

CONVENTION REPORT: AAAA CONVENTION IN FT. WORTH

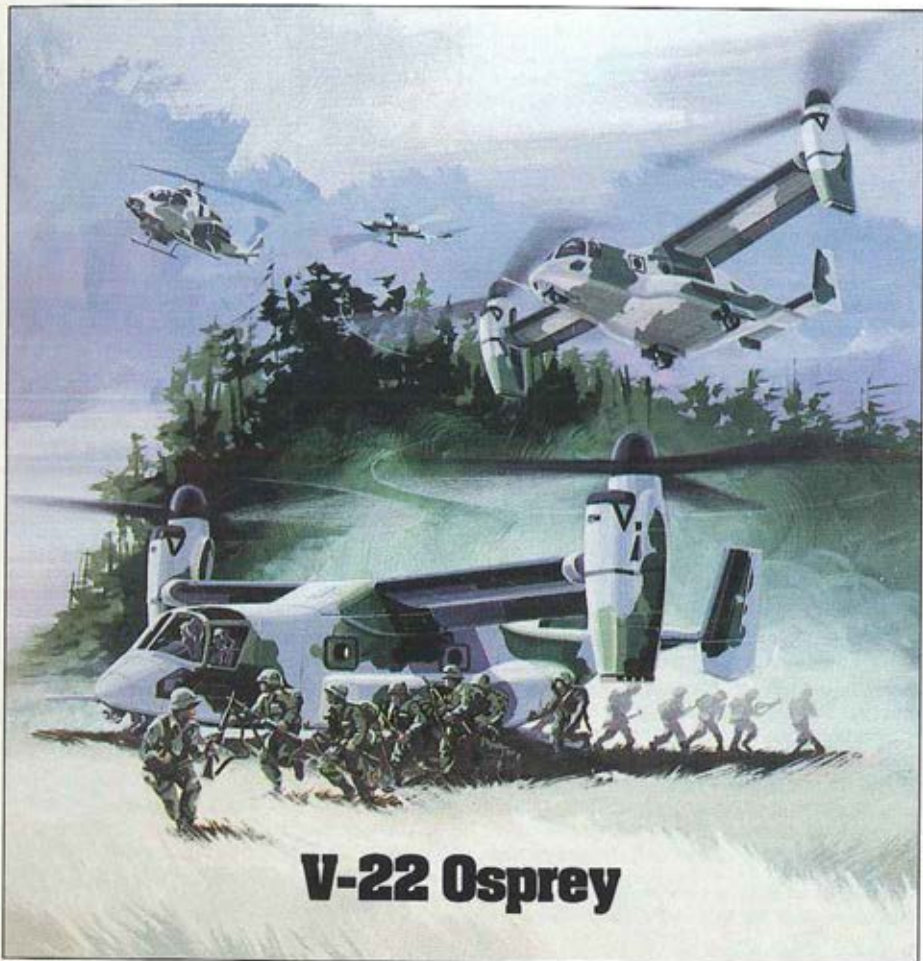
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ARMY AVIATION

ENDORSED PUBLICATION OF THE ARMY AVIATION ASSOCIATION • MAY 31, 1987 • \$2.50



V-22 Osprey



Army Aviation: Achievements and Challenges

by General John A. Wickham, Jr.
Chief of Staff
U.S. Army

ATENDING the annual AAAA meeting has always been a special occasion for me — I've gone to others in the years past because I get to talk about Army Aviation, and I get to see many friends and giants in aviation. These giants have remained good friends of Army Aviation over the years.

I'm a bit of an interloper in Army Aviation. I came into it when I was a battalion commander and had my second exposure with the 101st. In the early days of aviation, you either had to begin to think in 90 knots, or you were finished. That was the lesson I learned there, to orient firepower and maneuver capabilities at 90 knots, not 2.5 miles an hour or 15 miles an hour. That is one of the great achievements, I think, of Army Aviation.

The Best Ever

Based on my experience with aviation, I want to share a few thoughts with you about today's Army — an Army that is awfully good. You see it in terms of the capabilities that are in the display rooms here, and you see it all over the Army — the best soldiers we've ever had in terms of discipline and achievements. We have the best equipment, but we're only thirty-three percent modernized. And we've done a great deal to improve the flexibility of the Army. Aviators under-

stand flexibility; not all the Army does. We've tried to make the Army a little more relevant to the times so that we can be strategically deployable, "Johnny on the spot," if you will.

Like the rest of the Army, Army Aviation is better than ever before. Some may argue that it was a mistake to create an Army Aviation Branch, but I am convinced in my heart that it was wise, that it was a vision, that the time was right, and that the future pulled us in that direction. I think the "tiger of technology" has drawn us irrevocably into the era where we had to create a branch.

The Aviation Branch

I think the branch has really done extraordinarily well in terms of building a sustaining capability: the school structure, the quality of instructors, and the capabilities that we are now beginning to breed into the young soldiers, officers, and warrant officers who are going through Ft. Rucker. All of this speaks very highly of the Aviation Branch.

We've also created more structure within the Army to capitalize on the capabilities of Army Aviation and to try to bring out of the combined arms greater synergism on the battlefield: Aviation battalions and Aviation brigades at the corps and division level.

There's a big furor going on within the Army about what the Aviation Brigade should really be.

(Wickham — Cont. on Page 48)

Excerpts of an address given at the AAAA Awards Luncheon, April 10, 1987, in Ft. Worth, TX.

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June 30, 1987—A Special Report on the CH-47D Modernization Program and V-22 OSPREY Tiltrotor Aircraft Program.

July 31, 1987—A General News Issue which includes "The Aviation Officer" Directory of AAAA's Company Grade Officer members.

August-September, 1987—The 1987 "Blue Book", a directory of Army Aviation units, offices and agencies worldwide.

FRONT COVER
An artist's conception of the V-22 Osprey, being co-developed by Bell Helicopter Textron and Boeing Vertol Company.

ARMY AVIATION

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EDITORIAL MATERIAL

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C17

*"C" as in
computerized*

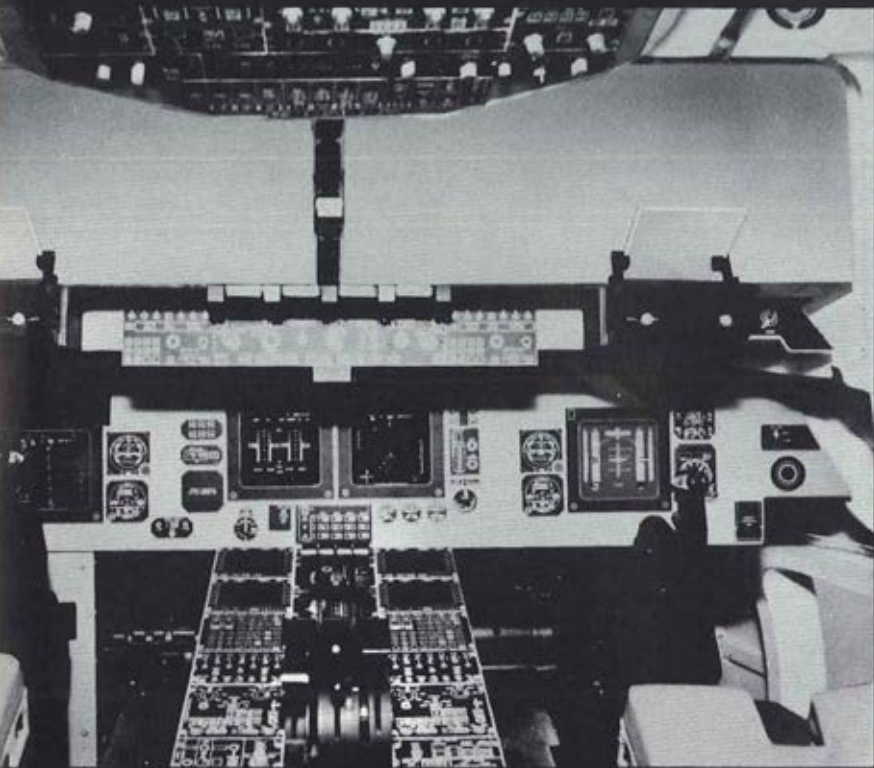
MODERN AIRLIFTER'S SYSTEMS CUT AIRCREW TO THREE.

Advanced avionics including head-up displays, combined communication/navigation controls, and multi-function CRT displays will reduce markedly C-17 pilot workload, compared with existing airlifters.

Equally important: With a basic crew of two pilots and one loadmaster, Air Force crew costs will drop dramatically compared with other airlift aircraft. And because ease of maintenance is engineered into the C-17, operations and support costs will also be reduced. The USAF Airlift Master Plan estimates a \$16 billion savings over the life of the fleet compared to other airlift options.

The C-17 is now in development for first flight in 1990, when it will reach new highs for operational utility and new lows for cost of ownership.

MCDONNELL DOUGLAS





"The Gathering of the Eagles"

by
Major General Ellis D. Parker,
Commanding General, U.S. Army Aviation
Center and Ft. Rucker, Alabama

APRIL was a busy month for the men and women of the Army Aviation Branch. We began the month with, "The Gathering of the Eagles," that being the convening of the Aviation Council Emeritus (ACE 87), April 1-4, 1987, at the Lake Lodge here at Ft. Rucker.

Every two years, we gather a distinguished group of retired senior Army officers, all of whom had a hand in forging the heritage of Army Aviation, to brief them on the current status of our branch. But even more valuable to us at the Aviation Center is the feedback we receive throughout the conference. These biennial ACE conferences take advantage of the perspective, experience, and viewpoint of these great aviation leaders, most of whom have left their marks on not only the Army but also on private industry as well.

Panels of Experts

The conferees included eleven retired general officers, twenty-eight retired field grade officers, and one retired chief warrant officer. COL George C. Hollwedel, director of the Department of Combined Arms Tactics (DCAT), and DCAT civilian and military personnel provided outstanding administrative support. The entire Aviation Center team took part in the conference.

The conferees discussed such issues as aviation pronency and personnel, doctrine and tactics, combat developments and training, after which those attending were divided into panels chaired by retired Army Aviation officers to discuss these and other significant topics. Later, as the conference came to a close, panel leaders gave back-briefings to those in attendance. Their enthusiasm and incisiveness were truly impressive and we enjoyed the camaraderie at

various social functions and luncheons.

On April 4, 1987, we at the Aviation Center celebrated the fourth anniversary of the Aviation Branch with the Fourth Annual Aviation Ball. COL Haspard R. Murphy, commander of the Aviation Training Brigade (ATB), and the men and women of the brigade did an inspired job of putting together the Aviation Ball. The theme of this year's ball was "The First 1,000 Days of the Aviation Branch."

Congressman William L. Dickinson, a longtime supporter of Army Aviation, was an honored guest, and he gave us the very good news that the AHIP and LHX were actively back in the Army Aviation arena.

Marsh Visits Fort Rucker

But this year we were particularly honored to have Secretary of the Army John O. Marsh, Jr. as our guest speaker. The Secretary addressed us on the ideals of the Constitution and then focused on the importance of Army Aviation in "providing for the common defense."

Secretary Marsh emphasized that Army Aviation's key role in AirLand Battle doctrine centered on its leadership in the operation and development of rotary wing aircraft, the increasing importance of safety and flight proficiency, its push for vigorous research and development programs, and its maturing as a combat branch with upward mobility for both enlisted and officer members of the branch.

It seems we hardly caught our breath after the Aviation Ball when we were on our way out to the 1987 AAAAA National Convention held in Ft. Worth, TX, April 7-12. As many of you are aware, the AAAAA National Convention is held to bring

together members of the Army Aviation Community and our colleagues and friends in industry and to exchange ideas, examine and discuss doctrine and have the opportunity to see the excellent exhibitions assembled by our branch and colleagues in industry. As usual, the turnout was large and there seemed to be a well beaten path between the Tarrant County Convention Center where most of the activities took place and the Hyatt Regency Hotel in which a number of functions also took place.

The professional programs and panels were of their usual high quality and all sessions were well attended. As further evidence of the keen interest shown by senior Army leadership in Army Aviation, both the Army Chief of Staff General John A. Wickham, Jr. and Army Vice Chief of Staff General Maxwell R. Thurman addressed the convention attendees. General Wickham spoke at the Awards Luncheon on Friday; General Thurman at the Awards Banquet on Saturday.

Our spouses were well taken care of throughout the convention with a full range of activities such as trips to the Nieman Marcus department store in Dallas and the Ranchland Dude Ranch.

After attending the "Aviation Brunch" on Sunday, we made our good-byes to our friends in both the Army Aviation community and in industry and returned to Ft. Rucker. On behalf of the men and women of Army Aviation, I take this time to extend my gratitude to the AAAA National headquarters staff for an enjoyable conference. See you next year at the conference in St. Louis.

Since our return from the AAAA convention, we have for all intents and purposes come "back down to earth." We in the aviation community are pressing on with our programs such as the V-22 Osprey, the LHX, and the expansion of Army Aviation's role in AirLand Battle doctrine. We are also moving forward with the activation of our aviation regiments and most of our implementation dates for these aviation regiments are on-line.

As Branch Chief, I will keep you apprised of what is going on in regard to these regiments because I strongly believe the Aviation Regimental System (ARS) does much to enhance our combat effectiveness, develop loyalty and unit esprit and assist us in Army Aviation to identify with and historically track those aviation units in which we serve in the present and those we will serve in the future. ■■■■

Marsh Speaks at Ft. Rucker

Secretary of the Army John O. Marsh, Jr., expanded on what the ideals of the Constitution mean to American defense and in particular to the new Aviation Branch before an audience at the fourth annual Aviation Ball, April 4, 1987, in Ft. Rucker, AL. Marsh said, "it is important that the Army be the chief proponent of, and maintain leadership in, the operation and development of rotary wing aircraft. That lead role is a key factor in our defense equation and in the application of our AirLand battle doctrine. A vigorous research and development program in rotary wing aviation is essential to maintain Army leadership."

Marsh continued, "Development and production of technology that contributes to proficiency and safety must be a priority for those in aviation." Marsh cited the continued improvement of night vision goggles as one of the advances, which improves Army readiness capabilities and pays dividends in flight safety. He stated, "Adequate flying hours are essential for proficiency and for safety. Our goal must be a program that exceeds realistic minimum standards for the active forces, the National Guard and the Reserve."

He added, "there is now, and will continue to be a key requirement in the Army for fixed wing aircraft. This requirement must be supported in acquisition and modernization."

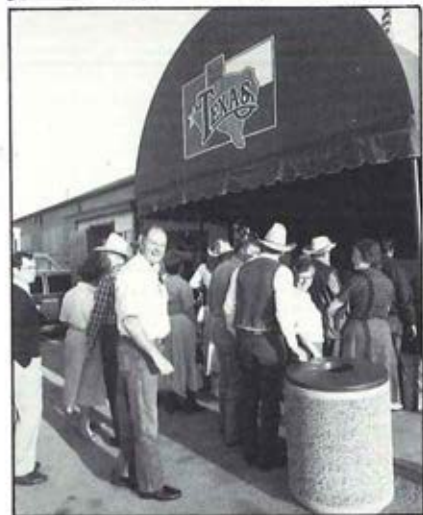
"Army Aviation must be a full partner, with opportunities for upward mobility for both enlisted and officer members of the branch. A partnership among the active, Guard, and Reserve elements is necessary for an effective total force, not only in the Army as a whole, but especially in Army Aviation. Mutual cooperation, support and assistance among these elements must be encouraged and practiced."

Citing Soviet adventurism, Marsh commented that the Soviet influence is now in America's backyard, Central America. Half of all US foreign trade transits through either the Panama Canal or the Caribbean Sea. He stated, "Surely it must be perceived that there is a growing threat to the collective security of the hemisphere which warrants the modest request to aid those supporting freedom in Nicaragua."

Commenting on this year's observance of the bicentennial of the Constitution, Marsh said that our republic "has become the hope of man in a world where most of mankind still is not free."



FT. WORTH - '87



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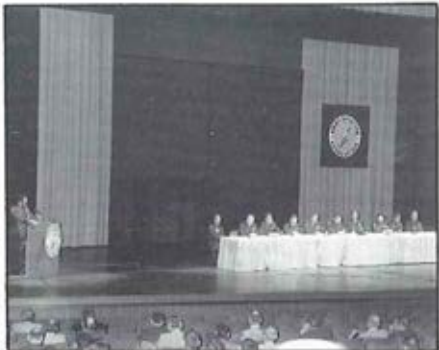
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1987 AAAA CONVENTION HIGHLIGHTS



LTG Saint

COL Stanko, Ret.



AAAA President MG George W. Putnam, Jr., Ret., opens the 1987 AAAA National Convention, April 8-12, in Fort Worth, TX. (top left). The professional program was co-chaired by MG Ellis D. Parker, (above left) CG, USAAVNC, Ft. Rucker, AL, and MG Richard E. Stephenson, (above right) CG, USAAVSCOM, St. Louis, MO. The theme — "The Aviation Team".



BG (P) Andreson

CSM Kirkland

APW T800 engine is first to complete maintainability demo.

The Avco Lycoming/Pratt & Whitney T800 engine has successfully completed the U.S. Army's first T800 maintainability demonstration at P&W's facility in West Palm Beach, FL.

Putting MANPRINT in action, an eight-member team of soldiers from Ft. Eustis, VA, and Ft. Rucker, Alabama, demonstrated a variety of maintenance tasks well within prescribed time limits on the T800-APW-800 engine. These tasks involved removing and replacing line

replacement units and the accessory gearbox and inlet particle separator modules using one wrench size. These maintenance actions were also completed while the team wore arctic and protective NBC gear.

Maintenance experts from the Army's Aviation Systems Command supervised while the Training and Doctrine Command observed these tests. Their recommendations will be incorporated into additional reliability and maintainability features on APW's LHX engine.

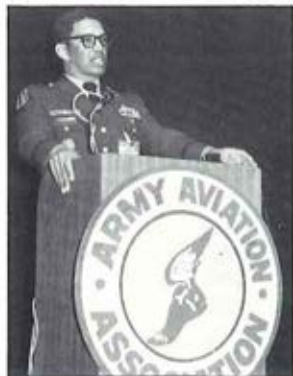
1987 AAAA CONVENTION HIGHLIGHTS



BG Rodney D. Wolfe (r), DCG, USAAVNC, chaired Friday's panel—(top l to r) John Stanko, MG William F. Ward, BG John R. Greenway, BG Donald M. Lionetti, and COL Albert E. Hervey, Jr.



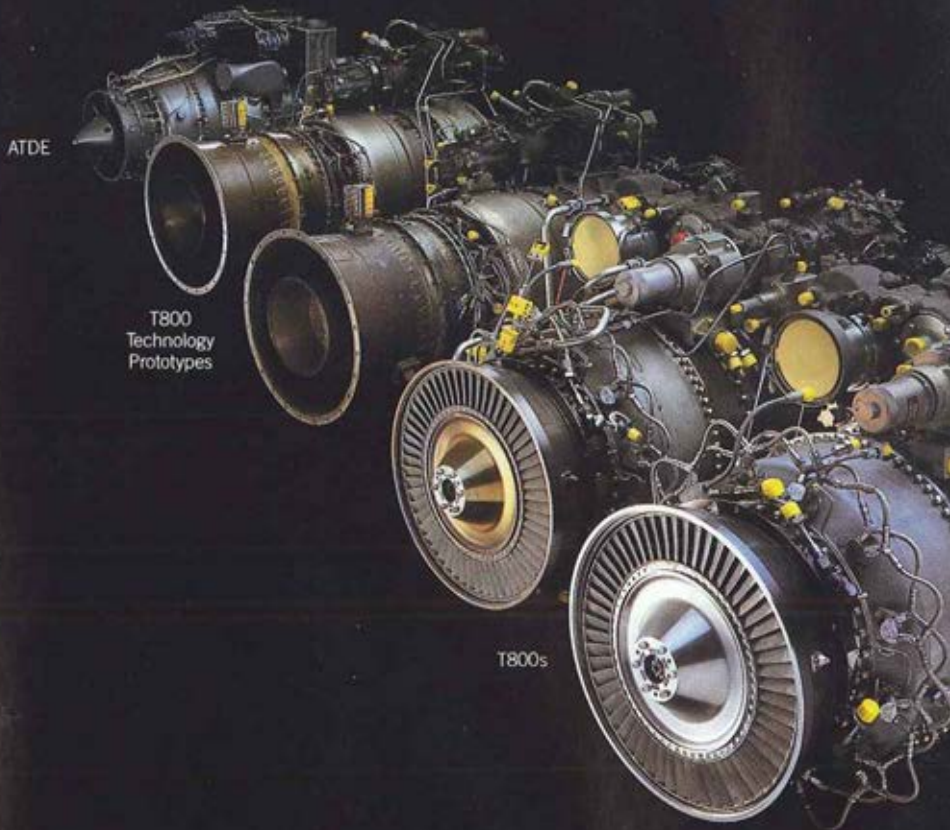
Top: Joseph Mallen, Boeing Vertol President, donates \$5K to Jack Klingenhagen, AAAA Scholarship Foundation President. Below: Robert Zincone, Sikorsky President, makes 4-year \$40K pledge.



Top L: CSM Hartwell Wilson speaks during the Aviation Enlisted Program. L: BG John H. Stanford, DCG, AVSCOM, chairs the AVSCOM Readiness Panel. R: Jack Horner, Bell Helicopter Textron President, participates in Saturday's Industry Panels.



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We're building upon an impressive base. 12,000 component/rig test hours and 8,000 hours of T800 power class testing since ATDE. Infusing

new technology every step of the way.

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LHTEC

Allison & Garrett

America's LHX Propulsion Team.

1987 AAAA CONVENTION HIGHLIGHTS



(Counterclockwise, r to l): 1) Chapter Presidents decked in 'cowboy' attire await Head Table introduction. 2) The Membership Luncheon opens. 3) GEN Hamilton H. Howze, Ret., is recognized. 4) LTG John J. Tolson, Ret., accepts a \$15,340 AAAA check for Museum. 5) MG John L. Klingenhagen, Ret., remarks on AAAA Scholarship Foundation.



1987 AAAA CONVENTION HIGHLIGHTS



Top L: Lindbergh wins Top Chapter Award; LTC Tom Fichter receives AAAA Banner from President Putnam. Top R: MG Story Stevens, Ret., AAAA Sr. VP, hands over a \$647.50 check to Peter F. Bauman, Sr. VP, Edwin A. Link Chapter, "Senior Chapter" Contest Winner. R: CW4 John V. Fowler, Lone Star Chapter President, accepts \$430 from MG Stevens as winner in "AAAA Chapter" category.



L: In a moving ceremony during the Membership Luncheon, 49 of the current 272 charter AAAA members joining in 1957 were recognized by Exec. VP Art Kesten and awarded with their 30-year membership pins by their family or fellow members. Here LTG Robert R. (Bob) Williams, Ret., is "pinned" by Edith (Toddie) Todd, as COL James (Jim) Townsend, Ret., looks on.

1987 AAAA CONVENTION HIGHLIGHTS

"The show of shows!"

Displays from over 100 aerospace organizations. Aircraft on display included the AHIP, APACHE, BLACK HAWK, CHINOOK, COBRA, IROQUOIS, and the DEFENDER.



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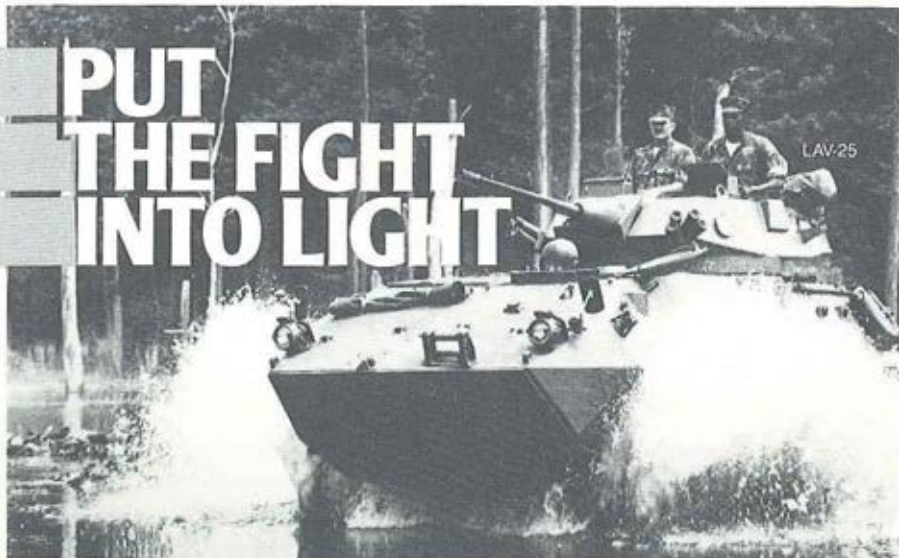
Aircraft Engines

1987 AAAA CONVENTION HIGHLIGHTS



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Baseline Reliability*	Purchase Description Requirements	LAV-25 Initial Production Test (IPT) RAM-D Results
Mean miles between mission failure	1250	5700
Maintenance Ratio (Organizational) (Intermediate)	.30 .08	.17 .01
Mean Time to Repair (Organizational)	1.3 hours	61 hours
Tasks above organizational level	< 20%	1%
Availability	90%	96%
Operating cost-per-mile Automotive Subsystem excluding weapon station	not stated	\$1.92



LAV-AT

LAV Air Transportability

CSA	
C141	
C130	
CH53E	

*Calculations by General Motors based on RAM-D data for LAV-25 baseline vehicle. Details available on request.



THE ULTIMATE ALLY



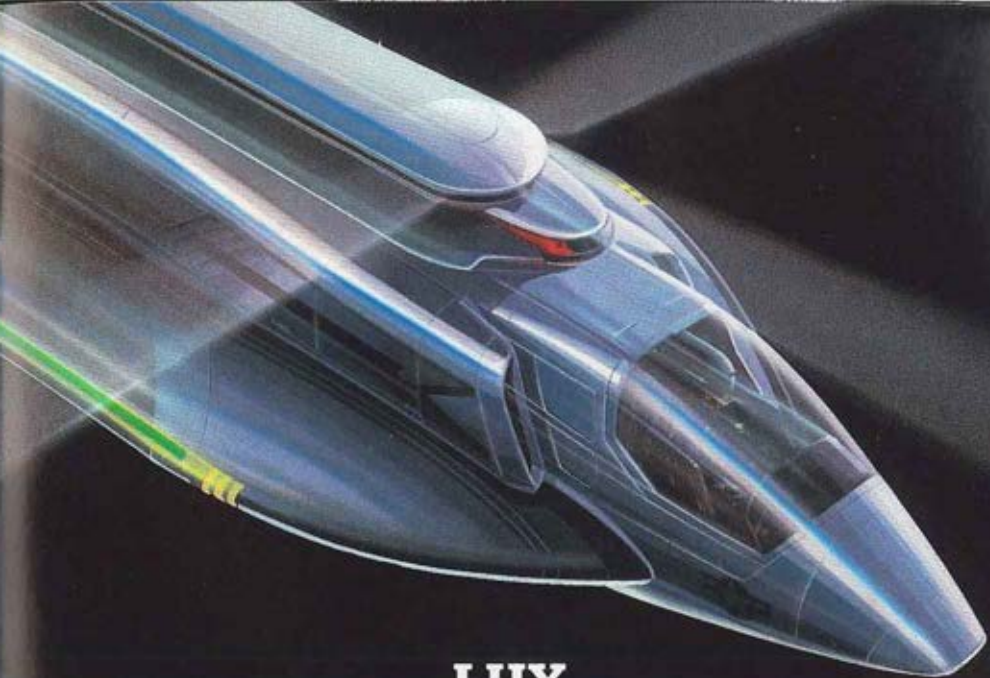
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(Counterclockwise, r to l): 1) Soldier of the Year SSG Richard E. Frye & his parents are introduced. 2) All rise as Awards Luncheon opens. 3) GEN John A. Wickham, Jr., Chief of Staff, presents Soldier's Award to Frye; Frye's parents join in. (Note—GEN Wickham received the President's Award for improving the Army's safety record.) 4) GEN Joseph T. Palastra, Jr., FORSCOM CG, presents Aviator of the Year Award to LTC Kenneth R. McGinty. 5) LTC McGinty and his family share in the honors.





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Litton Systems Canada. Northrop Corporation. And Texas Instruments. Together they will create the Mission Equipment Package that makes *this* LHX the most lethal, powerful and survivable helicopter ever developed.

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SuperTeam. Ready for the challenge. Focused on a fly-off ... in an experienced, competitive stance.



MCDONNELL DOUGLAS

SUPERTEAM

BELL HELICOPTER TEXTRON



Top L: CW3 Dean R. Coder, Mrs. Coder & mother-in-law, display the McClellan Award. Below: Coder receives award from LTG Crosbie E. Saint, CG, III Corps & Ft. Hood. Top R: Charles C. Crawford, Jr., DAC of the Year, is congratulated by MG Richard E. Stephenson, AVSCOM CG. Below: Mr. & Mrs. Crawford display the coveted trophy.



The AAAA President's Reception, on Friday evening, is one of the best attended events — the opportunity to mix and mingle and scrumptious hors d'oeuvres are a winning combination.





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Right: A view of the aircraft on display. Below Left: A MILPERCEN team provided career counseling throughout the convention. Below Right: The Saturday evening Awards Reception offers the last chance to view the outstanding exhibits.



Above Left: The colors are presented at the Saturday evening Awards Banquet by the Texas Christian University ROTC. Above Right: President Putnam cites the accomplishments of the U.S. Precision Helicopter Team, commanded by LTC Robert E. Harry (l). Right: Cadets from the Citadel join in the Awards Banquet festivities.



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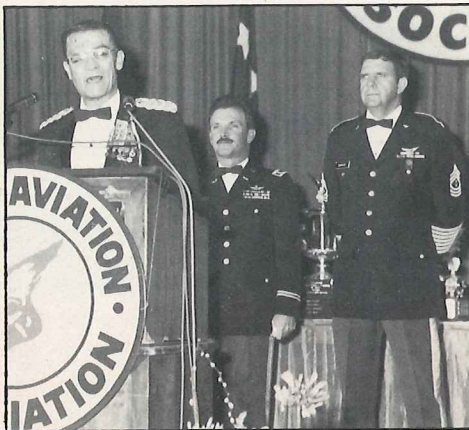


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Counterclockwise, r to l: 1) LTC & Mrs. Leroy A. Wall (l) & CSM & Mrs. Charles B. Connell (r), 45th Avn Bn, OKARNG, win Outstanding ARNG Trophy. 2) LTG Charles D. Franklin, 1st USA CG, presents award to Wall (l) & Connell (r). 3) COL & Mrs. John A. Lasch, III, & CSM William H. Fountain, Davison Avn. Cmd., Ft. Belvoir, VA, accept Leich Award. 4) USAR Unit members present pose for photos. 5) MG Robert F. Molinelli notes the achievements of the 282nd Avn Co, Ft. Rucker, as MAJ Gregory N. Beaman (l) & 1SG Jackie J. Bradley (r) are honored.





Top Left: MAJ Jesse M. Danielson (center), Commander, 238th Avn Co, 24th ID, Hunter AAF, GA, & Mrs. Danielson, (right) and 1SG Frederick G. Jaehn (left), Senior NCO, pose for photos. Top Right: Members of the 238th present join in to celebrate winning the Outstanding Aviation Unit of the Year Award. Right: GEN Thurman, delivers a stirring keynote address before the Awards Banquet audience of 1,400 (Below Right).



Above: AAAA member with Texas spirit enjoys Aviation Brunch. R: Incoming President MG Story C. Stevens, Ret., (l) toasts AAAA with William P. Brown, McDonnell Douglas Helicopter Co. President.



International:

Army Aviation in the "Bundeswehr"

by Brigadier General Kurt Josef Veese



and the mutual participation in exercises are more or less normal events.

The ALBATROS-exercises, the tenth of which was mentioned in this magazine last year, are an excellent example of an US/German aviation exercise. Originally this type exercise was introduced to improve the interoperability of US and German Army Aviation. In the meantime, airborne and mechanized units have also been included to gain more training profit out of the money spent. And this year, a unit of the French ALAT will join the game. Other exercises I should mention in this context are the REFORGER and the AUTUMN FORGE series. In these exercises as well, our aviation units support each other in performing their tasks.

The close relationship between US and German Army Aviation has provided commonalities in training, doctrine, organization and equipment and allowed us to mesh our assets. However, a US Army Aviator, viewing his German counterpart unit, will also find many differences. And there are, of course, reasons for this.

Let us first look at the equipment: While our transport helicopters are US-designed (eventhough produced in Germany), our anti-tank helicopter, the BO-105, is a German design. Couldn't we have procured the AH-1 COBRA instead? Of course we could have, and, in fact, this was under consideration before the decision was taken. The advantage of having one common weapon system for all US and German Army Aviation units was taken into account. But, the German Army was looking for a helicopter capable of performing one mission and (Germany — Cont. on Page 54)

Federal Republic of Germany-

When the German Federal Armed Forces were established in 1955-56, Army Aviation was organized as a branch of its own. The advantage was that we could recruit and train our personnel for a full aviation career and develop high standards.

But, there were some initial disadvantages. Most of the aviation officers lacked experience with the others branches of the combined arms team (except those who received their basic military education in another branch). Also, it took some time before knowledge of aviation — the value, possibilities and limitations of airmobility — was thoroughly understood by the other branches.

These shortcomings, however, are history now. As of this writing, two of the 36 brigades of our field Army will be under command of Army pilots.

In those early days, German Army Aviation consisted of a number of separate squadrons (company size units), equipped with a wide variety of fixed wing and rotary wing aircraft, small liaison types mostly, and some transports. In the late fifties, the French Alouette II was selected as LOH for the German Army. In fact today, some 150 of these ships are still in service for liaison and training purposes and will continue to fly for a number of

years. While our fixed wing aircraft were phased out in the sixties, our H-21 and H-34 transport helicopters were replaced by UH-1Ds and CH-53s.

The latest equipment in our inventory today is the BO-105, a two-ton twin engine helicopter which is widely known. Some of them are used as LOHs; the bulk, however, are maintained for the anti-tank-role (PAH-1), equipped with a roof mounted sight and armed with the Franco-German "HOT".

Also in these early days, it was not surprising that a close relationship formed between the US and German Army Aviation communities. Quite a few of our pilots at that time received their initial or refresher flight training at installations like (then) Camp Wolters and Ft. Rucker. Throughout the years, we continued to send pilots for training at Ft. Rucker, even though our own school at Buckeburg became quite a valid training institution. In fact whenever you come to Ft. Rucker, you can be sure to meet some Germany Army Aviators, both students as well as instructor pilots.

And over here in Germany? I remember well my first mountain-flights in an H-34 with an instructor pilot coming from the US unit co-located with my squadron. There are no US and German aviation assets co-located at this time. But partnerships between neighboring aviation formations, the exchange of crews or units,

BG Kurt Veese is General der Heeresfliegertruppe, Federal Republic of Germany.

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Air Traffic Control:

10th Air Traffic Control Battalion (Support)

by Lt. Colonel David C. Gwin



FT. RUCKER, AL — Most Army aviators, at some point in their careers, have been under the "control" of the 10th Air Traffic Control (ATC) Battalion (SPT). We are the newest member of the Aviation Training Brigade, Fort Rucker, AL.

You might have known us as the U.S. Army Information Systems Command (USAISC) Signal Battalion. On June 13, 1986 we received our new designation provisionally in anticipation of ATC progency being transferred from USAISC to the Aviation Branch on October 1, 1986.

The 10th ATC Bn provides ATC services in support of every phase and type of aviation training being conducted at the U.S. Army Aviation Training Center. This vast support mission entails the manning of 27 ATC facilities and the operation and maintenance of over 100 ATC systems dispersed over a three-state area. Every tower, ground control approach (GCA), or Flight Coordination Center (FCC) at the Aviation Center is operated and maintained by the 10th ATC Bn. We provide ATC services from initial entry rotary wing flight training in TH-55s to the AH-64 APACHes conducting gunnery training, as well as all fixed wing training. This makes us truly deserving of our motto **VIGILARE**. Fort Rucker is the

"mother lode" of training for Army ATC, allowing hands-on experience with some of the heaviest air traffic in the world.

"A" Company, formerly Basefield Company, provides ATC services at Cairns Army Airfield, Lowe Army Heliport, Hanchey Army Heliport, Shell Army Airfield, Troy Municipal Airport, and Runkle Army Airfield Tower. It also provides flight following at Blue Springs FCC, Runkle FCC, and GCA services at Troy Municipal Airport and Esto GCA. Last year the combined total aircraft movements for all A Company facilities exceeded 1,273,000 takeoffs and landings.

"B" Company, formerly Stagefield Company, provides ATC services at stagefield towers such as Goldberg, Hunt and 14 other stagefields throughout southeast Alabama. Unlike basefields, stagefields are used for actual student training, where the student is able to practice hovering, normal flight maneuvers, running landings, and emergency procedures. Last year, B Company provided air traffic control for over 2,259,000 aircraft takeoffs and landings.

Our Army Radar Approach Control (ARAC) Division is the only U.S. Army radar approach facility classified as a Level IV facility, the highest rating assigned by the FAA. In 1986, it was selected as the Army Air Traffic Control Facility of the Year. Located at Cairns Army Airfield, ARAC is responsible for all IFR

traffic from the surface to 10,000 feet in a tri-state area, covering most of southeast Alabama as well as parts of Georgia and Florida.

ARAC provides approach control services not only to IFR traffic originating from Fort Rucker, but also to civilian aircraft at Dothan, Troy, Enterprise, Blackwell and Andalusia Municipal Airports. It is an integral part of the National Airspace System, coordinating with Jacksonville Center on all airspace matters concerning Fort Rucker airspace. During a normal day, ARAC handles 960 movements, validating its Level IV (High Density) rating which is comparable with Orlando, Florida, or Memphis, Tennessee. ARAC, with 254,000 annual movements, is the 58th busiest of 418 FAA radar facilities nationwide.

The operating and maintenance of the NAVAIDS and ATC equipment supporting this vast array of training missions is all handled in-house by our ATC/NAVAIDS Maintenance Division. It is responsible for the performance of over 100 navigational aids, microwave communications links, ground-to-air radio systems, weathervision, and ATC radar facilities, covering 8,000 square miles and three states. People in this division average 18,000 driving miles each month servicing remote locations.

Since many of the NAVAIDS and two of the radar systems maintained are used not only for Aviation Center training, but also by general aviation operations in the National Airspace System, their efforts are indeed far-reaching. Our Weathervision Branch uses microwave and (10th ATC—Cont. on Page 52)

LTC Gwin is Commander of the 10th Air Traffic Control Battalion, Fort Rucker, Alabama.

Avn Medicine:

Aviation Activities in the Health Services

by Lt. Colonel Jimmy A. Norris



FT. SAM HOUSTON, TX — We at U.S. Army Health Services Command (USAHSC) do not manage a large fleet of aircraft, but we are deeply involved in aviation activities. These activities include participating in Aviation Resources Management Surveys (ARMS), developing medical evacuation doctrine to support the Airland Battle, assisting in developing and procuring aviation materiel, training aeromedical personnel, providing health care to the aviation community, and operating a small air ambulance unit at the U.S. Army community hospital servicing the home of U.S. Army Aviation, Ft. Rucker, AL.

The aviation staff officers assigned to HQ, U.S. Army Health Services Command supplement the ARMS teams of U.S. Army Forces Command (FORSCOM), U.S. Army Training and Doctrine Command (TRADOC) and U.S. Army Western Command (WESTCOM). During the ARMS we evaluate the aviation medicine programs of the units being surveyed, looking particularly at the involvement of the flight surgeons in the overall aviation programs. Also evaluated are aeromedical factors training within the units, medical management of air crewmembers and the medical management of nonoperational

LTC Jimmy A. Norris is Aviation Staff Officer for USAHSC, Ft. Sam Houston.

aviators. Additionally, the headquarters aviation staff sponsor the annual meeting of the Army Medical Department (AMEDD) Aviation Standardization and Safety Committee (AASSC). Active and Reserve Component members of the AMEDD aviation community from Europe, Korea, Panama, Alaska, and CONUS participate in this conference. Our purpose in conducting the conference is to update participants in materiel, doctrinal, safety, training, and personnel changes occurring in AMEDD aviation as well as to facilitate the resolution of issues submitted by our U.S. Army medical aviation units.

Within the Academy of Health Sciences, U.S. Army (AHSUSA), a subordinate activity of USAHSC, our combat developers are developing medical evacuation doctrine as a part of the Health Service Support to Airland Battle concept. A medical evacuation battalion headquarters has been documented to provide command and control of air and ground evacuation assets. A new, fifteen aircraft aeromedical evacuation company has been developed to replace the twenty-five helicopter company and the six helicopter detachment. These new organizations will increase the capability and flexibility required to evacuate casualties and clear the battlefield. Not

only is new doctrine being written, but we are also in the midst of materiel and equipment development and procurement. Programs on which our people are now working include the LHX, V-22, medical evacuation equipment set (MES), compartment heating for the UH-60, and improved hoist capability for the UH-60.

The U.S. Army School of Aviation Medicine (USASAM), an element of AHSUSA, is located at Ft. Rucker, AL and has the responsibility for providing medical subjects training to all students enrolled in flight training. Flight surgeons and air ambulance medical aidmen are also trained by USASAM.

The Medical Evacuation Propensity Action Office of AHSUSA is also located at Ft. Rucker and is tying together all issues relating to medical evacuation, air and ground. Another USAHSC activity at Ft. Rucker is the U.S. Army Aeromedical Center (USAAMC) which provides a wide spectrum of aeromedical services to Ft. Rucker as well as to the entire Army aviation community. Every aviator flight duty medical examination is reviewed by USAAMC and waivers for disqualifying medical conditions are recommended when appropriate. Additionally, the Air Ambulance division (FLATIRON) of USAAMC provides air crash rescue and air ambulance service to Ft. Rucker.

Flight surgeons assigned to our hospitals and clinics in CONUS, Alaska, Hawaii, and Panama are providing primary medical care to aircrewmembers and their dependents. Additionally, these flight
(USAHSC—Cont. on Page 55)

Hardware:

APACHE: Fielding the AH-64 Helicopter

by Colonel John P. Kennedy



Cavalry Brigade, has already had his squadrons successfully execute cross-FLOT strikes as deep as 60 to 80 miles at night and against realistically-arrayed enemy air defense systems.

Located just down the road from the 6th Cavalry Brigade is the headquarters of COL Lynn Handy, commander of the APACHE Training Brigade. He and his brigade will soon assume full responsibility for fielding and training the remainder of the Army's AH-64 battalions under the single-station fielding plan.

Meanwhile, in USAREUR, a great deal of hard work has been done and is ongoing to ensure that the AH-64 fielding there goes as planned. Shortly after Col. Ken Kimes assumes command of the 11th Combat Aviation Group, his unit will become the first in the theater to receive an APACHE-equipped battalion.

During the last USAREUR AH-64 fielding IPR in February, LTC Brock Wells and I visited the APACHE Combat Mission Simulator (CMS) site at Illesheim. We were impressed with both the facility that has been constructed to house the CMS and the "can do" attitude of the entire Illesheim community.

As I said at the beginning of this article, APACHE fielding is going extremely well. As of May 1987 over 200 APACHES will have rolled off the production line and the fleet will have flown nearly 40,000 hours. At the present level of system maturity, we are finding ourselves concerned with issues relating to doctrine, tactics, product improvements and training. We, the users' representatives, are interested in your input. Drop us a line or call anytime. (TSM-APACHE, COL Kennedy, AV: 558-2108/3408).IIIIII

FT. RUCKER, AL — Since becoming the TRADOC System Manager for the APACHE last July, I have been amazed at the overall success the Army has had in fielding this revolutionary new system. The planning and detailed execution that has taken place at all levels — long before I arrived on the scene — has really paid off. The AH-64 is in the field right now earning its living and living up to its reputation as the world's best attack helicopter. Before I give you an update on the AH-64 fielding, I would like to share with you some of my initial impressions upon returning to Ft. Rucker after a multi-year hiatus.

As many of you already know, Ft. Rucker is "home" to the four aviation-related TRADOC System Manager Offices (TSM-Missile, TSM-LHX, TSM-Scout, and TSM-APACHE). As the users' representatives, we are responsible for energizing, integrating, organizing and expediting user issues and concerns.

If you have not been back to Ft. Rucker recently you would be amazed at the changes that have taken place here. No longer is the Home of Army Aviation that sleepy little post in southern Alabama! Now that we have an Aviation Branch, Ft. Rucker has become the focal point and proponent for all aviation issues. It's a fast-moving, challenging and

COL John P. Kennedy is the TRADOC System Manager for the APACHE.

demanding environment.

The APACHE pilot qualification course remains tough and challenging as well, with more than 280 aviators having completed it to date. My first visit to the flight line was like taking a trip to the Attack Helicopter Hall of Fame. Many of the Army's finest are serving as APACHE instructor pilots. Some like CWOs Randy Dyer and Mike Talton have been with the AH-64 program from the early testing days. Others like CWOs Tom Olsson, Lance McElhiney, Jack Berry and Keith Broome have been IPs since the AH-64 qualification course began at Ft. Rucker. The experience that they are able to pass on to their students is impressive and will go a long way to ensure that the APACHE will be successful in combat. The ramp-up to 18 students per class will be completed by the end of May of this year with a new class beginning approximately every two weeks.

Moving from the training base to Ft. Hood, TX, we find the third AH-64 battalion fielded and preparing to take an ARTEP to certify its readiness for sustained combat. When that has been completed, the three 6th Cavalry Brigade APACHE-equipped squadrons will concentrate on their preparation for REFORGER '87.

Based on what we have seen thus far, it should be an interesting exercise. Colonel Walt Yates, commander of the 6th

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Operations:

Biggest Bang for your COBRA Flying Hour Buck

by Colonel James W. Lloyd

APO NY — MILES (Multiple Integrated Laser Engagement System) is the key to realistic Attack Helicopter training. Over the past five years, as our priorities shifted from the traffic pattern to tactical flying we have seen an increase in available flying hours. Time formerly spent in the development of individual aviator proficiency in touchdown emergency procedures and non tactical flying is now being devoted to improvement in individual, crew and unit combat-oriented proficiency.

As we transitioned from the traffic pattern to the environment of the other combat arms systems (tanks and mechanized infantry) we soon learned that only so many flying hours could be productively expended in developing maneuver proficiency. Tactical flying and navigating which results in safe and unobserved arrival in a battle position takes lots of practice and a tremendous amount of individual skill and leadership. Still, more hours are available than can be productively used in the development of movement techniques.

In the 4th Brigade of the 1st Armored Division, attack and scout crews are pretty good in employment of their COBRAs and OH-58s. They move well and could maneuver into firing positions undetected. Once

there, however, training virtually ceased and "bang, bang you're dead" was the only "steel on target" delivery means available. Thus, attempts to "engage" quickly became redundant and of little consequence, either to the crews or the commander who was attempting to determine the attack helicopter's real capability; that determination ultimately being an essential factor in decisions regarding tactical employment of these valuable assets.

The objective of maneuver is to arrive at an advantageous position on the battlefield so that effective, lethal fire can be placed on the enemy. We know we can maneuver, but what about the ability to kill the threat? MILES gives us that answer!

Make no mistake, the current MILES gear is tough to use — it's time consuming to install and hard to boresight and keep aligned. The Attack Helicopter Commanders have discovered that MILES, while it appears to accurately replicate TOW characteristics, has to be treated like a separate weapons system. Additionally, the MILES gear, especially modified TSU's, are not always readily available. Difficulties in obtaining sufficient systems and the tedious installation and upkeep requirements cause some to shy away from MILES. At first, we thought the gain from its use would not be worth the pain it took to get MILES on and operating.

Once the installation and boresight procedures were perfected, we found that aviators will fight you before they'll let the MILES gear come off their aircraft. More than any single system in my 25-year military memory, MILES — especially MILES-TOW — has revolutionized attack helicopter training. With the system installed and given a reasonable opportunity to engage MILES compatible targets — vehicles, tanks, personnel carriers, etc — there should be no such thing, in the future, as wasted blade hours for attack helicopter crews and units.

Before you run out and get this "stuff" hung on your COBRAs and "go to war" against a Tank Battalion, you need to develop and train to a standard. Given the fact that very few COBRA pilots have fired live TOW missiles, we probably don't know just how good we are. Our experience, with MILES, has led us to believe that a reasonable standard for accuracy is something like seven out of ten hits on a stationary tank at 3,000 meters. As range decreases we find that accuracy will increase. Engagement of moving targets, except at maximum ranges (beyond 3,000 meters) does not seem to be significantly more difficult than shooting at a stationary target.

So, get good with MILES in a sterile, range type environment. Insist that your crews achieve set standards before you try force on force exercises. Then, be prepared to use MILES to learn or relearn some valuable lessons about combined arms warfare in general and attack helicopter operations in particular. Some of what you'll learn: Helicopters inside the range of a main tank (MILES—Cont. on Page 52)

COL James W. Lloyd is Commander, Aviation Brigade, 1st Armored Division, APO New York.

Operations:

XVIII Airborne Corps: Wings of the Dragon

by Lt. Colonel (P) Kenneth Chien



1-159th Battalion Commander, LTC Trey McCarther, is presently on board and is directing the transition process. This Command Aviation Battalion will consist of an HHC with a U-21 detachment (5 Aircraft), a UH-1 general support company (15 Aircraft), an Assault Helicopter Company (15 UH-1), a general support OH-58A company (15 Aircraft), and a 15 ship OH-58D (FAAD) Company. The OH-58D company will support the forward aerial observer mission of Corps Artillery and will be instrumental in designating targets for the Copperhead round.

The 2-159th Medium Helicopter Battalion will initially be formed by MAJ(P) Mitch Johnson. He recently joined the Brigade and is working aggressively to activate the battalion HHC and the three outlying companies located at Ft. Bragg, Ft. Campbell, and Hunter AAF. The 2-159th MHB will consist of three CH-47D companies with 16 aircraft per company. The battalion HHC will be located at Ft. Bragg.

During FY 88 the 3-159th Assault Battalion will come on line with three companies and 69 UH-1's. Two of these companies will be stationed at Ft. Bragg with (Dragons — Cont. on Page 58)

FT. BRAGG, NC — The XVIII Airborne Corps and Ft. Bragg is one of the fastest moving and most challenging assignments a soldier could ever ask for.

The AOE transition to the 18th Aviation Brigade began February 1987. In order to provide maximum support to the Corps and an 18-hour world-wide deployment mission, soldiers have been working diligently to address specific fielding programs, such as the OH-58D and the AH-64 Attack Helicopter. Under the current configuration, the Corps has an organic general support aviation battalion, the 269th Aviation Battalion, from which the 18th Aviation Company (GS) and the 196th Medium Helicopter Company operate. The battalion presently consists of 20 OH-58A, 18 UH-1, and 16 CH-47D aircraft. The activation of the 18th Aviation Brigade will consist of converting existing 269th Aviation Battalion and other Ft. Bragg units as well as activating presently nonexistent units under the L series MTOE structure.

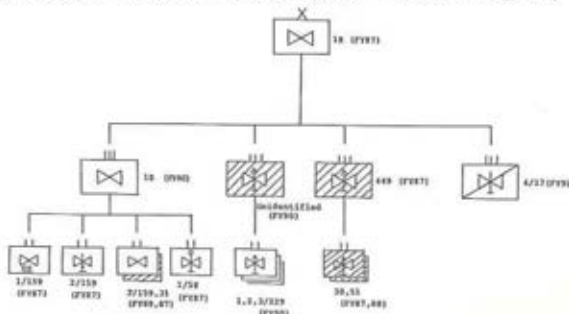
The formal name of the brigade will be the "18th Aviation Brigade (Corps) (Airborne)". Yes, there will be another "Airborne" aviation unit at Ft. Bragg in addition to that magnificent aviation brigade in the 82d Airborne Division. The 18th Aviation Brigade will consist of a General Support

Aviation Group, an Air Recon Squadron, and two Attack Helicopter Groups.

By September 19, 1987, the Brigade HHC, the 1-159th Command Aviation Battalion, the 2-159th Medium Helicopter Battalion, the 1-58th Air Traffic Control Battalion, the 31st Assault Helicopter Battalion (ALNG), the 30th Attack Helicopter Battalion (NCNG), the 51st Attack Helicopter Battalion (SCNG) and the 449th Attack Helicopter Group (NCNG), will be on line. The Brigade HHC will be a conversion of the existing 269th Aviation Battalion HHC located here at Ft. Bragg.

The 10th Aviation Group will form in FY 90. From FY 87 until its formation, all of the groups subordinate units will come directly under Brigade control.

The 1-159th Aviation Battalion will be activated through a conversion of the 18th Aviation Company (GS), currently under the 269th Aviation Battalion. The



LTC (P) Kenneth Chien is Aviation Officer, XVIII Airborne Corps, Fort Bragg, NC.

PERSONNEL: 3879

AIRCRAFT: A2-64 - 90
A2-12 - 14
OH-10 - 118
UH-1 - 174
OH-58 - 15
CH-47 - 48
UH-1 - 5
TOTAL - 527

LOCATIONS: FT BRAGG
FT CAMPBELL
FT BRUCKER
FT THORNTON
BROTHER ARMY AIRFIELD
SCHEP
BIRM
ALMO

Operations:

It's a Great Day in CAV Country

by Colonel Jerry T. Wagner



FT. HOOD, TX — It's a great day to be in CAV Country! The combat Aviation Brigade of the 1st Cavalry Division has been extremely busy since I took command in June 1986, and I would like to share with you some of our experiences and ongoing activities.

The brigade has been rolling in the right direction since its activation in September 1984, and the momentum has continued unabated. The 227th Aviation Battalion was inactivated and split into three separate companies, the 227th Aviation Company (GSAC), the 19th Aviation Company (CSAC), and the 493rd TAMC under DISCOM control. This isn't our idea of an ideal situation, but we are making it work. On October 16, 1986, the 1st Squadron, 9th Cavalry, our divisional cavalry squadron, was redesignated the 1st Squadron, 7th Cavalry. The Squadron's roundout ground cavalry troop remained A Troop, 98th Cavalry, Mississippi National Guard. The 1-9 CAV colors will be sorely missed since it is one of the most highly decorated and distinguished cavalry squadrons in the Army and a member of the First Team for over 29 years. One of the first missions of the newly designated 1-7 CAV was to train up and deploy an aviation task

force to the National Training Center. This was the first time a cavalry unit at the NTC was permitted to be employed in a traditional cavalry role. Numerous lessons were learned, the training was superb, and the rotation was rated a total success. The squadron will have an opportunity to build upon this experience when it deploys again to the NTC in May 1987 and on REFORGER in September 1987.

The remainder of the brigade has also been decisively engaged during this time frame. The 19th Aviation Company reorganized into a task force and deployed to Honduras in support of JTF-B. They departed in October 1986 and returned in March 1987. Although the mission was demanding and the flying occasionally dangerous, Task Force 19 returned a veteran unit, amidst a shower of laudatory remarks from all participating commands. Their experience should serve them well when they deploy on REFORGER this fall.

The 227th Aviation Company has continued to practice its mission on a day-to-day basis by providing general support to the 1st Cavalry Division. With the responsibility of flying the Commanding General, the Assistant Division Commander, and all 1st Cavalry Division brigade commanders, their mission is a seven day a week

one. This practice should help them excel when they deploy to Germany this fall during REFORGER 87. Shortly after their return, they will prepare to receive the OH-58D, which is scheduled to arrive in February 1988. The addition of the OH-58D will greatly enhance the division's target acquisition and reconnaissance capability.

Our attack battalion, the 228th AHB, has had a particularly hectic schedule. With four rotations to the National Training Center in an 18 month period, the battalion constantly stayed in the field and became exceedingly adept at desert warfare and combined arms integration. Recently, the 228th focused its energies on fielding the AH-64. The 1st Cavalry Division is the first division to receive the AH-64, and plans are afoot to integrate this highly lethal system into the combined arms team. On June 16, 1987, the battalion will commence the unit training program and complete all training by September 1987. This timing doesn't allow the brigade to deploy the 228th AHB to REFORGER in September, but they will be ready for the next one.

The brigade has been employed numerous times by the division as a maneuver element in both command post and field training exercises. The highlight for the brigade in 1986 came in August during the exercise Autumn Saber. The brigade deployed in its entirety with attachments of ground maneuver elements and a Forward Area Support Team. Doctrinal employment distances were maintained throughout the exercise, and

(Cav — Cont. on Page 55)

Colonel Jerry Wagner is Commander, Aviation Brigade, 1st Cavalry Division, Ft. Hood, TX.

OH-58D



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Operations:

Task Force 19: "Vultures" in Honduras

by Captain (P) Tommy M. Macon



FT. HOOD, TX — First Teamers travel overseas! Task Force-19 "Vultures" deployed to Honduras in support of Joint Task Force Bravo (JTFB). Serving as the nucleus for Task Force-19 was the 19th Combat Support Aviation Company (CSAC) under my command, assigned to Combat Aviation Brigade, 1st Cavalry Division, Ft. Hood, TX. Other units assigned to the Task Force included soldiers from the 493rd AVIM, 3/507th Medevac and a platoon from the 196th Aviation Company Ft. Bragg, NC. Task Force-19 was responsible for operating and maintaining 21 UH-1H (General Support), three UH-1V (Medevac) and four CH-47D (Medium Lift) Helicopters.

Task Force-19's mission was to provide aviation support for US Forces in Honduras, the US Defense Attache Office, and military groups in El Salvador and Guatemala. The Task Force also provided support for the sister services which included US Navy vessels, the USS Sphinx (ARL024) and Battleship USS Iowa (BB-61). Operating with the US Navy provided an invaluable training opportunity not normally found in a garrison environment. Another facet of the varied mission was the requirement to airlift life sustaining logistics to out lying installations

manned by military police from Air Force and Army elements. In many of the more remote locations, the only means available of rotating personnel, medical evacuation, and providing maintenance was by helicopter. Because of the natural elevation of Honduras, the majority of the unit's aviators greatly enhanced their abilities to prepare for and conduct missions in mountainous terrain.

Due to the political interest in the area and the number of ongoing major training exercises, the requirement to provide support for visiting dignitaries was extensive. Included in these visitors were Secretary of the Army, the Honorable John Marsh; National Security Advisor, Frank Carlucci; Secretary of State, George Schultz; Under Secretary of the State for Latin America Affairs, Elliott Abrams; CINC SOUTH-COM, General Galvin; and a host of congressional delegations. Altogether, over 3,500 flight hours were flown during the four months with an average daily requirement of nine missions per day.

Camp Blackjack, where the aviation Task Force was billeted, is located on Palmerola Air Force Base, Honduras, Central America. "Home" on Camp Blackjack was a C-Hut (hootch) in which six or seven soldiers slept in single bunk beds. Bunkers were located between each hootch for security in the event of contingencies. An open

bay shower point constructed of wood slabs replaced the previous tent model and was the only source available for personal showers. Older soldiers were treated to a sight from the past as "burn barrels" were brought out once again.

A typical day for the Task Force personnel included aircraft and equipment maintenance, area improvement (bunker building, laying brick walk ways), and flight missions. Soldiers averaged a six day work week, sometimes seven. Some maintenance and operation personnel and selected flight crews were required to maintain a 24-hour operational capability including one standby Medevac crew for any emergency. The maintenance platoon averaged 90% aircraft availability rate which reflects not only good maintenance management and many hours of hard work but also the highest operational readiness achieved thus far by any Task Force. This included the CH-47D, a marked increase in reliability over the older "C" models.

Soldiers were given passes to visit surrounding cities and view firsthand a country that features a rugged and varied terrain and a different cultural makeup. Aircrews from the Task Force had the opportunity to see several cities and countries in Central America including San Salvador, Guatemala City, El Salvador, Jamastran, Mocolon, San Pedro Sula, Puerto Cortes, and many other exciting places. Honduras has an Indo-Hispanic culture, with a good portion of the population located in rural areas. Medical support airlifts to nearby villages were commonplace. On these missions, medical personnel provided immunizations and dental (Vultures — Cont. on Page 55)

Captain Tommy Macon is Commander, 19th Combat Support Aviation Company, Ft. Hood, TX.

Research and Development:

Army Pilots Receive 'Top Gun' Training

by Gerald Irvine

FT. EUSTIS, VA — Two Army helicopter pilots got a chance to use their Marine Corps 'Top Gun' tactics training in late March. The pilots participated in the Air-to-Air Combat Test (AACT) IV program conducted by the U.S. Army Aviation Research and Technology Activity's (ARTA) Aviation Applied Technology Directorate (AATD), Ft. Eustis, VA, at the Naval Air Test Center (NATC), Patuxent River, MD.

MAJ Waldo Carmona, experimental test pilot at AATD, and CW4 Joseph Lyle, an engineering test pilot assigned to the U.S. Army Aviation Engineering Flight Test Activity (AEFA), Edwards AFB, CA, recently earned their Air Combat Maneuvers (ACM) certification at Ft. Eustis.

Marine Corps Majors Paul J. Blemberg and George Trautman, instructors of the Marine Aviation Weapons and Tactics Squadron One (MAWTS-1), Marine Corps Air Station (MCAS), Yuma, AZ, taught the three-day ACM course. Class emphasis was on visual detection doctrine, and detection avoidance countermeasures. Certification flights included three-hours of free flight, and seven-hours of helicopter tactics and maneuvers in the Army-leased French Aerospatiale 365N-Dauphin, one of four aircraft scheduled for AACT IV.

"This training is the direct result of the Department of

Defense Congressional Report that looked to identify why the U.S. pilot exchange rates over North Vietnam were almost equal," said Blemberg. "Among the spin-offs of that report was the training that evolved into the 'Top Gun' tactics and that part of the weapons school at Nellis Air Force Base, NV.

Some of the particulars in that report were incorporated into a paper called Project 19 for the Marine Corps. Project 19 was an evaluation of how we need to train to fight the next war.

It made a number of recommendations, one of which was to establish a Weapons and Tactics Instructor Training program. MAWTS-1 was commissioned in 1978 at MCAS Yuma to implement that program.

The purpose of the program was to put at least one Instructor Pilot (IP) in every squadron each year. Pilots are selected from each squadron for specialized ACM instructor training at a specialized location. Upon completion of the course, the new IP returns to train his unit in the latest ACM concepts, tactics, and applications of doctrine.

"Twice a year, we teach a six-week qualification course to create these instructors," said Trautman. "The rest of the time, we spend on the road certifying Marine Corps, Navy, Air Force, and Army pilots in ACM."

MAWTS-1 also evaluates the combat readiness of Marine units to be deployed overseas.

"The U.S. trained Iranian pilots easily adapted to air-to-air combat maneuvers, much better than the Soviet trained Iraqis," said Blemberg. "Soviet pilots are (Top Gun — Cont. on Page 55)

BELOW: MAJ Waldo Carmona (c) performs an inspection on the French leased Aerospatiale 365N-Dauphin helicopter with Marine Majors (l) George Trautman and (r) Paul Blemberg.



Gerald Irvine is the Public Affairs contact for U.S. Army Aviation Research and Technology Activity (AVSCOM).

Research and Development:

Advanced Rotorcraft Transmission Program

by Gilbert J. Weden

CLEVELAND, OH — The Army's Aviation Systems Command (Aviation Research and Technology Activity) (ARTA) announced recently that plans have been approved by Dr. Jay Sculley, Assistant Secretary of the Army for Research, Development and Acquisition, to conduct a 72-month advanced rotorcraft transmission program and that initial contracts will be let by the end of this fiscal year. The Army is taking this opportunity to combine component advances into a full-scale technology demonstrator. The program provides lead time required for basic integration prior to committing to overall development of future systems. The intention is to devote enough up-front R&D time to establish confidence in innovative designs

Gilbert Weden is affiliated with the Army Propulsion Directorate (ARTA).

thereby permitting incorporation of key emerging material and component technologies. Targets of opportunity will be future cargo and attack rotorcraft systems. Compared to today's systems, the plan is an aggressive and ambitious one, aimed at:

- Reducing drive-system weight by 25%;
- Reducing source noise by 10 db; and
- Increasing mean time between removals up to 5,000 hours.

This Advanced Rotorcraft Transmission (ART) Program is part of the Army Propulsion 21 Technology Demonstration which is one of the Army Top 20 Technology Demonstrations. This will be the first advanced development effort to be pursued by ARTA's Propulsion Directorate,

collocated with NASA at the Lewis Research Center in Cleveland, OH. The Propulsion Directorate, along with NASA-Lewis and the Industry, has been involved in advancing component technologies in a wide array of disciplines consistent with improving the performance, reliability and effectiveness of future rotorcraft systems.

The Army expects that offerors will propose innovative arrangements, using results from recent research and exploratory developments for mechanical components. The approved plan is divided into three phases of work, as follows:

- Phase 1 — Four contractors will evolve preliminary designs of advanced transmissions, establish component requirements, quantify gains, and deliver a report and plan for the balance of the program.
- Phase 2 — The same four contractors will conduct advanced component R&D efforts for configurations offered in Phase 1, including design, analysis, fabrication, and test. It is expected that subcontractors will (Rotorcraft—Cont. on Page 54)

Ames Hosts NASA/Rotorcraft Conference

Moffet Field, CA—Ames was the site of a gathering of the "Who's Who" of the rotorcraft research and development community in mid-March. Over 250 representatives from the government, the rotorcraft industry, academia, and foreign nations met to hear a summary of the progress during the past decade of rotorcraft research.

Co-host Dr. William F. Ballhaus, Jr., Director of Ames, welcomed the attendees to Ames Research Center on Tuesday, March 17 and presented an overview of the Ames Research activities. He was followed by co-host Dr. Richard Carlson, Director of the Army's Aviation Research and Technology Activity, who reflected on the R&D process.

Over the next three days, thirty-four papers were presented, outlining progress made in the fields of rotary wing aerodynamics, dynamics and aeroelasticity, materials and structures, propulsion and drive systems, flight dynamics and controls, acoustics, systems integration, research aircraft, and industry research and development.

Panel membership included William Brown, President of McDonnell Douglas Helicopter Co.; Dr. Dale L. Compton, Deputy Director of Ames; COL Gerald Kunde, Chief, Aviation Systems, DCSRDA, DOA; Harris Belman, Manager, Avionics Systems Advanced Programs, IBM Federal Systems Div.; and James Satterwhite, Vice President of Engineering, Sikorsky Aircraft.

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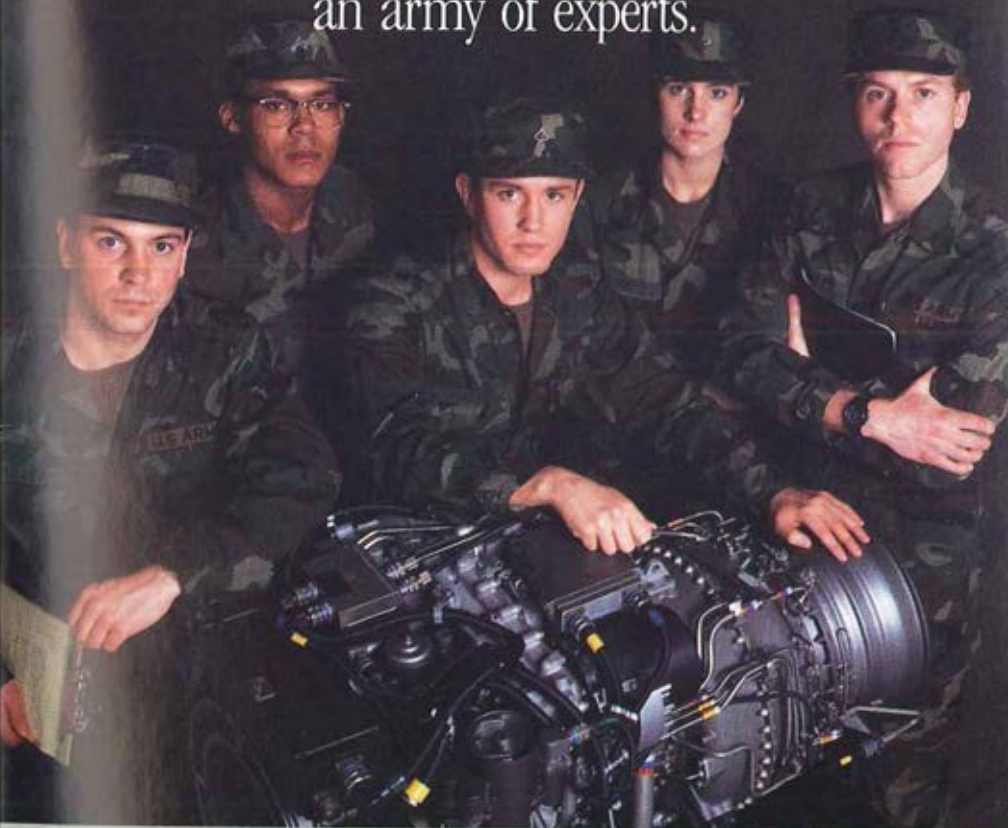
This maintainability tour has prompted numerous design changes. Like a repositioned emergency lube system accumulator to improve compressor linkage access. And moved air-frame-to-computer connectors

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an army of experts.



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Research and Development:

Army Aviation Engineering Directions

by James A. Ray

ST. LOUIS, MO — AVSCOM's Directorate for Engineering provides for life cycle engineering support for all Army Aircraft systems and related aviation materiel. In this role, support is provided for R&D projects, developmental projects, aviation materiel production, and operational fielded systems. A specific charter in this support is the planning and execution of the Airworthiness Qualification of U.S. Army Aircraft Systems (AR 70-62) in which qualification of basic and changed aircraft systems as well as airworthiness releases for non-standard aircraft modifications are performed. Additionally, the directorate manages a series of programs including: aircraft engine Component Improvement Program (CIP); Value Engineering; Air-to-Air Stinger (ATAS); Special Operations Forces (SOF) Aircraft, DOD Standardization; Industrial Preparedness; and Production Engineering. Several efforts are new or evolving in support of Army Aviation:

Air-to-Air Stinger: Initiated in 1984 to integrate the Stinger missile into the OH-58 C/D aircraft, the program consists of developing a launcher and associated electronics, aircraft mounting and sighting systems. Production awards for this installation are currently being worked along with an integration

James Ray is the Deputy Director of Engineering, Directorate for Engineering, AVSCOM, St. Louis, MO.

effort for the AH-64A.

Special Operations Forces Helicopter Modification: A project office was established in 1986 to develop aircraft in support of the Special Operations Aviation (SOA) Required Operational Capabilities (ROC). A Request for Proposal (RFP) has been developed for modification of a UH-60 and CH-47 aircraft in support of this mission.

Light Helicopter Experimental (LHX): Engineering support of the R&D effort and the Full Scale Development RFP have been continuing. A third draft RFP was released for industry in March 1987 with the formal release still scheduled for 3rd Quarter FY 87. The engine, T800, is in full scale development with competition between two teams. Both teams have several engines running, leading toward Preliminary Flight Rating (PFR) tests.

Flight Safety Parts Program: Since the initiation of the Flight Safety Parts Program in 1985, considerable progress has been made in identification of the parts and their critical characteristics, improvements/controls for their life cycle management, and initiation of recurring surveillance testing of new/used parts to insure their integrity is being maintained. In addition, overall consolidation of data bases and management procedures are being enhanced to include trend analyses and alert systems to improve the overall safety process. Automation techniques are also

improving other safety related programs such as Category I EIR/QDRs. Potential safety problems have already been detected through these efforts and corrective actions taken. As the Flight Safety Parts Program matures, it will provide a significant safety system for Army Aviation.

Flight Data Recorders: One of the necessary features to insure continuous safety evaluation for life cycle management is operational data. A flight data recorder program is underway to provide monitoring as a crash recorder, a maintenance diagnostic recorder and structural monitoring to allow for continuing evaluation of the aircraft's usage spectrum. An initial program effort to cover the crash recorder features has already been put in place by procuring 200 for initial installation on the BLACK HAWK. Effort is underway to develop the full complement of recorders with contract effort later this year.

Helicopter Structural Integrity Program (HSIP): The HSIP is in its early stages of development, but it will provide a program for insuring recurring structural information is maintained up to date for fielded aircraft. One specific task is developing a helicopter standard which will identify all structural integrity tasks to be accomplished as well as a helicopter specification to provide detailed requirements for each task. The standard will cover life cycle management for structural integrity, will be applicable for both metallic and composite systems and will incorporate our new Army initiatives including flight safety parts, surveillance testing, flight data recorders and damage
(Engineering — Page 54)

Safety:

Night Vision Flying: Avoiding Accidents

by Colonel A.E. Hervey, Jr.



FT. RUCKER, AL — Today, Army aviators are flying more and more in the high-risk environment. A high-risk environment is defined as a tactical, night, night vision goggles (NVG), slingload, or hoist mission.

In FY82, about 43 percent of our total flying hours were in this high-risk environment. In FY86, 90 percent of the total flying hours of our combat-ready divisions were in the high-risk environment, with some units reporting as high as 65 percent of their total flying hours at night with night vision goggles at nap-of-the-earth (NOE) levels.

In the last three fiscal years, there has been a rising trend in night vision device-related accidents. In FY84, 14 percent of the Class A rotary wing night accidents involved night vision devices. In FY85, 53 percent involved night vision devices. In FY86, all of the night Class A rotary wing accidents involved the use of night vision devices. Through March 15, 1987, six of the seven Class A rotary wing night accidents for FY87 involved night vision devices.

Because of this increasing accident trend, the U.S. Army Safety Center conducted a night vision flying accident prevention workshop. The purpose of the workshop was twofold: to gain a better under-

standing of how field units train and operate with NVGs in the high-risk night tactical environment and to define issues and develop lessons learned from operational experiences and NVG-related accident data.

Representatives from numerous Army commands, field units and agencies, the U.S. Navy, and U.S. Marine Corps attended the workshop. A broad range of NVG expertise was present.

The following circumstances were identified as leading to the majority of NVG-related accidents:

- Lack of contrast and visual cues.
- Lack of crew communication/coordination and "total crew" training.
- Flying too fast based on visual cues and conditions present.
- Lack of recent NVG flight experience.
- Inability to determine distance to obstructions.
- "Invisibility" of wires.
- Sensing that things are about to turn bad and failing to take corrective action.

Lessons learned from the workshop included the following:

- Do not conduct NVG training in areas of good contrast only and then try to operate in areas of low contrast.
- Train progressively. Master

the basic skills before going on to the more difficult ones.

- Train as a total crew.
- PVS-5 goggles cannot "see" wires because of the "frequencies" involved.
- Adjustment of the NVG is critical.
- Well defined procedures must be developed and followed before operating with PVS-5-, ANVIS-, and PNVSequipped aircraft/crews in the same training area. Each has different capabilities and limitations.

• NVG routes and operational procedures must be validated for adequacy. Checkpoints are often "choke" points.

• Communicate as a crew. In most NVG-related accidents, the crew sensed/knew that everything was not right just before the accident occurred.

• Low ambient light conditions create a high signal/noise ratio or graininess in the goggles.

• Visual contrast is the most critical factor during NVG flight.

• Flight with NVGs over water should be avoided if shoreline references are not available and the aircraft is not equipped with advanced flight stabilization equipment and radar altimeters and is not capable of instrument flight.

It is clear that for our aviation force to be effective on today's battlefield it must fly low and use the terrain to mask and protect itself. To do this at night, night vision devices are absolutely necessary. Operations at night can be performed safely with night vision devices. To do so, we must understand the limitations inherent in the night vision devices, in our aircraft, and in ourselves. **IIII**

COL A.E. Hervey, Jr., is Commander of the U.S. Army Safety Center, Fort Rucker, AL.

Test & Evaluation:

T-28 Retires From US Military Service

by Major John Martin & Corporal Larry Willens

EDWARDS AFB, CA — Another aviation era ended on March 27, 1987, with the retirement of the last North American T-28 airplane in US military service. Originally designed in the late forties as an Air Force and Navy trainer, the T-28 "TROJAN" ended its distinguished career, surprisingly enough, wearing US Army colors for its last scheduled flight.

The last T-28 was a "B" model, a slight modification of the original T-28A. Its final journey started from the hangars of the US Army Aviation Engineering Flight Activity (AEFA), the Army's engineering flight test organization, Edwards Air Force Base, CA. At the controls was COL Alan R. Todd, the AEFA Commander, who was also an instructor pilot in the T-28B. A small group of spectators from AEFA gathered around with cameras in hand to watch the white and olive drab airplane prepare for takeoff. The T-28 sprang to life with a burst of white smoke and noise, then slowly rolled down the flightline toward the control tower. The other passenger in the two-seat aircraft was civilian crew chief Joe Fitzgerald. The historic final flight had a destina-

Major John Martin and Corporal Larry Willens are associated with the US Army AEFA, Edwards AFB, CA.

tion of McClellan Air Force Base, Sacramento, CA, where the T-28 will be displayed at the base museum.

The first of three T-28Bs arrived at AEFA in 1964. Its primary mission was that of airspeed calibration, a very significant role in flight test. All test aircraft must have their airspeed indicators calibrated to a known standard. After modification and extensive testing of its own airspeed indicating system, the T-28B



became that known standard. The T-28 would "pace" a test aircraft by flying in close formation beside it. If the test aircraft's indicated airspeed did not match that of the T-28, its airspeed system was calibrated accordingly. The last test mission of the T-28 involved the airspeed calibration of its successor, the Beechcraft T-34C, making it the new pace aircraft.

The T-28 temporarily relinquished its pacer role in the late sixties, when the North American P-51 took over those duties. The

P-51 retired in 1978, replaced by the second T-28 in the same year. The third airplane arrived in 1981. MAJ Rickey Simmons, an instructor in the replacement T-34C, said of the T-28, "I loved it ... the last of the 'real man airplanes.' I'll miss that belching smoke and oil!"

The T-28 accomplished other missions besides airspeed calibration. As a chase airplane, the T-28 provided visual observation for various test aircraft, both fixed-and rotary-wing. Since the crew of the test aircraft is primarily concerned with the test procedures, the T-28 crew would monitor radio communications and remain alert for other conflicting aircraft, providing enhanced safety. Additionally, the T-28 crew was able to observe problems with the test aircraft, such as smoke or loose access panels.

Pilot training was another task for the T-28. It has been used to do initial fixed-wing qualification for helicopter pilots, but was primarily used to maintain Army test pilots' proficiency in airplane flying. Its aerobatic capabilities were important in this regard. The T-28 was capable of most aerobatic maneuvers, including loops, rolls and spins. Pilots could be trained to recognize unusual aircraft attitudes and how to recover from them. This experience helped pilots who found themselves in a similar situation in an unfamiliar test aircraft, helping them to save themselves and the aircraft. Unfortunately, the advancing age of the T-28 put an end to the aerobatics.

Aerobatics is one of the only (T-28 — Cont. on Page 58)

LHX



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Test & Evaluation:

Got a Problem? Put a Contract on It

by Colonel Lawrence Karjala



FT. RUCKER, AL — Contracting a professional to solve particular problems was pioneered (at least publicized) by the Mafia; however, we at USAAV/NDTA apply the technique in aviation technical testing as well. No, we do not put out contracts on PM's, manufacturers, or other key players in the acquisition process, but we are contracting more than ever before to AUGMENT critical capabilities required for mission performance.

While contracting for services is not free of difficulty, from the standpoint of USAAV/NDTA mission accomplishment, several advantages accrue. Especially useful to an organization whose workload is subject to significant fluctuation is the ability to quickly ramp up to meet a specific requirement and then ramp back down when that requirement is completed. Compared to dealing with the in-house personnel system (civilian and military), it is almost effortless as viewed from the USAAV/NDTA management level. While a premium is paid for this flexibility, the organization (or test sponsor) pays only for services rendered to complete the requirement. In some cases, the contractor can provide expertise that simply is unavailable through in-house channels. And in other situations, contractors can respond more quickly with special equipment or programs.

COL Lawrence Karjala is Commander of U.S. Army Aviation Development Test Activity.

In spite of the numerous advantages of contracting for services, it is important for overall mission success to maintain a core in-house capability. We contract services to AUGMENT that core capability and have realized excellent results. There are currently five contractors supplementing our in-house capability. A brief description of each follows:

Sikorsky: Sikorsky Support Services (SSSI) provides USAAV/NDTA with aircraft maintenance and backup test support. Although the contractor has changed from time to time, many of the maintenance personnel have been working their jobs for 20 years or more and represent an exceptionally experienced workforce. SSSI is capable of all levels of aircraft maintenance to include limited depot level. The engine shop can accomplish complete engine disassembly for engineering analysis and operates an engine test cell for performance evaluation and calibration. The machine/sheet metal shop fabricates special tools and parts for aircraft modification. The rotor and transmission shop can tear down complete rotor and transmission components for engineering analysis. There is an extensive avionics maintenance and repair shop providing total system repair and bench test, and an armament shop capable of complete repair and checkout of all airborne weapon systems

in the Army inventory. SSSI also operates an electronics instrumentation laboratory which designs and installs data acquisition packages for projects and repairs and calibrates data acquisition and reduction equipment. The overall capability of SSSI has been repeatedly demonstrated on all Army aircraft, many prototype aircraft, and several foreign aircraft. The 183 employees supporting USAAV/NDTA are supervised by Dick Seefeldt.

COBRO: COBRO Corporation augments USAAV/NDTA by developing and maintaining high-quality data bases for analysis of Reliability, Availability, Maintainability/Logistics (RAM/Log) characteristics of aviation systems and equipment. These data are also directly applied to the Flight Safety Parts Monitoring Program. Modified or full RAM/Log techniques are employed to acquire data for large, complex tests, and locally developed collection methodologies are used for smaller efforts. Presently, there are 47 COBRO personnel in support of USAAV/NDTA under the very able supervision of Mike Montgomery.

Essex: Essex Corporation provides engineering and technical services in the areas of human factors and system safety investigations in support of USAAV/NDTA technical tests. To accomplish this support, Essex provides detailed test design, human-factors-related instrumentation, test execution, and test reporting. Essex Corporation has been on contract to USAAV/NDTA for over six years and has gained an outstanding reputation for technical proficiency in the areas of Human Factors Engineering Analysis, Aviation System Safety, and lately, MANPRINT issues.

Contract support is provided by the manager, Dino Piccione, and he is assisted by two human factors/system safety research assistants.

Veda: Veda Corporation is contracted to provide engineering and high technology services to USAAVNDDTA for evaluation of test item performance relating to design and operational functioning of various systems including aircraft survival equipment, target designators, and night vision devices. In addition, Veda provides technical services in development of test operations procedures and automation capabilities within USAAVNDDTA. The Veda contract is task oriented, not fixed-dollar. Veda

provides specific services on request, both off-site and on-site, with a wide range of capability. The Veda manager at their Ft. Walton Beach, FL office is Earl Peet.

CSC: Computer Sciences Corporation provides an extension of the USAAVNDDTA Computer Support Branch. Support provided is in the area of systems analysis and computer programming for automation of office procedures, data base administration, scientific data reduction, and mathematical analysis of test data. One of the biggest payoffs from this contracting effort has been the systemization and automation of the processes used for project

accounting, tracking, and controlling of resources used during testing. These resources consist of funds received, labor hours, flight hours, materiel costs, TDY, and contract costs. A data base system has been designed which provides the current status of resources used and funds available for each test project. CSC supports USAAVNDDTA with 12 people under the supervision of Dave Tatom.

While USAAVNDDTA retains an in-house capability in each of these areas, these contractors provide an invaluable service critical to efficient mission accomplishment. They collectively constitute an essential part of the USAAVNDDTA Technical Team. ■■■■

USAAVNDTA

SIKORSKY SUPPORT SERVICES, INC.



DICK SEEFELDT
MANAGER

COBRO CORP.



MIKE MONTGOMERY
PROGRAM MANAGER

ESSEX CORP.



DINO PICCIONE
MANAGER

VEDA CORP.



A. EARL PEET
GENERAL MANAGER



COMPUTER SCIENCES CORP.



DAVID TATOM
MANAGER

Wickham (Continued from Page 2)

Should it be a maneuver headquarters or just a sustainer of aviation capabilities on the battlefield? I think the answer is both. But there is a priority that we must not lose sight of. I think I learned a little bit of that in the '01st when we went to REFORGER with the Aviation Group. We tried to use the Aviation Group as a sustainer of capabilities: attack capabilities through FARPs and FAREs to rearm and refuel; a sustainer of air assault capabilities on the battlefield; and a mover of artillery on the battlefield for firepower purposes and command and control. But also when the occasion — when METT (Mission, Enemy, Terrain, Troops available, and Time) — said that we needed to make use of the Group as a maneuver or a command and control headquarters, we did.

I think it's important for the Aviation folks, as well as the rest of the Army, to recognize that the Aviation Brigade can do both, but we must put the priority on the sustaining capability if we are to draw out of Army Aviation the great promise that it provides in terms of combined arms capabilities.

Safety is a Moral Issue

Sun Tzu, that general of thousands of years ago in China, had a saying: "Regard your soldiers as your children, and they will stand by you always." A rather beautiful turn of the phrase. If we as a people and as an institution are intensely concerned about safety — I know Aviation is — it's because we think of soldiers as our children.

I think the motivation behind safety is a moral one, taking care of our people like they're our own children. That doesn't mean we have to be wimps or have training that is not demanding. Pilots understand that the toughest training — NOE flight and goggle flight on the deck — can be very demanding, but it can be very safe.

When I got to Korea in 1979 I was presented with a series of investigations of accidents from wire strikes before my watch that were now coming to a culmination. These were all Class A accidents with several fatalities. Why is this? Why can't we get this solved?

Why is it that the Army doesn't have wire cut-

ters? The Canadians have them. Well, Don Parker, the aviation commander, said we tried that, but it never ranked high enough in the budget business in the Army so they just have never survived. Well, I was convinced they were going to survive. From Korea we drove the wire cutters into the Army and got them funded, and now they're all over the Army. With the APACHE it's going to take a little longer because you've got so many protuberances that have to have wire cutters in front of them. Those wire cutters have paid for themselves 100 times over in savings — in aircraft that have not crashed and in lives that have been saved.

The point I leave with you is simply one of innovation and commitment. The easy way out would have been to say "Well, that's the Army way. We aren't going to get them. They've tried in the past. Let's go on to something else." But when you've got a commitment — they're my children, these soldiers and their families, and when some of them go I am diminished — then I think you can make progress that makes sense and makes history.

Let me give you two examples. We still have a problem with the stabilator in the UH-60. The industry has been, I think, moving rapidly to try to fix that.

We're starting now to put flight data recorders on aircraft. We should have had them on five years ago so that we would have a track record of the stressing of equipment, as well as pilots who may not have been doing things they should have been.

Aviation in the Army has pioneered safety, and that's why we made the Safety Center for ground and air. With the reorganization of the Army Staff, I have pulled the Aviation Center directly under the Chief of Staff, because the Chief of Staff is the safety officer — I feel that.

The Soviet Threat

As you know, we are continuing the effort to modernize the helicopter fleet. This poses a particular challenge for us, because the threat is growing. The Soviets are out producing us in helicopters, and their technology is, if not neck and neck with us, maybe slightly ahead. They are fielding the HOKUM and the HAVOC helicopters. One of those will be air-to-air and the other one air-to-air as well as air-to-ground. The

(Wickham — Cont. on Page 50)



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Wickham (Continued from Page 48)

HIND D is also a very capable helicopter. While the 6th Cav folks and I think the APACHE's better, the HIND D is obviously far better than the COBRA. If we are not careful in the aviation community, as well as the other communities of the Army, we're going to slip off of that "tiger of technology."

We're worried about technology and the threat. We are trying to build the capability and the doctrine to deal with them. Part of the capability to deal with the growing threat has been not only to modernize our fleet with current production aircraft — the best aircraft around, the BLACK HAWK and the APACHE — but also to reach into next year's aircraft technology with the LHX. You see, we have to modernize and replace some 7,000 helicopters that are now averaging almost 18 years of life. If we don't modernize them we will be faced in the 1990s with a fleet that is 25 years old. The LHX is the future of Army Aviation.

The LHX Debate

There's a lot of debate about the LHX. One pilot, two pilots? Do we really need them? What weight should it be? Should it be tilt rotor? Should it be conventional rotor? Maybe we can't afford it. Maybe we ought to buy current production. There is a phrase, you know, "Current production has 100 fathers." Future technology is an orphan. Nobody supports it except those with a vision. There are no jobs with future technology, yet. But if the United States does not produce the LHX, then we might just as well bow out of being a world class leader in rotorcraft technology and production. We have to keep pace with the threat, and we have to keep pace with technology.

We do need a reasonable level of production of current aircraft — the APACHE and the BLACK HAWK. I think we have a particular problem with the APACHE. To keep the APACHE production alive costs Uncle Army one billion dollars a year. Out of a fifteen billion dollar a year procurement budget, what are we going to give up? Tanks? Bradley's? Artillery pieces? We're already buying a lot of helicopters. That gets back to the point about the need for more resources. I'm hopeful that the Congress will help the Army help itself on the APACHE and BLACK HAWK production

while we press on with their support for the LHX.

So as I wind up my comments here, I'd like to leave all of you with four challenges for Army Aviation — humble observations, from someone who loves Army Aviation and has tried in a small way to give part of his life to it.

The first challenge is innovation and pioneering. We have to continue our efforts to think distantly. The temptation, of course, as we grow older, is to think with bifocals on, to get mesmerized with the near term — even at the school houses of the Army. It's important, I think, for the leadership of the Army to have some vision and to have the capacity to reach out with the upper lens of the bifocals rather than to be mesmerized with the near term problems. That means innovation in terms of doctrine and in terms of how we use rotorcraft in air, air-to-air, and air-to-ground roles. We can't afford separate types of aircraft. We have to figure out how we can do the best with one type of aircraft.

Hand in Glove

We have to be innovative about our requirements so that we can work hand in glove with industry, rather than have requirements documents that are so thick that they drive us to high cost and to high risk. We have to be willing to go to industry with Army equipment, across the board, and say here are the generalized requirements that we think we need on the battlefield. What can you and your technology give to us? Let us work together to produce that kind of capability. We've been successful with a number of items recently that enabled industry to give us the best that way, and they like it better. But that takes innovation. And as I mentioned, LHX is innovation.

The second challenge I leave with you is one of speaking with one voice. The Army has many different baronies. The Navy has five navies. How the CNO is able to preside over them all at once is always a trick.

There are people in the Army who argue this way or that way. Once we have firm commitments though, I think we need to speak with one voice inside the institution, and — I'm going to tread lightly here — also in the retired community. (I'm going to join you pretty soon.) I think the retired community needs to help the Army speak with one voice about the things that are important if

(Wickham — Cont. on Page 52)

Personal Affairs CHECKLIST

INSTRUCTIONS: Read the checklist below carefully and be sure you have taken care of these important matters.

- Store important papers and records in one centralized safe place with easy access. Don't risk moving them every time you PCS.
- Set up an annual report listing all benefits payable from various sources to each family member. Use as a start point for estate planning.
- Make sure your family has aid in claiming insurance proceeds and government benefits in the event of death or disability.
- Find an authority on all government benefit programs—VA, Social Security, Survivor Benefit Plan and SGLI—an Association which stays current and can quickly answer the questions that you or your family have.
- Look for an Association to monitor all claims and benefits, whether they be life insurance proceeds or government benefits such as VA Dependency and Indemnity Compensation, or Education Assistance.
- Join the Army and Air Force Mutual Aid Association. We do all of the above and much more . . . We have been around since 1879 and serve both Army and Air Force Officers. We will help you and your family take care of your personal affairs, and will offer reliable unbiased counsel and information on all insurance and estate planning matters.

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- Nonsmoker Smoker



10th ATC - Cont. from P. 30

conventional cable television to transmit the aviation weather reports throughout the Ft. Rucker training area.

Safety and expeditious flow of air traffic are the watchwords of air traffic controllers. There is not a lot of glory connected with the 24-hour day support mission of the 10th ATC Bn; however, the soldiers and civilians of the 10th receive their gratification in knowing they keep the roadways of the skies clear for those who are "Above the Best." IIII

MILES - Cont. from Page 34

gun are in trouble. Your accuracy and ability to hold the TSU sight picture on a target for the required 12 (\pm) seconds is affected by seeing a tank turret swing and watching a main gun lay on your aircraft. Twelve seconds can be a long time when you are staring down a tank gun tube — that's the obvious reason why engagement needs to be outside tank main gun range. The battlefield is dirty with smoke and dust — that obscuration makes it harder than you might think to identify and kill. Once armor forces close on each other it's very tough to pick out the "bad guys".

The importance of attention to detail during installation, bore-sighting and troubleshooting of the MILES cannot be overstated. Likewise, training to a standard and insisting that crews achieve the standard, prior to "live" engagements is also critically important.

Before we had MILES, senior tactical commanders really had no way to tell how good we were. With MILES we show ourselves and the world that we either can

or cannot do all we've said we could. Thus, there's risk associated with putting MILES on your aircraft.

Are your COBRA crews good enough to accept the risk? IIII

Wickham - Cont. from P. 50

we are to have a conviction that gets us there. You might have some doubts. You might think we're rediscovering the wheel. Maybe we are here and there. Nonetheless, we need your sustained efforts to garner and maintain support with the public. We must speak with one voice if we are to sustain the momentum of the Army in terms of its requirements and what it is trying to do.

The third challenge I leave with you very briefly is one of jointness. If we have to go to war tomorrow, we will go joint, and we will go in a coalition. It's important for us to recognize that and to work toward jointness.

The management of air space over the battle area is still not well understood. I see it out in the National Training Center, the most demanding training anywhere in the world. We're flying helicopters around out there. We're using HIND look-alike helicopters, and there's a lot of close air support being flown. Aircraft are flying, dropping out flares because they think they have a missile coming up at them, but there's no pucker factor. There's no artillery dropping. Therefore, the airspace management concepts are not being practiced. I'm not sure that we can draw the greatest capabilities out of the combined arms at the battalion task force-level, particularly insofar as what aviation, including the Air Force, can do. So I think we need to work

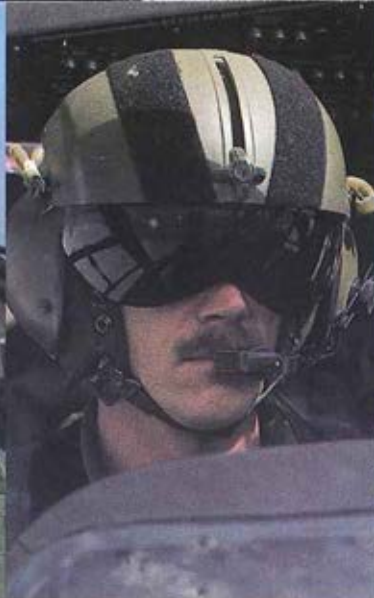
in the joint area to sustain commitments.

The last thought I leave with you is one of challenge in terms of maintaining the combined arms vision. Those who criticized the formation of the branch felt — and I think with some reason — that Army Aviation would move off towards the old Army Air Corps, a separate branch with white scarves in the breeze, and lose touch with the ground. If we are not careful, that could happen. It's a two-way street. The aviation community needs to reach back and pull the ground community into understanding the great capabilities of Army Aviation as the artillery pulled the ground community into understanding indirect fire. We don't have just trucks, binoculars, and artillery in the sky. It's the synergism of aviation as a dimension of combined arms that I think many in the Army today don't fully understand. That means, I think, Don Parker, that in your pro-pendency you need to be dog-gone sure that you are investing the future leaders of Army Aviation with a solid understanding of combined arms in the schools.

God bless the Aviation community and the AAAA that does so much for the Army. I'm very proud to be associated in some small way with the giants who are here, who have led the way, and who still lead the way in terms of vision for the Army. IIII

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The Collins CP-1516/ASQ Automatic Target Handoff System (ATHS) helps ensure clear, quick, C³I communications. It facilitates air/air and air/ground interoperability, and provides target steering cues on HUDs or CRT displays.

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Veese - Cont. from P. 28

nothing else — fighting and destroying enemy tanks. Further, we had the requirement to obtain as many helicopters as possible with the funds available. It was our opinion, the smaller, lighter and, consequently less costly, multipurpose helicopter, the BO-105, would allow us to obtain a greater number of units than the more capable, heavier, and, consequently, more expensive gunship COBRA.

Today, more than ten years after the decision was taken, one may well argue whether or not it is wise to have a weapon system capable only of executing one specific task. Faced with a continually growing number of WP attack helicopters we wish to be able to defend ourselves against this threat. Now, the question is whether we prefer the one, big battleship capable of dealing with enemy tanks, helicopters and whatever else is moving about on the battlefield — or whether we prefer a greater number of helicopters, each one dedicated to a specific task.

There are pros and cons to each alternative. Cost is not a decisive factor because to achieve the necessary degree of combat effectiveness, the amount of money required will just about be equal for both solutions.

Having looked at the equipment differences, our US Army Aviator may note another major difference when he compares the organizations. The US Army currently is forming Aviation Brigades, adding ground-based elements to the airborne fire and transport, thus gaining a highly flexible and powerful maneuver brigade. The French, as we

know, followed the same line when organizing their 4th D.A.M. There is no doubt in the German Army, also, that airborne firepower requires fighting ground elements. To employ ground-and airborne-firepower in concert is common practice.

So why doesn't the German Army, at least for the time being, also form airmechanized brigades or divisions, while maintaining the current organization, i.e. have the anti-tank, the light transport (= utility) and the medium lift helicopters of the corps concentrated in one regiment each with the three regiments being subordinate to the aviation commander of the corps? The primary reason for this type organization is to save manpower in peacetime.

Concentrating at corps level all helicopters of one type in one regiment comprising the flight crews as well as all maintenance elements below depot level, being stationed on one single field, allows the helicopters to operate in peacetime with minimum personnel. In other words, the available personnel produce a maximum of flight hours, because this organization keeps the administrative tail short. These regiments could, if required, accomplish their combat missions with what they have at hand. In order to achieve full operational flexibility, however, they need to be reinforced by several hundred reserve soldiers who would be called in times of tension and are being drawn in certain intervals for training.

This type organization, of course, is only acceptable for formations that are stationed in the home country with reserve forces nearby and those that are not called to fight overseas on short

notice.

As you can see, there are several distinct but reasonable differences between US and German Army Aviation (not only the order of magnitude). But, far more importantly, we also have very much in common. Close contacts have been established among our field units in USAREUR and the German Army and between our Aviation Branches. Let us continue that way!

IIII

Rotorcraft - Cont. from P. 40

will be involved/teamed with the primes.

- Phase 3 — Based on progress and potential for reaching the targets, it is likely that a down-select to two contractors will take place prior to proceeding with a full-scale demonstration of the proposed transmissions, sized for the expected future cargo and attack rotorcraft which are currently in concept definition.

A request for proposals is scheduled for release on or about June 1, 1987.

IIII

Engineering - From P. 42

tolerant design.

Value engineering: A major effort has been made to improve savings to Army Aviation in Value Engineering. Through established goals, training sessions, workshops, and special efforts, a significant improvement has been accomplished. Value Engineering Change Proposals from contractors and Value Engineering Proposals for internal efforts have resulted in FY 86 savings of \$41.9M (FY 85 savings were \$5.1M). Effort for FY 87 is to surpass the 1986 achievement.

IIII

USAHSC - Cont. from P. 31

surgeons are involved in the safety and training programs of aviation units.

Although USAHSC does not have a large flying hour program, we are nevertheless a viable part of Army Aviation. We will continue to do those things required to provide to the Army the finest aeromedical support possible. IIIII

Cav - Cont. from P. 36

real world problems associated with command and control and logistical support for units stretched over 100 kilometers of Central Texas were encountered and resolved.

Since our activation, we really haven't had time to catch our breath and the train is just going faster every day, but we're having a great time and forging ahead in countless new areas.

Vultures - Cont. from P. 38

care for the local populace. During Thanksgiving and Christmas holidays, soldiers adopted over 200 underprivileged Honduran children and provided a holiday feast that included the traditional turkey and all the trimmings. The Honduras experience provided them with many challenges and provided a cultural and intellectual experience that will stay with them for the rest of their lives.

At the end of the four month TDY tour, the 19th returned to Ft. Hood to begin preparation for their upcoming participation in "Relforger 87". IIIII

Top Gun - Cont. from P. 39

trained to rigidly fly their aircraft. They make good airline pilots with a businessman's mentality."

Unpredictability in helicopter

air combat is a critical doctrine of ACM training. If aircrews act predictably, it will be easier for the enemy to gain the advantage. Repetitive patterns of response when engaged by a threat invites destruction. Furthermore, predictable actions may enable the enemy to maintain visual contact while maneuvering to attack.

Most air-to-air kills are achieved through complete surprise. The key to survival is seeing the enemy aircraft first. Only by early detection of the enemy aircraft can U.S. Forces attain the initiative and take appropriate action to enhance survival.

Every aircraft sighted should be considered hostile until it can be positively identified. Aircrewmembers must be thoroughly familiar with all helicopters and fixed wing aircraft employed in the combat zone. This familiarity should include the tactics of both friendly and enemy aircraft.

"Some of the rules that the Marine Corps has built up over eight years of training has made our ACM program extremely stable," said Blemberg. "We feel that when the Directorate does something like AACT IV with these kinds of rules that have been tested over time, they can

have a very safe program."

A critical part of the AACT IV program is the use of realistic helicopter air-to-air combat tactics. Each test aircraft is assigned an experimental test pilot and an Air Combat Maneuvering Instructor Pilot (AMC) (IP) for tactical realism. The test pilots serve as pilot in command, while the ACM IP functions as copilot and tactics advisor.

Carmona and Lyle flew the SA365N-1 Dauphin helicopter. Other aircraft involved were an AH-1S COBRA; a contractor sponsored Bell Helicopter 406 (OH-58D derivative); and a contractor sponsored McDonnell Douglas AH-64A APACHE.

The test aircraft AH-1S, Bell 406, and the AH-64A were equipped with laser weapon simulators in fixed and turret mounts, Heads Up Display (HUD), Helmet Mounted Sighting Systems (HMSS) aiming systems, and full engineering instrumentation.

The AACT IV program was part of an effort to gather maneuverability and agility data for use in analysis, modeling, and simulation to determine technical advancements needed in current and future helicopters to meet the air-to-air threat. IIIII



Marine MAJ George Trautman (c) explains the visual detection doctrine of the Air Combat Maneuvers certification course to MAJ Waldo Carmona (r), as CW4 Joseph Lyle and MAJ Paul Blemberg look on.

BRIEFINGS

Army Aviators in the **Class of 1987** at the **U.S. Army War College** gathered recently for this group photo. **FIRST ROW**, (l. to r.): LTC Christopher D. Calhoun, LTC Floyd E. Edwards, COL E.H. Bud Henry, COL James S. Kessler, LTC John A. Otis, and LTC Everette L. Roper, Jr. **BACK ROW**, (l. to r.): LTC Ronnie L. Perry, LTC Gerald P. Kokenes, LTC James E. Dooley, III, LTC Peter S. Shockley, LTC Clifford L. Massengale, LTC Lindon D. Jones, LTC William G. Shaver, LTC Byron W. Smith, and LTC Al Sullivan. Not pictured is COL George L. Youngblood.



Sikorsky Aircraft has promoted **Sergei I. Sikorsky** to the position of vice president, special projects. He will be responsible for managing specific projects to support government programs and representing the company in the U.S. and international marketplace, especially Europe.

A digital flight control system that reduces pilot workload was successfully test flown on a **McDonnell Douglas AH-64 Apache** prototype helicopter. The system is designed to allow a single pilot to operate an advanced rotorcraft while concentrating on weapons delivery in combat. The testbed Apache aircraft has tandem cockpits, the rear one with conventional Apache controls and the front one with advanced digital flight controls. A computer processes flight commands given by a single pilot through the side-arm controller similar to that found in advanced fighter aircraft and issues additional commands to keep the aircraft on the heading, altitude, and attitude directed by the pilot.

Lockheed-Georgia Company delivered its first ship set of trailing edges of the wings for the first V-22 tilt rotor aircraft. Made of graphite epoxy composites, the wing trailing edges were manufactured under a subcontract to **Bell Helicopter Textron**.

The **US Army Aviation Systems Command (AVSCOM)** awarded a one-year contract to **Airwork** to overhaul and repair 40 **Allison A250-C30H** helicopter engines at its Millville, NJ facility.

Beech Aircraft named **James P. Woolnough** Vice President, Aerospace Division. He was previously President of the Federal Systems Group of Sanders Associates.

AVIATION COMMAND CHANGES

The following changes were provided from MILPERCEN:

COL Tommie C. Stiner — Commander, 9th Cav Bde (Air Attack), Ft. Lewis, WA. To become Chief of Staff, 9th Inf Div, Ft. Lewis, WA. Effective June 1987.

COL Joe D. Carothers — To become Commander, 9th CAV BDE.

COL Ernest F. Estes — Commander, 17th Avn Grp, Korea. To become Director of Combat Developments, Ft. Rucker, AL. Effective August 1987.

COL George L. Youngblood — Student, US Army War College. To become Director, Devices Management, USA Tng. Spt. Ctr., Ft. Eustis, VA. Effective August 1987.

LTC (P) Theodore A. Duck — Student, Naval War College. To become Director, DOES, Ft. Rucker, AL. Effective October 1987.

COL Albert E. Laferte — Director of Logistics, Headquarters TECOM, Aberdeen Proving Grounds, MD. To become Director of Logistics, Ft. Bragg, NC. Effective June 1987.

COL Matthew M. McGuire — Student National War College. To be assigned to Test & Evaluation, Office, Under Secretary of Defense (T&E), OSD, Washington, DC. Effective June 1987.

LTC (P) David H. Hicks — Student, Industrial College of Armed Forces (ICAF). To become Military Instructor, ICAF. Effective June 1987.

COL John A. Geurin — Test & Evaluation, Office of the Under Secretary of Defense (T&E), OSD, Washington, DC. To become Director, Aero Services, USA ATC Activity, Cameron Station, VA. Effective August 1987.

BRIEFINGS

The Alternator/Exciter/Regulator (A/E/R) made by Lucas Aerospace ran on the Avco Lycoming/Pratt & Whitney (APW) T800 engine for the first time in February. The A/E/R supplies power and logic to the engine computers and ignition systems.

Executive Instruments has developed a new method of lighting cockpit instruments so that they are compatible with General III or ANVIS (Aviators Night Vision Imaging System) goggles. According to **Dick Borkowski**, senior vice president, "by using NVG filtered green lighting, which is outside the infrared and near-infrared frequencies, many of the inherent problems now encountered by NVG users are eliminated."

The **Army Aviation Association's** Colonial Virginia Chapter and the **American Helicopter Society's** Hampton Roads Chapter will co-host a meeting on Helicopter Military Operations Technology (HELMOT III) in Williamsburg, VA, Nov. 16-19. Contact Jerry Irvine, (804) 878-3272.

The **McDonnell Douglas Helicopter Company/Bell Helicopter Textron LHX** team chose **Northrop's Defense Systems Division** and **Eaton Corporation's AIL Division** to co-develop aircraft survivability equipment for the Army's LHX program.

Collins signed an agreement with **British Aerospace** to market the **TERPROM** Terrain Profile Matching Navigation System in the US. TERPROM stores a digital map of the terrain it is overflying, typically 200,000 miles, and uses the map, along with the navigation system, to predict the aircraft altitude. The system also provides both 'intelligent' ground proximity warnings and automatic terrain following at high speed and low level, without assistance from forward-looking radars. No external navigation aids are required.

Boeing Vertol Company conducted its first commercial helicopter demonstration of the 234 Commercial Chinook in the People's Republic of China during April and May. The tour came at the invitation of the Civil Aviation Administration of China (CAAC). The 234 flight crew consisted of Boeing's Lynn Freisner and Jim Hotelling, and CAAC evaluation pilot, Zhu Jinling.

An eight-member team of Army mechanics successfully demonstrated they were able to perform field maintenance tasks on the **Avco Lycoming/Pratt & Whitney (APW) T800** engine well within the Army's desired time constraints.

The revolutionary **McDonnell Douglas NOTAR (TM)** no tail rotor helicopter commenced its first extended tour of the US at the **AAAA National Convention**, April 8-12, 1987, in Fort Worth, TX.

SGT John L. Hastings, assigned to Fort Riley's 82nd Medical Detachment, received the Soldier's Medal from **MG Leonard P. Wishart, III**, commander, 1st ID and Fort Riley. Also pictured below are (l. to r.) Cheryl and Christina Hastings, Hastings wife and daughter, and his mother, Joan Batten of Thomaston, CT. With his body being used as a lifeline between the helicopter and the boat, SGT Hastings (in water), and the crew from the 82nd Medical Detachment, towed two boaters into shore. The boaters had become trapped in the waters above Rocky Ford Falls in Manhattan, KS, and held on to a tree stuck in the water until the medical evacuation unit arrived.



Dragons - Cont. from P. 35

the third at Ft. Irwin, CA.

The 31st Assault Helicopter Battalion (ALNG) is commanded by LTC Billie Carter and is operational with its 69 UH-1's. These are outstanding aviators who have a night vision goggle (NVG) program that would challenge any aviation unit.

The 58th ATC Battalion (1-58th Aviation Battalion) commanded by LTC Mike Geoghagan and currently operating under the Dragon Brigade, XVIII Airborne Corps, will become part of the Corps Aviation Brigade in June, 1987. The ATC Battalion is dispersed among Ft. Bragg, Ft. Campbell, and Ft. Stewart, and is continuing to support the Corps in an outstanding, professional manner. As in the past, this unit will continue to have ATC assets and aircraft operating on three continents at any given time.

The active component Attack Group (presently unnamed) will consist of a National Guard HHC and three active attack helicopter battalions with 18 AH-64's per battalion. The attack battalions — 1st, 2nd, and 3rd of the 229th Aviation Regiment will activate in FY 90 and will be located at Ft. Bragg, Ft. Rucker, and Hurter AAF.

The 449th Attack Helicopter Group (NCNG) with two Attack Helicopter Battalions (AH-64), will also be part of the Brigade. Both the Group Headquarters and the 30th Attack Helicopter Battalion (NCNG) have already begun their transition. The Group Commander, COL Paul Bailey, and the Attack Helicopter Battalion Commander, LTC Duncan Stephens, have been working closely with the brigade to coordinate future collective training

exercises. The North Carolina National Guard received its first three UH-60 aircraft in January, 1987 and is scheduled to begin receiving AH-64's in June, 1987. They will receive three AH-64's per month until completion of the fielding.

Also under the 449th Attack Group will be the 51st Attack Helicopter Battalion (SCNG) commanded by MAJ(P) Mark Rhett. This unit is scheduled to begin receiving its AH-64's in Mid 88. All of these Aviation units have truly outstanding training programs. It is indeed a privilege for the XVIII Airborne Corps to be associated with these units.

An Air Recon Squadron (4/17th Cav) will activate in FY 91 here at Ft. Bragg. The squadron will be fielded with AH-1 (MC) COBRAs with C-NITE capability. The recon squadron is unique to the 18th Aviation Brigade in that we are the only Corps Aviation Brigade in the Army that will have this capability.

It is a fast moving train here at Ft. Bragg, and the 18th Aviation Brigade (Corps) (Airborne), "Wings of the Dragon", is contributing towards a great combined arms team. AIRBORNE!!!!

T-28 - Cont. from Page 44

advantages of the T-34C when compared with its predecessor. The T-28's 1425 horsepower gave it much more power and speed than the 400 horsepower of the T-34C. The T-34 "Turbo Mentor" also has no cargo capability. The cargo space of the T-28, although limited, gave it an added advantage as a utility aircraft.

There was at least one drawback to the T-28. COL Todd explains, "I remember one time up at Bishop, CA. One of the pilots brought the T-28 in for a

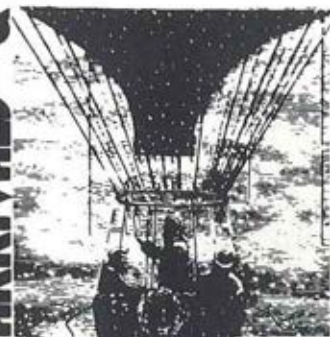
landing and the brakes wouldn't hold ... they had a tendency for doing that ... and subsequently the aircraft rolled off the end of the runway and was stuck in the sand. It had to be towed out."

Another of AEFA's civilian aircraft mechanics worked on T-28s as early as the fifties. Dick Murphy said, "The Trojan was a great aircraft and was easy to work on ... a gasoline-driven oil pump!" Again, though, age exacted its price. The T-28s are being replaced, at least in part, because the T-34 is much less costly to maintain. It is no longer cost-effective to replace some T-28 parts. Some other parts are no longer manufactured and are difficult to find at any price.

The T-28 has seen many changes in its illustrious career. One of these added a tail hook to allow the US Navy to utilize the plane on aircraft carriers. Others included armament for battle, which it saw in Southeast Asia, with both the US and Vietnamese Air Forces.

The T-28 has more than served its original purpose in military aviation. It personified both grace and ruggedness. One of its final missions was calibrating airspeed systems on new Army helicopters. Said COL Todd before his final fly-by of the AEFA hangars, "If they ever build a helicopter that is faster than the T-34, we may have to go back and pull the old T-28 out of retirement!"

Retirement for the other T-28s at AEFA also means museum displays. One has already gone to its final resting place at Wright-Patterson AFB, Dayton, OH. The other remains at Edwards AFB, where it will soon be ignominiously towed to its display at the new Air Force Flight Test Center Museum. IIIII

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NOTE FROM THE EDITOR: The surveys returned from a random sampling of the readership are being tabulated and are providing invaluable guidance in refining the editorial direction and philosophy of ARMY AVIATION MAGAZINE. Thank you for responding. We will be issuing a complete report in the fall.

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**Brig. Gen.
John
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Stanford
Hqs
AVSCOM
March 23**

**Colonel
William
A.
Hall
Avn Bde
Commander
April 3**



**Colonel
Peter
H.
Carr
Avn Bde
Cdr
April 3**

**Maj. Gen.
August
M.
Cianciolo
ODCSRDA
May 5**



**Arthur
H.
Kesten
Executive
Vice Pres.,
AAAA
May 12**

Each month, some six to ten key military, industry, and government leaders address AAAA's 54 worldwide Chapters professionally.



AAAA Calendar

March, 1987

■ **Mar. 23.** Cedar Rapids Chapter, professional dinner meeting. BG John H. Stanford, DCG, USAAVSCOM, guest speaker. Stouffer's Five Seasons Hotel.

■ **Mar. 25.** Greater Atlanta Chapter. Business Luncheon Meeting. Selection of Chapter Delegates. Ft. Gillem O-Club.

April, 1987

■ **Apr. 1.** Lindbergh Chapter. Early evening "mixer" and pre-convention meeting. "Meet the Delegates." 94th Aero Squadron.

■ **Apr. 2.** Checkpoint Charlie Chapter. Late afternoon general membership meeting. Avn Det Classroom, Tempelhof Central Airport.

■ **Apr. 3.** Monterey Bay Chapter. AAAA Spring Formal. COL William A. Hall, Avn Bde Cdr, guest speaker. O-Club, Naval Post Graduate School.

■ **Apr. 3.** Pikes Peak Chapter. Late afternoon professional-social meeting. COL Peter H. Carr, Bdr Cdr, guest speaker. Ft. Carson O-Club.

■ **Apr. 5.** Bonn Area Chapter. Professional luncheon/dinner meetings. Rolf Forstmann, AEG-WEDEL, guest speaker. Bueckeburg, FRG Army Aviation Center.

■ **Apr. 17.** Coastal Empire Chapter. Late afternoon prof'l-social meeting. "1987 Convention Update". Hunter AAF O-Club.

■ **Apr. 23.** Leavenworth Chapter. Late afternoon professional-social meeting. Wayne Chaffer, King Radio, guest speaker. Scholarship presentation to Miss Erika H. Fossum. O-Club.

■ **Apr. 23.** Tucan Chapter. Late afternoon business meeting. Chapter elections, future meeting plans. Snacks/refreshments. Howard AFB NCO Club.

■ **Apr. 29.** Corpus Christi Chapter. Late afternoon business-social meeting. Post-Convention Report. Free beverages. O-Club.

May, 1987

■ **May 1.** Ft. Bragg Chapter. AAAA Annual Aviation Spring Formal. Ft. Bragg Main O-Club.

■ **May 1.** Aloha Chapter. Softball Tournament and Chili Cookoff. Stoneman Field.

■ **May 1.** Indiantown Gap Chapter. Late afternoon business-social meeting. Convention Report; 1987 Chapter Goals. Ft. Indiantown Gap Community Club.

■ **May 2.** Rhine Valley Chapter. Third Annual Family Fun Day. Masters 10-km Run and 1-mile Fun Run and Barbecue Cookoff. Mannheim OCC yard assembly.

■ **May 2.** S. California Chapter. "Voyager Adventure" - Meet "Papa" Rutan." Mojave Airport, Hangar 77.

■ **May 2.** "Follow Me" Chapter. AAAA Family Picnic and Chapter Nominations. Uchee Creek Recreation Center, Ft. Benning, Ga.

■ **May 5.** Washington, D.C. Chapter. Professional dinner meeting. MG August M. Cianciolo, guest speaker. Ft. McNair OOM.

■ **May 6.** Arizona Chapter. After dinner prof'l-business meeting. Tour of new Aircraft Gear Corp. facility, free refreshments, Chapter elections. Aircraft Gear plant.

■ **May 12.** Morning Calm Chapter. Prof'l luncheon meeting. Arthur H. Kesten, Exec VP, AAAA, guest speaker. Sheraton Walker Hill.

Briefs

New National Board Members

The following members assumed seats on the AAAAA National Executive Board at the Board's April 8 meeting in Ft. Worth, Tex.:

Arizona Chapter, **MAJ Lyle D. Monson, Sr.**, Pres.

Coastal Empire Chapter (Hunter AAF), **COL Joseph W. Kuppich, Jr.**, Pres.

Corpus Christi Chapter, **COL William J. Blair**, Pres.

Lindbergh Chapter (St. Louis), **BG John H. Stanford**, Pres.

Lone Star Chapter (Austin, TX), **CW4 John V. Fowler**, Pres.

Monterey Bay Chapter (Ft. Ord), **COL William A. Hall, III**, Pres.

New Regional Officer

LTG John W. Woodmansee, Honorary President, USAREUR Region. Mar. 15.

New Chapter Officers

Tucan Chapter (Panama): **CPT Clarence A. Stiehm, II**, and **CW3 Michael R. Sparks** (VP, Memb Enrol). Mar. 2.

Aviation Center Chapter — **LTC Larry S. Sloan** (VP, Programs) and **CW2 Mary A. Hanley** (VP, AWO Aff). Mar. 5.

Pikes Peak Chapter — **COL Peter H. Carr** (Pres); **CW4 Robert F. Henry** (Trea); and **MAJ Paul F. O'Sullivan, Jr.** (VP, Prog). Mar. 16.

Mid-America Chapter (Ft. Riley): **COL George M. Mullen** (Pres); **MAJ Ronald J. Penrose** (SrVP); **MAJ Alan G. Davis** (Sec); **CW2 Thomas Tardibuono** (VP, Memb); **CW2 Charles Freyermuth** (VP, Prog); and **CSM James Rose** (VP, Enl Aff). Mar. 20.

North Texas Chapter (DFW): **N. Keith Reid** (Sec); **Charles Jacobus** (Trea); **Gary Wilson** (VP, Memb); **Tom Russell** (VP, Memb Renewal); **Rodney Adams** (VP, Corp Rel). Mar. 31.

AAAA Soldiers of the Month

Aviation Center Chapter (March): **SP4 Steven M. King**.

Taunus Chapter (February): **SGT Michael E. Glanton, Jr.**



AAAA Overview

Board approves three new awards, tables three others

At its April 8 meeting, AAAAA's National Board approved the proposal of **LTC Thomas E. Johnson**, Hanau Chapter President, for a national "Outstanding Aviation Logistics Support Unit Award", recommended that the award be initiated for CY87, and that the award be made in St. Louis, Mo., as a part of the annual AAAAA Product Support Symposium banquet conducted in that city by the Lindbergh Chapter.

The Board also approved the proposal of **MAJ Leonard W. Pardue**, DMI, USMA, for AAAAA sponsorship of an annual award to the top USMA Graduate who selects the Aviation branch, and approved the proposal of **BG Rodney D. Wolfe** that the award be implemented at the May, 1987 Cadet Awards Convocation. At the same time, the Branch Chief responded to an NEB request and indicated he would get the necessary data to institute an ROTC Award Program that would honor outstanding ROTC Graduates selecting the Aviation branch.

The Board tabled the Nat'l Office proposal for sponsorship of annual Air Traffic Control Awards and appointed an ad hoc committee of **MG Robert F. Molinelli** (Chairman); **MG Ellis D. Parker**; **Joseph P. Cribbins**; and **COLs Sylvester C. Berdux, Jr.**, **John A. Lasch, III**, and **John W. Marr** to review the subject of how best to provide "national recognition" to the foregoing and other "national" awards not made at the annual convention, and to view the whole Awards picture in that context.

Acting on the proposal of **COL Albert E. Hervey, Jr.**, Commander, USA Safety Center, the AAAAA will sponsor "Certificates of Achievement" for the Distinguished Graduates of all resident and non-resident Aviation Safety Officer Courses.

The subject of the AAAAA "providing initial Branch insignia to newly-appointed Aviation Warrant Officers" was tabled.

The Board tabled a proposal of **MG Richard E. Stephenson**, Nat'l Member-at-Large, calling for the AAAAA to provide a distinctive "Past Chapter Officer" lapel pin to each outgoing Chapter Officer pending discussion of the matter at the April 10 Chapter Presidents' meeting. (The proposal was not discussed at the meeting).

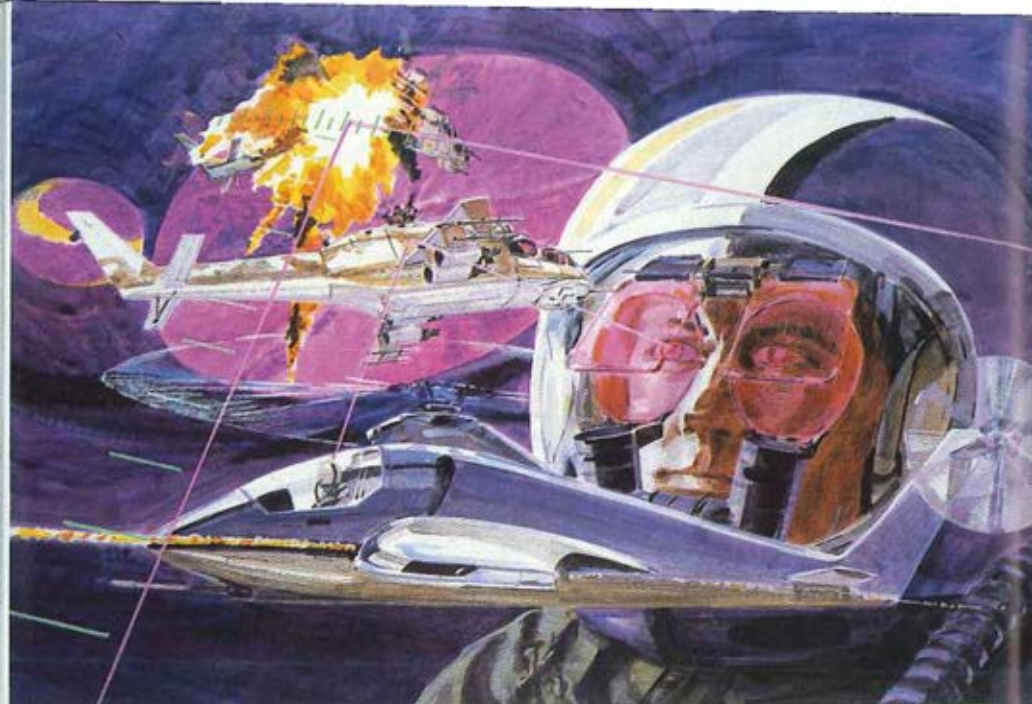
1988-1990 National Convention dates reconfirmed

Under "Long Range Plans", the National Board reconfirmed the conduct of the 1988-1989-1990 National Conventions as follows:

April 13-17, 1988 — St. Louis, Missouri.

April 12-16, 1989 — Atlanta, Georgia.

April 4-8, 1990 — Orlando, Florida.



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