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SPECIAL FOCUS: SOA AND NIGHT VISION DEVICES

ARMY AVIATION

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FORTHCOMING ISSUES

August-September 1996 — Annual Army Aviation BLUE BOOK.
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Briefings

Three 82d Airborne Division aviators were killed and one injured on 14 April 1996 when two helicopters crashed during gunnery training at Ft. Bliss, TX. Among the dead are: **CPT Joseph Reed**, Commander, B Co., 1st BN, 82d AVN REGT; **CW3 Donald Murray**, and **CW2 Michael J. Roche**, both instructor pilots in B Company. The injured soldier was **2LT Curtis Pierce**, a platoon leader in B Company. He was treated and released at the Ft. Bliss William Beaumont Army Medical Center. The two aircraft were working as a team in a night aerial gunnery exercise at MacGregor Range, NM. The pilots were wearing night vision goggles. A memorial service was held at the 82d Airborne Division's chapel at Ft. Bragg, NC on 19 April 1996.

On 4 July 1996, the **USNS Gordon** was christened at Newport News Shipbuilding, Newport News, VA. The **Gordon** was named in honor of Army Aviation Hall of Fame member **MSG Gary I. Gordon**, one of the USASOC snipers killed in action on 3 October 1993 in Mogadishu's "Black Sea" district while protecting downed Army Aviators. **MSG Gordon** was awarded the Medal of Honor for his actions.

ITT Night Vision, a division of ITT Defense & Electronics, has received a contract to provide 100% of the U.S. Army's next procurement of image intensification devices. The contract, referred to as Omnibus IV, with all options included represents a total value of \$239M. Equipment associated with this contract, which will begin deliveries in September 1996, includes: the new AN/PVS-7D infantry night vision goggles; three variants of the AN/AVS-6 Aviation Night Vision Imaging System (ANVIS) aviator's goggles; a new Monocular Night Vision Device (MNVD); and spare Gen III image intensifier tubes, in both 18mm and 25mm formats.

In order to expand the scope, details, and historical records of the **1st Aviation Brigade**, author **LTC Dwight L. Lorenz, Ret.**, requests that those in possession of historical information regarding the 1st and its aviation battalions, as well as the 12th Aviation Group Headquarters, contact him at P.O. Box 270, Bennington, VT, 05201. Tel./FAX (802) 442-3280, Email: lorassoc@sover.net. Respondents are requested to provide as much information as possible, as unit histories are the key element to accurate historical recording. Also needed are personal stories and anecdotes, as well as photographs of significant events. All materials will be properly credited and returned to the submitter, when requested.

A reunion of former **4/506th Helicopter Company** and **152d Maintenance Detachment** members will be held in Savannah, GA, 11-14 September 1996. Interested individuals should contact **Janice Paul**, 142 N. Franklin, Red Cloud, NE 68970, or **Loren C. Strange**, 407 Sherwood Drive, Mayville, TN 37801.

Errata: author **LTC Harold K. Nielsen's** name was misspelled in the May 1996 issue of **ARMY AVIATION Magazine**. **ARMY AVIATION** regrets the error.

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FRONT COVER

Paid Advertisement: Sikorsky Aircraft, Division of UTC. The crews of the MH-60K Special Operations Aircraft recently completed training at Ft. Campbell, KY and are ready for SOF contingency missions throughout the world at a moment's notice. This Black Hawk variant is self-deployable and all-weather capable. Caption provided by Advertiser.



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GETTING IT DONE

Last July, both the challenges that face special operations aviation (SOA) and US Special Operations Command's (USSOCOM) road map for the future were laid out in this magazine. Since then, the special operations aviation (SOA) community has compiled a remarkable record of supporting a myriad of diverse missions. This time, I'll speak to both our Army and Air Force assets in terms of our current capabilities, since they are two parts of a cohesive whole. I'll also take this opportunity to affirm the vision of all who have gone before me in keeping our aviation fleet the most capable platforms, and the most highly trained crews in the force structure, now and in the future.

Army special operations aviation has come of age. One of our enduring truths in USSOCOM is that "Special operations forces cannot be mass produced." What began in the early 1980s as a small ad hoc unit known as Task Force 160 is today a multifaceted, multipurpose aviation organization capable of supporting the entire spectrum of special operations

The CinC-SOCOM reviews Army and Air Force Special Operations Aviation.

Theater commanders have employed them and other SOF aircraft operationally this past year with outstanding results. For example, the special operations component of IFOR in Bosnia employed three MH-60Ls for more than 400 accident-free hours, many of which were dissimilar airframe, joint formation flights with Air Force Special Operations Command (AFSOC) MH-53Js. Their operations were as diverse as they were numerous, from direct action missions to accident recovery support, and MH-53Js provided the IFOR commander reliable, all weather airlift during the severe winter conditions that characterized the early stages of that mission.

Operation ASSURED RESPONSE saw

worldwide. The road has not been easy or cost-free, but by any measure, SOA has become a world class capability.

As you may know, the 160th Special Operations Aviation Regiment (Airborne) [160th SOAR(A)] just completed fielding the MH-60K, and the MH-47E is in its final training evolution, with fielding completed this month.

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SOA provide support to Special Operations Command, Europe as part of the non-combatant evacuation operation in Monrovia, Liberia. Four MH-47Ds from 3-160 SOAR (A) at Hunter Army Airfield were disassembled and ready for C-5 loadout 12 hours after notification, and flew their first mission within 72 hours. Flying with MH-53Js in NVG, day, and adverse weather conditions, SOA was the force of choice 'in extremis,' providing long range aviation support until conventional forces could arrive and relieve the special operations task force. All told, the NEO evacuated more than 2,500 American citizens and other foreign nationals of more than 70 countries from a chaotic and dangerous situation.

USSOCOM has integrated component aviation planning and operations to the maximum extent, offering our end users a seamless capability. At the headquarters in Tampa, we've established a single air manager (J3-J) for special operations aviation in our operations directorate. J3-J allocates SOA in accordance with the USSOCOM SOA mission priority list, serves as the Command's safety proponent, and is the executive agent for both the Special Operations Liaison Element and the Joint Special Operations Aviation Component Command (JSOACC) programs.

Tactically, the 160th SOAR (A) deployed to the JRTC as a regiment in the largest SOF CTC rotation ever, providing joint rotary wing support to the JTF, completely integrated with fixed wing assets. We also employed a JSOACC, as was mentioned earlier. All SOA, whether Army or Air Force, works for this com-

mander in order to provide appropriate support to all members of the special operations team.

AFSOC helicopters recently tallied 5,000 flying hours supporting NATO's Bosnian operations. Crews and aircraft from both Hurlburt Field, Florida, and RAF Mildenhall in the UK have provided continuous combat search and rescue (CSAR) since the end of the Gulf War. These real world missions, including backing up Marine helos in the O'Grady rescue, and the attempted CSAR for downed French airmen in which AFSOC crew members sustained wounds, came at

the same time we conducted search and recovery efforts after Secretary Brown's aircraft went down in Dubrovnik, Croatia, and launched in support of the NEO in Liberia I mentioned earlier.

The CSAR mission is an interesting assignment for us. DoD has designated the Air Force the executive agent for CSAR, yet our platforms are recognized

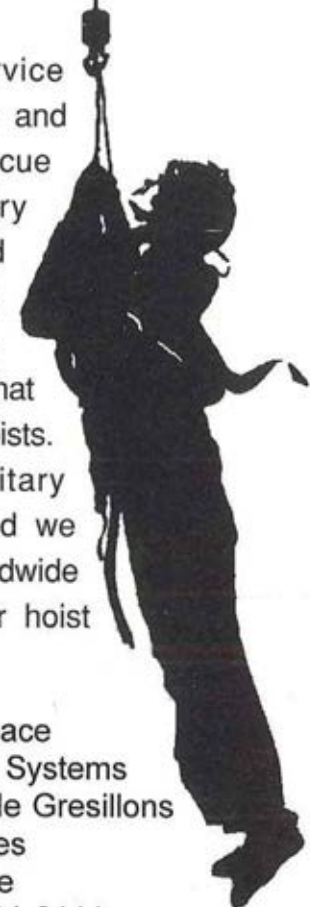
as the most capable in the inventory, and are tasked accordingly. These are challenging missions for our crews and the Special Forces soldiers and SEALs who ride as reaction forces, but these long-term commitments have us pushing the PERSTEMPO and OPTEMPO envelopes.

In our fixed wing fleet, several of our platforms have repeatedly proved themselves extraordinarily useful to theater and JTF commanders. The AC-130 gunships, with their extensive sensor suite and ability to place discrete firepower, are powerful force multipliers. Our newest model, the AC-130U, can see (and thus shoot) through clouds, fire on separate targets simultaneously, and shoot

*"... we've established
a single air
manager (J3-J) for
special operations
aviation in our
operations
directorate."*

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upon arrival in the objective area - upgrades to an already remarkable platform. We've taken delivery of 12 of 13 'U' models, and have reached initial operational capability on the first four of these. We've retired the Vietnam era 'A' model gunships (one of which was the original production C-130), but will retain and upgrade most of the 'H' models, since the demands for Spectre far outweigh the supply.

As commanders come to understand the force multiplier effect psychological operations provides, our PSYOP platform, the EC-130 Commando Solo, has offered superior service in every contingency. Able to broadcast products developed by our Army PSYOP units on AM and FM radio, and TV images over any frequency, Commando Solo and its Pennsylvania Guardsmen of the 193d SOG are models of mission accomplishment. Improved transmitters have greatly increased the platform's signal strength and range, and the unit continues to remain innovative; in the early days of our involvement in Haiti, for instance, a Commando Solo downlinked a President Aristide speech which was broadcast by satellite, and then retransmitted it all over the country.

Our modernization and recapitalization program continues apace, as we look to exploit new technologies. Our biggest program is the CV-22, which we project to reach IOC in 2005. Intended to fill the long-range exfiltration gap in our current capabilities, acquisition of the CV will allow us to get AFSOC out of the helicopter business, leaving all rotary wing missions to the 160th. AFSOC will then

concentrate on fixed wing and tiltrotor missions. Besides being a highly capable platform, the CV-22 program is an example of the superb support SOF receives from the Services, as the Navy is funding development, and the Air Force will procure the basic airframes; USSOCOM will then fund the SOF peculiar equipment that will bring it up to our requirements.

Defensively, the Directional Infrared Counter-Measures system (DIRCM) will provide protection against proliferating anti-aircraft missile systems. That said, however, we cannot forget that many of

the environments in which we'll employ our forces are not first world, as our experience in Somalia showed. We must adapt our high tech force to the spectrum of challenges that confront the Nation, something that faces us all. This period of transition — this uncertain peace — demands we remain flexible, ready, and relevant.

I said earlier that I am committed to keeping our SOA the most capable platforms, and the most highly trained crews in the force structure, now and in the future. SOA helicopters are recognized as the most specialized rotary wing assets in the DoD inventory. With integrated navigation, communications, survivability, aerial refueling, and terrain following/terrain avoidance capabilities, these aircraft will keep SOA out in front of any potential adversary in the foreseeable future.

We've learned many lessons the hard way, but we've learned them well, and we will never return to 'ad hocery' that has cost us dearly. Our SOA structure is
(DONE — continued on page 12)

*“... acquisition
of the CV
will allow us to
get AFSOC out of
the helicopter
business.”*

SPECIAL OPERATIONS AVIATION AND NIGHT VISION

The latest developments in night vision devices support the mission.

Army Aviation, as a whole, is tremendously successful at helping win the night fight. As a member of the Aviation Family, the 160th Special Operations Aviation Regiment (Airborne) (SOAR(A)) strives to remain on the leading edge of acquiring state-of-the-art night fighting equipment.

With continuous advancements in night vision technologies, the Regiment's Systems Integration and Maintenance Office's (SIMO) mission is to test and field equipment that will ensure success for Night Stalkers on the nighttime battlefield. Two such systems are the Omni IV Night Vision Goggle (NVG) and Generation III Forward Looking Infra-Red (FLIR).

According to the Army's Night Vision Lab, on a nightly basis, 67% of the time there is a quarter moon or less. To enhance mission capabilities in this environment, the 160th SOAR(A) has fielded the Omni IV night vision goggle (nicknamed "Ultra"). These goggles improve resolution, luminance, and signal

to noise ratio by 25%. The system also uses P43 phosphorus, which provides the user with brighter, yellow images. The bottom line on "ultra" goggles: better goggle visibility on those "Man, it's dark!" nights. Crews from the 160th have evaluated the goggles and have given them "two thumbs up". As a result, fielding to the Special Operations community is in progress.

In addition to Omni 4 goggles, the 160th is also researching new generation FLIR technology. What it has found is a system that increases stand-off capability by approximately 4.8 times. The new generation of FLIR has picture-in-picture capability to allow pilots to conduct close observation of a target, without losing overall target orientation. The FLIR also has freeze frame capability which allows the user to study a temporary event (or image).

One particularly useful feature is the FLIR's three field of view capability. This allows aviators the flexibility to view

targets in 1X, 6X, and 16X, increasing the probability for safe target acquisition/accurate identification. This family of FLIR also allows pilots to view a selectable area on the screen (up to 50% of the available viewing area) and magnify that portion by 2 times. In other words, the capability to view a portion of a 16X image in 32X exists. Experienced FLIR users know the challenges of obtaining high resolution images at this level of magnification. However, this generation III FLIR will permit the crew to distinguish between, for example, tracked and wheeled vehicles. In combination with Omni IV goggles, the ability of aircrews to successfully execute the mission safely under marginal environmental conditions is increased.

As Army Aviation continues its march forward into the 21st century, Special Operations Aviation will continue to use and help develop new night fighting equipment. Concurrently, the Directorate of Combat Developments (DCD), and the Directorate of Training, Doctrine, and Simulation (DOTDS), United States Army Aviation Center, continue as the main effort in monitoring and shaping this technology to achieve success on the 21st century battlefield. The Special Operations and Center Team partnership are committed to providing its pilots the best that technology has to offer. Army Aviation and Special Operations Aviation continue to work together to shape tomorrow's battlefield. Night Stalkers Don't Quit!

★ ★

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

DONE

(Continued from Page 10)

the right force to bring unique capabilities to our geographic CinCs and the Nation's service. We are intensely proud of the quiet professionals that populate these units — they flat get it done, any time, any place.

That said, another SOF truth is that "Humans are more important than hardware." This is especially true in our aviation community where our units are composed of mature, highly capable professionals with superior skills. They undergo a rigorous assessment and selection process, and then are trained to a razor's edge that makes them the world's finest. If you're ready for another aviation challenge, consider a tour with the 160th SOAR (A); I promise you'll get all the excitement you can stand. NSDQ.

★ ★

GEN Shelton is the Commander-in-Chief, U.S. Special Operations Command (USSOCOM), MacDill Air Force Base, FL.

160th SOAR(A) WANTS YOU!



— Contact —

CW3 Bob Holcomb

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NIGHT STALKERS DON'T QUIT

The past year provided exciting, fast paced challenges to special operations aviation soldiers within the 160th SOAR (A). The fielding and employment of the awesome MH-47E and MH-60K aircraft, transfer of the probed MH-47Ds to 3-160, continued development of integrated intelligence with automated mission planning/rehearsal, and several contingencies, marked major achievements of the unit's soldiers in the last 12 months.

Amongst all of these achievements, the unspoken theme is the integration of emerging technology into a diversified mix of challenging roles and missions. In a continued effort to capture the initiatives and capabilities promised in the Force XXI campaign, the 160th is committed to identifying, testing, and incorporating the latest technologies into our tactics, techniques and procedures (TTPs). Most important is sharing our lessons learned in this process with our fellow soldiers in Army Aviation and throughout the service.

Within this issue of ARMY AVIATION Magazine are two articles describing the

*"Most important
is sharing our
lessons
learned ...
with our
fellow
soldiers..."*

success we've enjoyed using technology and its enhanced capability in contingency operations. A third article describes the detailed train up for deployment using our nation's outstanding facilities and organizations to "fine tune" a trained team for specific environments. These facilities and teams provide a training capability unavailable a decade

ago. The remaining articles present a different focus on the 160th SOAR (A).

Most often the focus on the 160th SOAR (A) is achievements by its "aircrews and aircraft". The last articles introduce the superhuman efforts by a variety of skilled warriors who relish challenge, have incredible imagination and initiative, and yet receive little recognition of their efforts. These soldiers also focus on +/- 30 seconds TOT and without them mission success would be impossible. They also clearly demonstrate that regardless of MOS, "Night Stalkers Don't Quit".

★ ★

COL Dailey is the Commander, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

HERITAGE

A brief history of the 160th Special Operations Aviation Regiment (Airborne).

The history of the 160th Special Operations Aviation Regiment (Airborne) is one of great challenges, pioneering actions, valiant, and dedicated service in operations and battles. Since its inception in 1980, the 160th has pioneered night, low level tactical flight techniques, shared in the development of equipment, and lived the Regimental motto, "Night Stalkers Don't Quit."

The Regiment traces its history from 3/160's recent involvement in Operations JOINT ENDEAVOR and ASSURED RESPONSE through Task Force 160's patrolling of the Persian Gulf in support of Operation EARNEST WILL; to its inception immediately after the aborted Iranian Hostage Rescue mission.

Origins. After the failure of Operation RICE BOWL, the attempted U.S. hostage rescue in Iran in April 1980, the United States Army began testing and evaluation to develop special operations aviation capabilities. Volunteers were selected from the 101st Aviation Group's C/158 and D/158 (UH-60), A/159th (CH-47), and B/229th (OH-6) to form Task Force

158 and develop tactics, techniques and procedures for aviation in special operations mission profiles. The 101st ABN Div (AASLT) provided the UH-60s and CH-47s while the National Guard initially provided the OH-6s. The 101st was selected because it had recently fielded the UH-60 Black Hawk helicopter, which was already proven to be extremely

reliable and safe while conducting demanding missions. Additionally, the 101st possessed a large number of CH-47 medium lift helicopters that could complement the smaller Black Hawks and agile OH-6.

Beginning in June 1980, intensive training was conducted focusing on long range, low level, flying at night with primitive full-faced AN/PVS-5 night vision goggles. As proficiency increased, mission profiles became more demanding and complex — challenging the Task Force to develop additional capabilities of blacked-out and close formation flight. The testing and evaluation resulted in the development of the light helicopter company, light attack company, the extended range and lift UH-60, and the extended

range and FARP capable CH-47.

Upon resolution of the hostage crisis in early 1981, the Army recognized that it took a great deal of time, training, and resources to develop the unique capabilities to accomplish special operations missions and there may not be sufficient time to prepare and respond to a future crisis. The decision was made to form a standing Army Special Operations Aviation Task Force known as Task Force 160 consisting of volunteers from Task Force 158. The 160th quickly established a reputation in the Special Operations community as a unit that could deliver: always at the right place at the right time with the right assets. On 1 April 1982, Task Force 160 was designated as the 160th Aviation Battalion. However, the 160th continued to be referred to as Task Force 160 until the present.

Baptism by Fire. In mid-October 1983 Task Force 160 received its baptism by fire. On 21 October 1983, the unit received a short notice order to plan for Operation URGENT FURY in Grenada. Within 96 hours from notification, the 160th offloaded at the forward staging base in Barbados prepared to launch combat operations into Grenada. Six MH-60s attempted an air assault against the Richmond Hill prison. Receiving heavy fire, the first attempt was aborted. A second assault inserted the ground force. The two attempts to land on the prison resulted in extensive damage to all six MH-60s. One aircraft crashed east of Salines Airfield as a result of its battle damage. Two other MH-60s were allocated to an operation to secure Sir Paul Scoon, the Governor General, at his residence.

As the helicopters approached the residence, Grenadian soldiers took them under fire. The helicopters evaded the fire and flew over St George's harbor to the

USS *Guam*. In a second attempt, Special Operations forces reached the Governor's residence and protected Sir Paul Scoon. Despite flying against a heavily armed Cuban and Grenada force, the Task Force completed its mission, and earned the motto "Night Stalkers Don't Quit."

Force Structure and Command and Control Development. From 1983 to 1986, the Task Force continued to hone their skills through numerous classified exercises and operations. However, one of the main efforts was to develop and document unit force structure and command and control requirements to execute these precision operations. The 160th began as an "ad hoc" organization without a defined force structure. As a result, the 160th implemented force structure changes to keep pace with increases in OPTEMPO. Conventional models were applied to the structure, but they did not meet the needs of this one-of-a-kind unit. Initially, the unit's operational requirements grew faster than the system's ability to capture and respond. Consequently, the 160th force structure was often incompatible with the prevailing and combat proven special operations doctrine.

In 1983, the unit faced one of its greatest challenges; a challenge that highlighted the inadequacy of its force structure and resulted in significant changes in the way the unit operated. In a series of accidents that occurred at night during March, July, August, and October, the Battalion lost four aircraft and sixteen personnel. A "Blue Ribbon Panel" was assembled at Ft. Campbell to examine causes and recommend solutions. Two of the recommendations of this panel eventually led to the formation of a Special Operations Aviation Training Company and the formation of the Systems Integration Maintenance Office.

The proven value of the 160th Aviation

Battalion in the early to mid-1980s led to the need for additional aviation resources within the Army Special Operations community. To help meet the increasing demands for support, the 129th Combat Aviation Company was activated on 1 October 1986 at Hunter AAF, GA and was placed under the command and control of the 160th. Out of the 129th came the 617th Aviation Detachment at Howard AFB. The 617th had five of the fifteen MH-60s assigned to the 129th. Additionally, the 245th Aviation Battalion from the Oklahoma National Guard with 25 AH-6 and 23 UH-1 helicopters was placed OPCON to the 160th.

The 160th AVN BN (-) was reorganized and redesignated as the 160th Aviation Group (Airborne) on 16 October 1986. Key to this action was the designation of the 160th as an airborne unit and the authorization to wear the maroon beret. The unit initially wore the airborne flash and background trimming of 1st SOCOM. However, the unit designed its own flash and background trimming, combining both aviation and 1st SOCOM colors. The Institute of Heraldry, U.S. Army, approved the distinctive flash and background trimming for the 160th on 26 March 1987.

Early Contingencies. In 1987, Operation PRIME CHANCE (1987-1989) was initiated to protect ships passing through the Persian Gulf. Night Stalkers participated through sustained nighttime operations while supporting a joint military task force under very difficult and hazardous conditions. Aircrews of the 160th habitually operated 30 feet above the water, at night, using night vision goggles. Operation PRIME CHANCE resulted in the first successful night combat engagement that neutralized an enemy threat while using aviator night vision goggles and forward looking infrared devices. The

Night Stalker presence deterred numerous attacks on international shipping and slowed the mine-laying process. Once again the 160th proved to be a decisive weapon with international implications.

During this same time period (June 1988), the 160th received a short notice directive to recover an Mi-24 Hind attack helicopter from a remote location in Africa. The Operation, MOUNT HOPE III, required two MH-47 crews to fly 490 miles at night without outside navigational aids, extract the Hind and return. Within hours, the crews conducted a strategic deployment and executed their mission while they battled a blinding sand storm. This mission once again demonstrated the ability of man and machine to strike deep and accomplish the mission despite the most demanding flight conditions.

Then in December 1989, the 160th SOAG(A) was called upon to spearhead missions for Operation JUST CAUSE, the liberation of Panama. Soldiers of the 160th deployed from harsh winter conditions at Fort Campbell to the sweltering heat of Panama. The 160th deployed approximately 441 personnel with 9 MH-6, 11 AH-6G/J, 19 UH/MH-60A, and 7 MH-47D. The highlight of the deployment was the self-deployment of three MH-47Ds from Ft. Campbell, KY to Howard AFB, Panama. The MH-47Ds flew to Hurlburt Field, FL, linked up with MH-53Js from the 1st SOW, and deployed non-stop from Hurlburt Field to Howard AFB.

Participating in the first blows to oust a hostile dictator and safeguard American lives, Night Stalkers participated in the successful pre H-Hour airborne and air assaults. Missions in Panama City included the pre H-hour insertion of a beacon and combat controllers by 2 MH-6 supported by 2 AH-6 at Torrijos-Tocumen Airport. Four AH-6s conducted pre as-

sault fires at the Panamanian Defense Force Headquarters in the Comandancia. One of the AH-6s was shot down and crashed into the Comandancia. The pilots survived the crash, evaded capture, and were recovered by friendly forces. In addition, 4 AH-6s with 1 FARP MH-60 provided fire support for the airborne assault at Rio Hato. AH-64s from the 82nd Div (A) were OPCON to the 160th to provide additional support at Rio Hato. The Rio Hato mission originally included 9 other MH-60s and 4 MH-6s to raid a key PDF stronghold. Several hours prior to H-Hour, PDF leaders were believed to be in the vicinity of Colon. The 9 MH-60s and 4 MH-6s conducted an air assault raid to a beach house on the coast of Colon at H-hour. Another force of 8 MH-60s and 4 MH-6s were on strip alert to conduct raids should the need arise during the H-hour operations. Personnel from the 160th participated in the airborne assaults of Torrijos-Tocumen Airfield and Rio Hato Airfield to set up FARPs. Also, the 617th inserted two Special Forces "A" teams at the Pacora River Bridge where the teams held the bridge against a convoy of PDF from the Cimarron Cuartel.

After these initial missions, the 160th continued to provide support as special operations forces attempted to secure outlying areas, and recover weapons caches. A small force, 4 MH-60, 2 MH-6, 2 AH-6, and 2 MH-47 were moved to Ft. Sherman in the North to stage for operations in and around Colon. The 160th conducted numerous air assaults over the next two weeks.

On 3 January, the majority of the force redeployed. A small element remained behind. During the evening of 3 January, two MH-60s from the 160th transported GEN Noriega from the Papal Nuncio to Howard AFB for transload to a waiting MC-130 and transport to the United

States. All but some MH-47s redeployed two weeks later. Two MH-47s remained in Panama for the next few months to support Operation PROMOTE LIBERTY. Operation JUST CAUSE proved the 160th's ability to conduct complicated night and sustained combat operations as a unit against a determined enemy.

Formation of the Regiment. The formation of the 160th SOAG (A) in October 1986, was an interim step in the creation of one special operations aviation unit to serve as a unifying headquarters for all Army Special Operations Aviation. Plans were underway, by 1987, to create a SOF Aviation Brigade at Hunter AAF. In addition, TRADOC was tasked to submit a layout of the design concept plan for the 160th Aviation Group.

In August 1987, the U.S. Army Aviation Center at Ft. Rucker proposed that the 160th SOAG be regimentally designated as separate companies and one Battalion of the 7th Aviation Regiment. In October and November 1987, the 160th and 1st SOCOM requested that the 160th SOAG (A) be redesignated as the 160TH Aviation Regiment, instead of the 7th Aviation Regiment. Although the 160th was a relatively new unit, it had been combat tested, had earned two unit citations, and had a special operations affiliation. Activation of the 160th Aviation Regiment under the U.S. Army Regimental System was approved.

In his 27 June 1988 outgoing report, the CG 1st SOCOM cited 160th mishaps and stated that the potential for additional mishaps was related to overcommitment and inadequate force structure. In June 1988, 1st SOCOM prepared a concept brief on the formation of a Special Operations Aviation Regiment (SOAR) and briefed the Commander in Chief, United States Special Operations Command. After receiving Army and TRADOC con-

currence, the 160th SOAG(A) was redesignated as the 160th Special Operations Aviation Regiment (Airborne) with an effective date of 16 May 1990. A Regimental activation ceremony was held on 28 June 1990.

DESERT STORM/DESERT SHIELD.

On 2 August 1990, the Iraqi Army invaded and occupied Kuwait. Initial plans called for the deployment of sixteen MH-47s from the 2nd Battalion. 2nd Battalion was only able to provide twelve and this prevented them from providing any aircraft in CONUS for other missions. Therefore, their commitment was reduced to eight. 3rd Battalion was tasked to provide four MH-47s and eight MH-60s which brought the total to sixteen MH-47 equivalents. After finding out they were going to get MH-60s, SOCCENT modified the requirement to four MH-47s and eight MH-60s. TF 3-160 was comprised of Headquarters, two MH-47s, and eight MH-60s from 3rd Battalion and two MH-47s from 2nd Battalion. Deployment began on 3 September 1990 and the unit was based at King Khalid International Airport.

For the start of the air war, TF 3-160 had two missions. First, they had to provide MH-47s to support the pre-H hour attack of Iraqi air defense ground control intercept sites. They provided fuel bladder aircraft to refuel AH-64 attack helicopters from the 101st Airborne Division (AASLT). The operation was successful. The second mission was to forward deploy to Rafha and conduct Combat Search and Rescue (CSAR) missions into Iraq to pick up downed allied pilots. TF 3-160 retained the CSAR mission throughout the war, but moved from Rafha back to KKMCC when it was realized that the potential for allied shootdowns was slight.

Continued Contingencies. Highlights of TF 3-160's combat experiences included the successful pick up of a downed F-16 pilot sixty miles inside Iraq. It was the only

successful night vision goggle rescue. Also, TF 3-160 conducted an emergency extraction of Special Forces "A" Team that had been compromised. The mission was conducted by a single aircraft, in daylight, and in the middle of a fire fight.

In the summer of 1993, elements of the 160th deployed as part of Task Force Ranger, on Operation UNOSOM II in support of United Nations forces in Somalia. Again, elements of the Regiment conducted operations in a hostile environment. On October 3rd 1993 in Mogadishu, the Regiment lost five dedicated crewmen and two MH-60 aircraft to hostile ground fire during the search for Somali warlord Mohammed Fahra Aideed. Both aircraft were hit by RPG fire while flying to insert special operations forces. One badly injured crew member was held by Somali factions for 11 days prior to his release.

After the aircraft crashed, each in separate locations, efforts were made by other air crews on these missions to aid in the rescue of their comrades. At one point an MH-6 landed near the wreckage from one MH-60 in a narrow street. While the co-pilot went to extract survivors, the pilot laid down suppressive fire from the cockpit with his individual weapon. Under intense ground fire, the MH-6 departed with a survivor holding on to the skids. Ultimately, several of the soldiers who survived the crashes paid the highest possible price. The survivors of both crashes and the soldiers who attempted to rescue them by air and ground distinguished themselves in some of the most intense fire fights since Vietnam.

Operation UPHOLD DEMOCRACY, Sept-Oct 1994, saw the Regiment's first use as a warfighting Headquarters. Using a new concept of Adaptive Joint Force packaging, a large portion of the 1st and 2nd battalions staged on the aircraft carrier USS *America*. The remaining forces staged at Guantanamo (HERITAGE — continued on page 20)

WHAT'S NEW?

This past year has been significant for the 160th Special Operations Aviation Regiment (Airborne), marking the successful fielding of the MH-47E and MH-60K Special Operations Aircraft. These aircraft represent the most sophisticated and highly-integrated cockpits in Army Aviation and will be the backbone of Special Operations rotary wing support within USSOCOM well into the next century.

This accomplishment could not have occurred without the great efforts of many within both industry and the military. The streamlined acquisition plan chosen for these aircraft required early user input and, more importantly, user participation throughout the program. Soldiers from the 160th SOAR(A), specifically from the Systems Integration and Maintenance Office, participated in this process from requirements, critical design reviews, product development, to testing and training. Process Action Teams (PATs) were organized by the Product Manager's office for SOA to help keep all players involved and focused on the mission requirements of these aircraft.

This process was kept intact as program

*New
aircraft and
support systems
may lead
to new
tactics.*

management duties were transferred to the Technologies Application Program Office (TAPO) in St. Louis, MO, for the SOA aircraft in April 1995. This teaming process is exemplified by the recent successful completion and qualification testing, in December 1995, of Army Aviation's first multi-mode radar, specifically the terrain-following mode. This ended a two year effort by

the joint test team staffed by members of SMO and the Airworthiness Qualification Test Directorate out of Edwards Air Force Base, CA. The SOA aircraft were flown under Instrument Meteorologic Conditions down to both 300 and 100 feet set clearance plane altitudes giving future Special Operations aviators an outstanding capability.

The Regiment is already making a successful entry into FORCE XXI technologies. These efforts have centered on the areas of mission planning and mission rehearsal. Mission planning is being managed by the Product Manager for Mission Planning and Mission Rehearsal, LTC Ron Nelson, who is the Joint Product Manager for USSOCOM for the Special Operations Planning and Rehearsal Systems. Portable mis-

sion planners have already been issued to 160th SOAR(A) crews. As future capabilities continue to be developed, tested, and approved, they will be added to these fielded systems. Current capabilities include basic functions such as automated route planning, weight and balance, and performance planning. Future capabilities will include digital map data and intelligence fusion to provide tactical intervisibility information for successful route planning.

The second component of these FORCE XXI efforts includes mission rehearsal. Improvements are focused on fixed-based and portable systems. In the portable arena, the 160th SOAR(A) relies on its recently fielded TOPSCENE systems. These systems provide forward deployed units the capability to review real-world flight routes employing digital map data fused with photo-imagery based data in a three-dimensional perspective, allowing for pilot fly-through and analysis.

For fixed-based rehearsal capabilities, a USSOCOM program is in place to upgrade the MH-47E and MH-60K Combat Mission Simulators (E/K CMS) from its current image generators, which use generic training data bases, to the more capable Evans and Sutherland Image Generators model. The ESIG 4000 will allow for real-world data base input, allowing for not only pilot training, but also for mission rehearsal. This capability will also exist for multiple crews in both simulators to fly through the same data base as well as any other system that is networked.

In conclusion, these aircraft and systems represent not only a significant improvement in capabilities, but also a possible change of future tactics, techniques, and procedures on the modern battlefield.

★ ★

LTC Walters is Regimental Systems Integration Maintenance Officer, 160th SOAR(A), Ft. Campbell, KY.

HERITAGE

(Continued from Page 18)

Bay, Cuba. The Regiment conducted operations in support of other special operation forces. Fortunately, a political solution was reached and all operations were completed in a permissive environment. During this deployment, another first occurred as the 160th conducted its Change of Command on the flight deck of the USS *America*.

Most recently, the Regiment deployed 3/160th to support operation Joint Endeavor in Bosnia and just recently returned from Operation Assured Response in the nation of Liberia where they assisted other US forces as they safeguarded American citizens and diplomats from the ravages of civil war.

The 160th has been labeled as the world's premier night fighting force and the Army's only special operations aviation force. Throughout its short history, the 160th pioneered night flight techniques, shared in the development of new equipment and has met the call to duty wherever it sounded. Despite all challenges and adversities, the Regiment has always and continues to live by its motto, "Night Stalkers Don't Quit."

Today as in the past, the 160th stands ready to support actions to prevent aggressive and provocative threats, from any nation or group, against American citizens and the freedoms and values that our Country holds sacred.

"Night Stalkers Don't Quit!"

★ ★

LTC Zontrell is the Commander, 2d Battalion, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

CPT Mills is the Regimental S/S, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

OPERATION JOINT ENDEAVOR

Less than a year ago, many Americans had little idea of what was taking place in the country formerly known as Yugoslavia. What we did know is that the country of Bosnia was increasingly becoming synonymous with terms like "war ravaged," "ethnic cleansing," and "war atrocities." For three years, what was happening in this small nation was contrary to western philosophy, and the U.S. and European Economic Community could no longer tolerate its self-destructive course. Not long after the President of the United States approved the use of U.S. forces supporting a peace plan overseen by the North Atlantic Treaty Organization (NATO), many service members were dispatched to the Balkans, Germany, and Italy to influence the success of this emerging Operations Other than War (OOTW).

Today, the United States, and particularly, the United States Military, has been successful in its efforts to bring peace to the Former Yugoslav Republic. The mission, while augmenting NATO, was a road never before traveled by the U.S.

Special Operations Aviation in Operations Other Than War (OOTW).

military. Suffice it to say, "relevancy" has become a large part of the military's focus and purpose. This term means to be ever so expanding in mission focus. In other words, relevancy means that Mission Essential Task List (METL) operations could sometimes take a back seat to non-traditional military operations.

Regarding our involvement in Bosnia, there were other immediate concerns from all levels of the military and political hierarchy. One concern being the logistics infrastructure in this Area of Operations (AO). The logistical "train" had to either transition from United Nations Protection Force (UNPROFOR) or be developed by NATO. The establishment of the logistics infrastructure was obviously a priority for the Implementation Force (IFOR), under the direction of Army General George Joulwan, Supreme Allied Commander, Europe. During development of the infrastructure base for the transition of authority from UN to NATO, several coalition force nations were slow to commit to NATO, or withdrew forces altogether

because of the elimination of UN resourcing. Despite issues raised by those condemning the peace plan, 20,000 soldiers, Airmen, Sailors and Marines deployed from Continental United States and other parts of Europe. The 60,000 multinational member NATO IFOR would join together in this critical peace keeping operation named Operation JOINT ENDEAVOR.

The signing of the Dayton Peace Plan took place on 14 December 1995 at Wright-Patterson AFB, OH. Months before this day (G Day), the Special Operations Command, Europe (SOCEUR) had already planned to use assets from the 160th Special Operations Aviation Regiment (Airborne) to support Special Operations Forces (SOF) with the mission to assist UNPROFOR retrograde operations. Now, the plan called for mobilization of an "enabling force." This force had to be small and maneuverable. It would be charged with setting up logistics, communications, and command nodes; basically, to assist the transition from UNPROFOR to IFOR authority.

In early November 1995, 3rd Battalion, 160th Special Operations Aviation Regiment (Airborne) began contingency planning for Operation JOINT ENDEAVOR. The mission statement: On Order, 3/160th SOAR(A) deploys three MH-60L Helicopters and support element vicinity Brindisi/San Vito Air Station, Italy as part of NATO Implementation Force (IFOR). Be prepared to further deploy element to Bosnia and Herzegovina Area of Operations to Support CJSOTF Peace Enforcement Operations. With the receipt of the warning order, we had to determine the 3/160th SOAR(A) force structure (personnel, equipment, and transportation) of the element needed to sustain this package.

Developing Force Structure. No one existing unit of the 3/160th SOAR(A) is organized to fly, maintain and administra-

tively support a regional mission. Therefore, it was essential to form a provisional company/team. This team had to be formidable; yet, not so massive that it would deplete the battalion of a simultaneous war fighting capability. Therefore, we applied several self-imposed considerations in the force structure planning process.

The Commander, 160th SOAR(A), COL Dell Dailey, made sure he provided essential guidance in developing a viable plan. The most critical element of his guidance was to "plan light not to kill the battalion." This particular guidance, and the mandated constraint regarding U.S. force participation, gave adequate direction to develop the Army Special Operations Aviation (ARSOA) component's force structure.

In addition to the mandated guidance, we considered the following variables when developing the force structure: Where would we establish the Forward Staging Base (FSB); and how the command relationships would evolve.

Once again, the Dayton Peace Accord had the U.S. participation limited to 20,000 personnel. LTG J.T. Scott, Commander, United States Army Special Operations Command, directed that the personnel force list must:

- Support the operation for up to 365 days.
- Be lean not to significantly impede on the total U.S. contingent.
- Not cause the battalion to cease operations in the rear.

With USASOC and 160th SOAR(A) guidance in hand, we developed the ARSOA force that would support this operation. By virtue of combining elements of HHC, A Company, we were able to standup an autonomous company/team. E Company, 3/160th SOAR(A) was activated on 18 December 1995. It

comprised of 54 Officers, Noncommissioned Officers, and soldiers and better became known as "Team Echo." I was selected to lead the team, and chose 1SG Richard Frye as the senior NCOIC.

When we began spinning up for this contingency, Operation JOINT ENDEAVOR was the only "real world" mission in our scopes. It was quite unlikely there would simultaneous regional contingencies. Nonetheless, we had to think worst case scenario. Automatically, the assumption is that sending a ready and capable force to support the peace operation in Bosnia would degrade the remaining battalion's war fighting capability. However, due in part to the 160th SOAR(A)'s resounding success in maintaining quality personnel, we could send the highly competent people without having to individually train them. For instance, of the MH-60L Flight Platoon that was chosen to deploy, A Company did not juggle personnel to ensure mission success.

Platoon Sergeants Shawn Normandin and Matthew Pryor are excellent examples of this theory. The standards of individual and unit proficiency results in never needing to "stack" a team to ensure mission success.

There were several other considerations in determining best suited force structure for support of this operation. They include: operating range of the MH-60L; force protection; mountainous terrain; and logistic infrastructure. The MH-60L has an extended fuel range capability of about 480 nautical miles. Unlike the newly acquired MH-60K, the MH-60L does not have an aerial refuel capability. Therefore, in accordance with the Operations Plan (OPLAN), 3/160th SOAR(A) would deploy to an initial staging base (ISB), then forward deploy to the Former Republic of Yugoslavia to support SOF throughout FRY.

As with any military operation, force protection is key. In this case, this meant that the FSB providing the best force protection was most likely to be the FSB of choice. Equally as important was regardless of the MOS laydown, the force must possess a limited base defense capability.

As mentioned earlier, the logistics infrastructure was least of all areas developed. Means and timeliness of resupply were considerable issues. Finding out which FAARPs left over from UNPROFOR were operational was a difficult task. This remained an issue for about the first 45 days of the operation. We also intended to rely heavily on POMCUS, due to strategic airlift constraints. Fortunately, everything we requested from POMCUS became available.

Through thorough mission analysis and estimates, the battalion commander, LTC William H. Forrester, concluded 3/160th SOAR(A) could support the operation. Impact:

- 50% degradation of MH-60L aircrews
- 30% degradation of the MH-60L aircraft
- Limited level of impact within the command
- Critical training must have priority from the issue of the warning order through force deployment.

Critical Training. Our broad mission requires we maintain an already heightened state of readiness. The plus or minus 30 seconds, time on target, standard supports our mission to conduct precision rotary wing operations in support of Special Operations Forces worldwide in all environments throughout the operational continuum. Preparing a company/team to support an emerging operation caused little concern for the battalion commander. He and his staff quickly convened to develop a commander's and

staff estimate. The mission analysis determined there was a need for training to enhance aircrew survivability. With an aircrew training deficiency realized, CW3 Terry Frabott, the battalion Standardization Instructor Pilot, 1LT Reid Sawyer, S-2 Staff Officer, and I planned the training for which we thought would be crucial for operational success within that region.

To fix this deficiency, we needed to select the most capable and accommodating facility to train. The Army clearly lags behind its sister services for aircraft survivability training facilities. We researched several facilities, and came up with the Naval Air Station, Fallon, NV as the most suitable. Fallon is the military's leading aviation electronic warfare training center. So we deployed all of Team Echo to Nevada to sharpen aircrew Tactics, Techniques, and Procedures (TTP) for threat systems avoidance. In concert with CW3 Mike Richardson, the unit electronic warfare officer, CW3 Frabott and 1LT Sawyer began planning and coordinating a comprehensive training plan. The plan included in-depth knowledge of threat radar and weapon systems and TTP in order to defeat them. Additional subjects included: Aircraft Survivability Equipment (ASE) capabilities and limitations, and Survival, Evasion, Resistance, and Escape refresher academics and practical application. 3/160th SOAR(A), Missile and Space Intelligence Center (MSIC), and the Joint Service SERE Agency (JSSA) subject matter experts taught the classes.

The completion of the training at NAS Fallon and the Marine Corps Mountain Warfare Center brought better understanding of threat systems and cold weather survival techniques. It also brought valued insight into our aircraft, the factors of weather, and the vast challenge that lay ahead.

Deploying the Force. Team Echo began its deployment with the Advanced Party (ADVON). Other than the train up, the ADVON was probably the single most important contributor to the team's success. The ADVON consisted of two regimental and three battalion members: four Majors and a Captain. Some may be quick to think there was overkill to coordinate classes of supply, aircraft parking, equipment storage, berthing, and communications, but it turns out that this was to our advantage. A small Army element operating in the Joint/Combined area could easily become lost in the shuffle, not carefully managed well up from Team Echo was arriving to Brindisi more than two years behind the other JSOA units. The JSOAC, formerly the Joint Special Operations Task Force II (JSOTF II), had arrived in Brindisi almost three years earlier to support Operations Desert Flight and Sharp Guard. We had to figure for each square inch of aircraft parking, work, storage, and living space.

The first elements of Team Echo's main body departed Hunter Army Airfield, Georgia en route to Brindisi, Italy on 18 December 1995. USAF strategic airlift assisted in the deployment with one C-141 and two C-5 aircraft. The equipment list was extensive, but quite necessary. The bulk of the equipment was to maintain aircraft and to sustain the team under the most isolated conditions. The last C-5 in land at Brindisi on 22 December 1995.

Supporting SOCIFOR Operations. Command and control for this complex multinational operation were intricate. Important to note is that while BG Michael Canavan was Commander, Special Operations Command, IFOR, he continued his responsibilities as Commander, SOCEUR, working directly for General Joulwan, and Commander, IFOR, Admiral Leighton Smith. Subordinate to SO

JIFOR was the Joint Special Operations Air Component (JSOAC). COL Stephen Connelly was the JSOAC Commander. We were to anticipate OPGON to SOCIFOR, TACON to the JSOAC, and Command Less OPGON to the Army Special Operations Task Force. In the end, we were OPGON to the JSOAC, and Command Less OPGON to SOCIFOR. This meant the JSOAC would be responsible for the administration, while SOCIFOR would employ us.

Critical to Team Echo's success was the linkage into the intelligence nodes. We were just coming on board with SOFPARS and the LORAL/Vought Top Scene, and deployed with both systems. They were excellent to provide an operational base for flight planning and rehearsals, but lacked potential threat activity data.

Our concern was not having adequate intelligence connectivity. If required to stage from Tuzla Airbase, our area of responsibility would be significantly greater than that of Task Force Comanche. We were skeptical that the S-2, 12th Aviation Brigade could provide sufficient "real time" intelligence and imagery products throughout the Balkan theater. At times we would have certainly been in competition for intelligence assets. Furthermore, SOF had JDISS and LOCE connectivity. What was unknown is if there was similar connectivity at Tuzla. Intelligence limitations of operating apart from SOCIFOR was a relative concern.

When Team Echo departed Hunter Army Airfield, it was well known that austere flight conditions within the Balkans would present more than a challenge. The anticipated challenges were everything from adverse weather conditions, e.g., extreme cold climate, snow and freezing rain, low ceilings and visibility, mountainous flight considerations, and an underdeveloped maintenance support structure.

Historically, mean temperature in Sarajevo, December through February is 30°

Fahrenheit. Twenty-six days out each month would have snow or rain. Chances were that 60% of the time the ceilings and visibility would be below 1,000 feet/3 nautical miles. These were definite weather challenges. Despite these challenges, Team Echo managed a greater than 90% success rate for mission accomplishment. We can attribute a lot of this success to the MH-60L unique systems.

Mountainous flight is tough in any area. In addition to the inherent environmental dangers, we had to consider the potential for threat Air Defense systems, and the chances for consistently limited visibility and freezing precipitation. In order to get through the "Mostar Pass", leading from the Adriatic Sea to Sarajevo, the ceilings could be no lower than 2000 feet. Low ceilings coupled with the propensity for low lying fog made matters all the worse.

Of the three Black Hawks taken to support this operation, the oldest was a 1992 year model. We previously had good maintenance track records with all three. However, most learn it does not matter the age of the aircraft, nor the maintenance track records. To plan smart means to always expect the worst. Therefore, we had a genuine concern for the effectiveness of the Class IX (Aviation) supply system. How would it work in a country with no organic U.S. Army Black Hawk units? We expected extended periods of waiting for parts requisitioned through the 22nd Area Support Group (ASG). We were actually quite fortunate to have the highest priority requisitions take just 7-10 days to arrive. Redundant requisitions through the 22nd ASG, the battalion, or the regiment's System Integration and Maintenance Office (SIMO) proved capable in getting parts with minimal Non-Mission Capable (Supply).

Team Echo could support the operation from several locations within the Former Republic of Yugoslavia. Tuzla, Sarajevo,

Split, and Dubrovnik were all viable options. The most viable, however, was Tuzla Airbase. Tuzla was best for several reasons. It was the home of 12th Aviation Brigade, TF Comanche. It was in the U.S. sector. It was in the middle of our Area of Responsibility (AOR). Unfortunately, Tuzla Airbase, because of overcrowding, could not accommodate the three aircraft and support equipment we had planned to send forward.

There were several things that staging out of Brindisi afforded the team that no other place could. What Brindisi had was secure positive lines of communication in support of Team Echo's logistics, intelligence, and command issues.

The tasked missions for SOCIFOR covered the full spectrum of special operations support. We quickly found that there were no "cut and dry" missions when supporting OOTW. Team Echo supported missions from Zone of Separation (ZOS) surveillance, to providing Distinguished Visitor (DV) transportation in and out of the AOR, to sling loading a British Bi-Plane after it safely landed due to engine failure, to recovery operations for the USAF CT-43 accident transporting the late Secretary of Commerce, to multinational SOF infiltration and exfiltration techniques against threat targets. It was difficult to accurately portray what we were most likely to expect for follow-on missions. Flexibility and sound mission planning were the keys to success.

A Successful Mission. Team Echo began redeploying to Hunter Army Airfield on 18 April 1996 and completed that phase of the operation on 27 April 1996. We had a successful deployment. In all, we flew 408 flight hours in support of Operation Joint Endeavor and the assistance in the recovery of the USAF CT-43 accident. Despite flight in the most demanding conditions, there were no accidents or incidents. Despite the limited maintenance facilities and resupply system, the aircraft and vehicle maintainers

were exceptional. The Department of the Army standards for operational readiness for Black Hawks is 75%; ours was 95%. And lastly, we trained with the US Air Force Special Operations Command MH-53Js in joint formation flight.

Of the total flight hours, one-third was under night vision goggles. The Night Vision Goggle (NVG) hours to flight hour ratio is a lot less than we would have liked. The regimental standard is at least 50% NVG time. We as aviators do not dictate to the ground force commander when to fly. It's an education process. We must continue to educate the ground force about the survivability advantages to flying at night.

Before deploying, I received explicit guidance from both the battalion and regimental commander on what they were expecting. Their guidance almost mirrored. It was simple. Their guidance was to bring all members of Team Echo back home in the condition they left. We had little idea what to suspect in this OOTW scenario, but fortunately, we all returned in the same condition as we left.

Our Lessons Learned. Through this experience, we learned many significant and valuable lessons. I have determined the two key lessons:

Issue: Predeployment Training

Discussion — The training conducted at NAS Fallon and the Marine Corps Mountain Warfare Training Center proved to be invaluable, for two reasons.

- Team building within an environment to train with little distractions.
- The academic and flight training supported by the Missile and Space Intelligence Command and the Joint Service SERE Agency provided aircrews an operational advantage and boosted confidence tremendously.

Recommendation — Incorporate training at NAS Fallon or similar facility annually.
(ENDEAVOR — continued on page 31)

ASSURED RESPONSE

It's 090900 Apr 96, Tuesday morning. The majority of my company was returning to work after a family boating trip over the Easter weekend to Florida. I was just getting to my office after PT and was pondering over my decision not to participate in the battalion C-130 airborne operation that was taking place at Fort Stewart. I was hoping that I could get caught up on some paper work since the majority of the battalion staff was on the airborne operation. Bravo Company, 3/160th had been doing some great training (the enjoyable side of company command) and now I had to do the other half of the commander's job, the paperwork/administrative side.

Then it started, the ringing of the phone. It normally starts ringing around 0901, and rings until about 1900. The BN CDR, LTC Bill Forrester was on the line. He was short but clear — "Jim, I need you to come see me, reference crews available today." It was clear to me from the sound of his voice that I needed to come to his office ASAP and be ready to talk mission capability. With the MH-

*What you
get when
you call
on the
3rd Battalion,
160th SOAR(A)!*

47D, and with most Chinooks, this meant I should stop by Charlie Company and grab the maintenance commander, MAJ Mike Bobeck. If the old man was going to talk deployment, I wanted to have my cohort in crime, the maintenance guru, with me.

Mike and I tried to guess what was up as we made the five minute walk to the battalion Headquarters. We

went directly to the battalion commander's office. The S3, MAJ Ed Woods, was already waiting for our arrival. LTC Forrester gave us the warning order: be prepared to break down four MH-47Ds for loading onto Air Force aircraft. The caveat was, how fast could we do this without interrupting the already scheduled missions? MAJ Bobeck and I began to calculate. The question posed to me was how many crews could I deploy today without dropping any missions already scheduled today through the next 30 days.

To help us better assess the situation, the S2, CPT Reid Sawyer, MI branch, proceeded to give us an intelligence update on Liberia, Africa. After the update we agreed that we were into the "Mission

Analysis" phase but definitely needed more information on the higher headquarters' and the ground commander's intent, along with a mission timeline. We pulled out the RSOP and the TACSOP and decided to jell the two together as we started to come up with courses of action, keeping in mind the commanders constraint that this would all be done without effecting the training that was already scheduled. The S3 made the decision that we needed to break up to work on our individual areas and call back updates as required to the S3 and the commander. The next meeting would be in the battalion classroom at 1200 hrs, at which time I would brief my package COAs for the Battalion Commander's approval.

As soon as I got back to my company area, I had CPT(P) Mark Drabik (Plt Ldr) and 1SG Buford Thomas call to work all individuals that were on leave. I called a key leaders meeting that included Plt Ldrs, Plt SGTs, Top, and myself. We moved into my office as we began to lay out how we could meet all the training events that were on the schedule and still send four crews, at a 1.5 pilot crew ratio and four FE/CE per aircraft on the deployment. The number crunch was the easy part of the equation. I needed to look at who was going to do the training events versus who went to the real world deployment. I was sure that some of my personnel just would never understand why I needed them to go to JRTC as Observers/Controllers as others were rotated from the JRTC rotation to the Real World deployment. I guess that's why I get commander's pay, to make the necessary calls nobody likes but that benefit all involved in the big picture.

After 45-50 minutes, I arrived at a package that totaled 82 personnel. The big numbers came from the maintenance company, with 40 personnel. I would be

taking 27 personnel — not quite what I wanted in terms of 1.5 pilots. I would use the Battalion Commander, myself, and my maintenance officer, CW2 Mike Huser, for the .5 for three crews and would try to sell to the Battalion Commander that I needed one less person to go to JRTC in order to fill the last .5 crew member. I like to have a third crew member on board as much as possible.

Just prior to 1200 hr meeting, I received the call: execute the breakdown of the four MH-47Ds. It looked like this deployment was going to happen. My update to the staff and the BN CDR went well — add a medic, decrease a fuel handler, all minor adjustments. I was unable to get him to budge on the additional .5 crew member, as I had to meet all currently scheduled training.

The Mission:

3/160th SOAR(A) (-) deploys four MH-47Ds to Freetown, Sierra Leon, Africa to support COMJTF (Operation ASSURED RESPONSE) in the Noncombatant evacuation of personnel from Monrovia, Liberia, from 10-20 APR 96.

The Personnel Assets:

HHC:

4 Officer, 1 WO, 9 Enlisted, 0 Civilian.
A/3-160:

0 Officer, 0 WO, 0 Enlisted, 0 Civilian.
B/3-160:

2 Officer, 8 WO, 17 Enlisted, 0 Civilian.
C/3-160:

1 Officer, 0 WO, 39 Enlisted, 1 Civilian.
Total:

7 Officer, 9 WO, 65 Enlisted, 1 Civilian
(82 personnel)

The Helicopter Assets:

4 MH-47Ds

The staff updates were still a bit sketchy, particularly in the area of what logistics would be available at the deployment end. The train was moving so fast that we would not have time to get an

Advance Party (ADVON) in before the main body arrived. I focused mainly on mission requirements and deploying the right people, equipment, and bullets to be able to perform all of my METL for 14-21 days. It was on the logistic side that I was taking risk and selling the BN CDR on my assumptions. My general assumption was that everything we needed beyond executing the mission would be there for us to fall in on — a big assumption that we were not able to confirm prior to departure. I was glad we were able to include tents and cots to our load as we waited on the air flow for departure.

Then the big question was asked: What was the no nonsense time we could be ready? MAJ Bobeck had stopped all scheduled maintenance and had every mechanic working on the MH-47Ds identified for deployment. He said, "Twenty-four hours, Sir." LTC Forrester said nice try but can you do it in 12 hours. Mike confirmed with me that my CEs would join the fight once my deployment equipment was ready, and he could put his DynCorp team on one MH-47D. This would enable us to have four MH-47Ds ready to load at 0001, in 12 hours. The BN CDR was much happier with that figure. As we left the meeting, everyone in the room was focused on deployment.

LTC Forrester was going to deploy with Team Viola because of the uncertainty of support at the far end and the rapidity of the deployment. This would become his second ongoing Real World mission in Operations Other Than War, as he already had three MH-60Ls in Brindisi, Italy in support of SOCIFOR, BG Michael Canavan. It was comforting to find out that we also would work for BG Michael Canavan, the JTF Commander.

The teardown of four aircraft and the first C-5 load-out went great. It was ac-

complished through the super work and dedication of the contract personnel from DynCorp, teamed with two teardown crews from C/3/160. Two aircraft were prepared for deployment on a C-5A. The third and fourth aircraft were configured for transport on a C-5C, one of two the Air Force owns. The C-5C is a modified C-5 which requires less breakdown of the MH-47D. At 092345 Apr 96, the fourth Chinook was ready to load. With the air flow scheduled to start at 100015 Apr, there was only time for a short break.

The Assistant S3, CPT Richard Carroll, showed up in the hangar. "Hey, Sir, there's been a change in the air flow." Those words started the tumble. Problem #1, the air flow began to tumble one to two hours at a time. The first C-5 finally landed and was ready to load at 100900 Apr 96. Because the teardown crew worked until midnight in preparation for a 100015 APR 96 loadout, and now the actual load time was 100900 APR 96, this extended the teardown crew's already long duty day. Some personnel were up almost 24 hours. Not a problem yet, it will be an eleven hour flight, plenty of time for some rest.

Once the loading started, the adrenaline began to flow again. It went quick and safely. Chalk 1 was ready to go in about two hours. As Chalk 1 departed Hunter Army Airfield, Chalk 2 started to load up. Problem #2 was about to rear its ugly head. Chalk 1 diverted to Dover, Delaware for 16 hours with maintenance problems and Chalk 2 remained at HAAF with some equipment problems. Chalk 2 ended up taking off first and arrived at Freetown, Sierra Leone at 112100 Apr. Chalk 1 arrived at 120030 Apr. After some delays in downloading, build-up operations were begun at 120400 Apr.

As my pilots came off the C-5, I gave them the priority of work. Set up a plan-

ning area in the JSOACC, get accountability of the planning stations, three crews would go into crew rest, and one crew would put together maps and get all the grid coordinates into the planning computer for all key locations.

Initially I ran into some small logistical problems, but I unleashed my ace in the hole, the BN CDR. The horsepower play worked; my assumptions for support were becoming facts with the help of LTC Forrester.

The Acting JTF Commander on scene (Freetown) was the USEUCOM Deputy COMSOG, COL Race. BG Canavan was forward deployed at the US Embassy, Monrovia.

Our command relations with the JTF, was as a member of the Joint Special Operations Aviation Component Command. The other members of the JSOACC were elements of the 352nd and the 21st. The JSOAC Commander was initially COL Connelly, Commander, 352nd. COL Connelly was followed by his deputy, COL Curtis, on 16 Apr 96. LTC Forrester was the senior Army element in the JSOACC, and the senior Army commander within the JTF headquartered at Freetown.

Build-up was slow and deliberate. The rate of build-up and maintenance test flights continued at a steady and safe pace. The urgency I placed on pushing the build-up crews to finish all four aircraft, was dictated by the missions for which we were tasked and safety considerations of the long duty days thus far. Although the projected timelines, both teardown and build-up crews to finish all four aircraft, was dictated by the missions for which we were tasked and safety considerations of the long duty days thus far. Although the projected timelines for both teardown and build-ups were met, the continued/sustained deployment sequence (air flow slips) degraded my ability to push the build-up teams too hard.

The timelines for build-up:

- Second C-5 arrives Freetown, Sierra Leone (Africa), 112100 APR 96
- First C-5 Arrives Freetown, Sierra Leone (Africa), 120030 APR 96
- Build-up begins (three aircraft), 120400 APR 96
- Build-up complete/FMC (A/C #367), 121230 APR 96
- A/C #367 executes 1st mission, 121730 APR 96
- Build-up complete/FMC (A/C #160), 131230 APR 96
- Build-up complete/FMC (A/C #360), 131430 APR 96/NMCS (transmission pump)
- Build-up complete/FMC (A/C #146), 141300 APR 96

Mission support began within 17 hours of our arrival at Freetown, Sierra Leone, with my first FMC MH-47D, #367.

A typical mission departed Freetown, flew southeast along the west coast of Africa, and landed at the ECOMOG compound or the US Embassy in Liberia.

The majority of our missions from 11-15 Apr 96 were executed using Night Vision Goggles (NVGs). Mission requirements shifted to require two day sorties and six night sorties. Aerial refuel was used enroute from tanker aircraft provided by both 352nd SOG and 21st SOS.

B/3/160 SOAR (A) MH-47D aircraft were used to transport American Citizens (AMCITS) and foreign nationals from Monrovia to Freetown Airport. The evacuees were then cross-loaded on a C-130 and flown further north to Dakar, Ghana.

The Follow-On:

Team Viola continued operations and assisted the transition of the JTF mission to the US Navy/Marines. A MARG steamed South to reach the coast of Liberia on 20 Apr 96. A smooth transition through a local area/AO brief to the Marine pilots was given and a successful handover of the SOC

mission to the Marines occurred on 20 APR. After the Marine forces were in place at the Embassy and a successful handover of the Embassy was made from 3-325 IN to the Marines, I was charged with exfil of all the Army personnel. I used three MH-47Ds to extract the company plus with six sorties. Our first TOT was 201230 APR 96 and we were PZ clean at approximately 202015 APR 96. The last lift out of the Embassy included BG Canavan, the JTF Commander.

Our arrival back into Sierra Leone signified mission complete for Team Viola, as well as the JTF mission. It was now time for Phase four, the MH-47 breakdown and redeployment sequence.

Operational Highlights:

- 100% mission execution
- 2,100 personnel, including 436 AMCITS evacuated (not including 3-325 soldiers)
- Aerial Refueling available for all missions
- C-17 MH-47D load validated at HAAF for possible redeployment (C-5s were used)
- 24.5 hours flown on 20 Apr 96 (approx. 8 hrs per crew, last mission)
- ZERO accidents/incidents
- MH-47D total hours — 85.1
- 71 different Nations evacuated

Well, we didn't break the MH-47Ds down as fast as we did to get to Africa, but we were ready to go home 48 hours from our last mission.

Now I'm back at HAAF, still shifting through paperwork. I'm putting out the hot — no, the extremely hot — fires only, so I can still have a little time to enjoy my command. I'll get caught up with this paperwork in my next staff job! I'm heading off on another mission now.

NSDQ.

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MAJ Viola is the Company Commander, B Company, 3rd Battalion, 160th Special Operations Aviation Regiment (Airborne), Hunter Army Airfield, GA.

ENDEAVOR

(Continued from Page 26)

Issue: Training with theater Special Operation Commands.

Discussion — There were some growing pains during the early stages of the deployment due to adjusting to SOCIFOR (SOC-EUR) operational philosophy. In addition, having Air Force units already on ground when we arrived led SOCEUR to think all aviation organizations had most of the same requirements, e.g., weather minimums.

Recommendation — Exercise capabilities with the five theaters SOC's as often as possible. Each training event is an educational opportunity.

Conclusion. In conclusion, we do not know whether Operation JOINT ENDEAVOR will ultimately be known to the world as a success. What it has been is an operation that will go down as one of the finer displays of multinational cooperation. This typical OOTW will become the trend. Our military mission continues to expand. The term relevancy has become an everyday word. Although doctrine does not currently outline relevancy, my opinion is that relevant means remaining within the unit's capability, and doing it smartly. Without a firm doctrinal foundation for OOTW, it would behoove us to use current doctrine as a guideline, nonetheless. Doctrine tell us how we should operate under a set of given circumstances. In the absence of doctrine, we should not throw away what doctrine has taught us. Despite the ever growing trend to stray from Mission Essential Task List oriented operations, we must still understand doctrine and use it as a checklist until it is no longer applicable.

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MAJ Jackson is the Company Commander, A Company, 3rd Battalion, 160th Special Operations Aviation Regiment (Airborne), Hunter Army Airfield, GA.

LOGISTICAL SUPPORT

The 160th Special Operations Aviation Regiment (Airborne) is the Army's premiere aviation unit and is routinely called on to fulfill its mission of flying hazardous mission profiles under the worst imaginable visibility and flying conditions, arriving on time and on target, plus or minus thirty seconds.

To accomplish this mission, 160th has a truly diverse mix of the most technologically-superior airframes in the Army's inventory. More importantly, we also have the Army's best aviators to fly these phenomenal aircraft. None of our missions can be successful, however, without a logistics team equal to the task. 160th has never developed a robust logistics "tail" as it formed its significant combat power "tooth". This outstanding but little publicized logistics tail, affectionately known as "Team Red Dog", is the focus of this article.

Evolution Without Growth. As the Regiment has grown and matured over the course of time, the logistics capability of the unit has never developed as a separate entity. In other words, as logistics capa-

*Doing more
with less
to support
the 160th
SOAR(A).*

bility developed, there was never a parent headquarters (like an Aviation Support Battalion) formed to encompass all of the many diverse logistics functions required to keep the Regiment operating. These diverse logistics functions have, instead, fallen under the oversight of the Regiment Logistics Officer, the Regimental S4 (RS4).

The RS4 of the 160th controls all of the logistics functions for the Regiment. It takes a special kind of logistician to keep up with the many demands of the 160th SOAR (A) Operational Tempo (OPTEMPO).

RS4 Section: Logistics Control Now ... and for the Future. The RS4 section is the focal point around which all of the Regiment's logistics support revolves. The RS4 is a major's billet requiring a diverse background in multifunctional logistics. In addition to the standard logistics disciplines a logistics officer would normally learn in the conventional Army (subsistence, general supplies, fuel, engineer materials, ammunition, major end items, medical supplies, repair parts,

160th Special Operations Aviation Regiment (Airborne)

LOGISTICS ORGANIZATION "Team Red Dog"

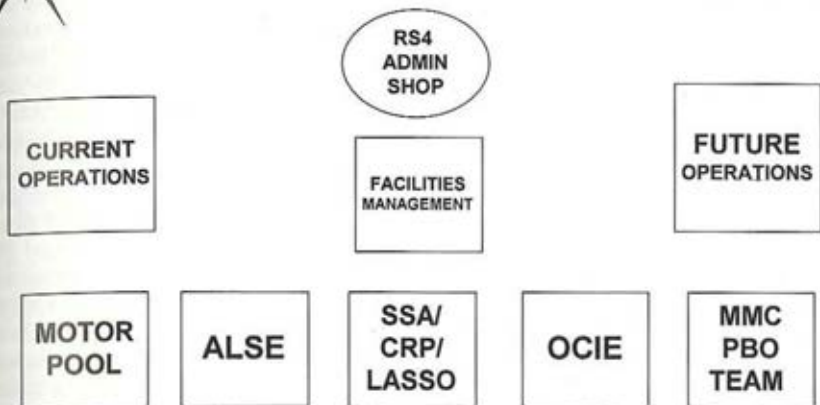


Figure 1

maintenance, transportation, services, and health service support), there are a multitude of other areas that the 160th RS4 routinely deals with.

These include: contingency logistics forecasting; air drop operations; contracting; host-nation support; contract and non-standard maintenance support; non-standard ammunition support; Class A Agent operations; commercial transportation operations; research, test, development, and evaluation operations; aviation life support equipment operations; facilities management; and non-standard repair parts procurement. The RS4 often interfaces directly with commercial sources of supply as well as the depot and wholesale supply systems. Needless to say, there is a heightened sense of urgency in this elite unit, and the logistics supporters must be able to react instantly to the ever-changing demands of our mission.

The Current Operations Section of the RS4 handles the routine, recurring logistics support to the Regiment. This section provides oversight of those essential supply and support functions that are necessary for every unit in the Army. Reports of Survey, routine contracts, supply operations, local purchases at homestation, GSA vehicle fleet procurement and maintenance, and administrative logistics support are a few current operations areas of responsibility.

The Future Operations Section handles contingency logistics support to deployed elements of the command. It is Future Operations' responsibility to ensure that logistics support for our numerous training and real-world deployments is planned, forecasted and executed in a manner that compliments and enhances the commander's intent for the mission. Future Operations is led by a Captain and

a Sergeant First Class. These two logisticians are tasked with providing the interface between the deploying element and the support system in the theater support channels. When you consider that the 160th has potential missions in every Theater, one quickly understands why the Future Operations Section considers the entire world the "Regiment Support Area"!

Regiment Consolidated Motor Pool: It Ain't Sexy, But It's Important! In addition to the routine ground maintenance that every Army unit must perform, the Regiments consolidated motor pool also maintains many lines of non-standard and mission-specific ground support equipment. Trucks, materiel handling equipment, overhead lift devices, power generation equipment, commercial personnel transportation, and fuel delivery equipment are just a few examples of the over 400 lines of equipment that the motor pool maintains at a 95% or higher readiness rate. Couple the demands of high operational tempo with equipment use under extremely adverse conditions and one can get a feel for the challenge of maintaining 160th's ground support equipment!

Regiment ALSE: Setting the Standard and Blazing the Trail! The Regiment's Aviation Life Support Equipment (ALSE) section is recognized as among the best in the Army! The ALSE shop routinely conceives, researches, procures, tests and evaluates new ALSE gear, ensuring that the Night Stalker aviator is the best equipped on the modern battlefield. Right now, the ALSE section is in the development and testing phases for a multitude of new ALSE gear, including fire resistant cold weather gear, enhanced cold weather aviation gloves, fire retarding cold and hot weather flyers boots, and ergonomically-efficient, state-of-the-art, aviator flotation devices, to name just a few of their

ongoing projects. The ALSE section cannot afford to be single-mindedly focused on their RDT&E mission ... they still have to maintain and service the aviation life support equipment for over 800 aviators! Other U.S. Army and Department of Defense units routinely call on the 160th ALSE for their ideas and expertise, and that exchange of ideas and information has resulted in better ALSE equipment for all aviators. 160th ALSE is truly setting a high standard for the aviation community!

Regiment Supply Support Activity: One-Stop Shopping for All of Your Replacement Parts Requirements! The 160th is an echelons-above-corps unit and, as such, has some unique requirements and systems for interfacing with the standard Army supply system. The Supply Support Activity (SSA) is the central point through which all Class IX (Air) repair parts flow for the Aviation Unit and Intermediate Maintenance activities throughout the Regiment. The SSA manages about 7,000 lines of standard, non-standard, and commercially-procured aviation repair parts in its Authorized Stockage List (ASL). Additionally, the SSA manages deployable aircraft-specific parts packages, used in support of our numerous deployments.

The SSA OIC also receives all classes of supply at the Regiment central receiving point and functions as our Logistics Automation Support Officer (LASO). Several new supply system conversions and enhancements (including adoption of the new Standard Army Retail Supply System-Objective, and Velocity Management) have dramatically reduced our order ship wait time and have improved our support to the flightline. These enhancements and the addition of our planned Consolidated Supply Support Automated Facility (scheduled for con-

struction in FY97) will ensure that the 160th SSA is on the leading edge of supply technology well into the 21st Century.

OCIE: "Cutting Edge" Individual Equipment for the Night Stalker! The 160th operates across the spectrum of conflict and, as we have already mentioned, in every theater in the world. This kind of worldwide mission requires a variety of climatic, environmental and mission-specific individual equipment. The Regiment's Organizational Clothing and Individual Equipment (OCIE) section is responsible for the development, testing, procurement, receipt, storage and issuing of over \$200 million worth of the most state-of-the-art individual clothing and equipment in the US Army inventory. This equipment includes everything from specialized uniform items to watches, knives, eye protection, specialized helmets and footwear. The OCIE section also interfaces with a multitude of governmental and non-governmental research, development, testing and procurement agencies to ensure that the Night Stalkers preparing for deployment has virtually everything they need to accomplish their mission. The OCIE section has leveraged every possible source of support to ensure individual combat readiness!

MMC PBO Team: Keeping the Books for the Regiment! The last section in Team Red Dog is the Materiel Management Section (MMC) Property Book Team. This PBO team is attached to us from the 528th Materiel Management Center, Special Operations Support Command (Ft. Bragg, NC), and ensures that

our more than 750 lines of deployable equipment, valued at over \$900 million, are procured and accounted for. The PBO Team OIC is also tasked with keeping a close eye on our fluid authorization documents to ensure that we are actively pursuing procurement of the latest and best equipment available throughout the Army system. Unlike a normal PBO section, our PBO team has to stay in close coordination with the flightline, and, as new and improved items are developed and fabricated, ensures that responsible accountability is assigned to these new items. The 160th is extremely conscious of our stewardship of the citizens' tax

dollars, and the MMC PBO team "keeps the books" for the Regiment!

Team Red Dog: The Tail DOES NOT Wag the Dog! The RS4 also maintains oversight of the logistics functions in the three battalions and two separate companies in the Regiment. Monitoring every phase of logistics readiness, from Forward

Arming and Refuel Points to Equipment and Personnel Air Delivery operations, the RS4 section serves as the single point of contact in the command for logistics readiness and assistance. RS4 goals for the 110 members of Team Red Dog are clear: Support the Night Stalkers in the cockpit in every possible way, so that they can accomplish their vital missions! In this Regiment, the tail does not wag the dog!

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MAJ Phelps is the Regimental S-4, 160th Special Operations Aviation Regiment (Airborne), Ft. Campbell, KY.

*"The 160th
operates
across the
spectrum of
conflict ...
in every
theater
in the world."*

INTELLIGENCE TRAINING OBJECTIVES

With the current unstable world geo-political situation, U.S. aviation assets, especially Special Operations Aviation, continually find themselves employed throughout the world operating across the continuum of conflict supporting any number and types of missions. In light of this, unit intelligence personnel must work closely with their operations officers and commanders to design demanding and realistic air crew training to better prepare for potential missions.

This article discusses a "model" for mission preparation that worked successfully for 3/160th SOAR(A) during their recent participation in Joint Endeavor. Not every deployment will allow for such detailed planning and training, which underscores even more the need for these aspects to be incorporated into a unit's training structure by the intelligence section. Specific aircraft and missile engagement results are not included in this article due to the classification of the data.

Overview. 3/160th Special Operations Aviation Regiment (Airborne) was tasked

*Utilization of
different
training sites
and agencies
strengthens
readiness.*

to provide three MH-60Ls and the appropriate support personnel for participation in Operation JOINT ENDEAVOR. Over a period of one month, a company team was formed, trained and deployed to Brindisi, Italy to conduct operations throughout Bosnia-Herzegovina and Croatia. (See associated article by MAJ Randy Jackson.)

In preparation for Team Echo, 3rd Battalion 160th SOAR(A)'s deployment to the Former Republic of Yugoslavia, the battalion developed a comprehensive threat training program preparing the pilots and air crews for a previously unknown environment. The model used in designing the training was:

Mission analysis.

- Identify priority intelligence requirements as they relate to the pilots;
- Evaluate and educate the force on the current situation;
- Assist in designing environmental training (incorporate specific threat);
- Rehearse techniques in environment for suspected threat;
- Conduct situation specific SERE training.

This article discusses the different phases of the training and the value added from the Missile and Space Intelligence Center and the Joint Service SERE Agency while training at the Naval Strike Warfare Center, Naval Air Station Fallon, Nevada. This article presents an overview of our objectives, the facilities used and the contributions made by the different national agencies to our training program.

Without a specific mission statement and firm knowledge that the environment would remain permissive, several assumptions concerning the threat were made:

- While US forces moved into Bosnia-Herzegovina, the SA-6 threat would remain low due to strong overhead air cover and ELINT monitoring.
- The primary threat would be from small factions capable of employing systems ranging from small arms and AAA to man portable air defense systems.
- Little warning would exist of potential engagements during the conduct of missions.
- Despite a projected "permissive environment," the situation was viewed as unstable and all threat scenarios were relevant.

A combined approach to intelligence mission preparation—identification of the threat, as well as what to do in the case of a maintenance failure or worse yet, a shoot-down in "unfriendly territory" must be incorporated into any IPB process. A balanced view of both aspects is often overlooked during mission preparation. The training objectives were designed using this paradigm.

Training Objectives. After receiving the warning order for deployment, the Naval Strike Warfare Center located at Naval Air Station Fallon, NV was selected as the primary training site due to the mountainous region, cold weather climate, and most importantly, the extensive

electronic warfare (EW) facilities.

Our intelligence training goals at Fallon were two-fold: one, complete a rigorous block of instruction in surface-to-air missiles and validate tactics and techniques for radar evasion; and two, conduct SERE training specific to the area of operations and combatants.

With this in mind we designed a program that incorporated the subject matter experts for each area. The Missile and Space Intelligence Center, in concert with the Operational Test Support Activity from Fort Bliss, TX, presented superlative training on threat air defense systems. Accordingly, the Joint Service SERE agency provided a team of Bosnian experts to work with the pilots, air crews and intelligence personnel. The training began with an extensive review in surface-to-air missile systems, worked through specific comparisons between the aircraft survivability equipment and the different missiles, and then validated the techniques that would be employed once overseas. The SERE training focused on cold weather survival, movement and resistance techniques, validation of survival pack loads and culminated in a short SERE exercise at the Marine Corps Mountain Warfare Center, Bridgeport, CA.

Naval Strike Warfare Center While primarily designed to support the Navy's carrier air wings, the Naval Strike Warfare Center offers excellent training opportunities for rotary wing aircraft of all types. Designed around the Dixie Valley in southeastern Nevada, the extensive site offers over 30 emitters that accurately replicate different radars, jammers and radar guided surface-to-air missile systems. The layout of the emitters allowed us to select and design a "threat course" using varying terrain and threat systems. The system operators realistically portray

the search, target acquisition and engagement sequence of the actual systems presenting a realistic picture to the pilots. The high degree of proficiency of the site operators allowed the air crews to both realize the limits of their aircraft survivability equipment and the vulnerability of their airframes in different situations.

Additionally, two aerial gunnery ranges are available for training with a variety of ordnance. By selecting specific sites, and incorporating the gunnery ranges, the air crews can be presented with a variety of different scenarios that will test and teach the air crews.

Missile and Space Intelligence Center The Missile and Space Intelligence Center (MSIC), a part of the Defense Intelligence Agency, is located at Redstone Arsenal in Huntsville, AL. While performing wide and varied missions, the threat experts at MSIC are invaluable in the training of anyone concerned with air defense weapons and radars. The MSIC training comprised of two basic categories: education and application. The discussions focused on the Strella and Greta MANPAD families (including Yugoslavian variants) and the SA-6 and SA-8. (While the combatants in Bosnia-Herzegovina were not known to possess any SA-8 systems, flying against the SA-8 in training provided a greater challenge to develop tactics than flying against the SA-6 alone.)

Air Defense Education Divided between MANPADS and radar guided systems, the classes began with an in-depth review of missile and radar principles and the operating characteristics of different systems. While many of the pilots receive continuous education in threat system capabilities during numerous exercises and classes, discussing the information and theories with the engineers that have studied, fired and modeled the concerned systems was of great bene-

fit to the pilots. Most beneficial, were the discussions concerning missile capability versus aircraft survivability equipment in relation to the physical environment. It was during these discussions that the engineers, system operators and pilots discussed and decided on the tactics that may or may not work for a given system.

Flight Profile Techniques The general tactics discussed were employed in the application phase or flight phase that immediately followed the threat classes. A crawl, walk and run approach was employed while the MSIC personnel provided continuous feedback to the pilots from within the aircraft and from the emitter sites.

Flight Training The flight portion was divided into day and night operations each with three segments: one, medium altitude (300-500 feet), slow flights to orient the pilots to the terrain and the radar operators to the aircraft; two, low altitude (100-150 feet), fast flights; and three, very low altitude (less than 100 feet) flights with numerous countermeasures and evasion maneuvers employed. The MH-60Ls flew against a total of seven sites replicating the SA-6, SA-8 and the Spoon Rest systems. Additionally, man portable surface-to-air systems, with actual seeker heads connected to a video feed, were employed in several locations throughout the route to test the ALQ-144(A) infrared jammer. The man portable systems were employed in such a way as to acquire data on all engagement aspects.

Results Using terrain to their advantage, a flight of three MH-60Ls would approach the radar sites and upon detection by the aircraft survivability equipment/radar warning receiver, the pilots would begin their evasive maneuvers. Successful evasion primarily depended on two factors: one, the amount of time the

pilots took to recognize and react to the threat; and two, the terrain in which they were able to mask themselves from the systems' operators. While this sounds elementary, application of the techniques and employment of chaff and flares required extensive rehearsal and crew coordination drills, especially at the given altitudes, speed and proximity of aircraft to one another. Each of the engagements were designed in concert with the respective threat system expert allowing the pilots to react to the different type of engagements including head-on, side and tail aspect acquisitions.

Debriefs, using both film and audio from the different sites, were conducted following each engagement sequence. The video products from the man portable surface-to-air missiles allowed the pilots to see what affect the aircraft infrared jammers and suppression equipment had on the different missile seeker heads. This was a unique opportunity to assess the effectiveness of these devices for a given flight profile and environmental conditions. Additional value was gained as the site operators provided specific feedback on each sequence. The discussion between the system operators and the pilots concerning the results allowed for further refinement of our procedures. This portion of the training proved invaluable as it allowed the air crews to develop and validate specific tactics to defeat, or as a minimum, diminish the different radar capabilities. With the conclusion of this phase, the pilots gained an appreciation for the theoretical procedures as they applied to their aircraft.

SERE Training The Joint Service SERE Agency headquartered at Ft. Belvoir, VA is responsible for all aspects of SERE training and is the Joint Chiefs of Staff Executive Agent for joint evasion and escape and combat search and rescue issues. The Joint Service SERE Agency (JSSA) mobile training team consisted of five individuals each

with a different area of expertise. JSSA focused on four areas: movement techniques, cold weather survival, resistance techniques, combat search and rescue information—each area was discussed as it related to the Bosnian theater of operations. Again, the training was divided into an education and application phase.

SERE Education Given the fact that the classes were taught by subject matter experts and that the air crew members were all graduates of the U.S. Army SERE Course, Level C, the classes quickly focused on the detailed theater specific information after covering the general techniques. After action reports of the O'Grady shoot down were used as well to provide a frame of reference for the discussions.

Not knowing whether the theater would be permissive or non-permissive, the classes focused on areas of dissension throughout Bosnia and Croatia and how one would negotiate the different regions. The numerous factions in the area created unique dynamics in terms of evasion—"How to determine who is your friend at any given time and who is not." With this information, the unit's standard operating procedure for evasion and recovery was rewritten to include the theater specific combat search and rescue information and the theater special instructions. The development of the evasion plan of action requires extensive input from the operators, unit intelligence personnel and theater experts (when available).

Application — SERE Exercise. Upon the conclusion of the classes, the company team was divided into five elements and flown to the Marine Mountain Training Center at Bridgeport, CA in staggered intervals. Accompanied by a SERE instructor, each group negotiated an evasion route moving as if their aircraft had been downed in unfriendly territory. The six hour course,

(INTEL — continued on page 50)

THE SOA MEDIC

The pilots and aircraft crewmen of the 160th Special Operations Aviation Regiment (Airborne) are arguably the finest and most highly-trained aviation soldiers in the world. The mission of the 160th SOAR(A) places members of the unit in extremely demanding and dangerous conditions far beyond that of the average aviator, and requires extraordinary performance by the pilots, crewmembers, and support personnel of the entire Regiment.

To ensure mission success, the 1500 members of the Regiment must be medically fit and protected from both combat and noncombat threats. In addition, soldiers of the Regiment must also trust that the finest in medical care is immediately available if a member of the command is wounded in combat or becomes sick from any number of diseases that soldiers may be exposed to during worldwide deployments.

To medically support a unit with such an exacting mission, the 160th SOAR(A) is authorized separate medical sections at the Regiment Headquarters and each of

Maintaining the healthy Night Stalker.

the three Battalions. Total medical personnel authorized for the Regiment include four physicians/flight surgeons (one Regimental Surgeon and three Battalion Surgeons) and twenty-one 91B combat medics spread among the four separate sections. Because of the limited medical personnel, multitude of missions, and close personal interaction with

all soldiers of the command, the medical personnel of the Regiment must operate as an integrated and cohesive unit to provide comprehensive support to the Regiment.

Physicians assigned as battalion surgeons are captains and are General Medical Officers who have completed medical school and internship. They are graduates of the US Army Flight Surgeon Course, Fort Rucker, AL, and usually have prior experience in another aviation unit as an operational flight surgeon. The Regimental Surgeon is a Major and a flight surgeon, but has completed a residency training in a medical specialty. The current Regimental Surgeon is a Board Certified General Surgeon. All physician bil-

lets require them to be Airborne qualified and certified in both Advanced Trauma Life Support (ATLS) and Advanced Cardiac Life Support (ACLS). Assigned physicians are selected through a similar process as all other officers of the Regiment. They must undergo a stressful assessment process to ensure they will be compatible with the needs of the unit.

Upon completion of initial orientation ("Green Platoon"), Dunker/Heeds training, and Survival, Escape, Resistance, and Evasion training, the physician is mission ready. As opportunities avail themselves, the doctor may attend other schools including Air Assault School, Dive Medical Officer Course/Hyperbaric Medical Officer Course (DMO/HMO), Armed Forces Medical Intelligence Course (AFMIC), and the US Army Tropical Medicine Course. They must maintain current medical licensing and credentialing at their local Army hospital and attend medical conferences to ensure they are up to date on the most current medical information. Physicians can expect to serve the Regiment for two to three years before reassignment either to a residency training program or to advanced military schooling such as the AMEDD Officer Advanced Course or Command and General Staff College.

Like the Regiment's flight surgeons, the Special Operations Aviation Medic is a highly qualified professional. Currently, assignment to the Regiment usually occurs after the soldier has completed training to become a 91B, combat medic, and after he has served as a medic in another unit. The applying medics are screened and if accepted are assigned to the Special Operations Aviation Training Company (SOATC) where they undergo an intensive 28-day train up program to become a

member of the Regiment. Upon completion of this "Green Platoon", the medic then serves a 90 to 180-day rotation in the Regimental Aid Station to become oriented to daily Regimental medical operations and to be directly supervised by the Senior Regimental Medic and physicians to enhance their medical skills. The most junior medics are Basic Mission Qualified (BMQ) when they have completed Emergency Medical Technician-Basic training (EMT-B), attended the Flight Medic Course (FMAC), as well as Airborne school, Basic Life Support (BLS), Pre-hospital Trauma Life Support (PHTLS), advanced tissue laboratory, and Dunker/Heeds training.

A more senior medic is Fully Mission Qualified (FMQ) after he has completed training to become an Emergency Medical Technician-Intermediate (EMT-I) and has completed SERE training, ACLS, AFMIC, and an advanced trauma course for medics. A Lead Medic attains that status only after completion of Emergency Medical Technician-Paramedic (EMT-P) training. All medics undergo military professional development with attendance to Primary Leadership Development Course (PLDC), Basic Noncommissioned Officers Course (BNCOC), and the Advanced Noncommissioned Officers Course (ANCOC) at the appropriate time.

Like the surgeons, the Regiment's medics have opportunities to attend Air Assault School, Dive Medical Technician Course (DMT), SCUBA training, Jumpmaster, Advanced Burn Life Support (ABLS), and do advanced medical cross training with Special Forces and other USASOC units. This training process is all subject to change in the near future. In July, the US Army Special Operations Command (USASOC) opened the Special Operations Medical Training Course

(SOMTC). In this course, all medics including Special Forces 18D, Ranger Regiment 91B, USAF pararescue (PJ), and Seal Team medics will undergo the same initial training for 19 weeks. Upon completion, these medics will be EMT-P and have completed most of the other SOA medic training. After the initial 19-week training each medic will continue in advanced training for their assigned unit, i.e., Special Forces medics will continue with advanced medical training for MOS 18D and SOA medics will attend the Flight Medic Course. Upon assignment, these medics will then be fully trained, but will not be FMQ until they have more operational experience. Medics are expected to serve the Regiment for four to six years after assignment.

The Combat Medical Badge and Expert Field Medical Badge are highly valued in the 160th SOAR(A). The CMB recognizes those medics who have served as a medic in a combat environment, while the EFMB identifies those personnel who have met a highly set standard in field medicine. The awarding of the EFMB is a desire for all medical personnel of the Regiment.

With these highly-trained, skilled, and dedicated soldiers, no medical mission is impossible. In addition to providing Level I and Level II medical care to the Regiment, as well as the units we support in combat and training operations, Regimental medical personnel are also responsible for conducting internal and external Search and Rescue/Combat Search and Rescue (SAR/CSAR) and Medical/Casualty Evacuation (MEDEVAC/CASEVAC)

operations, providing medical support to Forward Area Arming Refueling Point (FAARP and Airborne FAARP) operations, procuring and disseminating worldwide medical intelligence, conducting all medical supply operations, maintaining immunization status and providing immunizations of unit personnel, maintaining all medical records for the unit, assisting in recruiting medical personnel, coordinating medical operations up to the Theater level, providing aviation specific medical support, and conducting an average of 850 aviation physical exams each year. This becomes more challenging

when one realizes the medical sections of the 160th SOAR(A) are the smallest of any special operations unit supporting one of USASOC's largest units.

Medical support for Special Operations Aviation is an exciting and challenging adventure. With new medical technologies now available, even better medical

care can be provided to those soldiers who fly the most advanced rotary-wing aircraft in the world. The dedication and professionalism of the medical personnel of the 160th Special Operations Aviation Regiment (Airborne) set the example for the remainder of the Army. They will always be ready to maintain the health of the Night Stalkers.

NSDQ!

★ ★

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RUSSIAN CLOSE AIR SUPPORT

"While I concede that you have combat superiority in the air, you still have to meet us on the ground. General Dudayev."

— TELEGRAM TO RUSSIAN AIR FORCE CHIEF P. DENEIKIN,
DECEMBER 1994, AFTER CHECHEN AIR FORCE IS DESTROYED ON GROUND.

As of this writing, the Russian Army has been — officially — fighting in Chechnya for the last eighteen months. After the Soviet break-up in 1990, many of the smaller republics followed the path to independence. Under Dzhokar Dudayev the Chechens declared unilateral independence from Moscow. The Kremlin's biggest objections to this revolve around the Baku-Black Sea oil pipe line, which runs through Chechnya's capital Grozny. Around 70-80% of Russia's aviation fuel runs through this line. Thus began a three year Kremlin attempt to unseat Dudayev.

On 25 November, 40 helicopters in Russian markings attacked Grozny's airport. On 30 and 31 November, jets identified by both western and Russian media sources as Su-25s bombed Grozny's airport. Despite this heavy support, the Kremlin-backed anti-Dudayevist militias were defeated. Worse, Russian Army personnel serving as contract soldiers are captured.

Dudayev's men intended to publicly execute them and the media broadcasted

A blow-by-blow account of the last year-and-a-half of fighting.

this threat. The PW's families demand political intervention and the political maneuvering of the last three years came to a head.

The invasion force's fixed wing assets were drawn primarily from the 4th Air Army¹, with two squadrons of Mi-24 Hinds and two of Mi-8 Hips dedicated as well. These were reinforced one flight

of Mi-9 Command and Control ships. As the campaign progressed, losses were made good to maintain the original levels. While the Mi-8 and Mi-26 are reliable workhorses, the Russians recognize that their primary attack helicopter — the Mi-24 Hind — is obsolete². Military Transport Aviation provided Il-76, An-12 and An-22s, with an unknown number of Mi-26 heavy lift helicopters (these were committed while still in their Aeroflot blue-and-white colors).

Ground units crossed into Russia's breakaway republic on 11 December 1994. From the very beginning they had a tough time of it, with small rebel units causing casualties and chaos far beyond what their numbers warranted. President

Dudayev's Chechen Air Force started the war with only 219 aircraft, only 12 of which were combat ready³. With the rebel air force destroyed on the ground within the first 48 hours of fighting and their ADA assets⁴ fairly weak, the Russians have enjoyed total air superiority.

Yet Russian ground units have suffered from a lack of effective close air support. Why?

The Russians picked the worst time of the year to start their war in Chechnya, one third of which is in the Caucasian Mountain chain. Flight operations suffered from the winter weather, since throughout December and January it was typical to have ceilings of 300 meters due to heavy fog, frequently topped off with heavy snow and sleet. Temperatures can rapidly drop to -20° Celsius. An estimated 95% of February 1995 was declared "non-flying days". Furthermore, Grozny and many of the major towns are in the same fog-plagued valley, tucked between two ridge lines.

The Russian Air Force started the campaign with ammunition, POL, provisions and spare parts stocks at 50% of preferred levels. The initial Russian plan was that 65-70% of their rotary wing assets would be used in combat missions, 15% for transport and 5-10% in special missions. In Chechnya, only 17% of their resources went into combat missions; CAS, convoy escort, and just general "hunting" trips.

There are other missions — troops in Grozny could initially only be supplied by air. Mi-26s were bringing in 15-20mt of water, as well as ammunition and replacements. They left with wounded, refugees, and PWs, headed for the dreaded "filtration camps". There are unconfirmed reports that the bodies of 200 Russian KIAs were dumped into a river (presumably the Terek) in order to avoid them

being added to the rising casualty count.

Maintenance was apparently able to keep up with operations, which the Russians attribute to either good organization or the less-than-projected demands. In all likelihood, uncommitted units in Russia were probably stripped to keep those committed to operational area going. It is known that supplies of helmets and flak jackets were so short that the entire logistics system had to be scoured to provide for the squadrons assigned to Chechnya.

Training time has been cut back drastically since 1990. Where once the standard was 100-150 hours, most of the pilots are only getting 40-50 hours (some reports state that this is only an average of 25 hours). For pilots with 10-15 years experience, this might be an inconvenience. Supposedly, 59% of the pilots in Chechnya were Afghan War veterans. But those men are getting out and the younger pilots aren't staying proficient.

The Russian fixed wing units attack high value targets; oil refineries, the rebel tank repair facility at Shali, large buildings. As of 15 March, the Russian Air Force claimed to have destroyed about 180 vehicles (20 tanks, 25 BTRs and over 130 trucks), a POL warehouse, took out seven bridges, suppressed six ZSUs and an artillery battery, destroyed two antenna fields and "many other objectives..."

The Chechens despise the Russian aviators, particularly the bomber pilots. In early January, the rebels beheaded a Kazakh (ethnic Muslim) Su-27 pilot after he ejected. They claim to know the pilots' names ("Samoilov", "Drashchenko", "Mikhailov") and vow to exact revenge on them and their families.

The Russian air force didn't limit itself to enemy targets — incidents of fratricide were all too common, since (in addition to the weather) the rebels were using equipment essentially identical to Federal

troops. In December '94, strike aircraft managed to knock out five lead vehicles in a 104th Airborne Division column. Furthermore, the rebels were not above "dirty tricks". For instance, they would occupy a farm outside of North Grozny airfield to fire on arriving and departing flights. By the time a response was organized, they would be gone — leaving the hapless farmers to take the return fire. They also occasionally managed to break into radio transmissions and guide Russian strike aircraft into fratricide runs onto their own units.

Army sources initially denied using gravity bombs because of their inherent inaccuracy. However, western and Russian media reports note the large number of inaccurate, often indiscriminate bombing runs. The use of Fuel Air Munitions has also been mentioned; but unconfirmed. When the Russian troops were in Grozny, some targets were within +/- 150m of friendly troops, yet Tu-22Ms and Su-25 dropped free fall and illumination bombs from 6-7,000m. The Kremlin also reported that 16 cassette (cluster) bombs were dropped on Grozny's outskirts until their further use was forbidden by the Kremlin.

The Russians claimed that they had limited their helicopter weapons loads to UB-32 non-guided aerial rockets for area targets and AT-6 "Shturm" missiles for point targets.

Air Operations in Chechnya. In addition to A-50 DRLO (Mainstay) AWACS exercising radar control over the entire region, on 21 December 94 two to six MiG-31 or Su-27s begin patrolling the Chechen air border. At that point, the possibility of stray rebel air activity was still anticipated. Despite capturing or cratering known airfields, the Russians knew of some sections of local highways that have been prepared as emergency

runways since high-value weaponry had been smuggled into the country during three months prior to the invasion. By January this CAP had logged 1,500 hours.

On 10 December thirty An-12s land 6,000 troops and their equipment at Mozdak (in Northern Ossetia, 90km NE of Grozny) and the 104th Airborne Division (1,000 men and their equipment) are flown in from Ul'yanosk East airfield using An-124-1000. This operation took only 24 hours.

As the Russians advanced, they made increasing use of air strikes. However, in deference to political pressure about civilian casualties, on 24 December Yeltsin called a halt to Grozny's aerial bombardment⁵. On 29 December the weather cleared enough to use high-precision weaponry and by 3 January, political concerns were shelved and strikes against Grozny were renewed.

As the Russians tightened their ring around the capital on 30 December, the rebels made an unconfirmed claim of knocking out seven Russian warplanes and 14 helicopters during the battle. Grachev says Air Force jets were firing laser-guided bombs, theoretically more accurate than conventional bombs. Two bridges and Dudayev's personal helicopter were destroyed.

The success of Russian air assault operations varied. In the New Year's Eve day battle for Grozny, paratroops should have been landed along the advance routes of the armored columns. Due to phenomenally poor coordination, Russian paratroops learned of the assault only when they heard gunfire. Pavlov claims that no requests for combat flights came through that day. Afterwards, it was determined that the city was too unsuitable to airmobile operations — too many sloped roofs, too many balconies.

The Presidential palace — keystone of the rebel defense — was targeted with HE and concrete-penetrating bombs. At 14:00 hrs, 18 January the palace was rocked by two bombs or rockets, far larger than anything else the rebels had heard used to date. These were later reported as half-ton bombs armed with delayed-action fuses. 20 rebels are killed, as well as 38 of the 100 Russian PWs.

The Chechens claim to have downed their first Su-25 with AAA fire on 4 February, the Russians countering the first was hit by a ZSU-23-4 near Chechen-Aul on 4 April. The Russians admit that, as of 17 March, 14 aircraft had been hit by rebel AA fire. All were declared repairable.

On 30 April, an Mi-8 was hit by machinegun fire but limped to friendly Dagestan. On 5 May, a second Su-25 was confirmed downed by a shoulder-launched missile near Sterzhan-Yurt and the pilot KIA'd.

By the beginning of summer, the rebels had been pushed off of the plains and into the Caucasian mountains but rebel units continued to take their toll. On 24 May, an Mi-24 hit during a flight to Chechen-Aul and three crewmen are KIA'd. In the early evening hours of 4 June, an Mi-24 is shot down and the two crewmen KIA'd around Nozhai-Yurt (70 km SE of Grozny). On 12 June an Mi-8 making a resupply run near Shatoi was shot up by a heavy machinegun, making a very low altitude dead-stick landing. The crew survived.

Apparently, at least the airborne units learned from their mistakes. On 8 June 95, the fortified mountain village of Vedano was taken in an air assault operation (details of which are still sketchy). Russian spokesmen claimed that they took no casualties, as the rebels were completely surprised.

Throughout late summer, flight operations were apparently limited to resupply and casevac missions, whilst negotiators attempted to reach an agreement. By October the peace talks had broken down and the litany of casualties continued into the war's second winter. On 7 December, while escorting an Mi-8 loaded with casevacs, an Mi-24 crashed 20 km from Nazran (Ingushetia). All four crewmen aboard were KIA.

On 9 January 1996, rebels attack the town of Vizlyar in neighboring Dagestan. On the 10th the rebels talk their way out of town, holding an estimated 120 hostages as a human shield. While they are enroute to Chechnya, a helicopter gunship rocketed a critical bridge on the convoy's route. The rebels, trapped in the town of Pervomayskaya, dug in and waited.

Over the next few days, the Russians used their air power as a psychological warfare tool; dropping flares throughout the night and doing low-level flybys at supersonic levels.

Negotiations broke down and on the 15th, the Russians attacked. A dozen Mi-24V and P Hinds make 30 minute strafing runs, firing machinecannon bursts and two to three rocket salvos. However, the Federal troops committed to this latest crises were drawn from across Russia. Due to incompatible communications systems among different organizations (Interior Ministry, Army, etc.), there were numerous reports of the Hinds hitting friendly targets.

In a twist worthy of George Orwell and his notion of double-speak, Yeltsin declares a cessation of military operations on 31 March 1996. Within 24 hours Russian units are vigorously attacking rebel positions.

On 4 April an Su-25 on a recon mission near Goiskoye (20 m/30km SE of Grozny) was shot down, allegedly with a

Stinger SAM. The pilot ejects safely. On 15 May — the day that Russian troops were to begin pulling out of Chechnya — an Mi-8 was shot down near Vinogradnoye (12 m N Gorzny). Three crewmen and a soldier accompanying the cargo are KIA. On 5 May, at 11:00 hrs, the rebels down a reconnaissance Su-25 near Mairtup⁶. Both pilots are KIA. The Russians admit that this was the fifth fixed-wing aircraft to have been lost in the war and the fighting in Chechnya continues...

Lessons Learned the Hard Way. The war in Chechnya has obviously been a drain on Russian resources; on men, machines and war supplies. The estimated 160,000 mt of aviation fuel consumed by late April had to be taken from the reserves of uncommitted units.

Despite the munitions and planes consumed in the war, Russian Public TV reports that throughout 1995 the Russian Air Force didn't buy a single plane, despite forecasts that they would need 200-300 just to maintain parity. The war has retaught the Russians many combat necessities; target identification, respect for ground AAA fire and better coordination with ground units.

Despite the best efforts of the 40 Air Controllers attached to the combat units, helicopters flying Air Support missions in Chechnya were often forced to hunt for their own targets.

The higher ranks in the Russian Army are now clamoring for delivery of the Ka-50 "Black Shark" (only two of which are currently in service), as well as the BO-MAN⁷. The Russians recognize that they need to enhance their target designation capabilities with higher tech equipment.

On 1 February 1996, Presidential Chief of Staff Nikolai Yegorov noted that the Russian Air Force was the linchpin of their defense and has promised to revitalize it, saying that the \$6.6 billion in

foreign aircraft contracts was proof that the impetus is there to carry out the promised rebuilding.

Ten days later, GEN Petr Deinekin, CinC of the Russian Air Force, told that branch's military council that aviation was in a critical state; fourth generation aircraft make up only 15% of the force total, and financial constraints had limited fuel purchases so that only one-third of the pilots were combat ready.

On March 4th, while visiting Grozny, Defense Minister Pavel Grachev told members of a unit that the army has decided to buy 20 Mi-24 gunships, 10 Mi-26 tranports and 6 Mi-26 fuelers for use in the Chechen theater. The 36 aircraft would be purchased from Rosvertol, in Rostov-no-Donu. Not a single helicopter was purchased in 1995.

★ ★

1LT Geibel is an M1 Tank Platoon Leader, 5/17th, 42ID, NJARNG.

FOOTNOTES

¹Reinforced w. recon, assault, bomber and long range aviation subunits. This Gruppirovka contained an unknown number of Su-17s, Su-24s, Su-25s, Su-27s, MiG-31s and Tu-22M3s.

²Many Hinds in Chechnya were 15-years-old or more. A large percentage remained grounded when they were desperately needed by front-line troops. Those that could fly did an estimated five or six missions a day, average duration 40-45 minutes, particularly as the campaign progressed into the mountains.

The Hinds were limited to visibility better than 1,500m so pilots could visually ID the targets. The majority lacked thermal suppression systems for their exhausts and were not fitted with the latest ammunition storage bins. As such,

the "kamikaze" pilots felt their machines were 50% combat effective.

Flights of Mi-24s usually total four helicopters, two flying high and two low.

³The total destruction of the rebel air force on the ground was reminiscent of the opening days of Nazi Germany's invasion of Poland in 1939.

On 28 November 94, two unmarked cargo planes land at one of Dudayev's airfields with a last delivery of arms and ammunition. Hours later, the Russian Air Force began their raids on the rebel bases. Ancient Tu-134 airliners were also targeted, so that mercenaries couldn't be flown in.

According to Russian sources, there were 39 L-39s, 80 L-29s, three MiG-17s, two MiG-15UTIs, six An-2 transports, and two Mi-8s at Kalinovskiy Military Aviation Academy at Armavir. At Khan-kala airfield there were 72 L-39s and 69 L-29s. All were equipped with hardpoints for carrying two UB-16 rocket pods.

While obviously not an air superiority force, these planes could have provided a fair level of close air support. Unfortunately, there were only 41 trained pilots for 251 aircraft. Another 100 were in training at the KMAA at Armavir, with 40 more in Turkey.

⁴The rebel airfield Air Defense Forces included 10 SA-13 (Strela-10s), 23 AAA guns and seven SA-16s (Igla-1 MANPADS). Field units had SA-16 (Strela-2 MANPADS), RPG-7s (deadly with their self-destruct feature at 900m) and machineguns. Redel AD systems were reportedly rendered less than effective due to the Russian aircraft IFF and some units reported that they had run out of ammunition on 21 Dec. 94. A Kremlin report from Defense Minister Grachev cited 150 rebel AAA weapons deployed around

Grozny.

There is speculation that the rebels have access to Stinger shoulder launched AA missiles, supplied by sympathetic Islamic movements.

⁵The civilian casualty count from Grozny was estimated at 18,700 dead, with 80-85% of them ethnic Russians.

⁶Even as late as 24 May 96, the Kremlin will only admit to losing four aircraft and 18 helicopters.

⁷Forward Air Controller's Combat Vehicle. The Kremlin would like to have one BOMAN per maneuver battalion.

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ACCENTUATE THE POSITIVE

Attitude is everything — in the business world, the sports arena, and in your personal relations. It is profoundly important in your career transition. Without a positive approach to the very difficult venture of changing careers, you might not arrive at the right place to retire or the right job.

According to The American Heritage Dictionary, "Attitude is a state of mind or feeling with regard to some matter; disposition." As you begin to think about and plan for changing your career, your state of mind becomes important not only to you and your family but to your active duty co-workers as well. They'll be listening to your every word about your current assignment and about your proposed career plans because it's only a matter of time before they'll be in the same situation.

All too often, people leaving the service tend to say negative things about their respective service, current job, or immediate supervisor — particularly if they have been involuntarily separated

*Never more
important
than in the
job search
process.*

under the services' downsizing initiatives. But those who remain in the service want to feel good about themselves and their service to our nation, and they are uncomfortable when others "bad-mouth" what they enjoy. Potential employers do not want to hear your negative feelings about military service either, primarily because they will think you bring a

negative attitude to their organization. Most people can't help you with your career transition anxieties and possible frustrations, but even if they could, they might not be so inclined if you are constantly complaining.

If, on the other hand, you are upbeat and positive about life, others are more inclined to seek your friendship and counsel and to offer help when you need it. Just as important, you'll succeed at your tasks. If you believe you can find a job, make the necessary preparations, including networking, and then throw your full enthusiasm and energy into the effort, you will be successful.

To a prospective employer, enthusiasm can be more important than intelligence.

Very few endeavors in the business world are singular actions; they are integrated into a larger system involving other people — usually many other people. Goals are achieved through teamwork. If you cannot lead the team, follow the team, or in some way contribute to the team effort, you probably won't be selected to be part of an organization.

An employer wants to be satisfied that you, as an employee, can do the work, will do the work, and most importantly, "will fit on the company team."

That's not to say maintaining a positive attitude is easy. The most important, yet most difficult time, to maintain a positive attitude is after receiving your first rejection — and it will happen sometime during your job search. The key to handling rejection is not to take it personally. It is, in fact, part of the job search process. And anyone looking for a job needs to accept the rejection, learn from it, and continue the job search.

A positive note of thanks is a tip worth remembering in the job search process. After an interview, drop members of the interview team a personal note of thanks, even if you were rejected for a job. Members of an interview team will be more likely to remember you positively for your note. They might reconsider you for the job, or they may consider you for another position within their organization where you may fit better. Never underestimate the power of a bright and cheerful attitude. The quality of your future depends on it.

★ ★

COL Crews is the Deputy Director, TRQA Officer Placement Service (TOPS), Alexandria, VA. Reprinted with permission of The Retired Officers Association, 201 N. Washington Street, Alexandria, VA 22314. © 1996.

INTEL

(Continued from Page 39)

while short, reinforced winter and mountain movement techniques as well as validating the survival packs and equipment carried by the crew members.

The after action review of the SERE movement exercise further refined the unit's evasion plan of action. Having the time to create a very thorough yet realistic evasion plan of action is a luxury that must be capitalized on whenever possible; preferably prior to entry in theater. Additionally, frequent review and refinement of the evasion plan of action is necessary once in theater. The SERE portion of the training concluded with a group briefing of the evasion plan of action and a review of the theater specific information.

The Joint Service SERE agency can provide general SERE information germane to almost any theater as well as specific information and intelligence for almost any contingency or operation. This is critical information that, when sought after, may save air crew lives at one time or another.

Conclusion. The incorporation of a detailed intelligence training goals to a unit's training calendar is critical to properly prepare the pilots and air crews. Given the pace of world events, most operations will not allow for such extensive preparation as did Joint Endeavor. This only emphasizes the fact that the intelligence section must assist the operations officers and commanders in developing a comprehensive training plan. Thus, when faced with a deployment order—the pilots must only narrow their focus and "peak" for the operation at hand.

★ ★

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BRIGHT STAR '95

The year 1995 was an extremely arduous, challenging, and rewarding period for the 1st Battalion 111th Aviation Regiment, Florida Army National Guard. The Battalion conduct a rotation at the Joint Readiness Training Center (JRTC), Ft. Polk, LA in May and June 1995 while continuing to plan for the scheduled movement to Egypt in support of the 24th Infantry Division's Bright Star '95 Exercise. Elements of the battalion were also called to State Active Duty for three hurricanes. In fact, the unit's UH-60 aircraft flew missions as part of the Hurricane Opal relief effort the day prior to being loaded aboard USAF C-5A Galaxies for the flight to Egypt.

The planning for Bright Star culminated in September with the deployment of the advance party to Egypt. That month the Battalion also convoyed fifty-three pieces of rolling stock to the port of Savannah for sea movement to Egypt. In mid-October two C-5A Galaxy sorties deployed eight AH-64s, two UH-60s, associated maintenance equipment, and sixty-two personnel to Cairo West Egyptian Air

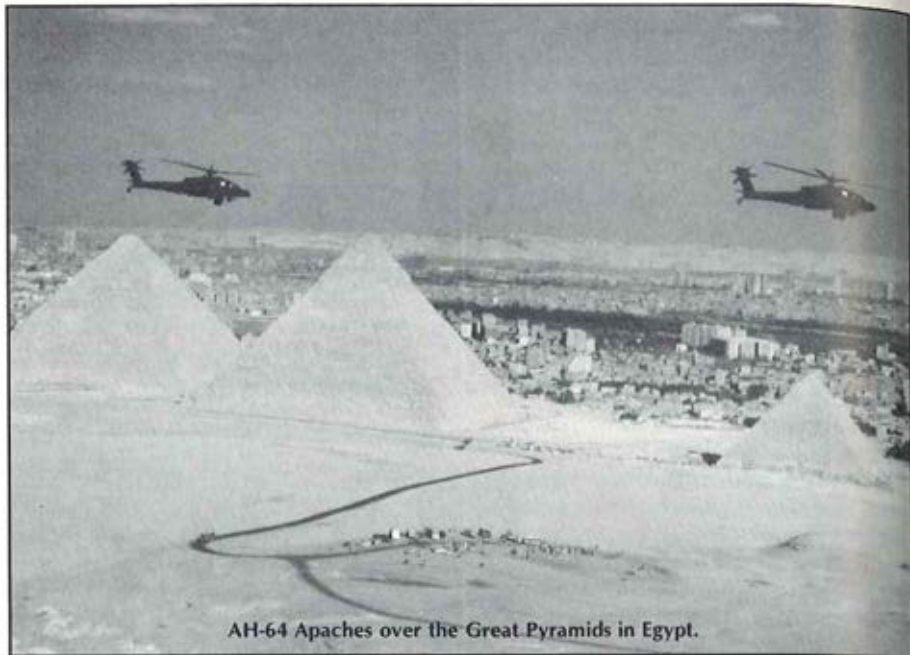
*The 1995
Army National
Guard
Aviation Unit
of the
Year
reports.*

Force Base (EAFB). The Battalion's main body followed in early November via chartered aircraft.

The OCONUS training consisted of two phases. The first was affiliation training with the Egyptian Air Force's (EAF) AH-64 Wing based approximately 60 NM northeast of Cairo near the Suez Canal at Abu Hammad EAFB.

Another partner in the affiliation training was the United Arab Emirates Air Force's AH-64 Apache Squadron that had deployed to Egypt via giant Russian IL-76 transports. This phase consisted of three weeks of classroom and tactical flight training. Academic subjects included FARP operations, company mission planning cells, deep attacks, call for fire/JAAT, and airspace safety. Flight operations included hot-refuel operations, mission rehearsals, and deep attack drills.

A Coalition Apache Battalion was formed consisting of one U.S. AH-64 Company and one company sized element each from Egypt and the UAE. Operating under the Command and Control of the 1-111th, the coalition battalion planned, rehearsed and executed deep attack mis-



AH-64 Apaches over the Great Pyramids in Egypt.

sions into training areas overlooking the Red Sea and far into the Sinai peninsula. These missions were conducted in preparation for the actual Bright Star FTX to be held in mid-November. During this same time period the 1-111th conducted a CALFEX and Hellfire launches with the 24th Infantry Division prior to the FTX.

The second phase consisted of the actual Bright Star FTX. The 1-111th and its affiliate Arab Apache units moved to Burg el-Arab EAFB, near Alexandria on the Mediterranean Sea, in preparation to support the 24th ID. Two deep attacks on consecutive days were executed by the coalition attack battalion which was joined by French Army Gazelles OPCON to the 1-111th. The 18 AH-64 Apaches and 6 French Gazelles executed the deep attacks flawlessly, hitting the Cross-FLOT and target engagement times according to the battle plan. Each deep attack consisted of

two engagement areas with four battle positions each in conjunction with flank screens. The Battalion commander orchestrated these maneuvers from the command and control UH-60 operating within the command and control Restricted Operating Zone (ROZ).

Force Protection and safety were paramount in all Bright Star 95 operations, and as a result, no Class A, B, or C accidents occurred. The 1-111th flew 172 AH-64 and 62 UH-60 flight hours while maintaining an Operational Readiness rate of 88 percent for AH-64s and 74 percent for UH-60s in the desert conditions of Egypt. At the conclusion of the FTX, the battalion redeployed its vehicles to the port of Alexandria for sealift, and its aircraft and personnel back to Cairo West for airlift back to Florida in time for Thanksgiving.

Bright Star '95 provided many members

of the 1-111th the opportunity to renew friendships with both Egyptian and UAE Apache pilots they had trained with previously during AH-64 Aviator and IP Qualification Courses at Ft. Rucker. All FLARNG personnel had the opportunity to visit numerous historic sites and met many proud and hardworking Egyptians. This challenging and productive year

would not have been possible without the dedication, motivation, and professionalism of the citizen-soldiers of the 1st Battalion, 111th Aviation Regiment. They are truly "Air Warriors".

★ ★

CW5 Bording is the Aviation Safety Officer, 1st Battalion, 111th Aviation Regiment, FLARNG.

Air Traffic Services in Exercise BRIGHT STAR 95

MAJ Jack Maher, ATC Officer, 29th ATS Group, MDARNG -
SGM Earle Prior, Operations NCO, 29th ATS Group, MDARNG

(Cairo West Airbase, Egypt — December, 1995) The wind was blowing and fine sand penetrated everything in CENTAF's Air Operations Center (AOC) — including the clothing and equipment of the Army liaison team from the 29th ATS Group, MDARNG. The morning rush of flight plans coming in had started. There were only a couple of hours to perform the initial processing of up to 120 flight plans received each day, and deliver them to the Egyptian airspace authorities before permission to fly in Egyptian airspace is granted.

In its many deployments the 29th ATS Group has learned to be flexible. BRIGHT STAR 95 was no exception. The first LNO team was on the ground early during the deployment phase of the exercise and remained until all flight operations in the maneuver box had ended. Army aviation was operating several weeks before the AOC was operational. The two man team established liaison with the Joint Task Force (JTF) Headquarters, ARCENT and with Egyptian Air Traffic Control and Air Defense, while continuing to manage the maneuver airspace and flight route structure for use in the exercise.

The host nation liaison function was a vital ingredient, and the success in this area allowed our role to expand to assisting our sister services, as well as the British, French and UAE. This worked well in the elimination of redundant functionality and allowed the team to serve as the one-stop required for joint and combined rotary wing ATS requirements. The rapport the team established with Egyptian authorities was excellent. The AOC director credited this working relationship as a major factor in keeping up the OPTEMPO for all joint and combined flight operations throughout the exercise.

While normally aligned with ARCENT, the 29th ATS Group has performed missions with USAREUR and Eighth Army, a very full plate for a National Guard unit. On average, the 29th ATS participates in a major exercise or evaluation every other month. In addition to BRIGHT STAR, we have deployed a team to Korea to perform an EXEVAL of the 164th ATS Group, to Florida to support CENTCOM's exercise INTERNAL LOOK, and is preparing to send additional LNO teams back to Korea for ULCHI FOCUS LENS.

EXTERNAL FUEL TANKS FOR FOR HELICOPTERS

In many U.S. Army units, the tactical use of external extended range fuel tanks on AH-64 and UH-60 helicopters has become the rule as opposed to the exception. While these tanks were intended for temporary use to ferry the aircraft long distances, the lure of extended aircraft range and endurance has prompted many commanders to adopt the use of external fuel tanks as Standard Operating Procedure (SOP). Through an analysis of mission, safety, and mechanical implications, this article will attempt to highlight the positive aspects and surface some of the negative aspects of helicopter external tank use. Only by considering both the positive and negative aspects of external tank use can an aviation commander make an informed decision as to the appropriate use of external tanks on his unit's aircraft.

Mission Implications. The well-known positive aspects of external tank use are increased range, endurance, and mission flexibility. By using external tanks, the air assault UH-60 can make more and longer sorties; the air escort AH-64 can accom-

*Dispelling
some of the
myths behind
the use of
external tanks
in the tactical
situation.*

pany the air-assault aircraft through the entire airmobile mission without need for refuel; the command and control UH-60 can orbit on station longer; the close attack AH-64 can remain in the battle position longer; the deep attack AH-64 can strike at targets deeper into enemy territory; and the cavalry AH-64 can recon more territory or perform lengthier security operations. All of these attributes are highly desirable from the point of view of commanders, planners, and operators. The mission flexibility external tanks provide to the aviation commander is a potent combat multiplier that cannot be discounted.

But what are the penalties that come with the prize? As with all things, there is no free lunch. The negative mission aspects of external tank use are restricted/reduced firepower, restricted Field of View (FOV), and reduced performance. On the AH-64A, the use of a single external fuel tank eliminates the capability to carry four Hellfire missiles or 38 rockets. While these losses comprise less than one quarter of the aircraft's firepower, once

an attack engagement begins, the ammunition generally goes faster than the fuel. Downward FOV is restricted on the installed tank side and, while minor, it can be important during slope and/or battle position operations.

Use of the external fuel tanks on the UH-60 restricts the door gunner's field of fire in nearly all azimuths, diminishing the crew's capability to defend the aircraft and provide suppressive fire during insertions/extractions. Similarly, the tanks obscure the crew chief/door gunner's FOV during most air assault operations. The restricted cockpit FOV of the UH-60 places increased importance on the participation of the other crewmembers to clear the aircraft and spot potential hazards especially during night vision goggle operations.

The installation of external fuel tanks on helicopters decreases aircraft performance. In general, external fuel tanks increase gross weight, increase aircraft drag, may increase sideslip, and increase required ESHP. The cumulative effect of these factors can significantly reduce helicopter performance and depending on the mission requirements reduce mission effectiveness. It can be as plain and simple as the 1,000+ lb weight differential between a full fuel tank and a loaded Hellfire rack preventing an AH-64 from hovering out of ground effect on a high/hot day. Or it can be more complex such as higher drag, increased sideslip, and higher torque settings combining to negate your careful mission fuel planning for a particularly long mission. The bottom line is that external fuel tanks will decrease your range and endurance per gallon of fuel, decrease your excess aircraft power available, and reduce your maximum airspeed as compared to a

similarly equipped "clean" aircraft.

Safety Implications. There are few, if any, positive safety aspects associated with operating helicopters with external fuel tanks. No one could argue that the additional fuel carrying capability of external tanks would reduce the number of times an aircraft would have to complete potentially hazardous Forward Arming and Refueling Points (FARPs). This may be true depending on the mission and unit SOP.

However, the negative safety aspects associated with operating external fuel tanks are numerous and potentially hazardous. Topping the list is the fact that at least one Army UH-60 Class A accident is directly related to the operational use of external fuel tanks. It is unknown to this author how many other accidents have had fuel tanks as a contributing factor.

Second, is the fact that a non-crashworthy, temporary tank designed and procured only for ferry use has become a permanent fixture on many aircraft. The Army spent a significant amount of money to develop and equip helicopters with crashworthy fuel cells. These cells are designed to protect the crews and the aircraft capital investment from post-crash fires. The effectiveness of these cells is being reduced or eliminated by allowing routine use of non-crashworthy external tanks that can and do rupture during a crash sequence. A Recent AH-64A accident, reported in U.S. Army Safety Center's *FlightFax* newsletter, described the crew's concern of a post-crash fire due to a ruptured and leaking external fuel tank. Many people dispel this as a safety issue because the crew can jettison the external fuel tanks prior to impact; however, this is not always accomplished (as evidenced by the *FlightFax* article) due to lack of time prior to impact, failure of the

explosive cartridges/jettison system, fear of repercussions from damaging equipment, or just plain forgetting to do it in the heat of dealing with the emergency.

Third, the external fuel tank poses an explosive hazard to the aircraft during combat missions. While aviation fuels are not extremely volatile, they are nevertheless combustible when hit by various types of enemy munitions. The tank becomes more volatile as it empties of fuel, leaving fuel vapor behind. Currently, the nitrogen inerting systems installed on many of our aircraft do not interface with external tanks. Again, it is argued that this hazard is lessened by the ability to jettison the tanks if the aircraft anticipates/encounters hostile fire or after they are empty. However, I would counter that argument with the assertion that jettisoning empty tanks or jettisoning tanks prior to encountering hostile fire is currently not trained as SOP in most units, it has not happened as SOP in past combat operations, and in all likelihood it will not happen in the future (because of the cost of the tanks) until a multi-million dollar aircraft is lost due to an explosion. Historically, Air Force and Navy pilots jettison fuel tanks prior to encountering air or ground fire. I wonder why?

Fourth, the aircraft may display unpredictable final attitudes on slopes, may exceed slope roll limits on very minor slopes, and aircraft brakes may not be able to hold a fully loaded aircraft in place on up or down hill slopes. Recent slope testing conducted on an AH-64A with full ammo, internal fuel, and a full external fuel tank documented extremely unpredictable roll attitudes. Aircraft roll attitude varied from no cockpit roll on a 4° slope with the tank on the uphill side to 14° of cockpit roll on a 5.5° slope with the tank on the downhill side. Additionally, the aircraft brakes re-

leased on down slopes of as little as 5° due to the increase in gross weight caused by the external tanks. The brakes were fully functional and serviced in accordance with the maintenance manual.

Finally, the pilots will have less of a chance to successfully execute a recovery from a single-engine failure at terrain flight altitudes when the tanks are not or can not be jettisoned. The higher gross weight associated with operating a helicopter with external fuel tanks requires higher torque settings in all modes of flight. These higher torque settings will affect the time that the pilot has to react to a single engine emergency prior to over-torquing the aircraft due to torque doubling. Additionally, the pilot will have to pull maximum contingency torque in order to attain single-engine airspeed and avoid hitting the ground. All of these actions will have to occur in less time than they would in a similarly loaded "clean" aircraft.

Mechanical Implications. As with safety, the major mechanical implications of using external fuel tanks on helicopters are negative. The aircraft using external fuel tanks typically exhibit higher levels of vibration than clean aircraft in all modes of flight. These vibrations are especially pronounced when the load factor is increased above 1g. Recent AH-64A testing documented increased vibration during all external tank flights. Vibration during maneuvering flight increased to a level where cockpit instruments were unreadable at 2g. Vibrations associated with blade stall were occurring at angles of bank as low as 20°. These increased vibration levels can only accelerate long term wear and tear and should cause concern in the areas of main and tail rotor stress, blade cracking, strap pack stress, airframe stress, wing fatigue/cracking, strut life, and tire life.

The external tank use is likely contributing
(FUEL TANKS — continued on p. 62)

OUT OF CONTROL

"We trained hard — but it seemed that every time we were beginning to form up into teams we would be reorganized. I was to learn later in life that we tend to meet any situation by reorganization; and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization." So wrote Petronius in 256 BC, such has been the recent legacy of Army Air Traffic Control (ATC).

The genesis of Army ATC can be traced back to a 1956 Continental Army Command (CONARC) recommendation to develop, equip, train, and field an ATC organization. Army aviation operating detachments (AAOD) were established in support of the CONARC recommendation and subsequently assigned the mission to "provide assistance to Army aviation elements in the combat and communication zones to enable these elements to operate at night and in adverse weather conditions."

The first AAOD (6th Aviation Operating Detachment (Army)) was activated at Fort Bragg on 4 September 1957. The detachment consisted of four officers, two warrant officers, and 26 enlisted men.

A *historical perspective of Army Air Traffic Control.*

The operating elements of the detachment were the flight operations section, air traffic control team, approach control team, and airfield service section. The 6th AAOD underwent extensive unit training starting in December of 1957 and was judged capable of performing its assigned mission by May 1958.

The second AAOD (70th AAOD) was similarly established at Ft. Benning, GA and was capable of performing its support mission in August of 1958. CONARC directed that one AAOD would be assigned per corps, army, and major Army airfield in the communications zone; additional AAODs were activated at the rate of one in each quarter during fiscal years 1959 and 1960 until force structure requirements were met.

Army organizational and operational air traffic regulation doctrine continued to develop and mature from 1959-1965. It is interesting to note a DA study was conducted in the early 1960s attempting to resolve who should have proponentcy for Army ATC—the Signal Corps or Army Aviation. The Signal Corps had been assigned responsibility in 1957 for ATC equipment requirements, procurement,

and maintenance; the ATC soldiers worked in support of and for the aviation community. In 1962, the decision was made to leave ATC in the aviation arena because "the mission of the system, which is to regulate the flight of aircraft, is a function of Army aviation." The Signal Corps retained responsibility for the equipment side of the house. Since aviation was not a branch in 1962, air traffic controllers wore unassigned branch insignia.

The Vietnam era validated the wisdom in CONARC's decision to establish Army ATC. By the late 1960s the AAODs had become Aviation Support Detachments (ASD) but were still performing the same ATC support mission the AAODs were originally chartered to accomplish. The ASDs in Vietnam were all assigned to the 164th Aviation Group (Long Bien) but were stationed throughout the Republic. They performed typical airfield and air traffic support functions. Most notable, at least to the aviator, were the conduct of flight following and ground controlled approach (GCA) operations.

One must remember that flight operations during the Vietnam War were often conducted without the benefit of the Army aviator possessing an instrument ticket—this was the era of the "tactical" instrument ticket. Many an aviator, possessing limited instrument flight capabilities, can attest to the warfighting benefits of having ATC on the battlefield especially during adverse weather.

ATC "existed" during the late 1960s and early 70s, but the foundation, infrastructure and readiness posture of the ATC community was in decline. The problems were evident—there was no proponent, no "Big Daddy" for the ATC community. And as often happens when faced with "consensus" management, none stepped forward to halt the trend. It

was obvious that belonging to a branch was necessary to ensure survival.

DA recognized the problem and attempted to partially reverse the trend by establishing the U.S. Army Aeronautical Services Office (USAASO) in November 1967. USAASO was established to function as the DA executive agent and centralized manager for airspace and air traffic regulation, ATC procedures, related ground support facilities/systems, and flight information. In May 1972, DA via USAASO, tasked the U.S. Army Strategic Communications Command (USA-STRATCOM/Signal Corps) to conduct a study and develop a systems approach to the acquisition, operation, and maintenance of ATC systems and facilities. The results of the study determined that centralized management of ATC and branch assignment (vice affiliation) were imperatives. DA subsequently assigned (1973) ATC proponentcy to USASTRATCOM. The U.S. Army Air Traffic Control Activity (USAATCA) was established to effect the management of the proponentcy function for USASTRATCOM. The Army controller was finally assigned to a branch and was able to trade in their unassigned branch insignia for the Signal Corps insignia.

Army ATC prospered during the next 12 years (1973-1985). The Signal Corps readily adopted ATC equipment as communication systems and had the requisite skills and acumen necessary to efficiently and effectively modernize the force.

Aviation became a separate branch in 1983. The branch implementation plan identified ATC soldiers/equipment/units as part of the branch. The Vice Chief of Staff of the Army (VCSA) directed in 1985 a transfer plan be developed to move ATC proponentcy from the Signal Branch to the Aviation Branch. The VCSA approved the transfer plan in

1986. The plan stated that ATC was an aviation mission and directed the USAVNC to assume responsibility for ATC proponent functions (concepts, doctrine, tactics, techniques, procedures, organizational designs, materiel requirements, training programs, training support, manpower requirements, education requirements, and aeronautical service functions). The plan also directed that within the USAVNC, a director of ATC be responsible for proponent functions and be designated as a field operating activity (FOA) of DA DCSOPS. The USAATCA organization was transferred from the Signal Corps and was tasked to continue its proponent function and serve as the director of ATC at Ft. Rucker (USAATCA was never designated as an FOA).

Army ATC has now been a member of the Aviation Branch for ten years (1986-1996). Frankly, due to a plethora of reasons, the ATC community has fallen into disarray once again. Shortly after MG Adams became CG of the USAVNC, he forwarded a request to ADCSOPS-FD for a Department of the Army study of the Army ATC mission area. MG Adams' concerns, as addressed in his 17 January 1995 memorandum to ADCSOPS-FD, were that "the 1986 ATC Transfer Plan was never fully implemented and, as a result, the skills and services ATC brings to the Army are rapidly eroding to the point of impacting readiness and safety." ADCSOPS-FD adopted the request and an Army-wide ATC study was initiated and is on-going.

The history lesson is over. What does the future hold? Is the past the prologue for the future or is the ATC community's future more in line with the William Faulkner quote of "the past isn't dead, it isn't even past."?

It is not for me to speculate. The DA ATC study will answer the philosophical

questions. I am, however, continually drawn to a wonderfully written and eloquent 1985 message from LTG Paige (CG, USAISC—the owner of ATC at the time of the transfer) to all concerned. LTG Paige stated that "I have serious concerns regarding the proposal to return Army ATC to the state of mass disorder and disarray that caused it to be realigned under the central banner of the predecessors of this command (USASTRATCOM)."

LTG Paige was prophetic. The negative trends within the ATC community have to be, once again, reversed. If not, the Army will find itself "out of control"—and this we can not afford.

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LTG Stuck is the Director, U.S. Army Air Traffic Control Activity, USAVNC, Ft. Rucker, AL.

ATC AWARDS NOMINATIONS OPEN

Nominations are open for the **AAAA Air Traffic Control Awards**. Sponsored by AAAA, these awards will be presented at the January 1997 AAAA Aviation Center Chapter Annual Awards Banquet at Ft. Rucker, AL.

Awards will be made to: The Army Aviation ATC Manager of the Year; Army Aviation ATC Controller of the Year; Army Aviation ATC Facility of the Year; Army Aviation ATC Platoon of the Year; and the Army Aviation ATC Maintenance Technician of the Year. Suspense for all nominations is 30 September 1996. Contact the AAAA National Office at (203) 226-8184 for more details.

A²C² — "GUARDIAN STYLE"

How the LNO helps synchronize combat power in ROK.

The Army's warfighting doctrine exploits the use of all weapons, arms, and services fighting in the same battlespace, encompassing deep, close, and rear operations. The ability to maneuver allows the Ground Component Commander (GCC) to place the enemy at a disadvantage through the flexible application of combat power. The third dimension of the battlespace enhances maneuver. Intensive coordination, however, is necessary to provide all users of the airspace (aviation, military intelligence, field artillery, air defense, etc) the maximum flexibility in the use of the airspace. This challenge to integrate, manage, and synchronize the users of the airspace is the job of Army Airspace Command and Control (A²C²).

There is no doubt that A²C² is perhaps the most difficult of all synchronization challenges, and nowhere is that a bigger challenge than on the Korean peninsula. There is not another area where the enormous amount of combined forces operate on a land mass less than 150 miles wide. The Republic of Korea will

provide the majority of soldiers and weapons systems involved in any conflict on the peninsula. This adds to the challenge of deconflicting the limited amount of airspace available to the maneuver commander for operations. After action reports from Somalia, Haiti, and now, Bosnia, clearly indicate the difficult task which faces A²C² personnel.

The GUARDIANS of the 164th Air Traffic Services (ATS) Group meet this challenge head-on. An extensive liaison (LNO) network exists to coordinate this theater's complex airspace. There are eight dedicated LNO teams working in conjunction with three flight coordination centers (FCC) whose primary mission is to deconflict airspace requirements below the coordinating altitude (CA) and synchronize requirements above the CA. These LNO teams form the core of the A²C² elements at the three ROK field armies, the 2nd Infantry Division, the Combined Aviation Force (CAF), and Flight Operations Center-Korea (FOC-K). Additionally, two teams interface with the Air Component Command through the

Battlefield Coordination Element (BCE) and Master Control and Reporting Center (MCRC) at Osan. The placement of these teams at the appropriate level headquarters is critical to synchronizing airspace requirements, thus giving the GCC the maximum flexibility in the application of his fires and maneuver.

Emerging A²C² doctrine identifies the need for formal A²C² elements to be established at each echelon from Brigade to higher. Current MTOEs do not allow for this. Here in Korea, many of the A²C² elements are composed solely of ATS LNOs versus the appropriate battlefield operating system representative mix. In some cases, there are no A²C² cells, such as at the ROK corps HQs. To answer the need for A²C² expertise, and as identified earlier, the nineteen ATS LNOs are placed selectively for maximum utilization of their skills and abilities. There is an intensive training commitment for these LNOs and the three FCC teams. Additionally, the Group has been aggressively pursuing automated equipment to enhance their efforts.

Of the nineteen LNOs, eleven are "taken out of hide." A significant drain on the tactical units, but necessary if A²C² is to be executed properly. These LNOs are some of our most experienced senior NCOs and officers. We also add a Korean speaking soldier to those LNO teams which support the ROK field armies and the MCRC. These Korean Augmentee to the U.S. Army (KATUSA) provide invaluable service in our combined operations. Aside from their communication contributions, these KATUSAs provide continuity and stability to our LNO teams. The major payoff is that these KATUSAs are well versed on A²C² doctrine and operational requirements. They are key players in educating our Korean counterparts on the

intricacies of A²C².

To insure our A²C² LNOs remain current at all times, bi-monthly battle focused training focuses on retaining the fundamentals of airspace management and deconfliction processes. A week-long situational training exercise (STX) is conducted twice each quarter to assess and train our LNOs proficiency. These STXs replicate the critical A²C² functions our LNOs face at every level from the BCE down through the ROK field armies to the 2nd ID and the CAF. Recently, the three FCC teams have been integrated into the STXs while they are deployed to tactical field sites. This has added a new dimension to the STXs and allowed for identification of further training needs, as well as refining processes. As automation capabilities are increased, they serve to assist in making the A²C² deconfliction process easier. However, training areas needing emphasis as a result of this automation are use of computers, secure communication equipment, and A²C² software.

Dissemination of the air tasking order (ATO), Airspace Control Plan (ACP), and special instructions (SPINS) has been a problem since before DESERT STORM. While work continues to ultimately solve this problem for the entire force, here in Korea we disseminate this critical data via three means:

- a bilingual Theater Automated Command and Control Information Management System (TACCIMS). System connectivity is via a local area network (LAN).
- the Contingency Theater Automated Planning System (CTAPS). Though time consuming, AUTODIN is the means of transmission, as well as radio links from air to ground assets.
- manual transmission from one of the

previous terminals, then handcarried or transmitted via secure FAX or secure data to appropriate locations.

The preferred method of transmitting this information is via CTAPS. This is an Air Force system, but we are aggressively pursuing the procurement of a remote capability for our LNO teams to enhance airspace management across the theater.

The emphasis of our A²C² teams are to execute the timely deconfliction of airspace, which implies that the necessary airspace control measures and related requests will be identified in time to be included in the 37 hour integrated air tasking order (ITO) established by the ACC. The AH-64 community is most impacted by this requirement. AH-64 planning must coincide with planning and execution of the ITO. In the event a need arises inside the 37 hour window, immediate deconfliction is executed by the BCE at the Hardened Tactical Air Control Center (HTACC) in Osan.

There are many challenges to executing the A²C² function in Korea. Communications, personnel, procedures, and language barriers all present different obstacles to successful mission accomplishment. But through the professionalism, skill, and dedication of the A²C² LNO personnel, these obstacles are met head-on, and overcome to insure that the maximum effect of our many systems are fully applied at the time and place of the maneuver commander's choosing. The 164th ATS Group GUARDIANS will continue to insure that the third dimension of our battlespace is available when it is needed.

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FUEL TANKS

(Continued from Page 56)

to early pylon failure. A full fuel tank weighs approximately 1,000lbs more than a loaded Hellfire rack. While this weight increase may not pose a problem for a gentle ferry flight, the additional stress imposed on the pylon by an additional 1,000lbs (plus g load) during operational flying is likely significant. Moreover, reports from some field units indicate that the pylons that carry the external fuel tanks may be cracking at a higher rate than those carrying conventional wing stores. Regardless, when you watch the tank wobble and move during flight, you are quite sure that there is increased stress on the pylon.

Conclusion. What I have hoped to point out in this article is that the increased mission flexibility gained through routine use of external extended range fuel tanks does have a downside. Use of the tanks has some negative implications with regard to mission, safety, and maintenance. In these days of shrinking defense dollars, it may also be worth looking at the fiscal costs associated with routine external tank use. Could more aircraft be lost in external tank related accidents? Could maintenance/replacement costs dramatically increase due to routine use of the tanks? Could the sex appeal of using the tanks overshadow their actual usefulness? I don't know. But I do feel that all factors should be considered prior to blindly hopping on the external tank bandwagon. So, external fuel tanks for helicopters: the ultimate mission enhancer? Well maybe, but then again, maybe not. You decide.

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MAJ Peterson was with the Airworthiness Qualification Test Directorate (Edwards AFB, CA), U. S. Army Aviation Technical Test Center, Ft. Rucker, AL when this article was written.

AUTOMATED RISK ASSESSMENT

Today, most aviation unit commanders assess the risk of aviation missions by using a matrix that attempts to identify hazards the flight crew may encounter and interpret them into a given level of risk. The problems with most of these matrices are that they are generally developed intuitively rather than from factual accident data; they do little to assist the commander in developing viable controls that reduce accident risk; and more often than not, the flight crew is the first to identify hazards and the least able to control the risk.

Where good risk management identifies control options that support the mission and reduce risk, our current risk matrices too often focus only on who must accept the risk on a given mission. Additionally, recent studies by the U.S. Army Safety Center (USASC) indicate that as many as 78 percent of our aviation missions may have their risks underestimated with the matrix assessment system.

Recognizing this deficiency in aviation risk management, the U.S. Army Aviation Center (USAAVNC) is working

Fixing the Matrix System Assessment deficiencies.

in concert with the USASC to provide the field commanders, staffs, and flight crews with risk management tools that systematically lead from identification of hazards, through an accurate assessment of risk, to identification and implementation of effective controls. This effort has resulted in a series of automated risk assessment

and control (ARAC) programs developed not only for aviation units, but for the entire Army.

The first ARAC program to be fielded focuses on night rotary wing aviation missions. This user friendly, DOS-based program began as a statistical analysis of 162 data points from each of 119 crew error night accidents that occurred during the period 1984 through 1989. The original study identified 8 mission profiles where numerous hazards clustered together to result in an accident. Additionally, several hazards were identified to have a synergistic effect. That is, each hazard could be identified to have a detrimental effect on the mission, but when two or more of these

"accelerators" exist together the risk is greatly increased.

Using these eight profiles, a group of USASC and USAAVNC subject matter experts went to work developing control options that would reduce the accident risk while still allowing mission accomplishment. The result was an automated tool that allows the mission planner to answer a series of questions prompting the program to match the proposed mission to the profiles of these real missions that resulted in accidents.

The program thus establishes a level of uncontrolled risk for the mission. The planner then selects from a menu of control options that, when implemented, reduce the risk. A risk management decision is then made on the residual risk. This prototype program was tested against 45 night rotary wing human-error accidents that occurred in FY 93-94. The program accurately predicted the type accident that actually occurred in 51% of the cases. Could we have prevented over half of the accidents during this period with this program? Of course, we cannot say for sure. But, the evidence indicates that the ARAC can be a powerful risk management tool.

In June 1995, the basic program was fielded for testing to 40 different aviation units. Armed with the results from this test, the ARAC team began development of the final product.

The final version of the night ARAC was fielded to all aviation commanders in March 1996. The USASC anticipates updating the program at least biannually. This first in the ARAC series gives the commander an effective risk management tool that:

- Accurately assesses the risk level of aviation missions based on real accident data up through FY95.
- Is sensitive to interaction of known,

critical accident hazards.

- Systematically leads from the identification of hazards to the identification of effective controls.
- Is designed to involve commanders and staff in the selection of controls and making risk acceptance decisions.

As good as the ARAC may be, it does not address all possible factors that contribute to the risk level of a specific mission. Commanders must continue to evaluate individual missions to identify, assess, and control hazards not identified in the accident database of this program. The program is designed to allow the commander to subjectively upgrade the mission risk as appropriate and to specify additional controls not addressed in the program.

The next logical step in this process is the development and fielding of a day version of the ARAC. The day ARAC prototype is currently fielded to several units for test and evaluation. Aviation commanders can expect this product in a final version by the fourth quarter of FY96.

The USAAVNC is also assisting the USASC in the development of ARAC programs for Joint Special Operations, privately owned vehicle (POV) operations, and Ground Task Force operations. We have high hopes for the ARAC as a viable risk management tool, and we highly encourage all commanders to integrate each of them into their current programs.

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

CW5 Williams is the Aviation Branch Safety Officer, USAAVNC, Ft. Rucker, AL.

IS IT TIME FOR ACQUISITION CORPS REFORM?

The good news is that the Army Acquisition Corps (AAC) continues to enjoy favorable Primary Zone selection rates to promotion at the grades of O-4, O-5 and O-6. The career path for AAC officers seems brighter with each year of maturity and the community, seems to be coming to grips with the complexities of the law and assigning the multi-disciplined and diversified career fields of 51, 53, and 97 officer pools. News from AAC leadership also paints a "glossy" picture despite dramatic decreases in our modernization accounts and fewer military PEO and PM positions. More and more TO&E General Officers are looking less at the AAC with contempt and misunderstanding. The AAC has become a rewarding and challenging career field for many young Army officers.

The not so good news is that we have some serious challenges in the AAC. Inflation of our nearly 17-year-old OER is impacting our Army's capability to identify the best and brightest AAC officers in all branches. Promotion boards, consisting of mostly non-AAC officers, still indicate

*What's right
and what's wrong
with today's
acquisition
corps career
path.*

difficulty deciphering the critical, tough AAC jobs.

The Army's superstars are usually realized through "below zone" promotions. However, in recent years AAC rapid advancement has been nearly non-existent at O5 and O6. Recent promotion statistics show that most senior AAC "fast movers" are not successfully competing with their TO&E

counterparts.

Year Group 74 AAC officers on track for FY 97 O6 PM/Command selection are competing with officers already in or nearly completing Brigade Command. At the 20 year mark, the best AAC officers are falling 2-4 years behind TO&E officers identified as future Army Generals. Each year, the AAC falls further behind the power curve. The result is an Army with insufficient numbers of qualified AAC General Officers to fill PEO positions.

Our greatest concern should be that we are losing our best and brightest. It is not unusual to see AAC officers recently selected for SSC and O6 announce their retirement after 22 years of service.

Ironically, one was selected as the Army's Product Manager of the Year.

While PMs are selected to three and four year "chartered" positions, often two and three years later in their careers, the TO&E Army selects more than 95% to two year Command positions during the first year of eligibility and zero beyond the second year.

When this is coupled with the realities of so few 06 PM/Command positions available each year, many AAC LTCs are taking second looks at their cards and leaving the Service during their peak performance years.

As in the TO&E Army, not all jobs in the AAC are career enhancing. Arguably, the AAC has too many junior officers competing for fewer and fewer PM jobs. Through the MAPL review process, we must continue to weed out those jobs that creep toward irrelevance to the changing Army and keep the jobs with the highest demand for User-Material Developer interface.

Most AAC jobs do not easily translate to S3, XO, and Battalion Command. Ergo, a Product Manager is not a Battalion Commander. Some Product Manager jobs are truly tougher than some Battalion Commands and vice versa. Each AAC job is unique and is graded and viewed differently than TO&E assignments by promotion boards. The AAC has become as different from the TO&E Army as is the Medical Corps.

Since 1991, the TO&E Army's acceptance of AAC officers has improved perhaps because AAC officers not only do a great job but also pose no threat to TO&E careers during the promotion board process. But, without change, the AAC will continue to be less competitive beyond the grade of 06.

To help meet these challenges, we must select PMs earlier and to two year PM

positions which will provide more opportunities for AAC officers and help balance their career paths with field commanders, while concurrently promoting AAC superstars below the zone.

Regardless of how we meet these challenges however, there is no doubt that good officers will continue to serve in the AAC because the jobs are challenging and truly rewarding. The Army is still a great place to serve our country!

★ ★

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

**AAAA
Army Aviation
Simulation
Symposium**

**4-6 September 1996
Arlington, VA**

**AAAA
Avionics and
Electronic
Combat
Symposium**

**12-14 November 1996
Long Branch, NJ**

**Contact the
AAAA National Office
for details!**

TESAR: AN UNMANNED AERIAL VEHICLE SUCCESS STORY

*Using the best
in new
technology
to perform
new missions.*

The Army's Program Executive Office for Intelligence and Electronic Warfare (PEO IEW), a team member on the multi-service OSD mandated Medium Altitude Endurance (MAE) "Predator" UAV Advanced Concept and Technology Demonstration (ACTD), has broken new ground with the successful integration and deployment of lightweight, high resolution Tactical Endurance Synthetic Aperture Radar (TESAR) systems on the long endurance Predator UAVs.

The 168-pound radar systems, producing one foot resolution imagery, were deployed this March in support of Operation JOINT ENDEAVOR, just two years after contract award. TESAR's successful performance in support of Bosnia operations heralds the emergence of significant, tactically available, high-resolution SAR imagery as a new intelligence tool for the Army and Joint Commander.

The Predator ACTD, managed by the Navy's Program Executive Office for Cruise Missiles and Joint Unmanned Aerial Vehicles (PEO CU), is one of the

first of a new breed of OSD initiated efforts to accelerate the deployment of operationally useful demonstration capabilities to theater commanders.

The Predator ACTD's objective is an attritable, dynamically retaskable long endurance UAV reconnaissance system, with high resolution sensors and real-time dissemination capabilities. PEO

IEW teaming with the Army's Communications-Electronics Command (CECOM), Army Research Laboratory, and Northrop Grumman Corporation (formerly Westinghouse Electric Corporation) filled the "high resolution sensor" bill by fast-tracking the procurement and integration of ten state-of-the-art SAR systems and associated Ground Control Stations (GCS) elements. Managing this streamlined and accelerated acquisition for PEO IEW is the Project Manager, Night Vision/Reconnaissance, Surveillance, and Target Acquisition (PM NV/RSTA) and the Product Manager, Tactical Endurance Synthetic Aperture Radar (PM TESAR).

As a premier sensor on the Predator, TESAR provides the tactical commander

MAE UAV SAR Payload Distribution

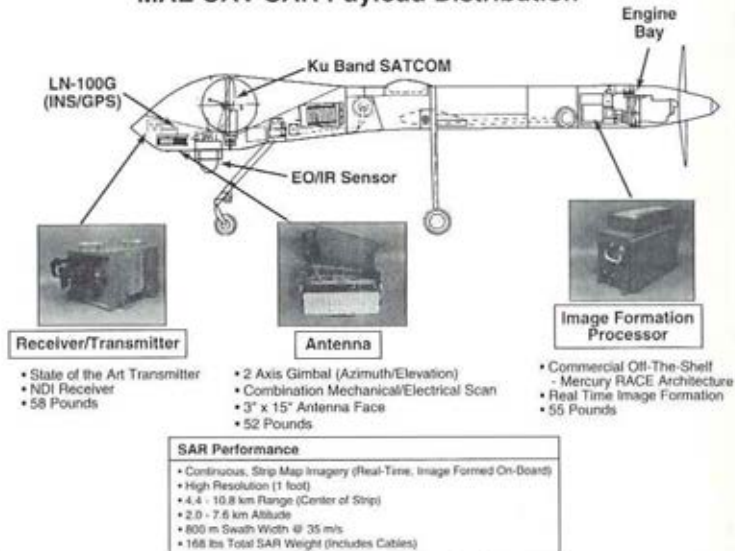


Figure 1

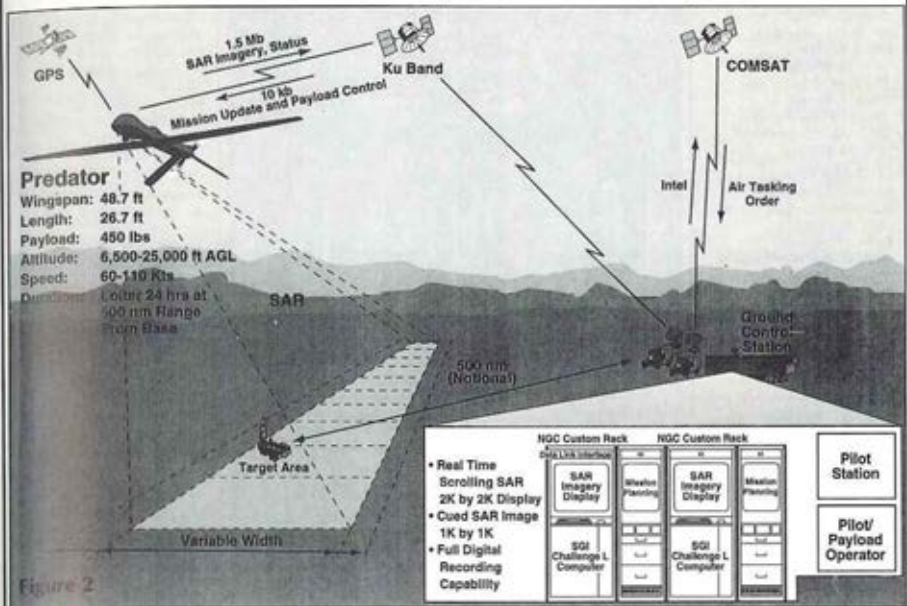
with a high resolution, all weather, near real-time imagery capability. The TESAR system is comprised of two main components: the aircraft's radar payload and the ground station elements. The airborne payload, its location in the aircraft and its basic performance characteristics, are depicted in Figure 1. The GCS layout and the TESAR operational concept are shown in Figure 2. Images formed onboard the aircraft are compressed and transmitted over the Ku band SATCOM datalink to the GCS. The imagery, displayed in a continuous waterfall within 40 seconds of imaging, is recorded and initially screened by an imagery analyst. Selected imagery patches (1k ft by 1k ft) are cued for further exploitation/annotation and disseminated via the intelligence network.

Three SAR-equipped Predator UAVs deployed by the Joint Chiefs of Staff in support of Operation JOINT ENDEAVOR

provide the operational debut for this all weather imaging capability on the already successful Predator aircraft. Bosnia weather conditions make this sensor an essential adjunct to the electro-optical and infrared sensors. TESAR is operational and has provided significant imagery in overcast, snow, and rain conditions. Improving weather conditions will continue to increase Predator's — and thereby TESAR's — already significant operational utility.

Operational experience, thus far, has identified the need for continued training on SAR capabilities and employment; the criticality of all team players, including UAV pilots, participating in SAR mission planning; the need for a rapid SAR imagery dissemination capability; and the absolute requirement for accurate map data and precision collection management taskings. As is the objective of ACTD, all

MAE UAV SAR Operational Concept



lessons will be captured to enhance future operations and system capabilities.

As this 30 month ACTD draws to a close, it is again breaking new ground as OSD examines the pathway from advanced technology demonstration to a more structured acquisition program. Strong user support for an ACTD follow-on requirement is making the Predator system a prime candidate for the first ACTD system to make this transition. TESAR has successfully met its ACTD requirements but also has significant inherent flexibility for additional capabilities at low cost and risk. Already underway is a PM NV/RSTA initiated demonstration of a software-based modification to achieve a Moving Target Indicator (MTI) capability. Additional capabilities based on SW only changes are an increased swath width at lower resolution (2.4 km at 1m resolution) and a one foot

resolution spotlight capability.

Unmanned Aerial Vehicle systems take a major step forward with the success of this rapidly executed, user focused demonstration. TESAR signals the emergence of high resolution, tactically available SAR imagery to the commander. The PEO IEW/CECOM team is moving out on accelerated system evolution for identified Predator requirements, and is prepared for additional SAR/MTI challenges on other UAV and manned platforms.

★ ★

LTC Horner is the Product Manager, TESAR, PM NV/RSTA, Ft. Monmouth, NJ.

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COL Delyle G. Redmond, Ret.
CW5 Gordon M. Smith

AAAA President's Message

(Tenth in a Continuing Series)

MG Richard E. Stephenson, Ret.

Several things emerge in a hasty inventory of AAAA facts, focus, and future. Fortunately, a positive tilt on such a rundown comes immediately to mind.

The Facts — the returns on our 1996 Convention clearly signal a leveling out and an increase from the declining trends of the early 90s ... this is good.

- Membership is holding fairly steady, yet at its lowest since 1988 at the end of the cold war build up. Membership priority is second only to getting the AAAA hired Executive Director (ED) in place and functioning.
- Revenues are up and we have several initiatives that are about to blossom forth.

The Focus — Our first priority since the NEB meeting of March 27, 1996 has been to articulate and document our way from the old Executive Director arrangement of the contractor hired to the new one approved by the AAAA National Executive Board of a direct AAAA hired arrangement. The charter to effect the change "as soon as practicable" is much easier said than done. Our intent is to bring the ED on board as quickly as we can. Applications are still being accepted, but hurry up, the window is closing.

The Future — The First Annual AAAA Army Aviation Simulation Symposium in Washington, DC co-sponsored with the AAAA Potomac Chapter and the AUSA looks like a winner. Mark your calendars for 4-6 September 1996 at the Crystal Gateway Marriott. Call the National Office for more details.

- Don't forget, the AAAA Avionics and Electronic Combat Symposium co-sponsored with the Monmouth Chapter is also almost upon us, 12-14 November 1996, Long Branch, NJ. The AOC will be holding a classified session in conjunction with this event on the 15th.
- We are investigating the possibility of an AAAA affinity credit card program. This may be a superb source of revenue and a good deal for our members ... a win-win.
- We hope to have significant increases in Reserve Component AAAA participation, membership, and sponsorship of activities. The ARNG Army Aviation segment is equal to or greater than the active duty numbers — and so too should be the relevance of AAAA to this significant portion of the AAAA constituency. We hope to sponsor two regional symposia within two years using the ARNG activism, the regional AVCRADs, and the interest and participation of our industry partners and friends where appropriate.
- Several international affiliation opportunities may emerge as viable as the Turks, the other European allies, and the Pacific Rim Army Aviation communities come of age. More on this later.

So — the facts, the focus, and the future hold great promise for AAAA to move optimistically into the next century. Have a great AAAA summer!

NEW NEB INSTALLED

During the recent AAAA Annual Convention in Fort Worth, TX, the new members of the National Executive Board were installed. The officers are **MG Richard E. Stephenson, Ret.** (President); **MG John D. Robinson, Ret.** (Senior VP and Chairman, Membership Committee); **MG Carl H. McNair, Jr., Ret.** (Secretary-Treasurer); and **William R. Harris, Jr.** (Acting Executive Director).

Vice Presidents include: **BG Harry H. Bendorf, USAF, Ret.**; **LTG William H. Forster, Ret.**; **MG Robert S. Frix, Ret.**; **CW5 Ronald W. Gerner**; **LTG Jack V. Mackmull, Ret.**; **James P. Schwalbe**; and **George T. Singley III.**

MG Stephenson appointed the following as National Members-at-Large: **COL Eric W. Braman**, **COL Dave Carothers, Ret.**, **LTC Howard T. Comer**, **SGM Jeffrey R. Culp**, **CPT Robert L. Douthit**, **BG Jerome V. Foust**, **BG Stuart W. Gerald**, **CSM Marvin E. Horne**, **Thomas L. House**, **COL Gerald R. Kunde, Ret.**, **MAJ Jeanette M. McMahon**, **LTG Ellis D. Parker, Ret.**, **MG Daniel J. Petrosky**, **William Pollard**, **CW5 Darrell C. Pope**, **MG John M. Riggs**, **GEN Crosbie E. Saint, Ret.**, **BG James R. Snider**, and **COL Harry W. Townsend, Ret.** Additionally, **Mr. Joseph P. Cribbins** and **COL John J. Stanko, Ret.** serve as National Members-at-Large Emeritus.

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

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

SCHOLARSHIP BOARD ANNOUNCED

The AAAA Scholarship Foundation Board of governors also met during the AAAA Annual Convention in Fort Worth, TX. The current officers are: **COL John W. Marr, Ret.** (president); **Mrs. Dorothy Kesten** (Vice President); **COL Robert L. Parnell, Jr., USMC, Ret.** (Secretary); **COL Gerald E. Lethcoe, Jr., Ret.** (Treasurer); and **Mr. William R. Harris, Jr.** (Acting Executive Director).

Governors include: **Dan R. Bannister**; **COL John N. Bertelkamp, Ret.**; **LTC Frank S. Besson III, Ret.**; **LTC Robert P. Birmingham**; **COL Eric W. Braman**; **LTC Edward L. Carnes, Ret.**; **COL Dave Carothers, Ret.**; **Ms. Carolyn Chapman**; **CPT Curt S. Cooper**; **MAJ Brian M. Craddock**; **CSM Raymond P. Dartez**; **MG Robert S. Frix**; **BG Stuart W. Gerald**; **Jose J. Guzman**; **Paul L. Hendrickson**; **BG James M. Hesson, Ret.**; **Leonard D. Kulik**; **Ronald V. Kurowsky**; **COL John A. Lasch III, Ret.**; **MSG Tom M. Migliozi**; **CW4 Joseph L. Pisano, Ret.**; **William Pollard**; **LTC Frank H. Radspinner, Ret.**; **LTC Ralph W. Shaw, Ret.**; **COL Harry W. Townsend, Ret.**; **LTC James O. Woodard, Ret.**; and **COL Howard W. Yellen.**

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

Awards and Honors

The AAAA provides awards to the Distinguished Graduates of the Initial Entry Rotary Wing Aviator Course and certain enlisted, warrant officer, and officer courses at Ft. Rucker, AL and Ft. Eustis, VA that have been determined by the AAAA Aviation Center Chapter's Executive Council to merit a Distinguished Graduate Award. The information below is provided and the awards are coordinated by the respective local AAAA Chapter's VP of Awards.

Aviation Warrant Officer Basic Course, Class 95-906 (4 AUG 95): WO1 Gary Murphy; Class 96-910 (22 NOV 95): WO1s Marty P. Alne, Robert L. Hafey; Class 96-911 (19 DEC 95) WO1 Vincent G. Cacho; Class 96-912 (2 FEB 96): WO1 Adam S. Worthington.

Aviation Officer Basic Course, Class 95-908 (2 NOV 95): 2LT Lori L. Turbak; Class 96-1 (14 DEC 95): 2LT Darrin D. Dorn; Class 96-2 (9 FEB 96): LT Thomas C. Petty.

Aviation Officer Advanced Course, Class 95-4 (16 NOV 95): CPT Jeffrey M. Metzger; Class 96-2 (24 MAY 96): CPT Craig Morrow.

Initial Entry Rotary Wing Course (OH-58), Class 95-6 (7 SEP 95): 2LT Keith D. Wheeler; Class 95-8 (5 OCT 95): WO1 Adam J. Cowan; Class 95-9 (20 OCT 95): WO1 Daniel V. Wright; Class 95-10 (3 NOV 95): WO1 Ronald M. Geer III; Class 95-11 (3 NOV 95): WO1 Lyndle W. Ratliff; Class 95-12 (5 DEC 95): WO1 Brad E. Ramspott; Class 96-917 (29 FEB 96): WO1 William D. Moffitt; Class 96-918 (14 MAR 96): WO1 David L. Pearson; Class 96-920 (24 MAR 96): 2LT Jackie R. Davis, Jr.

Initial Entry Rotary Wing Course (UH-1), Class 95-5 (9 AUG 95): 2LT John D. Lane; Class 96-6 (23 AUG 95): 2LT John A. Mackey; Class 95-10 (20 OCT 95): CPT Stephen J. Roach; Class 95-9 (5 OCT 95): 2LT Devin R. Wickenhagen; Class 95-11 (3 NOV 95): WO1 Jeffrey V. Simon; Class 95-12 (20 NOV 95): LT Anthony S. Delmonico; Class 95-13 (5 DEC 95): WO1 Joseph P.H. Ryan; Class 95-14 (5 JAN 95): WO1 Stephen G. Dobbin; Class 96-919 (14 MAR 96): WO1 Derrick V. Rodriguez.

AAAA Avionics and Electronic Warfare Symposium Set

Two National Functional Awards will be presented at the upcoming AAAA Avionics and Electronic Combat Symposium, 12-14 November 1996 at the Ocean Place Hilton, Long Branch, NJ.

Sponsored by Cubic Defense Systems, Inc., the AAAA Avionics Award will be presented at the 1996 AEC Symposium to "the person who has made an outstanding contribution to Army Aviation in the area of Avionics during the awards period encompassing 1 August 1995 through 31 July 1996."

Sponsored by Lockheed Martin, the AAAA Aircraft Survivability Equipment Award will also be presented at the 1996 AEW Symposium. It will be presented "to the person who has made an outstanding individual contribution to Army Aviation in the area of ASE during the awards period encompassing 1 August 1995 through 31 July 1996."

Contact the AAAA National Office at (203) 226-8184 for official nomination forms. The suspense date is **1 September 1996.**

Other Nominations Open

Nominations are also open for the AAAA Army Aviation Fixed Wing Unit Award, sponsored by FlightSafety International, the AAAA Army Aviation Medicine Award, sponsored by Gentex, the AAAA Army Aviation Trainer of the Year Award, sponsored by Hughes Link Training, the AAAA Army Aviation Air/Sea Rescue Award, sponsored by Lucas Aerospace, and the AAAA Air Traffic Control Awards, sponsored by AAAA. These awards will be presented at the January 1997 AAAA Aviation Center Chapter Annual Awards Banquet at Ft. Rucker, AL.

The awards period covers 1 September 1995 to 31 August 1996. Contact the AAAA National Office at (203) 226-8184 for the official nomination forms and requirements. The suspense date for all nominations to be received at the AAAA National Office is **30 September 1996.**

AAAA Distinguished Graduates

The AAAA provides awards to the Distinguished Graduates of the following Advanced Individual Training (AIT) courses and certain enlisted, warrant officer, and officer courses at Ft. Rucker, AL and Ft. Eustis, VA that have been determined by the AAAA Aviation Center Chapter's Executive Council to merit a Distinguished Graduate Award. This information is provided and the awards are coordinated by the respective local AAAA Chapter's VP of Awards. The following is a list of graduate students in the following courses for the October - December portion of 1995 that received AAAA Certificates of Achievement:

Class #95-10 (16 OCT 95), 67N10 UH-1 Utility Helicopter Repairer: PFC Leonard J. Chrichton, Assigned: Maryland ARNG.

Class #95-22 (16 OCT 95), 93P10 Aviation Operations Specialist Course: PVT Ryan P. Taber, Assigned: Mississippi ARNG.

Class #95-11 (27 OCT 95), 67V10 OH-58 Observation Helicopter Repairer: PVT April M. Fauver, Assigned: Korea

Class #95-23 (27 OCT 95), 93P10 Aviation Operations Specialist Course: PVT Monica J. Salazar, Assigned: California ARNG.

Class #96-01 (14 DEC 95), 67N10 UH-1 Utility Helicopter Repairer: PVT David N. Smith, Assigned: West Virginia ARNG.

Class #96-01 (14 DEC 95), 67V10 OH-58 Observation Helicopter Repairer: PVT Matthew E. Bruner, Assigned: Hawaii.

Class #96-04 (18 DEC 95), 93P10 Aviation Operations Specialist Course: PFC Robert W. Tyler, Jr., Assigned: Germany.

Class #96-01 (8 DEC 95), 93P Basic Non-Commissioned Officer Course: SGT Michael Thomas, Assigned: HHC 1/228th Aviation Regiment, APO AA 34006.

Class #96-01 (8 DEC 95), 93C Advanced Non-Commissioned Officer Course: SSG James D. Robbins, Assigned: HHC 3/58th Aviation Regiment, APO AE 09096.

Class #96-01 (8 DEC 95), 93P Advanced Non-Commissioned Officer Course: SSG Jay M. Jones, Assigned: HHT 3rd Squadron, 17th Cavalry, Fort Drum, NY 13602.

Class #96-501 (8 DEC 95), 93P Advanced Non-Commissioned Officer Course: SSG Linda G. Ammons, Assigned: HHC 160th SOAR, Fort Campbell, KY 42223

Class #96-09 (29 FEB 96) 93P10 Aviation Flight Operation Specialist: PVT Christopher R. Bohn, Assigned: North Dakota ARNG

Class #96-02 (8 MAR 96) 93P30 Advanced Non-Commissioned Officer Course: SSG Harlan R. Henthorne

Class #96-01 (11 JAN 96) 93C10 Air Traffic Control Operator Course: PVT Heather A. Beazley, Assigned: Fort Hood, TX

Class #96-912 (2 FEB 96) Warrant Officer Basic Course: WO1 Adam S. Worthington

Class #95-906 (4 AUG 95) Warrant Officer Basic Course: WO1 Gary Murphy

Class #96-2 (9 FEB 96) Officer Basic Course: LT Thomas C. Petty

New AAAA Chapter Officers

Aviation Center:

LTC Robert E. Bowman
(Treas); CPT Susan M.
Lind (VP Awards).

Flying Tigers:

LTC Larry D. Maynard
(Pres); SGT(P) Robert G.
Thompson (VP, Memb).

High Desert:

MAJ James G. Hendley
(President).

Iron Eagle:

LTC Thomas Burnett
(SrVP); LTC James
Lawson (Secy); CW5
Ronald Edwards (VP, WO
Affairs).

Morning Calm:

CPT Jennifer J. Manzo
(Secy); CW5 James J.
Kriskowski (Treas); CSM
David D. Tomblison (VP,
Enlisted Affairs).

Ragin' Cajun:

CPT Robert Baer (Treas).

Savannah:

2LT Gary J. Morea
(Treas); CW2 George
Kessler (VP, Memb); CW5
David A. Campbell (VP,
WO Affairs).

AAAA Aviation Soldiers of the Month

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

SPC Dallas L. Hult
April 1996

SSG Cecil E. Gibbs
May 1996
(Central American)



Above: MG Ronald E. Adams (left), Aviation Branch Chief and CG, USAAVNC and Ft. Rucker, AL and MG Richard E. Stephenson, Ret. (right), AAAA President, present the Gold Order of St. Michael Award to COL Larry D. Holcomb, Ret., during the Aviation Center Chapter Awards Banquet on 11 January 1996. COL Holcomb is the 21st individual to receive the Gold Award.

Below: Eight officer Candidates were branched and commissioned into Army Aviation in a ceremony held on 30 January 1996. AAAA provided the newly-commissioned officers with their first set of aviation branch insignia: They are: 2LT Richard Arnold, 2LT Derrick Jee, 2LT Anthony Laier; 2LT Steven Massar, 2LT Shannon McAteer, 2LT Scott McIntosh, 2LT Jason Miller, 2LT Christopher Niosi, and 2LT Matthew Speare.





Above: SGT Norman D. Viloso (left) and SPC Raymond W. Dawson (right) received AAAA Certificates of Achievement, a one weekend stay at the Peach Tree Plaza Hotel in Atlanta, GA, and a fully-funded trip to the AAAA Annual Convention at Fort Worth, TX from COL Michael T. Mulvenon, Aviation Center Chapter President, for being selected as the Chapter's NCO and Soldier of the Year at Ft. Rucker, AL.

Below: Six Officer Candidates were branched and commissioned into Army Aviation in a ceremony held on 30 May 1996. AAAA provided the newly-commissioned officers with the first set of aviation branch insignia. They are, from left to right: 2LT Maureen Henry, 2LT Steven Rosen, 2LT Kevin Belden, 2LT Gary Retzlaff, 2LT John Pulinski, and 2LT Anthony Barnett.



SPC Anthony J. Kuntz

January 1996

(Northern Lights)

SPC David D. Jackson

February 1996

SPC Erika Cooper

March 1996

SGT Douglas L. Kouach

April 1996

SPC Jeremy S. Jones

May 1996

(Savannah)

SPC Christopher Gowdy

March 1996

(Talon)

AAAA Aviation

Soldier of the

Quarter

SPC Carl K. Kleinholz

2nd Quarter 1996

SPC Alexandria M. Lewis

3rd Quarter 1996

(Aviation Center)

AAAA Aviation

NCO of the

Quarter

SGT Craig D. Martin

2nd Quarter 1996

SGT Charles R. Claussen

3rd Quarter 1996

(Aviation Center)

Aces

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

Susan E. Barnes

Joseph A. Caines

CW3 Wendell A. Condon

Lois Contreras

CPT Curt S. Cooper

Janet J. Garmon

Tom R. Holer

CPT John R. Kenefick

Ronald V. Kurowsky

LTC David C. Mackey
1SG Jay W. Maitland
CW4 Dennis P. Maxwell
LTC Michael F.
McClellan, Ret.
CW2 Cameron McDaniel
CW2 John R. Musser II
CPT Andrew B. Nocks
CPT David C. Ortega
CW2 Kris A. Rogers
MAJ Michael T. Shifflett
SFC Pamela L. Shugart

LTC Floyd T.

"Blue" Barron, Ret.

LTC Floyd T. "Blue" Barron, 75, of Bridgeport, WA died Sunday, 17 March 1996 at Central Washington Hospital following a brief illness.

He was born on 3 December 1920. In 1940, he joined the U.S. Army and was assigned to Ft. Riley, KS as a horse cavalryman. He then went on to pilot training. He received many military citations, including the Silver Star. On 31 October 1962, he retired as a Master Army Aviator and Flight Examiner.

On 29 December 1951, he married Barbara Boyd at the American consulate in Yokohama, Japan.

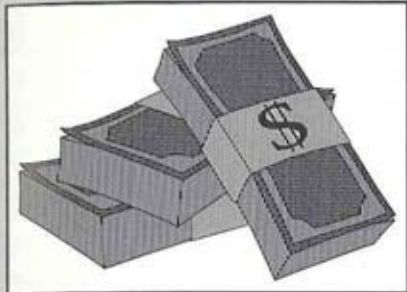
Survivors include his wife, Barbara, Bridgeport, WA; one sister, Mary Buday, of Florissant, MO; and numerous nieces and nephews.



Above: MAJ Thomas J. Kee III receives his Master Army Aviator Wings from MG James D. Cravens, Deputy Chief of Staff for Combat Developments, during a ceremony held on 9 February 1996 at HQ TRADOC, Ft. Monroe, VA. MAJ Kee has over 5,000 hours of helicopter and fixed wing flight experience.



Left: Members of the AAAA's Oregon Trail Chapter pose for a photo opportunity during one of their many community projects in Salem, OR on 1 June 1996. From left to right: Joseph Molohan, Ryan Jackson, MAJ Robert E. Payne, Chapter Senior Vice President, Dan McCarron, and CW3 James O. Jackson, Chapter VP, Membership.



CFC • CFC • CFC • CFC • CFC • CFC

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

Please consider making a CFC-sponsored contribution to the AAAA Scholarship Foundation this year. AAAA's code number for the Fall 1996 CFC is **2121**.

AAAA GOES ON-LINE!

The AAAA National Office now has E-Mail capability via CompuServe. Our address is:
74023.3400@compuserve.com

AAAA CALENDAR

A list of upcoming AAAA Chapter and National events.

September 1996

- **Sep. 4-6.** AAAA Aviation Simulation Symposium, Crystal City Marriott, Arlington, VA.

October 1996

- **Oct. 14.** AAAA National Executive Board Meeting, Sheraton Washington Hotel, Washington, DC.
- **Oct. 14.** AAAA Scholarship Board of Governors Executive Committee Meeting, Sheraton Washington Hotel, Washington, DC.
- **Oct. 29-31.** AAAA Colonial Virginia Chapter and AHS Hampton Roads Chapter, Helicopter Military Operations Technology Specialists Meeting (HELMOT VII).

November 1996

- **Nov. 12-14.** AAAA Avionics and Electronic Warfare Symposium (formerly AAAA AEC Symposium), Ocean Place Hilton, Long Branch, NJ.

January 1997

- **Jan. 29-31.** Joseph P. Cribbins Product Support Symposium sponsored by AAAA Lindbergh Chapter & AAAA Logistics Support Unit Awards & AAAA Industry Award Presentations, Stouffer Concourse Hotel, St. Louis, MO.

February 1997

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

April 1997

- **Apr. 23-26.** AAAA Annual Convention, Kentucky Fair and Exposition Center, Louisville, KY.

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