreme and opens the door for mistakes and accidents to occur. It is unacceptable to acknowledge that friendly fire will continue to cause casualties, but it is a fact of war. We must continue to seek the hardware and equipment that will minimize this tragedy and train to a standard that causes each soldier to rely on his training and experiences to make the right decision in these intense scenarios.

Here is my account of events leading up to and including an actual combat mission conducted during Operation DESERT STORM. What follows is an example of how even the best tactics, techniques, and

procedures in training can't always prepare one for the real thing. The text tries to explain the extent to which helicopter crews will go to ensure that friendly troops are not fired upon.

Our unit, the 4th Battalion, 159th Aviation Regiment, is based in Stuttgart, Germany and commanded by LTC Dennis A. Williamson. The battalion consists of one Headquarters and Headquarters Company with attached fixed wing platoon and AVUM, as well as UH-1H, CH-47D, UH-60, and OH-58D companies. The battalion provides general, combat support, and combat service support to the Corps. The unique composition of the battalion often requires it to be spread very thin performing various missions around the world. An extreme amount of command and control is required to insure the successful completion of every mission.

Being a corps asset under the 11th

1LT Moreno served as D Company Platoon Leader, 4-159th Aviation Regiment, 11th Aviation Brigade, Stuttgart, Germany.

Aviation Brigade, we in the OH-58D company often more times than not find ourselves attached to the Apache battalions within the brigade. This attachment has essentially become the standard for training and combat operations. Our OH-58Ds have worked with the Apache battalions during REFORGERs, gunnery exercises, and in all levels of collective training. During the Corps' quarterly deep attack scenarios, the AH-64 battalions and the OH-58Ds cooperatively train together. All of this habitual training has produced scout/gun teams that, to say the least, are a most lethal combination.

With the trend and necessity to fight at night, advanced sighting and designating systems have been developed and are continually being improved. The Thermal Imaging System (TIS) on the OH-58D and the Forward-Looking Infrared (FLIR) System on the AH-64A Apache offer the ability to improve our night fighting capabilities.

Mission Play-By-Play

Scouts of all kinds, be they aerial or ground, take pride in their ability to distinguish friend from foe. We can sit all day in front of flash cards, slide projectors, or field manuals correctly identifying vehicles and aircraft from many different countries. This without a doubt improves our ability to distinguish the type, origin, and possible weapons combination that may be brought to bear on us. Even with today's high-tech systems at our disposal, mother nature and the enemy can alter our ability to effectively identify a vehicle. Let me explain:

On the dark and windy night of 26 February 1991, my platoon of OH-58Ds was attached to the 4th Battalion, 229th Advanced Attack Helicopter Regiment, commanded by LTC Roger E. McCauley, Jr. Our mission was briefed in a holding area located in Iraq about 45 miles north of the Saudi Arabian border. The mission, as practiced so many times in training, was to advance deep across the Forward Line of Troops (FLOT) to destroy Iraqi armored units in Kuwait. The briefings, map recons, routes, engagement areas, all were

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straightforward and per SOP. The thrill and apprehension of our first combat mission was there, but it was going just the way we had practiced, so nothing at the beginning of this mission surprised us.

At approximately 2145 hours, we pulled pitch and departed the holding area in a modified wedge, heading northeast at 100 knots and 30 to 50 feet Above Ground Level (AGL). My OH-58D and the two AH-64 gunships were the second flight in one of the three Apache companies involved in the attack. We were responsible for the southernmost part of the battalion's sector. To our north was the rest of the Apache company and the remainder of the battalion. Our southern side was all to be considered enemy territory once we crossed the line of departure. The movement to the line of departure was uneventful, even though our American forces were methodically destroying numerous Iraqi armor all around us. It was not until we saw the last friendly ground scout elements that we knew exactly where the FLOT ended.

The 90° grid line graphically depicted our line of departure indicating where the flight would switch to a passive mode of operation concerning some of our electronics. The line of departure also represented the transition point actively energizing our find, fix, and destroy detail. Intelligence had told us the Iraqi armor unit was about 100 kilometers across the FLOT. No problem here, we trained and practiced to conduct deep operations repetitively 100-150 kilometers deep.

Across the FLOT

Not too long into our flight, radio traffic of teams assessing and engaging enemy forces and commanders receiving Situation Reports (SITREPs) flowed over the battalion net, just like a training mission. Naturally, not all of the calls were in the standard format. A great deal of chatter was heard: observers and pilots whooping, commanders maneuvering teams into the engagement areas, and the distinct sound of certain exclamations describing how the turret of a tank suddenly departed its chassis. Then my team spotted an apparent Iraqi

armored column moving north. Only 200 meters past the 90° grid line! The bad guys were supposed to be "deep".

It was, however, a true scout/attack helicopter dream. The enemy armor was all lined up in trail formation, just begging to be sacrificed for their country. Then we noticed something we had not experienced in training. Peering through our night systems, we could make out numerous tracked vehicles and tanks, but what kind? There was something that made these armored vehicles appear different. All of our training had not put this element of identification into the equation.

Because this armored column was so close to the line of departure, they easily could have been friendlies that were disoriented or ordered beyond the briefed FLOT. Being the scout, I was sent forward to get a positive ID. As I moved closer to the armored column, the more frustrated my aerial observer, SFC Kenneth R. Carter and I became. Sure, this was known enemy territory, we had crossed the FLOT, but there had to be positive identification before we could launch a missile. One of the AH-64's stated that one of the vehicles looked like a Commercial Utility Cargo Vehicle (CUCV). Many things were now being factored together. The close location of the column to the line of departure, unclear silhouettes, and a possible friendly identification. Now what?

As I maneuvered closer, the problem became obvious. Each armored vehicle was covered with soldiers. No wonder the silhouettes appeared unusual. This was one factor that we simply had not expected to encounter. Still, I crept closer in order to identify the vehicles. Now, instead of the entire vehicle being available for identification, only the type of suspension and placement of the bore evacuator on the gun tube lent itself to view.

Eventually, the suspected Iraqi soldiers heard the helicopters. They immediately jumped off of the vehicles and hit the dirt. At last, a clear view of the tanks and MT-LBs (multi-role tracked vehicles) appeared. All were now positively identified as enemy. My aerial observer requested two missiles,

one on our laser code and the other on the AH-64's. The AH-64s told us to move back, we were too close to the armored column for them to fire a missile. Getting caught up in the moment, I had maneuvered dangerously close. I immediately backed off and set up in an Observation Point/Designation Point (OP/DP). End result: three tanks, six MTLBs, and a commercial truck that appeared to a Toyota were totally destroyed.

In reviewing the recorded tapes, I maneuvered so close it appeared that my aircraft was part of the armored column. Of course I had the comfort of supporting fires from the AH-64s, but we put ourselves in jeopardy to insure that the vehicles we were about to destroy were in fact enemy.

There have been many suggestions on how to eliminate the possibility of fratricide. One is the placement of rotating beacons on vehicles. This would present problems to all that fly or drive using night vision goggles. Secondly, what is to stop the enemy from placing infrared beacons on their vehicles?

Alternatives

Perhaps an Identification Friend or Foe (IFF) system as used on aircraft would be effective. This would require retro-fitting all vehicles and aircraft with the like interrogation and response devices. Even then, we become dependent on the electronic reliability of the equipment. Also, infrared or thermal tape applied to vehicles may not be effective, either. Where as they may work for TIS or FLIR, they are ineffective for night vision goggles.

A word to our brethren on the ground—helicopter crews go to great length to be absolutely positive the vehicles in our sights are indeed the enemy before we shoot or request missiles. Every situation is different. Even the best trained crews cannot foresee every contingency. No one wants to shoot friendly troops or vehicles. When a vehicle is in your sights and the system has it locked in, the thought of fratricide goes through your mind. Many factors must be considered before firing. As in this case, many of those factors were not anticipated

nor previously encountered by the team. Unlike in training, these bullets and missiles were real and we were playing for keeps.

As aviators, we know what it is like to have to rely on others for positive identification. The threat of friendly fire from our own air defense artillery goes through our minds. Often, talk around the tent describes "somewhere sits a PFC, scared and tired in a foxhole and manning a Stinger, ready to shoot down anything that crosses his path." Let's hope he has this aircraft identification thing down to a science.

Let it be known, every possible effort is made to insure that positive identification is made prior to firing on any vehicle or personnel. Perhaps there may never be a rock solid solution to this problem other than the total abolition of war itself. Until that time, we must rely on training, the systems provided us to fight with and our own abilities to make sure that the target in our sights is indeed the threat. ■■■

CAREER TRACK

If you'd like to take advantage of the Career Track employment referral service, but you're not yet a member of AAAA, the solution is simple: Fill out a membership form and send it in along with your request for a Career Track application. Your ad will run in the next available issue.

Active AAAA members may have a 30-word classified employment ad published in two consecutive issues of ARMY AVIATION MAGAZINE free of charge. Write to the AAAA National Office, 49 Richmondville Avenue, Westport, CT 06880-2000, or call (203) 226-8184 for Career Track applications. Inquiring organizations contact the National Office.

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DESERT STORM: LESSONS LEARNED



WSRO?

by Lieutenant Colonel Alan Gardner

Whiz who?" I asked. "WSRO, or Weapons System Replacement Operations," stated the Army Central Command Staff Officer, "and you are in charge of the aviation processing and training WSRO in Saudi Arabia." This was my introduction to WSRO, and the

thought was not appealing to any battalion commander — particularly an attack battalion commander. The chain of events that put me in this position began weeks prior at Fort Hood, TX.

Rumors of the battalion's (5/229th) deployment circulated early in January. In fact, the III Corps staff asked if the battalion could deploy by January 25th. The answer was "yes", but it would mean cancelling our ARTEP and suspending the Apache Unit Training Program, leaving the battalion's status in limbo. After extensive conversations with DA, DCSOPS,

FORSCOM, and ARCENT the decision was made on 11 January to deploy 18 Apache crews, a small headquarters control

element, and a maintenance team for the sole purpose of assembling the aircraft and not for sustained maintenance. The following day we were told to provide nine OH-58C Scout crews. The Apache and observation aircrews were to be used as individual replacements for the ground offensive of DESERT STORM. This news was not welcomed as we had trained together for the preceding seven months and we wanted to fight together as a battalion.

This news was followed by another disappointment. The nearly brand new aircraft we had picked up at the factory, and the ones we had trained with for seven months would be exchanged for four and five year-old Apaches we had never seen. We knew our aircraft, and we felt comfortable going to war with them. This was particularly disturbing since we went through so much trouble ensuring small



LTC Gardner is a Commander of the 2-3 Aviation Regiment (formerly the 5-229th).

arms were zeroed, but we would not be able to fire our primary weapons systems much less fly them prior to going to war. AVSCOM Apache Training Brigade, and Lockheed Support Services Incorporated (LSSI) worked for a week to make Aircraft Survivability Equipment modifications, tape the blades and repair equipment faults on the aircraft. In the meantime the soldiers were weapons qualifying, NBC testing, preparing equipment for shipment by air, and drawing personal equipment for deployment. Another change occurred the day prior to the first C-5A's departure, the entire battalion would now deploy; however, because the load plans for the C-5A's were locked-in, the remaining equipment would have to go by rail to Jacksonville, Florida for sea shipment.

As the crews and small headquarters section deployed, the Executive Officer, Major Bruce Ladeira and CSM Larry Owens organized the remainder of the battalion to load vehicles and equipment on rail cars to Jacksonville for eventual shipment to Saudi Arabia. As is usually the case in these matters, the worst ice storm of the year hit the Ft. Hood area the day the rail cars were being loaded. CPT John Till, the S-2, coordinated most of the battalion's deployment requirements allowing the S-4, CPT Scott Eichelberger, to fill battalion equipment shortages.

For those of the 93 person advance party over 7000 miles away in the Saudi desert, the priorities were to assemble aircraft, test fly them and check armament systems. For some, this meant over 26 straight hours of unloading aircraft from C-5As after a 30 hour flight. Soldiers quickly fanned out seeking assistance from K-loaders (vehicles used to unload cargo aircraft) to move Apache rotor blades, and tugs to move the aircraft one and one-half miles to the assembly area.

The pilots were taken to Camp Jack near the Dhahran airport to set up their cots in a large fest tent. For many this would be their home (good or bad) for the next month. The first day in Saudi Arabia was barely distinguishable from the second day as the two merged into one. The first of many

SCUD alerts occurred the first night, and everyone scurried for available shelter (at Camp Jack there was no shelter), and quickly donned protective masks. Later we learned to listen to the local American Forces Radio Network (AFN) to determine where the missiles were headed. In this way we could remove the NBC masks well before the Saudi sirens would give the "all-clear" signal. This knowledge was particularly helpful at 2 A.M. when getting back to sleep was important, as the large Camp Jack generators were started at 0445. The generators were located inconveniently just outside our fest tent, and one of the rather large commercial generators did not have a muffler!

WSRO inprocessing began before our arrival by Major John Barton from the ARCENT standards section and help from personnel of the 7th Army Training Center in Europe. Crews from Fort Drum had arrived the day before. The magnitude of the operation was beginning to become readily apparent. Initial guidance to replacement crews was vague and aircrews arrived without basic necessities such as maps, ammunition, NBC masks, atrophine injectors, flak vests, ANVIS visors and aircrew body armor (chicken plate). Some soldiers arrived with expiring ID cards and pay problems.

Crews were arriving in the middle of the night with no advance warning, causing considerable confusion. There was no central point of contact keeping track of aircraft departures in the States and Europe. The chain of command to help resolve problems was also vague. ARCENT G-3 was in charge of WSRO activities; but they were not manned and equipped to handle support for a single attack battalion, much less the hundreds of other replacement aviators. Aviation WSRO was further subordinated to the G-3 Air who was glad to see us take over aviation WSRO. BG(P) Robert Frix, the Deputy ARCENT Commander, recognized the command and control problem, and he attached the battalion to the 2nd Armored Division Aviation Brigade which helped considerably. Slowly, Aviation WSRO was

taking shape.

CPT(P) Scott Patton, the battalion S-3, developed a program of instruction that included safety, threat, aircraft survivability equipment operation, and lessons learned on flying in Saudi Arabia. Given the lack of training aids, transportation support and training facilities, this school provided a minimum of instruction; but instruction that was welcome and needed by the crews new to country. Perhaps the most difficult part of the whole operation was inprocessing. Determining equipment shortfalls, administrative problems, and assignment was time consuming and often frustrating.

A week after the school began, its first graduates were assigned to VII Corps and XVIII Airborne Corps. These initial aircrews were aerescouts badly needed by the two corps. UH-60, OH-58D, and CH-47 crews soon followed. These crews were assigned rather than attached, which later caused problems for their return when the war ended.

“... why should we deploy soldiers to fly and fight with aircraft they have never flown or fired?”

BG(P) Frix decided to keep the AH-64 crews together as much as possible and used the battalion as a theater reserve. The companies would be attached to Apache battalions at least until the battalion's equipment arrived in country. Once the battalion was fully established in country, the companies would be returned or replacement crews with aircraft would be flown in from CONUS or Europe to provide a fully operational battalion to ARCENT. The battalion also provided much needed Apache maintenance for the replacement aircraft brought over. The Theater Aviation Maintenance Point (TAMP) did not have the capability to maintain Apaches and I Company, 159th Aviation Battalion (AVIM) was moving forward for the upcoming battle. The battalion did this mission extremely well, especially in aircraft armament.

At the direction of BG(P) Frix, the battalion occupied a quickly constructed heliport. Soon after this occupation the battalion launched Alpha Company

Forward to work for 3d Armored Division. This phase of the operation will be discussed in a later article. Many lessons can be learned for future crew replacement operations.

First, the tasking message must contain clearly defined guidance on what the mission will be, and a point of contact must be established to clarify requirements. The tasking message must contain the MOS required and the minimum essential equipment for aviators to bring with them. If the need is for replacement battle rostered crews, I believe the Army is best served by calling up volunteers from Reserve and National Guard crews, not dismantling an active duty battalion to get crews. Second, a point of contact in the States must track all taskings, answer questions, and track all flights with replacement crews. Notification of flight number, number and MOS of crews on the flight should be passed to the overseas point of contact. This is vital to

orderly processing of crews.

Third, if a battalion is deployed, it should deploy with aircraft it trained with and knows. We do not allow soldiers to go to war with small arms that are not zeroed, then why should we deploy soldiers to fly and fight with aircraft they have never flown or fired? This could have been disastrous if the battalion had deployed directly into the war.

Fourth, there must be an AVIM unit to provide maintenance to Echelon Above Corps aviation units. Such a unit is vital when a new aviation unit arrives in country. Help with off loading, towing equipment and assembly is important.

Many people helped make the battalion's mission a success, and I thank all those from the Apache Training Brigade and LSSI, but most importantly I thank the soldiers of the battalion who made it happen under difficult circumstances. ■■■■

This article first appeared in the Apache Training Brigade's "Smoke Signals" October 1991.

TRAINING:

1ST AVN BDE RC SUPPORT MISSION

BY CSM GARY L. WRIGHT & SPC TONYA L. RILEY

FORT RUCKER, AL — When the small country of Kuwait was invaded by Iraq, the U.S. answered its call for help. The soldiers of the 1st Aviation Brigade at the U.S. Army Aviation Center (USAAVNC), Ft. Rucker, AL, answered the call to serve.

From the 1st Aviation Brigade, more than 600 soldiers of the 46th Combat Engineer Battalion and 300 soldiers of the 2nd Battalion 229th Attack Helicopter Regiment left Fort Rucker, AL in late August and early September for the Persian Gulf. Soldiers from many other brigade units were also attached to the deploying units. Their heroism, effectiveness, and sacrifices have been recounted many times on national television and in the newspapers.

The 1st Aviation Brigade also answered the call in another

way—a way not seen on the nightly news.

Thousands of Reserve Component soldiers from Alabama, Mississippi, and Georgia were



activated to support Operation DESERT SHIELD/STORM. They came to Ft. Rucker. Hundreds of Individual Ready Reserve soldiers also came from all over the U.S.

The 1st Aviation Brigade suddenly faced an awesome task. The mission: get our own soldiers and equipment ready to go—then get more than 3,200 Reserve Component soldiers trained and Processed for Overseas Movement (POM).

Every Reserve Component soldier that deployed to the Persian Gulf via Ft. Rucker was

assigned to the 1st Battalion, 10th Aviation Regiment of the 1st Aviation Brigade, except the IRR soldiers. They were assigned to and trained by the 1st Battalion, 13th Aviation Regiment of the 1st Aviation Brigade.

Extra Hours

Soldiers of the 1-10th Aviation Regiment, responsible for command and control, began working six and seven days a week, often 12 to 16 hours per day, in processing and scheduling the arriving Reserve Component soldiers for training and POM. The busiest period was from Thanksgiving through the beginning of the New Year. During that brief period, more than 2,400 of the 3,200 activated Reserve Component soldiers arrived at Ft. Rucker. Each of the 28 units was met by a welcoming group, no matter what time they arrived.

Ft. Rucker buildings were converted to POM sites. Every soldier's personnel records had to be checked and complete before deployment. Thousands of soldiers reported for appointments to have wills drawn, take medical examinations, update dental records, and to get uniforms issued. The list



CSM Wright is
Command Sergeant Major,
1st Battalion,
13th Aviation
Regiment,
1st Avn Bde
(AASLT),
Ft. Rucker, AL.



SPC Riley is
with the
Public Affairs
Office, 1st
Aviation
Brigade,
Ft. Rucker, AL.

of things to do seemed endless, and more soldiers arrived every week.

When Reserve Component Soldiers were activated, they rarely had more than three days to report to Fort Rucker.

Upon arriving, the units were inspected and evaluated by the 1-10th. Temporary housing was quickly assigned. Every available space on post controlled by the 1st Aviation Brigade was filled. Some called the quarters assignments "hot beds", because the minute one soldier would leave, another was assigned the bed. After the unit evaluations, logistics needs were determined and plans for packing equipment for overseas shipment were implemented.

Feeding Frenzy

The 46th Combat Engineer Battalion, which deployed in September, turned their dining facility over to the management of the 1-10th during their deployment. Often, more than 2,000 soldiers per meal (in addition to Ft. Rucker's permanent party soldiers) ate there.

U.S. Army Central Command (CENTCOM) mandated specific training for soldiers about to deploy to DESERT SHIELD/DESERT STORM. Every day at 1630 hours, brigade and battalion leadership met to discuss accomplishments, changes, goals, problems, and solutions. Nuclear, Biological, and Chemical (NBC) warfare defense training was stressed. Soldiers went out to the firing ranges and re-zeroed their weapons. Aviators who haven't flown since Vietnam were given refresher flight courses. Soldiers were tested about their knowledge of the common soldier tasks.

Training vs. Time

Since the unit's movement order dates were unpredictable, the 1st Aviation Brigade's goal was to have each unit validated for overseas movement within seven days of their arrival at Ft. Rucker. In most cases, the Brigade met that goal, but the average time the units spent at the Ft. Rucker mobilization station awaiting movement was 34 days. After units were validated as ready for movement, brigade and battalion operations sections scheduled intense sustainment training processing.

The efficient processing plan proved beneficial when one Reserve Component Unit had to process through and leave Ft. Rucker within nine days of their arrival. Many units were here for 10-14 days.

The units processing through Ft. Rucker had the advantage of an unusual training area. Months before a hint of DESERT STORM, thunderstorms ripped through the Alabama post. During the massive flooding that followed, a spillway and dam containing a recreational lake broke, exposing 680 acres of muddy lake bottom. The hot Alabama sunshine baked the mud and dust throughout the summer, providing a suitable substitute for the deserts of Southwest Asia when soldiers arrived and needed a place to train in fall.

On a typical sustainment-training day, the soldiers would be bused to the lake bed where they would be trained at practical exercise stations. For instance, at one station, they might set up defensive fighting positions. At another station, they might act as leaders and

engage in perimeter defense training or practice patrolling. The unit training continued six days per week until orders came to move out.

When the units were notified that transportation would soon be available to move them to their overseas positions, the 1st Aviation Brigade organized spectacular farewell ceremonies.

Sent Off in Style

No matter what time of day or night the units left, 1st Aviation Brigade leaders were there to give encouraging speeches to the troops and their families. Local news media were invited out to document the departures. The 98th Army band, also of the 1st Aviation Brigade, provided patriotic music at each of the send-offs. Every soldier left Fort Rucker well-trained and with a sense of military, family, and community support.

For a few months, the Aviation Brigade concentrated its efforts toward supporting the families of deployed soldiers. Among those programs were those designed to help waiting spouses in the area (some who had never managed a household alone) with housing, financial information, and counseling. Toll-free 24 hour information and assistance hotlines were established.

Months later, our soldiers were victorious and the troops were beginning to come home. The 1st Aviation Brigade once again shifted into high gear, preparing to accept all of the returning units that initially passed through Ft. Rucker. The returning Reserve Component soldiers once again belonged to the 1st Aviation Brigade. The new mission was to get them out-processed and home to their

loved ones as soon as possible. The goal: four days.

When the units arrived at airports in Dothan, Montgomery, or Atlanta, Ft. Rucker's Department of Logistics met them for weapons turn-in. On the day of their arrival, the 1st Aviation Brigade welcomed each unit home with a special ceremony. Each unit received a processing packet and a short briefing. Since many friends and family had travelled to Ft. Rucker to welcome their soldiers home, the remainder of the day was opened for visitation time.

On the second day, each returning unit's commander and first sergeant met with the 1-10th leadership to discuss out-processing, scheduling, and arranging quarters. Nearly every step of the original deployment process, except training, was repeated in reverse. Soldiers of the 1-10th once again worked 14-16 hour days to get the Reserve Component soldiers home. When the unit's equipment was crated and soldiers' financial, medical, and dental records were in order, they began the administrative process of separating from active duty.

On the fourth day, the units were validated and given final clearance. The 1st Aviation Brigade also processed awards for the soldiers, in most cases before they left Ft. Rucker.

When scheduling the return of the units to their respective home towns, the 1st Aviation Brigade used both commercial and military transportation so that soldiers would arrive during daylight hours.

Every person in the 1st Aviation Brigade, from the private to the civilian employee to the senior

military leadership learned valuable lessons during those few months. When the mission was a challenge, the brigade met it through preparedness, daily planning, good communication, and a lot of long hours. The 1st Aviation Brigade's contribution to victory in Operations DESERT SHIELD and DESERT STORM was great.

IIII

21st Century (continued from page 6)

tradition of America's Army. The roots of today's Army.

- Antietam battlefield and the statue of a citizen-soldier, commemorating courage in the face of withering fire, commemorating the bloodiest day in American history. The inscription carved in granite reads: "Not for themselves, but for their country."

- Normandy and the American cemetery overlooking Omaha Beach—absolute silence, stillness. Scan the beach from the high ground—courage. Over 9,000 white marble crosses and stars of David in rows—sacrifice. Liberty for others overseas. America's values.

- The Vietnam Memorial. Watch the endless procession of Americans—day and night, rain or shine—passing quietly and touching names, sometimes leaving small mementos at the base of the wall in solemn respect to soldiers, sailors, airmen, and marines.

- A victory parade down Constitution Avenue. A parade that recognized victory in DESERT STORM. A combined arms victory, a joint victory, a decisive victory.

These places and scores of others like them speak to one

thing: Victory. What the nation wants. Victory. What we are here to deliver for almost 217 years. Victory.

Conclusion

This is the essence of America's Army. Competence, character, sacrifice—duty, honor, country. These values are what we must preserve. These values will see us through the challenges confronting us.

Remember: our ability to come through all this dramatic change and still be an organization that is capable of delivering decisive victory is because of the unique combination of our values as an institution, our leader development programs, and our doctrine. When challenges arise, soldiers look to their leaders. This is the time for leadership.

We must remain fixed on one standard—protect and defend the Constitution and the Republic. We will provide decisive victory when the Nation calls.

IIII

121st ASSAULT HELICOPTER COMPANY REUNION

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**Mini-Reunion will
take place Friday and
Saturday 3 and 4 July
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ATLANTA - '92



1992 AAAA CONVENTION HIGHLIGHTS



After the presentation of the colors (top left) AAAA President MG Charles F. Drenz, Ret., opened the 1992 AAAA Annual Convention, April 8-12, in Atlanta, GA (top center). The professional program was chaired by Presentations Chairman MG John D. Robinson (top right), Aviation Branch Chief, CG USAAVNC, Ft. Rucker, AL and Commandant USAALS. MG Donald R. Williamson (above, left), CG AVSCOM, followed with his address on support. The Keynote Address was delivered by GEN Gordon R. Sullivan (above, center), Chief of Staff, U.S. Army. Other Thursday speakers included: GEN Frederick M. Franks (above, right), CG TRADOC; BG R. Dennis Kerr (left), Director, Army Safety and Commander, U.S. Army Safety Center; and MG Barry R. McCaffrey, CG, 24th Infantry Division (Mechanized).



1992 AAAA CONVENTION HIGHLIGHTS



Above, left to right: Friday's main Professional Sessions kicked off with MG Caryl G. Marsh, Deputy CinC/Chief of Staff, FORSCOM on "Aviation and Future Conflicts"; BGen Paul A. Fratarangelo, USMC, Commander, Forward Headquarters Element/Inspector General, CENTCOM on "Continuing Projection Operations in Southwest Asia"; MG Stephen Silvasy, Jr., Assistant Chief of Staff, UN Command/Combined Forces Command/U.S. Forces, Korea/EUSA on "Power Projection—Aviation Operations in Korea"; and Mr. Gary L. Smith, Special Operations Acquisition Executive, U.S. SOCOM on "Special Operations Future".

Below, left to right: MG Eugene L. Daniel, Deputy Chief of Staff for Operations, Allied Forces Central Europe made his "The Changing Face of NATO" presentation; GEN Crosbie E. Saint, Commander in Chief, U.S. Army Europe & Seventh Army/COMCENTAG, followed with "What Has USAREUR Done for Aviation Lately?"; COL Richard H. White, Commander, 128th Avn Bde, presented "Army Aviation in U.S. Southern Command"; and BG Lawson W. Magruder, Deputy Director for Strategic Planning and Policy, U.S. Forces Pacific, made his presentation, "Power Projection Contingencies in the Pacific Theater".



1992 AAAA CONVENTION HIGHLIGHTS



Above left: LTG Billy M. Thomas, Deputy Commanding General for RD&A, U.S. Army Materiel Command, kicked off Saturday's First Light Breakfast with his address.

Above center: leading off Saturday's Professional Sessions was a presentation by MG Dewitt T. Irby, Jr., Program Executive Officer, Aviation. Other topics covered under the update were: "Comanche", by BG Orlin L. Mullen, Program Manager, Comanche; "OH-58D Kiowa Warrior" by COL James T. Huey, Project Manager, Kiowa Warrior; "Apache—Today and Tomorrow", by LTC Chester L. Rees, Jr., Program Manager, ATE/TADS/PNVs; "Longbow", by COL Robert C. Atwell, Project Manager, Longbow; "UH-60 Black Hawk", by COL Gerald C. Green, Project Manager, Utility Helicopters; "CH-47 in the Future", by COL Ronald N. Williams, Project Manager, CH-47 Modernization Program; and "Aircraft Survivability Equipment (ASE)", by COL Thomas E. Reinkober, Project Manager, ASE.

Below, left to right: The Industry Professional Session was opened by the Honorable Stephen K. Conner, Assistant Secretary of the Army (RD&A) on "Army Modernization". Included in the Industry Session were: Mr. Webb F. Joiner, President, Bell Helicopter Textron, Inc.; Mr. Edward J. Renouard, Executive Vice President/General Manager, Boeing Helicopters; Mr. Dean Borgman, President, McDonnell Douglas Helicopter Co.; and Mr. Eugene Buckley, President, Sikorsky Aircraft Division, UTC.



1992 AAAA CONVENTION HIGHLIGHTS

ANOTHER SHOW OF SHOWS!

**MORE THAN 160,000
SQUARE FEET!!**

Displays from over 150 aerospace organizations. U.S. Army Aviation Technical Test Center, Ft. Rucker, AL once again coordinated the arrival and departure of 20 aircraft. Aircraft on display included the Kiowa Warrior, Apache, Black Hawk, Chinook, Cobra, Mi-24 Hind, Kiowa, Iroquois, Mi-17 Hip, and the L-4 Cub.



1992 AAAA CONVENTION HIGHLIGHTS



The 1992 Hall of Fame Luncheon gets underway as LTG Robert R. Williams, Ret. (above left), Army Aviation Hall of Fame Chairman, begins the program. Ten new Hall of Fame Inductees were admitted this year. See Page 52 of this issue for complete details. Left, MG Charles F. Drenz, Ret., AAAA President, opens the Army Aviation 50th Anniversary Dinner with a round of toasts. Below left, the oldest Army Aviator—Mr. Bryce Wilson—and the youngest Army Aviator present—1LT Robert M. Wilkinson—cut the Anniversary cake with cutlery ritually presented by Citadel Cadet Chad Smith. Below right, the 98th Army Band provides spectacular entertainment during the Army Aviation 50th Anniversary Dinner.





Sergeant Major of the Army Richard A. Kidd (above right) addressed Friday's 1992 Awards Luncheon. The 1991 AAAA James H. McClellan Award (above left) was presented to CW4 Steven V. Rauch by BG R. Dennis Kerr, Director, U.S. Army Safety, and Commander, U.S. Army Safety Center. Left, DAC of the Year James R. Ray (right) poses with Joseph P. Cribbins (left), Chief, Aviation Logistics Office, ODC-SLOG. Below left to right, SMA Kidd (l) presents SSG Everett F. Smith with the Aviation Soldier of the Year Award. MG John D. Robinson (l), Aviation Branch Chief and CG, USAAVNC and Ft. Rucker, presents CW3 James C. Kalahan with the Aviator of the Year Award.





Above left, the NCO Session gets underway as CSM Fredy Finch, Jr., Command Sergeant Major, USAAVNC, makes his opening remarks. Also chairing were SMA Richard A. Kidd, CSM Richard P. Mullen, SFC Roderick J. Lutz, SGM Rufus Stills, and MSG(P) Norman P. Maurice.



Above right, AAAA Executive Director Terry Coakley addresses the troops at the Chapter Presidents and Secretaries Session.



Right, LTC Richard W. Crampton, Chief, Aviation Branch, OPMD, and COL Gerald L. Crews, Chief, Warrant Officer Division, PERSCOM, detail the latest personnel trends during the Career Management Session. Also included was the Aviation Soldier PERSCOM Brief, conducted by LTC John M. Carden, Branch Chief, Aviation/Transportation Branch, PERSCOM.

The AAAA President's Reception (Center right, lower right, and below) remained one of the best attended events.



The Spouse Programs included events like Friday's Spouse Breakfast lecture on the history of Atlanta, presented by Atlanta Historian Franklin M. Garrett (right). Below right, Stormy Franklin, wife of Soldier of the Year SSG Everett Franklin, is presented with her corsage during the breakfast by Mrs. Lillian Drenz, wife of AAAA President MG Charles F. Drenz, Ret. Below left, Ann Crossley, author of the book *The Army Wife Handbook*, makes her presentation on "Army Protocol and Etiquette" during the Spouse Professional Program on Friday afternoon.

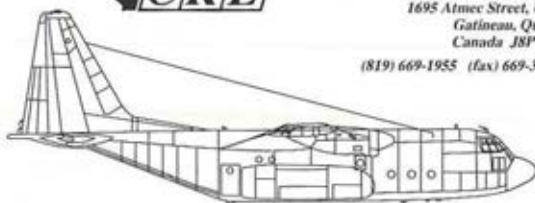


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1992 AAAA CONVENTION HIGHLIGHTS



The 1992 Membership Luncheon gets underway as MG Charles F. Drenz, Ret. (above left), AAAA President, begins the program. The Pledge of Allegiance (above right) was recited by LTG John M. Wright, Jr., Ret. MG George S. Beatty, Jr., Ret., (left), Chairman, U.S. Army Aviation Museum Foundation, provided a status report on the museum. Below left, MG George W. Putnam, Jr., Ret., President, AAAA Scholarship Foundation, delivers his update on the Scholarship Foundation. Next, Terrence M. Coakley, below center, Executive Director, AAAA, conducts the group presentation of the 30-Year Membership Lapel Insignia. Below right, Mrs. Cindy Irby presents COL James M. Walker, Ret. with his 30 Year Pin.



1992 AAAA CONVENTION HIGHLIGHTS



BG James M. Hesson (top left), Chairman, Nominations Committee and Immediate Past President, presided over the AAAA National Elections. See Page 77 for details on the election results. The award for Largest Net Membership Gain-AAAA Chapter was accepted by COL Gregory T. Johnson, USAREUR Region President, on behalf of the Red-catcher Chapter, Nurnberg, Germany, from MG Benjamin L. Harrison, AAAA Senior Vice President. COL William Clontz, President, Iron Mike Chapter, Ft. Bragg, NC, accepts his plaque from MG Harrison for Largest Gain-Senior Chapter (top right). BG Robert A. Goodbary, President, Army Aviation Center Chapter, Ft. Rucker, AL accepted his plaque for Largest Gain-Master Chapter (right).



Far left, MSG John H. Bae, Ret. accepts his plaque from MG Harrison for the 1991 Top Gun Award. MG Charles F. Drenz, AAAA President (near left), presents a AAAA banner to COL Larry Turnage, President of the Top Chapter, Morning Calm Chapter.



Top left: The colors are presented. Top right: a bird's-eye view of the Awards Banquet. Above left: 1992 AAAA Annual Convention Presentations Chairman, MG John D. Robinson, CG USAAVNC and Ft. Rucker, and his wife Bobbi are introduced at the 1992 AAAA Awards Banquet. Above center: 1992 Annual Convention Military Affairs Chairman MG Robert S. Fris and his wife Moe make their entrance at the Awards Banquet. Above right, AAAA Executive Director Terry Coakley and Mrs. Coakley are introduced. Right: Ms. Jo Johnston, composer of the Army Aviation Branch Song and the score for *We Will Fly*, the 50 Years of Army Aviation video produced by USAAVNC, is recognized. Ms. Johnston was presented with the first Silver Award of the Order of St. Michael at the Thursday evening 50th Anniversary Dinner.





Counterclockwise: 1) President Drenz. 2) GEN Crosbie E. Saint, CMC, U.S. Army Europe & Seventh Army/COMCENTAG presents the Robert M. Leich Award to U.S. Army Aviation Systems Command (AVSCOM), St. Louis, MO. Accepting are MG Donald R. Williamson, CG, and CSM Richard P. Mullen, Senior NCO. 3) MG Raymond F. Rees, Director, ARNG, NGB, poses with representatives of the winning ARNG Unit of the Year, 1109th AVCRAD, Groton, CT, COL Pamel J. Flagg, II, Commander, and CSM George H. Allard, Jr., Senior NCO. 4) 7th Battalion, 158th Aviation Regiment (Combat) was the winner of the USAR Award, presented by LTG Teddy G. Allen, Director, Defense Security Assistance Agency. Accepting for the unit were LTC James M. Richey, Commander, and CSM Ronnie G. Greeling, Senior NCO. 5) The Aviation Brigade, 101st Airborne Division was selected as the Army Aviation Unit of the Year. COL Thomas W. Garrett (left) and CSM Richard A. Howard (right) pose with GEN Dennis J. Reimer, Vice Chief of Staff, U.S. Army.





Above: GEN Dennis J. Reimer, Vice Chief of Staff, U.S. Army, delivers the Banquet Address. Above right: during this year's Awards Banquet, GEN Crosbie E. Saint and Mr. Joseph P. Cribbins are presented with Order of St. Michael Gold Awards for their outstanding contributions to Army Aviation. Center right: after the Banquet, a Farewell Dance was held at the Hyatt Regency Atlanta. Bottom right: MG Drenz and LTC Tom Rains, Ret., International Marketing, McDonnell Douglas Helicopter Company, sponsor of the Farewell Champagne Toast, prepare to toast AAAA. Below left: the 1992 AAAA Convention drew to a close with the Get-away Breakfast. COL Thomas W. Garrett (left) enjoys the buffet. Hope to see you in Ft. Worth for the AAAA Convention 31 March-4 April 1993!



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Bell Helicopter Textron, Inc. — The Kiowa Warrior Variant helicopter was on display for Bell Helicopter in the Textron booth. Other Bell emphasis included a new training helicopter for the Army, V-22 as a future solution for the Army and Bell's UAV Eagle Eye Tiltrotor.

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The Boeing Sikorsky — The Boeing Sikorsky RAH-66 Comanche team exhibited a new quarter-scale model of the Army's Comanche helicopter, demonstrating its multimission configurations: armed reconnaissance, attack, and air combat. Team member companies displayed full-scale hardware that will go into the aircraft, now in development.



EXHIBIT HIGHLIGHTS



GIAT Industries is the major land weapons manufacturer in Europe. Among a complete range of army products, our airborne gun systems are outstanding performers. GIAT Industries is the prime contractor for the turreted gun system of the Franco-German Tiger helicopter and is associated with General Electric for the Comanche 20 mm gun turret.

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LTV — A team composed of some of the aerospace industry's leading companies has been assembled to offer to the U.S. Army a new light utility helicopter called the Panther 800. The Aircraft Division of LTV Aerospace and Defense is the program leader responsible for integrating engine, airframe and weapons systems. Other team members are American Eurocopter, LHTEC and IBM.

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The Army Aviation Hall of Fame inducts ten new members

The Army Aviation Hall of Fame, sponsored by the Army Aviation Association of America (AAAA), was established in 1974. It honors those persons who have made an outstanding contribution to Army Aviation over an extended period and records the excellence of their achievements for posterity.

There are 73 members currently in the Army Aviation Hall of Fame. Nominations for this year's induction were solicited through publicity in ARMY AVIATION Magazine and numerous AAAA chapter meeting notices from April 1990 to 1 July 1991, and were open to anyone.

The Hall of Fame Board of Trustees met August 9, 1991 and selected 21 candidates from the 75 nominations received. The electorate consisted of all AAAA members with two or more years of current, consecutive membership as of July, 1991. 9,000 AAAA members were mailed ballots in the Fall of 1991 and all returned ballots had to be postmarked by 31 December 1991.

The physical Army Aviation Hall of Fame consists of the members' portraits and photos together with brief descriptive narratives of their achievements and is located in the new Army Aviation Museum at Ft. Rucker, AL.

Ten new members of the Army Aviation Hall of Fame were inducted in ceremonies held April 8, 1992 in Atlanta, GA at the AAAA Convention.

The opening remarks were made by **LTG Robert R. Williams, Ret.**, Chairman of the Army Aviation Hall of Fame Board, who introduced **Chaplain (Colonel) Marvin K. Vickers, Jr.**, Staff Chaplain, Ft. Rucker, AL.

Following the Invocation by the Chaplain and lunch, LTG Williams (a 1974 Inductee), began the actual induction ceremonies. In alphabetical order, each new inductee or next of kin was brought to the stage for the unveiling of the Hall of Fame portrait by a Hall of Fame member who served as escort. The new Hall of Fame members, next of kin, and Hall of Fame escorts were:

MG George S. Beatty, Jr., Ret., who was accompanied by **LTG Harry W. O. Kinnard, Ret.**

CPT William P. Brake, deceased, represented by his daughter, **Janis Pearson** and escorted by **COL John W. Marr, Ret.**

MG Benjamin L. Harrison, Ret., escorted by **MG Story C. Stevens, Ret.**

COL Frank L. Henry, deceased, represented by his widow, **Mrs. Frank L. Henry**, and escorted by **GEN Robert M. Shoemaker, Ret.**

CW3 Jon A. Iseminger, escorted by **MG George W. Putnam, Jr, Ret.**

SSG/CPT James T. Kerr, Ret., escorted by **Mr. Joseph P. Cribbins.**

LTG Jack V. Mackmull, Ret., escorted by **Mr. Arthur H. Kesten.**

COL Nelson A. Mahone, Jr., deceased, represented by his widow, **Mrs. Nelson A. Mahone**, and escorted by **COL John W. Oswalt, Ret.**

LTG James H. Merryman, Ret., escorted by **MG James C. Smith, Ret.**

MAJ Marie T. Rossi-Cayton, deceased, represented by her husband, **CW3 John A. Cayton**, and escorted by **CW4 Elmer M. Cook, Ret.**



After the unveiling, the inductees' citation was read (see following pages) and other attending family members were recognized in the audience.

The next Hall of Fame Balloting will take place in the Fall of 1994, with inductions to follow in the Spring of 1995.

George S. Beatty, Jr.

Maj. General, Retired



During the 1960's when the Army's Air Mobility concept was born, tested, and proven in combat, George Beatty played key roles in each of the phases.

In 1962 he was assigned to the "Howze Board" (Army Tactical Mobility Requirements Board) where he was instrumental in the writing of the plan for the accomplishment of the Board's mission. He supervised the running and recording of the field tests of all aspects of the Board's interest. Upon completion of the Board report, he and Lieutenant General (then Colonel) John Norton went to Washington to brief the Board's findings and recommendations to the Secretary of Defense and other interested Federal Agencies.

He was assigned to the 11th Air Assault Division (AAD) in January 1963 as Commanding Officer, 1st Brigade and commanded that Brigade through

all of the testing and field exercises.

He briefly commanded the 11th Aviation Group in 1965 during which time a composite Aviation Company was formed and sent to the Dominican Republic to support the XVIII Corps.

When the 11th AAD was redesignated as the 1st Cavalry Division (Airmobile), Beatty was assigned as Chief of Staff where he coordinated the planning and loading out of the division. In Vietnam, he served as Chief of Staff, and then Brigade Commander of the 1st Brigade. During this eventful year he saw the air assault concept, which he had helped pioneer, proven under fire and accepted by the U.S. Army.

From 1968 to 1970, he commanded the Army Flight Training Center at Hunter Army Airfield at Fort Stewart, Georgia where several hundred rotary wing pilots were graduated every two weeks. Training of South Vietnamese students was initiated during this period, and their unfamiliarity with the English language required the introduction of special innovative teaching techniques to enable those students to succeed.

Throughout his career, General Beatty was involved in many pioneering developments in the concepts, training, organization, tactics, and equipment that have been incorporated into Army Aviation as we know it today.

William P. Brake

Captain, Deceased



For every new item of equipment that is proven on the field of battle there are usually a few individuals who stand out as dedicated advocates, applying heroic energies and skills to promote its success.

So it was with the helicopter as it made its debut on the battlefield of the Korean War. Aviators quickly proved the worth of the Bell H-13 as a key life-saving factor in battlefield casualty evacuation. But it remained for Captain William P. Brake to prove the true workhorse dimensions of one aviator and one helicopter.

Captain Brake's incredible record of 900 casualty evacuations in the span of 14 months in Korea has remained unchallenged.

Captain Brake was on combat assignment with the 49th Medical Helicopter Ambulance Detachment from March 1952 to May 1953. A man of uncommon skill and enormous energies, he flew missions along the entire chain of casualty evacuation.

He could be seen lifting off amidst the heaviest fighting along the front line areas often with a litter-borne casualty on each skid and one in the seat beside him as he strove to deliver them to medical treatment facilities in record time.

Much of his time was spent in bringing casualties to safety from the Iron Triangle where some of the bloodiest fighting of the war was experienced.

Alternately, he could be seen lifting patients from field hospitals to evacuation hospitals for shipment to Japan or the United States.

Brake — Continued

In his 14 months of service in Korea, Captain Brake flew 567 missions of which 311 were combat missions, lifting 415 casualties from the front lines to field hospitals. He lifted an additional 485 patients from field hospitals to evacuation facilities for shipment out of Korea.

Before leaving the Army, Captain Brake was

also an instructor pilot and member of the U.S. Army's helicopter demonstration team.

His pioneering spirit, dedication, and energetic effort to prove the productivity and worth of the helicopter in medical evacuation roles profoundly influenced the post-war vision of the role of the helicopter in the Army of the future.

Benjamin L. Harrison

Maj. General, Retired



Major General Ben Harrison, Retired, has been a key player in many of the pivotal decisions which have shaped Army Aviation for more than 30 years. It was his influential voice, in retirement, which made the difference in the Army's decision to create an Aviation Branch.

Earlier, in 1978, he conducted a comprehensive Review of Officer Education and Training (ROET) for the Army Chief of Staff which highlighted significant aviation personnel management problems. This early spadework provided a major part of the justification for the decision to form an Aviation Branch.

General Harrison's service qualified him uniquely to provide sound guidance at key points in the history of Army Aviation. He enlisted in the Army in 1946 at age 17 and was commissioned a second lieutenant of Infantry through ROTC in 1951. He graduated from flight school in 1958 at the top of his class, and was also first in his class at instrument school.

He later taught Army Aviation subjects at the Command and General Staff College. He was the Chief Evaluator of all air cavalry and Mohawk units during the crucial tests of the 11th Air Assault Division (Test) in the mid 1960's.

In Vietnam, Harrison commanded the 10th Aviation Battalion during 1966-67. The battalion's combat operations reflected his training emphasis in night operations and instrument flying.

Following tours in the Office of the Secretary of Defense and the Office of the Assistant Chief of Staff for Force Development, he returned to Vietnam in 1970 as the commander of the 3rd

Brigade, 101st Airborne Division, conducting operations in the Khe San and Ashau Valley areas.

He was the senior advisor to two preeminent divisions of the Vietnam Army in planning and conducting operations into Laos. His combat decorations include two Silver Stars, two Distinguished Flying Crosses, and the Soldiers Medal. He has flown over 7,000 hours, with 1,842 in combat.

After the Vietnam War, Harrison directed the TRICAP testing at Fort Hood which resulted in the formation of the 6th Cavalry Brigade (Air Combat). He then served successively as Deputy Commandant of the Command and General Staff College and Deputy Commanding General of the U.S. Army Aviation Center.

General Harrison has been an extremely effective soldier, thinker, and educator. His mark on Army Aviation is indelible.



MG Benjamin L. Harrison, left, a 1992 Hall of Fame inductee, stands alongside his portrait. Joining him are his wife, Carolyn, his daughter, Laura Winkler, and his sister, Harriet Humphreys.

Frank L. Henry

Colonel, Deceased



Colonel Frank Henry made Air Assault happen. He converted the promise and theory of Air Assault into suitable tactics, workable procedures, trained aviation units, and motivated aviators.

His work in demonstrating the potential of Air Assault at Fort Campbell, Kentucky, led to Lieutenant General (then Brigadier General) Kinnard transferring him to Ft. Benning as a member of the 11th Air Assault Division Cadre. Henry was given command of the first Huey Gun Company formed in the 11th AAD, Company A, 227th Assault Helicopter Battalion. In that role, he was the lead assault helicopter company commander of the Air Assault Tests and a developer of airmobile procedures later standardized within the test division and used widely by units in Vietnam. His call sign, 'Happy Tiger', describes perfectly his personality and warrior spirit.

General Kinnard selected Henry as his aide and took him to Vietnam when the test division was redesignated the 1st Cavalry Division (Airmobile). Three months later he was assigned as the Executive Officer of the 2nd

Battalion, 7th Cavalry where his strong leadership was demonstrated in infantry combat.

He returned to the 1st Cav in Vietnam in 1968-1969, distinguishing himself as the Assistant Division Aviation officer and commander, 2d Bn, 8th Cavalry. The Army wisely took advantage of his unique expertise by sending him to the Infantry School from 1969-1972 as a tactics instructor and Chairman of the Aerial Employment Committee.

When the 1st Cavalry Division was tested in the TRICAP configuration in 1972-1974 at Ft. Hood, Texas, the Division and III Corps commanders insisted that the Army make Lieutenant Colonel Henry available to command the division's assault helicopter battalion. His performance was so spectacular that his battalion, the 227th AHB, was selected as the AAAA's "Outstanding Army Aviation Unit of the Year".

After the Army War College, Colonel Henry returned to the troops he loved as Commander, 3rd Brigade, 101st AD (AASLT). When his command tour was completed, the division commander selected him to remain as Chief of Staff, a position he held until his untimely death on 12 August 1977.

COL Frank Henry was a truly heroic aviation figure who rose through the ranks, OCS, Flight School, and earned a masters degree. He did many things well, but was a master at troop command and tactical innovation—precisely the attributes needed in his pioneer air assault assignments.

Jon A. Iseminger

CW3, U.S. Army



Chief Warrant Officer (W3) Jon A. Iseminger, U.S. Army, was twice awarded the title of World Champion Helicopter Pilot by the Commission Internationale de Giraviation (the International Helicopter Commission) acting for the Federation Aeronautique Internationale (FAI), the world-wide sponsor of air and space records and contests.

His successes led the United States Precision Helicopter Team to two consecutive World

Helicopter Championships in 1986 and 1989.

In 1986 at Castle Ashby, England, CW3 Iseminger topped a field of 26 crews from West Germany, the Soviet Union, Great Britain, Poland, and the United States of America. In 1989, at Chantilly, France, competing in a field of 38 crews representing West Germany, the Soviet Union, Great Britain, France, South Africa, and the USA, he won with an astounding 796 points of a total possible 800. The highest scoring foreign competitor had 757 points.

For his efforts, CW3 Iseminger was congratulated in person by President Ronald Reagan in 1986 and at the Oval Office in 1989 by President George Bush.

In 1990, accompanied by Mrs. Iseminger, he visited the Office of the Vice President, where he was presented the prestigious Harmon Trophy by Vice President Dan Quayle for his

Iseminger — Continued

outstanding achievements as a pilot. With the award of the Harmon Trophy, CW3 Iseminger joined the select ranks of the world's great aviation pioneers, pilots, and astronauts. In winning, he is the first member of the U.S. Army to win the Harmon Trophy since General James H. Doolittle won it in 1946.

The Army Aviation Association of America (AAAA) also selected him for its "Army Aviator of the Year Award" in 1990.

James T. Kerr

Staff Sergeant/ Captain, Retired



Many have earned the title of the "Pilot's Pilot" or the "Mechanic's Mechanic". Staff Sergeant James T. "Butch" Kerr has earned a much higher accolade. For fifty years he has been the "Authority" on flying and maintenance. He continuously advanced his knowledge and capabilities in flying and maintenance, kept ahead of the field, and taught the individuals who carried on as leaders.

Staff Sergeant Kerr obtained a CAA instrument instructor rating before the Army Ground Forces initiated instrument flying in the pilot program; in 1950 while maintenance line chief at the Department of Air Training he spent many hours instructing the staff and faculty in instrument flying.

Staff Sergeant Kerr obtained a CAA multi-engine instructor rating before the Army Ground Forces procured their first multi-engine airplane. Many senior Army Aviators got their check-out on new aircraft by Staff Sergeant Kerr. Kerr was the first individual to receive a CAA helicopter Airline Transport Pilot rating. He later served with the FAA, training its inspectors in the operation of the helicopter.

Staff Sergeant James Kerr joined the Test Group for Artillery Organic Aviation at Ft. Sill in early 1942 as an aircraft and engine mechanic, and soon became line chief at the Department of Air Training. There, he established maintenance procedures that were broadly adopted throughout the Army. Such

The scores achieved by Chief Warrant Officer Iseminger in international competitions are recorded permanently with the Federation Aeronautique Internationale, Paris, France, and will stand as a formidable challenge to future competitors.

His outstanding accomplishments gained world-wide recognition while representing the United States Army's magnificent corps of Warrant Officer Aviators.

was the quality of his work and the availability rate of his aircraft that, in the words of more than one observer, Kerr was the one indispensable individual in Air Training at Ft. Sill.

In 1951, Kerr was commissioned and ordered to take flight training, obviously a perfunctory procedure for one who was at that time the instructor's instrument flying instructor. Assigned later to the Transportation Aircraft Test and Support Activity (TATSA) at Fort Rucker, he participated extensively in the logistic support testing of all new model aircraft entering the Army inventory.

In recognition of his outstanding service, he was selected for the first "Army Aviator of the Year Award" presented by the Army Aviation Association of America in 1958.

Retiring from the Army in 1961, he went to work directly for the FAA, becoming an Aviation Safety Inspector.

In his 20 years in the military service, and in his 50 years of continuous government service, "Butch" Kerr has been one of the best qualified and most highly respected pilots the Army has ever had.



LTG Robert R. Williams, Ret. (far left), joins SSG/CPT James T. "Butch" Kerr during his Hall of Fame induction. Looking on are Maxine Kerr and Hall of Fame escort Mr. Joseph P. Cribbins.

Jack V. Mackmull

Lt. General, Retired



Few Army Aviators have had the variety of important aviation assignments throughout a career as Lieutenant General Jack V. Mackmull.

While Chief of the AWO Branch during the early days of the Vietnam War, he managed the greatest expansion in the history of the Branch. Recognizing that Aviation Warrant Officers had no definite career program, he personally wrote the forerunner of today's Aviation Warrant Officer career program.

He had three combat aviation tours in Vietnam, first commanding the 13th CAB in 1964, then one of only three aviation battalions in USARV. His unit was designated as "AAAA's Outstanding Aviation Unit of the Year." On his second tour, he commanded the 164th CAG that included all aviation in the Mekong Delta and effectively integrated Air Cavalry, airmobile, and attack helicopters and aviation logistics in all combat operations.

In 1972, he returned to USARV for a third tour to command the 1st Aviation Brigade that encompassed all Army Aviation in Vietnam. He effectively managed the draw-down of all aviation units and equipment without incident—a

retrograde movement of some 15,000 men and more than 1,000 aircraft—without stopping aviation combat operations.

As Deputy Commanding General of AVSCOM, he participated in the source selection of the Black Hawk and Apache, and designed and implemented "Systems Management" which is used today.

As the Commanding General of the JFK Special Warfare Center he established the original requirement for Aviation and Tiltrotor Support of Special Operations Forces, and helped to organize the Delta Force and Special Operations Aviation.

As Assistant Division Commander, and later as Commanding General of the 101st Air Assault Division, Lieutenant General Mackmull designed and implemented the Combat Aviation Management System, several FMs on "Air Assault Operations" and preselected aviation battle drills. While at Fort Campbell, he organized Task Force 160, a major innovation.

In 1982, Lieutenant General Mackmull chaired the Tactical Employment Committee at the Army Aviation Review. This committee's actions led to the establishment of the Army Aviation Branch and recognition of the requirement for helicopter air-to-air combat. He completed his career as Commanding General, XVIII Airborne Corps.

This highly decorated and respected Combat Infantryman, Special Forces Officer, and Master Parachutist has been called "Mr. Aviation" by the Chief of Staff and FORSCOM and TRADOC Commanders and considered his greatest award to be Master Army Aviator.

Nelson A. Mahone, Jr.

Colonel, Deceased



One of the first Army-trained aeronautical engineers, Colonel Nelson A. Mahone, Jr., completed his graduate study in Aeronautical Engineering at Princeton in 1950-1952 and then reported to the Army Aviation-Airborne R&D Office at Army Field Forces at Ft. Monroe in summer of 1952.

A Master Army Aviator with 5,800 flying hours

(819 in combat) in a variety of aircraft types, Colonel Mahone held Rotary Wing and Fixed Wing instrument ratings, and was jet-qualified. The 28-year Army Aviator was one of the first multi-engine instrument rated aviators in 1954 and one of the earliest Master Army Aviators in 1961.

While with the Air Mobility Division, OCRD, DA, during 1961 to 1964, he was responsible for coordinating and planning all aviation-related R&D, including aircraft, weapons, avionics, surveillance, and related systems. He was the DoD project officer on the tri-service, tripartite development and evaluation of the P.1127 aircraft (USMC Harrier) where the Army was executive agent for DoD in the British, German, and U.S. development/evaluation.

During 1964-1965, he organized and trained

Mahone — Continued

the Army's first Aerial Rocket Artillery Battalion, and developed the unit's tactics and techniques of employment as a brand new and vital part of the 11th Air Assault Division. This unit was composed of UH-1B helicopters modified to take various developmental weapons systems.

When this division became the 1st Cavalry Division in 1965, he took the 20th Aerial Rocket Artillery Battalion to Vietnam where its success was proven in combat. During this period he commanded the 20th for seven months in combat (1965-1966).

Returning to CONUS, Colonel Mahone became the LOH Project Manager during 1966-1969 during which time he had complete responsibility for the development, testing, procurement, and deployment to operational units of the OH-6 Cayuse helicopter and related programs.

In 1969, Colonel Mahone returned to Vietnam where he commanded the 17th Combat Aviation Group, consisting of seven Aviation Battalions with over 600 RW and FW aircraft. His decorations include the Silver Star, four LOMs, two DFCs, the Bronze Star with "V", and 18 Air Medals.

James H. Merryman

Lt. General, Retired



Lieutenant General Merryman's Army Aviation career spanned from Second Lieutenant, fixed-wing pilot flying the border in Germany to Lieutenant General, Deputy Chief of Staff of the Army for Research, Development, and Acquisition. Between these two mileposts he also was a great combat commander in Vietnam, the Director of Army Aviation, and the Commanding General of the U.S. Army Aviation Center.

In 1961, he was assigned as the first Aviation Officer at the Field Artillery School where he gained approval for establishing an Aerial Field Artillery Battery. He served on the "Howze Board" in 1962, developing methods to evaluate the capabilities of various aerial firepower systems.

From 1964 to 1966 he was with the FAA. In 1967, he went to Vietnam, where he was S-4, 12th Combat Aviation group for two months, followed by command of the 269th Combat Aviation Battalion. His innovations in command and control, the use of gunships, and aerial medical evacuation techniques are well known.

He returned to Washington after a highly successful tour and was assigned to ACSFOR

and DCSOPS, Operations Directorate until 1971 when he returned to Vietnam to command the 17th Combat Aviation Group.

He then served as Executive to the Assistant Secretary of the Army for R&D. In this assignment, he advised the Army Secretariat on all matters pertaining to aviation programs and was intimately involved in developing and securing approval of aviation programs such as the AH-64 Apache.

In August of 1973, he became Director of Army Aviation. In January 1977 he was assigned to DCSPER TRADOC where he managed and emphasized the improvement of career patterns of Aviation Warrant Officers. He was then elevated to Deputy Chief of Staff for Combat Developments at TRADOC.

From December 1978 to July 1980, as Commanding General of the U.S. Army Aviation Center, General Merryman established Fort Rucker as the focal point for Army Aviation organization, doctrine, and material requirements.

From July 1980 to August 1984, Lieutenant General Merryman served as Assistant Deputy Chief of Staff and Deputy Chief of Staff for Research, Development and Acquisition. In these positions, he contributed to the successful development and acceptance of Army Aviation materiel.

The greatest achievement of his career was changing the organizational structure of Army Aviation. Through his personal efforts an Aviation Brigade was approved for all Divisions in the Army.

Marie T. Rossi-Cayton

Major, Deceased



Major Marie T. Rossi-Cayton, U.S. Army, was an outstanding aviator and soldier who lost her life flying and soldiering in combat in Southwest Asia during Operation DESERT STORM.

Major Rossi-Cayton, 32, the first female Aviation Commander to fly into combat, led B Company, 2nd Battalion, 159th Aviation Regiment, 18th Aviation Brigade and was the pilot of a CH-47D Chinook flying supplies to troops in the combat zone.

One day before the ground phase of Operation DESERT STORM began, television viewers across the United States saw a Cable News Network (CNN) interview of Major Rossi-

Cayton in which she spoke of her role as a woman flying in the combat zone. Major Rossi-Cayton commented that she would be among the first to cross into Iraq when the ground war started.

In a "no big deal" context, she said, "Personally, as an aviator and a soldier, this is the moment that anybody trains for, so I feel ready for the challenge." With the selflessness of these words and thoughts, she captured and epitomized the excellence of today's Army leaders and aviators.

Major Rossi-Cayton is the first female U.S. Army Aviator to be killed while flying combat support missions in an active theater of war. She set the example for the legions of female aviators and soldiers to follow—indeed for all who are to follow in the contingencies and wars of the future, male and female.

We commemorate this outstanding soldier who gave her life flying and soldiering in Southwest Asia.



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Mr. Gary L. Watson

Mr. John Werner

Mr. Jackie W. White

CPT Christopher Whitehurst

Mr. Donald Winslow

1LT Leroy Victor Woods

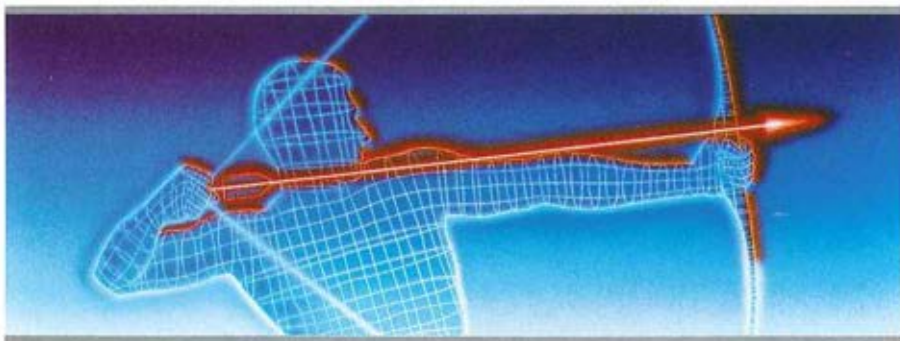
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10 June 1958 — Utilizing Army and Marine versions of the H-34 Sikorsky Choctaw, President Dwight D. Eisenhower has solved the vexing transportation problems that often play havoc with his tight official schedule.

The first President to fly in a helicopter, Mr. Eisenhower regularly soars over the congested streets and highways in the Washington area by using military helicopters for trips as distant from the White House as 100 miles.

Split second timing typifies each flight. Landing on the South Lawn, the two Choctaws wait with engines running; the President and his party immediately board one of the aircraft and take off, usually within three minutes after the landing.

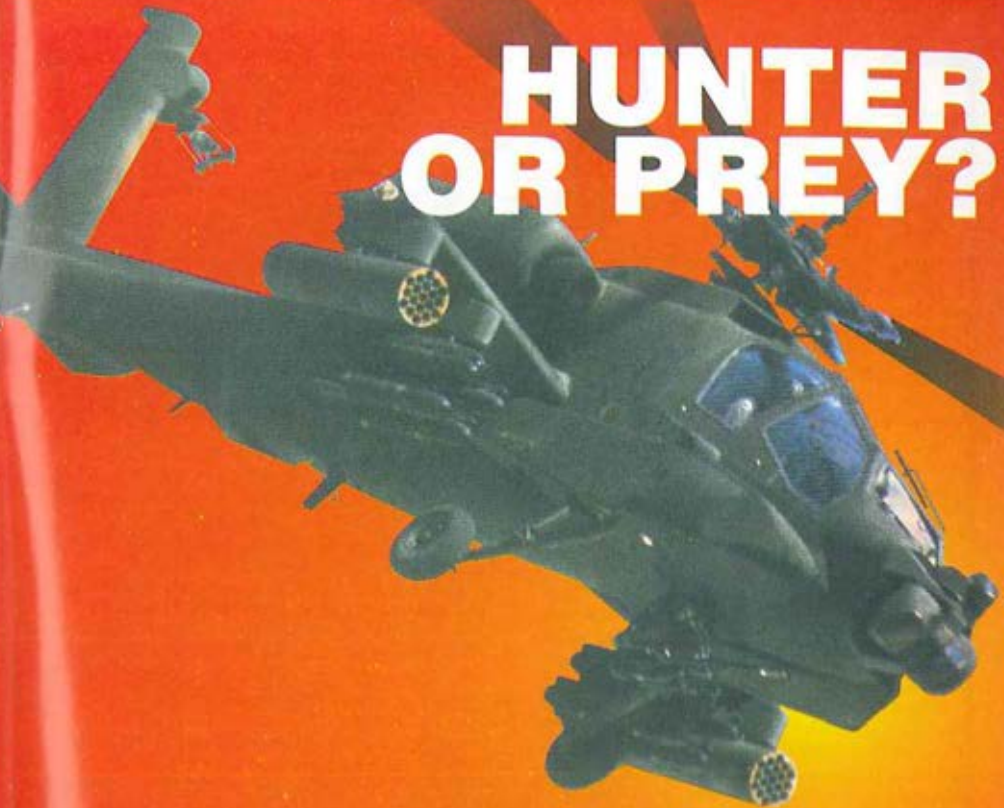
One of the notable flights taken by the Chief Executive occurred during the recent visit of Prime Minister Harold MacMillan of Great Britain. The President and the Prime Minister flew to Baltimore, MD to receive honorary degrees at Johns Hopkins University, returning to the White House only two hours and five minutes later. The flight, suggested by Mr. Eisenhower in the face of Mr. MacMillan's extremely heavy schedule during his brief Washington stay, provided an aeronautical "first"—for the first time in history, two leaders of the free world were transported in the same helicopter. It also marked the first helicopter ride for the Prime Minister.

When the President and the Prime Minister alighted from the helicopter on returning from Baltimore, they were presented with cards making them official "Hoverbugs" of the U.S.



Army, both "having remained motionless in space, flown backward, forward, sideways, and vertically in U.S. Army helicopters." The Army Choctaw pilot for the flight was MAJ William A. Howell. Pictured above prior to their departure are (left to right): James Rowley; COL Robert L. Schulz, Military Aide; President Eisenhower; SFC Thomas E. Hill, U.S. Army crewchief; Prime Minister MacMillan; British Ambassador Sir Harold Caccia; and Charles S. Garland, President of the Board of Trustees, Johns Hopkins University.

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The AAAA President's Annual Report

The following remarks are excerpts from the AAAA President's Annual Report delivered by AAAA President, MG Charles F. Drenz, Ret., during the AAAA Membership Luncheon, 11 April 1992, at the AAAA Annual Convention in Atlanta, GA.

In total membership, as of March 31 there were 16,877 active members, a gain of over 500 members. Life membership has shown an increase from 715 last year to 777 this year. Industry support is also strong with more than 200 Industry Members. Sustaining Memberships are still popular among the Chapters with 77 Members.

In the area of Regional and Chapter activities, your Association continues to grow with each passing year. The Ninth Annual AAAA Aircraft Survivability Equipment (ASE) Symposium was held in El Segundo, CA in early November and again provided a tremendous opportunity to exchange ideas on this vital subject. Just two months ago, we were in St. Louis for the Lindbergh Chapter Annual Joseph P. Cribbins Product Support Symposium, which provided an invaluable opportunity to share the lessons learned between the Army and Industry.

AAAA's 60 Chapters held 175 meetings in 1991. We are also proud to welcome five new AAAA Chapters: the Hudson-Mohawk Chapter, Albany, NY; the Isthmian Chapter, Ft. Clayton, Panama; the Minuteman Chapter, Westover AFB, MA; the North Star Chapter, St. Paul, MN; and the Savannah Chapter, Ft. Stewart/Hunter Army Airfield, GA.

ARMY AVIATION MAGAZINE continues to bring comprehensive information about Army Aviation developments to our members ten times a year.

With respect to contemporary issues, the AAAA, along with more than 130 other associations, including AUSA, voiced its concern in writing with the Office of Government Ethics and successfully opposed a ruling that would have had a negative effect on active military participation in AAAA programs and activities. Most recently, the Association supported the members of our Minuteman Chapter in Massachusetts in their efforts to reverse disproportionate reductions in the National Guard units in the State of Massachusetts.

The bottom line is that you can count on AAAA to represent the membership on issues of importance to the Association and Army Aviation.

In addition to sustaining all our regular pro-

grams like Career Track and the CHAMPUS Health Supplement Program, some of the highlights of the last year for AAAA included: The implementation of the Order of St. Michael, which recognizes individuals who have made outstanding contributions to Army Aviation. This year, we modified the program to include a silver and gold award to accompany the original bronze.

During 1991, your Association awarded the first AAAA Air/Sea Rescue Award which is sponsored by Lucas Aerospace and recognizes the crew or crew member who has performed a rescue using a personnel rescue hoist that saved the life or eased the suffering of an individual or individuals.

Your association was also busy in 1991 implementing the recommendations which resulted from the Company Grade Officer Membership Survey which identified areas of concern to the younger members of the association. An Enlisted member survey is now also underway.

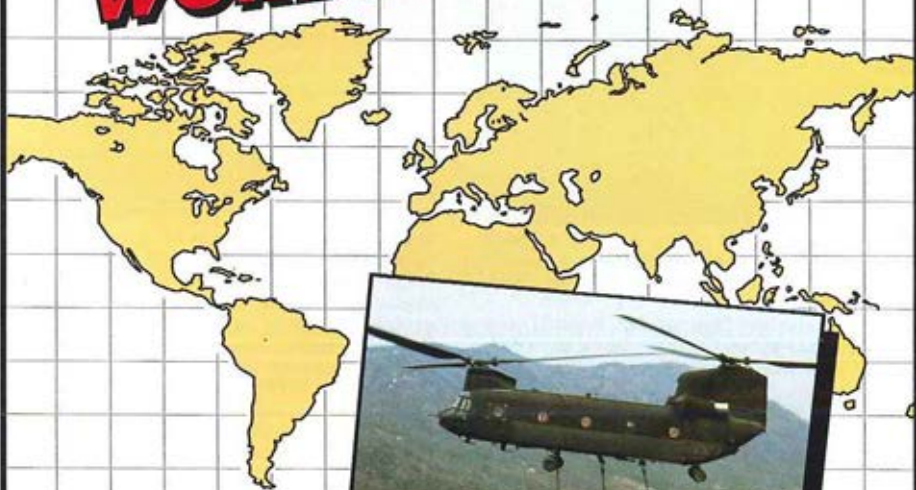
The observation of the Fiftieth Anniversary of the establishment of Army Aviation at Fort Sill has also been one of the highpoints of the year. Everything from articles in the magazine to the 50th Anniversary Dinner on Thursday night focuses on the heritage that has brought us to the modern battlefield force we are today. The observation of this 50th Birthday will continue to be supported and celebrated throughout 1992. We have planned a special issue of ARMY AVIATION MAGAZINE in December featuring a look back over the last fifty years by some of the people who have made Army Aviation what it is today.

"RECOGNITION" is a key word in this Association. The AAAA Awards Program attests to that. AAAA National Award winners represent the best and the brightest. It is important to point out that outstanding achievements at the national level are recognized by the AAAA throughout the year—not just at the AAAA Convention.

Although not presented in 1990 because of the demands of DESERT SHIELD, the Howze Gunnery Awards were presented last December. This time the awards were made to two categories. The 1991 AH-1 Cobra crew award went to pilot W01 Jose E. Trejeda, C Troop, and co-pilot/gunner CW2 John L. Kercheville, D Troop, 1-7 Cavalry, Fort Hood, TX.

The top AH-64 Apache crew was pilot CW2 Jarrett R. Brewer and co-pilot/gunner W01 Kevin E. Smith, C Troop, 6th Cavalry Brigade, Fort Hood, TX. Rockwell International provides the take-

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home trophies for this award.

The **AAAA Trainer of the Year Award**, sponsored by CAE-Link, went to co-winners this year. **CWS John S. Moltenberry**, from the Department of Aviation Systems Training, U.S. Army Aviation Logistics School, Ft. Eustis, VA, and **SGT Christopher M. Pakutka**, Aerocout Observer, Palehorse 4/2 Armored Cavalry Regiment, Feucht, Germany.

The **AAAA's Aircraft Survivability Equipment Award** for 1991 went to **CWS Stephen L. Woods**, Brigade ASE Officer, 1st Battalion, 1st Aviation Regiment, Ft. Riley, KS.

As I mentioned earlier, the first award of the **Army Aviation Air/Sea Rescue Award** was made to **CW4 Julian Council** and **CWS Scott Berrier**, A Troop, 4th Squadron, 17th Cavalry (AIR) (RECON), Fort Bragg, NC, for a daring rescue in the Gulf War.

The **Outstanding Logistic Support Unit of the Year Award** was awarded to co-winners for 1991. The **8th Battalion, 101st Aviation Regiment**, Fort Campbell, KY, and the **Connecticut Aviation Classification Repair Activity Depot (AVCRAD)**, of the Connecticut Army National Guard, were recognized at the **AAAA Lindbergh Chapter Product Support Symposium** in February.

Industry contributions to Materiel Readiness were also recognized at the Product Support Symposium. The **Individual Industry Award** went to **Mr. Harry Frazier**, DYNACORP, Fort Rucker Division.

The **Materiel Readiness Award for Contributions by an Industry Team, Group or Special Unit** was awarded to **Lockheed Support Systems, Inc.**, Fort Worth, TX.

The **Small Business Organization Award** went to **Southern Aero Corporation**, Ozark, AL.

The **Major Contractor Award** was presented to **DynCorp**, Reston, VA.

The Association also honors our outstanding young people who are entering Army Aviation. This year's **AAAA Top ROTC Cadet of the Year Award** will be presented to **Cadet Victor S. Hamilton**, University of Texas at Austin, at our December meeting at Ft. Rucker. The **AAAA Top U.S. Military Academy Cadet of the Year Award** will be presented during graduation week at West Point, to **Cadet Michael D. McKay**.

Every three years, the AAAA honors sustained contributions to Army Aviation by inducting members into the Army Aviation Hall of Fame. On Thursday, we inducted ten new members into the Hall of Fame. They were: **MG George S. Beatty, Jr.**, Retired, **CPT William P. Brake**, deceased, **MG Benjamin L. Harrison**, Retired, **COL Frank L. Henry**, deceased, **CWS Jon A. Iseminger**, **SSG/CPT James T. Kerr**, Retired, **LTC Jack V.**

Mackmull, Retired, **COL Nelson A. Mahone, Jr.**, deceased, **LTC James H. Merryman**, Retired, and **MAJ Marie T. Rossi-Cayton**, deceased.

One of AAAA's most outstanding success stories is the **AAAA Scholarship Program**. This year, we will award a minimum of over 31 scholarship grants valued at \$80,000 and five interest-free \$4,000 loans for a total \$108,000. AAAA now directly picks up the expenses of the Foundation so that 100 percent of your donations go to the scholarship recipients. In 1993 the Foundation expects to award \$112,000.

With all these strong programs, and membership holding its own, our fiscal health is sound, but I point out to you that our membership dues even with the recent dues increase do not completely support our member activities. How do we do this without becoming insolvent? The Association derives its needed funds to support the Association from the sale of exhibit space to our industry member firms. We are deeply indebted to those industry member firms that have supported us for so many years.

Maintaining fiscal solvency and administering the many AAAA programs is the responsibility of the AAAA National Executive Board. We have recently expanded the board to reach out and appoint additional company grade officers, warrant officers and enlisted soldiers as National Members-at-Large. In addition to the elected vice-presidents and appointed members-at-large, the NEB is also comprised of the USAREUR Region President and the Presidents of Chapters representing 150 or more members.

Lastly, the Past Presidents of the AAAA and the Past Executive Vice President are permanent members of the Board. They provide a most important historical perspective and a vast amount of experience and wisdom.

This broad range of NEB membership is designed to keep your leadership in touch with the real world of our membership. You should not hesitate to communicate your thoughts to your board representative.

In summary, I would tell you that your Association has continued to improve over the last year and we continue to be financially sound. There will be challenges ahead as we experience the draw down in the Army Force Structure. Now more than ever, we will need the support and participation of the Army Aviation Community and you, the membership, to maintain and improve the association for the future. With your active involvement, I am sure we can continue to make AAAA an even better association for the next fifty years in support of Army Aviation.

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— MICHAEL J.C. ROTH CFA
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NEW NEB INSTALLED

During the recent Annual Convention in Atlanta, GA, the new members of the National Executive Board were installed.

The officers are **MG Charles F. Drenz, Ret.**, (President), Fairfax, VA; **MG Benjamin L. Harrison, Ret.** (Senior VP and Chairman Membership Committee), Belton, TX; **MG Richard E. Stephenson, Ret.**, (Sec.-Treas.), Vienna, VA; and **Terrence M. Coakley** (Executive Director), Westport, CT.

Vice Presidents include: **Mr. Joseph P. Cribbins**, Alexandria, VA; **COL Gerald R. Kunde, Ret.**, Arlington, VA; **LTG Jack V. Mackmull, Ret.**, Mt. Pleasant, SC; **MG Carl H. McNair, Jr., Ret.**, Reston, VA; **LTG Ellis D. Parker, Ret.**, Hopkinsville, KY; **CW4 Joseph L. Pisano**, APO AP, and **Mr. William Pollard**, Alexandria, VA.

President Drenz appointed the following as National Members-at-Large: **MG Ronald K. Andreson, Ret.**, Bethesda, MD; **COL Sylvester C. Berdix, Jr., Ret.** and **COL Dave Carothers**, of Alexandria, VA; **CSM Fredy Finch, Jr.**, Ft. Rucker, AL; **Mr. Jack D. Floyd**, Ft. Worth, TX; **MG William H. Forster**, Ft. Belvoir, VA; **Mr. Thomas L. House**, St. Louis, MO; **CSM Richard A. Howard**, Ft. Campbell, KY; **CPT Jeryl C. Ludowese**, Enterprise, AL; **CPT Phillip S. Martin**, Ft. Hood, TX; **CW4 Francis W. Murtagh**, Burke, VA; **CW4 David A. Prewitt**, Woodbridge, VA; **GEN Robert W. Riscassi**, APO AP; **MG John D. Robinson**, Ft. Rucker, AL; **GEN Crosbie E. Saint**, APO AE; **LTC Ralph W. Shaw**, Springfield, VA; **COL John J. Stancko, Jr., Ret.**, Aberdeen Proving Ground, MD; **CPT Paul M. Steele**, Alexandria, VA; **COL Harry W. Townsend, Ret.**, Silver Spring, MD; and **MG Donald R. Williamson**, St. Louis, MO.

AAAA Past Presidents, who serve in perpetuity, include: **Bryce Wilson**, Genoa, NV; **GEN Hamilton H. Howze, Ret.**, Fort Worth, TX; **LTG Harry W.O. Kinnard, Ret.**, Arlington, VA; **MG Delk M. Oden, Ret.**, Ft. Belvoir, VA; **COL Edward L. Neilsen, Ret.**, North Palm Beach, FL; **LTG John M. Wright, Ret.**, Riverside, CA; **LTG Robert R. Williams, Ret.**, Fort Worth, TX; **MG George S. Beatty, Jr., Ret.**, Savannah, GA; **COL John W. Marr, Ret.**, Arlington, VA; **MG James C. Smith, Ret.**, St. Petersburg, FL; **MG George W. Putnam, Jr., Ret.**, Falls Church, VA; **MG Story C. Stevens, Ret.**, Hilton Head, SC; and **BG James M. Hesson, Ret.**, Vienna, VA. The Past Executive Vice President, **Arthur H. Kesten**, Westport, CT, serves in perpetuity on the NEB.

The Presidents of Chapters with more than 150 members and Cadet Representative Alexander H. Burgess fill the remaining seats on the 71 member board.

SCHOLARSHIP BOARD ANNOUNCED

The AAAA Scholarship Foundation Board of Governors also met during the AAAA Annual Convention in Atlanta, GA. The current officers are: **MG George W. Putnam, Jr., Ret.**, (President), Falls Church, VA; **Mrs. Dorothy Kesten**, (Vice President), Westport, CT; **COL Robert L. Farnell, Jr., USMC, Ret.** (Secretary), Alexandria, VA; and **COL John W. Marr, Ret.** (Treasurer), Arlington, VA. Governors include: **Mr. Dan R. Bannister**, Reston, VA; **LTC Frank S. Besson, III, Ret.**, Arlington, VA; **MG Patrick H. Brady**, Presidio of San Francisco, CA; **CPT(P) Brian M. Craddock**, Oakton, VA; **LTC Linda M. Dumoulin**, Arlington, VA; **Mr. Jose J. Guzman**, Corpus Christi, TX; **MG James F. Hamlet, Ret.**, Trenton, NJ; **Mr. Paul L. Hendrickson**, St. Peters, MO; **BG James M. Hesson, Ret.**, Vienna, VA; **Mr. Leonard D. Kulik**, Washington, D.C.; **Mr. Ronald V. Kurowsky**, Manasquan, NJ; **COL John A. Lasch, III, Ret.**, Woodbridge, VA; **CSM Roy McCormack**, APO AA; **CSM Richard P. Mullen**, Granite City, IL; **COL William F. O'Neal, Ret.**, Arlington, VA; **CSM John T. Pate, Ret.**, Arlington, TX; **LTC Lawrence P. Peduzzi, Ret.**, Fairfax Station, VA; **CW4 Joseph L. Pisano**, APO AP; **Mr. William Pollard**, Alexandria, VA; **LTC Frank H. Radspinner, Ret.**, Ft. Worth, TX; **LTC Ralph W. Shaw**, Springfield, VA; **MG John H. Stanford, Ret.**, Atlanta, GA; **MG Richard E. Stephenson, Ret.**, Vienna, VA; **COL Harry W. Townsend, Ret.**, Silver Spring, MD; **LTC James O. Woodward, Ret.**, Alexandria, VA; and **Mr. Leroy L. Worm**, Garland, TX. Presidents Emeritus who serve in perpetuity include: **Mr. Bryce Wilson**, Genoa, NV; **MG John L. Klingenhausen, Ret.**, O'Fallon, IL; and **COL Rudolph D. Descoteau, Ret.**, Arlington VA.

New AAAA Chapter Officers

Black Knights:

CPT Mark A. Reisweber (VP, Membership)

Central Florida:

LTC Richard Diamond, Ret. (VP, Industrial Affairs)

Colonial Virginia:

SGM Alan A. Gott (VP, Enlisted Affairs)

Connecticut:

BG Rodney D. Wolfe, Ret. (President); Mr. Michael R. Wade (SrVP); LTC John S. Bolton, Ret. (Secy); Mr. William J. May, III (VP Prog); CW4 Carlson E. Allen (VP, Mil. Aff., AC); COL Paluel J. Flagg, II (VP, Mil. Aff., RC); Mr. Jimmy A. Watt (VP, Industry Affairs).

Ft. Indiantown Gap:

CW4 Donald E. Beatty (President); CPT Scott D. Wagner (Secretary)

Hanau:

COL Charles M. Burke (Pres)

MacArthur:

CPT Marc L. Redgate (Secy)

Morning Calm:

MAJ Edwin D. Patterson, Jr. (Secretary)

North Country:

COL Michael D. Dallas (President); LTC Robert L. Gore (SrVP); CPT Robert J. Szempruch (Secy); LTC Roger L. Duckworth (VP, Memb. Renew.); MAJ Hayward A. Hull (VP, Prog)

North Star:

MAJ Joseph G. Schmitz (VP, Membership)

USAREUR:

CSM Elmer L. Woodard (VP, Enlisted Affairs)

Wright Brothers:

MAJ Frederick W. Rupp, Ret. (Treasurer)

ARMY AVIATION ASSOCIATION OF AMERICA, INC. BALANCE SHEET AS OF DECEMBER 31, 1991

ASSETS

Cash	\$17,219
Paine Webber Cash Fund	275,754
Investment in Marketable Securities	116,180
Net of valuation allowance of \$8,781 in 1991 and \$3,159 in 1990	
Accounts Receivable	4,329
Inventory of Pins	15,568
Prepaid Administrative Fee	189,143
TOTAL ASSETS	\$618,163

LIABILITIES

Accrued Expenses and Allocations Payable	\$68,243
Deferred Membership Dues	204,302
Deferred Convention Revenues	159,465
TOTAL LIABILITIES	\$432,010

FUND BALANCES

General Fund	40,571
BOARD DESIGNATED FUNDS	
Emergency Fund	128,700
Hall of Fame Escrow Fund	18,629
Order of St. Michael Fund	7,134
FUND BALANCES	194,934

Unrealized Loss of Investment in Marketable Securities	(8,781)
FUND BALANCES (NET)	\$186,153

TOTAL LIABILITIES AND FUND BALANCES	\$618,163
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STATEMENT OF REVENUE, EXPENSES AND CHANGES IN FUND BALANCE — GENERAL FUND YEAR ENDED DECEMBER 31, 1991

REVENUES

Membership Dues	\$292,226
Annual Convention	777,648
ASE Symposium	22,905
Souvenirs	2,487
Interest	32,217
Miscellaneous	7,745
TOTAL REVENUES	\$1,135,228

EXPENSES

General and Administrative	496,552
Special Allocations	76,787
Annual Convention	603,617
ASE Symposium	19,515
TOTAL EXPENSES	1,096,451

EXCESS OF REVENUE OVER EXPENSES

FUND BALANCE — BEGINNING	15,994
Transfer to Emergency Fund	(4,200)
Transfer to Hall of Fame Escrow Fund	(10,000)
FUND BALANCE — ENDING	\$40,571



The SILVER EAGLES Program was established in 1988 to recognize those AAAA supporters who have been members for at least 30 years.

SILVER EAGLES receive a special 30-year membership pin, a listing in ARMY AVIATION magazine and recognition at the AAAA Convention.

We've come a long way since 1957 — when a small group of aviation officers banded together to form the AAAA. Thank you SILVER EAGLES for your continued support. Those 30 year members who joined AAAA in 1962 are:

Adcock, Jerry W., LTC
Addy, B. Walter, LTC
Andrews, Joseph L., Mr.
Arnold, Jimmie D., CW4
Bailey, Alonza T., CW4
Baney, Robert A., CW4
Bennett, Ralph O., COL
Bergeron, Andrew L., LTC
Berthot, Hugh V., CW4
Boyd, Leslie C., LTC
Buelow, Wallace R., COL
Burden, John R., LTC
Byrd, Roger D., LTC
Colbert, Bill N., COL
Cressall, William F., LTC
Crouch, Horace J. Jr., COL
Dodd, Harry J., Mr.
Downing, Clinton E., CW4
Eakins, James R., CW4
Fredrick, Gilbert H., COL
Fulton, Charles F., LTC
Gniadkowski, Francis, COL
Gould, Roger K., CW4
Grady, William H., MAJ
Grothe, Robert T., Mr.
Haley, Robert H., LTC
Holzer, James R., CW3
Houser, John W., LTC
Hyers, James E., COL
Ivey, Claude T., MG
James, Robert B., COL
Jones, Harold L., LTC
Jones, Louis R., COL
Kaiser, Philip E., LTC
Kauffman, Lewis E., COL

Kieffer, George W., LTC
Konide, Thomas E., LTC
Kreulen, Ray H., LTC
Krisman, Michael J., COL
Krivorchuk, Nickita, LTC
Lacy, Joseph A., MAJ
Lawson, Edward K., COL
Loveless, Kenneth D., COL
Maloney, William H., COL
Marshall, Walter D., COL
Mattson, Bernard H., LTC
McCary, James G., COL
McCurdy, John D., Mr.
Miller, Christian J., LTC
Miyamoto, Atsushi A., LTC
Obermire, John P., COL
Oram, Charles J., COL
Owens, Bobby L., LTC
Parker, Ellis D., LTG
Randin, Thomas C., LTC
Reece, Frank S., COL
Reynolds, Robert S., LTC
Robinson, John D., MG
Serratt, Jerry W., LTC
Shain, Robert G., LTC
Smith, Joe L., LTC
Snipes, Grover E., COL
Stevens, Jackson C., MAJ
Swift, Ivan C., LTC
Tinseth, Warren D., CW4
Van Rope, Jeffrey W., MAJ
Walker, James M., COL
Willey, Noble J., LTC
Witt, Kenneth, Mr.
Wood, John L., LTC
Wujek, Stanley J., CW4

AAAA CALENDAR

A listing of recent AAAA Chapter Events and upcoming National dates.

May, 1992

- ✓ **May 1.** Air Assault Chapter AAAA Base Tournament. Bumpus Mill Landing. \$7.00 per member, \$12.00 per nonmember.
- ✓ **May 6.** Hanau Chapter General Membership meeting and Executive Council Elections. Hanau Rod & Gun Club, 1830 Hours. Guest Speaker: Mr. Jack Floyd, Bell Helicopter Textron.
- ✓ **May 6.** Wings of the Devil Chapter Professional-Social Meeting. Ft. Polk Officer's Club, Ballroom One. Guest Speaker: COL Joseph W. Eszes, Cdr, 6th CAV BDE (AC) and III Corps Avn Officer.

- ✓ **May 7.** Bonn Area Chapter Professional Dinner Meeting at Bad Godesberg Schloss, Godesburg Hotel Restaurant. Guest Speaker: Philip C. Norwine, VP, Commercial Market Development, V-22 Osprey.

- ✓ **May 7.** 1992 Army Aviation Ball, sponsored by AAAA USAREUR. Heidelberg Officers and Civilians Club, Patrick Henry Village, 1800 Hours.

- ✓ **May 8.** AAAA Professional Day, sponsored by the AAAA USAREUR, Patrick Henry Village, Heidelberg, 0730 Hours.

July, 1992

- ✓ **July 11.** AAAA National Scholarship Selection Committee Meeting, Arlington, VA.

October, 1992

- ✓ **Oct 12.** AAAA National Executive Board Meeting, Sheraton Washington Hotel, Washington, D.C.

February, 1993

- ✓ **Feb 3-5, 1993.** 19th Annual Joseph P. Cribbins Product Support Symposium, Stouffer Concourse Hotel, St. Louis, MO

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