Update on Close Air Support Study .. P. 4
DOD report on "No Fly/No Pay" ..... P. 8

Army Aviation

FEBRUARY, 1973

UNDER Section 715 of the 1973 Appropriations Act, the services are expected to terminate flight pay on May 31 for all O-6s and above who are serving in non-combat duties.

This action will impact in two ways — the Army is certain to lose a substantial number of experienced aviation officers as key O-7s and O-6s leave the service prematurely, and the problem of attracting young officers to an aviation career in the service will be made more difficult.

While the grounding deadline is imminent, we're advised that Congress might consider delaying the O-6 grounding date if the services develop an alternate plan that would serve to reduce overall flying costs.

A 1972 study group did develop such a plan, one that based flight pay on length of rated service, rather than on rank, and provided for the gradual reduction in flight pay at career end. The proposal — as submitted by the study group to Congress — recommended a three-phase flight pay table (see *ARMY AVIATION*, April-May, 1972). The proposal ended certain inequities in flight pay and flattened the impact that goes with an abrupt loss of a substantial increment of one's pay.

In this respect, *ARMY AVIATION* has forwarded pertinent "background papers" to several thousand of its O-7 and O-6 readers, urging each to write to his Congressman regarding an extension of the pending ground order. At the same time, the magazine is providing address information on specific Congressmen when requested.

Senior Officer Flight Pay

A co-authored letter, one of the many received by ARMY AVIATION, is reproduced below.

Dear Editor:

We're soliciting your support in attempting to amend the provisions of the recent Appropriations Bill for 1973, Section 715, which provides for terminating the payment of flight pay to rated officers in the rank of colonel (O-6) and above while in a non-combat assignment.

This is considered a breach of faith with professional officers who, in addition to keeping current with basic branch technology, have pursued additional responsibilities in Army Aviation. Our implied contract was to the effect that since Army Aviation is not a career branch, by considerable extra effort we could pursue a career in aviation and compete and advance with our non-aviator contemporaries in our basic branch for advance schooling as long as our skills were maintained in both branch of service and aviation.

We're aware that boards for promotion and advance schooling are on a competitive basis and require considerable extra effort on our part since non-aviators need only concentrate on their basic branch needs.

We chose Army Aviation believing that by expending this extra effort we could reach the highest grades although we knew at the same time that while beginning salaries were low the later stages of our career would be more remunerative and our families could enjoy a standard of living equal to our contemporaries in civilian industry.

It is difficult for us to understand after surviving reductions in force, the hazards of passing annual flight physicals, and the competitive selections for promotions and schooling why our salaries should be reduced by at least $245 a month, or approximately $2,900 a year. The potential loss of pay on reaching the higher O-6 grade will cause any aviator in the grade of lieutenant colonel to consider retirement or resignation, and is certain to impact on the many young officers who are faced with the choice of pursuing aviation as a career.

"Flight pay" is not to be confused with hazardous duty pay; there is no comparison. We consider flight pay to be professional pay, similar to that paid doctors (and being considered for lawyers), rather than hazardous duty pay currently provided to parachutists and divers. The latter are temporary hazardous duties and are paid only when the man performs the particular hazardous duty.

Flying today's sophisticated aircraft and helicopters on crowded airways in all weather demands precise skill, and professional pilots with continuing rigorous educational and training requirements as well as physical profiles not required of other persons in the military.

We understand the concern and need to conserve funds in today's defense posture. However, we feel it is equally important to conserve and to retain the professional skills and experience of these individuals who have chosen Army Aviation as a profession, and through whom we derive the required mobility on today's battlefield.

Lastly, we question whether the continuance of flight pay to O-6s is harmful to the morale of nonrated personnel. All who are interested and who can qualify have had the opportunity to attend aviation program schools and qualify. Many do not desire to do so or are not motivated to expend the extra effort to become an Army Aviator.

We urge reconsideration of the language of the Appropriations Bill to correct the breach of faith which this bill has caused. This reconsideration will restore the desire of young officers to choose Army Aviation as a professional career, and ultimately will enhance the mobility and combat readiness of tomorrow's Army.

Five senior aviation officers

ARMY AVIATION

VOLUME 22 FEBRUARY 8, 1973 NUMBER 2

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AAAA'S 1973 NATIONAL CONVENTION TO BE EXPANDED TO 2½ DAYS

Open discussion periods, a workshop on AAAA organizational matters, and opportunities to view the aerospace and military exhibits at AUSA's Annual Meeting will highlight Wednesday, October 17 opening day programming at the AAAA's 1973 National Convention. The full October 17-19 convention will be held at Washington, D.C.'s Shoreham Hotel. Special invitations to attend the "Big 15th" will be directed in April to all 1959-1973 winners of AAAA individual and unit awards, all present and former National and Chapter officers, the Association's 400+ Charter Members, and all Ten (and Fifteen) Year Members.

COMMAND & STAFF

Major General John L. Klingenhagen, to Deputy Chief of Staff for Logistics, Hq, USAREUR and Seventh Army, APO NY 09403.

Major General Robert M. Shoemaker, as Commander, 1st Cavalry Division (TRICAP), Ft. Hood TX 76544.

Major General Herbert E. Wolff, as Deputy Chief, Central Security Service, National Security Agency, Ft. George G. Meade MD 20755.

Colonel John E. Baker, as DCSOPS, USCONARC, Ft. Monroe VA 23351.

Colonel Charles E. Canedy, as DCSOPS, Project MASSTER, Ft. Hood TX 76544.

Colonel D. P. Creuziger, to Hq, 1st Armored Division, APO NY 09326.

Colonel William E. Dasch, Sr., as Commander, USA Aviation School Brigade, Ft. Rucker AL 36360.

Colonel Donald H. Jersey, as Deputy Director, Army Aviation Directorate, OACSFOR, Washington, D.C. 20310.

Colonel William R. Ponder, as Deputy Commander, 1st Aviation Brigade, APO SF 96309.

Colonel Paul C. Smithey, as Secretary, General Staff, Hq, 8th U.S. Army, APO SF 96301.

Charles W. Ellis, as Vice President and Assistant General Manager, Boeing Vertol Company, P.O. Box 16858, Philadelphia PA 19142.

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PHASE II of the *Deputy Secretary of Defense Close Air Support Study* now is complete after more than a year in preparation. *Mr. Kenneth Rush,* the current Deputy Secretary and designee to be Deputy Secretary of State, signed letters to the chairmen of the Armed Services and Appropriations Committees of both houses of the Congress on 24 January (see letter below).

He also tasked the Secretaries of the Services and the Joint Chiefs of Staff to increase the scope and content of close air support training at service schools and prepare a test plan to weigh certain proposals for improvements in command and control and basing and logistics of close air support.

The report states that the Army command system under which attack helicopters deliver close air support is adequate for Army needs. However, it indicates that improvements are needed in fixed wing support. This phase of the study follows the hardware phase concluded in June, 1971 which determined that helicopters and fixed wing fighters possess sufficiently different capabilities that they both should be continued.

Phase II conclusions and recommendations are extensive, and full details appear on pages 26-29.

Close Air Support

THE SECRETARIES OF THE SERVICES AND THE JOINT CHIEFS OF STAFF HAVE BEEN TASKED TO INCREASE THE SCOPE AND CONTENT OF CLOSE AIR SUPPORT TRAINING AT THE SERVICE SCHOOLS UNDER PHASE II OF A DOD STUDY

THE DEPUTY SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

Jan. 24, 1973

MEMORANDUM FOR:
SECRETARIES, MILITARY DEPARTMENTS
CHAIRMAN, JOINT CHIEFS OF STAFF
DIRECTOR, DEFENSE RESEARCH & ENGRG.

I believe that our recent study on Close Air Support Phase II Study (Command and Control) was very useful in identifying issues involved, in developing actions to be completed, and in outlining certain objectives to be achieved in close air support command and control through testing and evaluation. My January 5, 1973 memorandum requested comments on proposed actions and the testing and evaluation objectives for close air support command and control. I have considered your replies in formulating the following actions:

The Secretary of the Air Force will:

1. Coordinate with the Secretary of the Army to determine the minimum number of close air support training sorties to be provided each Army combat battalion per year.

2. Develop courses of instruction and provide instructors, in coordination with the Army, to train Army unit leaders in close air support and close air support command and control concurrently with other Army unit leader training at Fort Benning (Infantry), Fort Knox (Armor), Fort Rucker (Helicopter), and Fort Sill (Artillery).

3. Provide liaison to the Chairman, Joint Chiefs of Staff to develop and implement a detailed test plan to achieve the test objectives.

4. In coordination with the Secretary of the Army, evaluate for possible implementation: (a) assigning of Air Force forward air controllers to Army Division and Corp units, to be responsible to the Commanders of those units, and to deploy with those Army units; and (b) training, qualifying and designating selected Army helicopter pilots as forward air controllers.

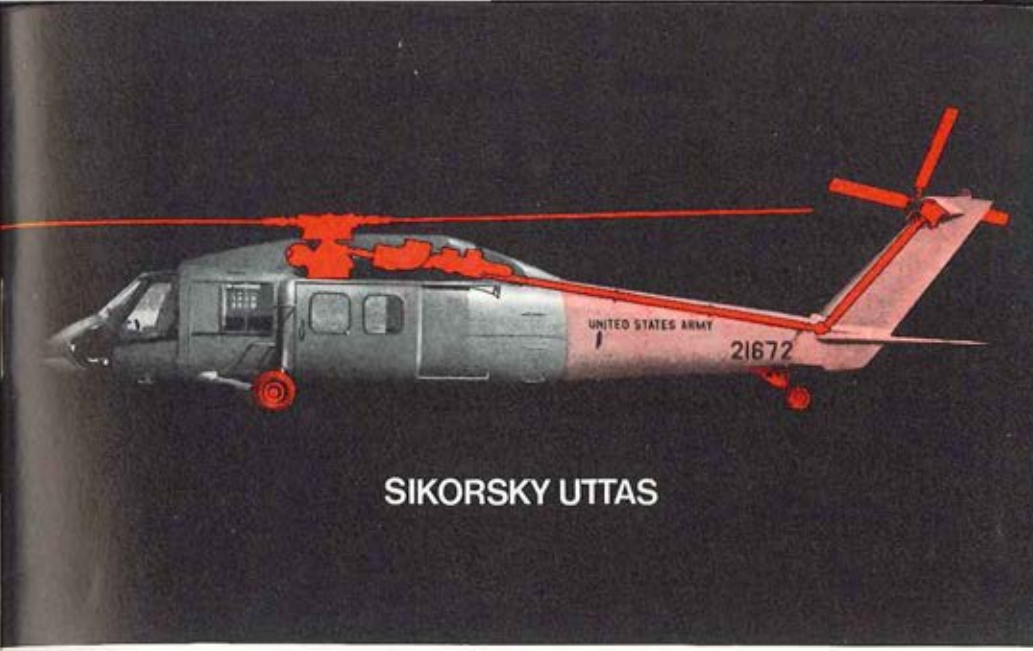
5. Coordinate with the Army concerning item 2 below.

The Secretary of the Army will:

1. Coordinate with the Secretary of the Air Force on items 1, 2 and 4 above.

2. Develop courses of training and provide instructors to train Air Force tactical air control personnel in ground force operations including small unit tactics and the effects of close air support on small unit tactics. This training is to

(Continued on Page 25)



SIKORSKY UTTAS

Commonality with UTTAS. The sure way to keep AAH risk and cost low.

Sikorsky's Advanced Attack Helicopter is the low-risk AAH with proven advanced technology.

Risk and cost are low because the all-important dynamic components—transmission system, engines, flight servos and blades—are identical to those in our UTTAS, already in development under Army contract.

Risk and cost are low because our AAH has the latest proven technology. The same important advances that made Sikorsky the out-front choice for UTTAS. Every one of these Sikorsky advances has been proven in flight test or operational use—on heavier, bigger, faster helicopters than the AAH.

For lowest AAH risk and cost: Sikorsky. The sure way.

Sikorsky Aircraft DIVISION OF UNITED AIRCRAFT CORPORATION U A.

FIFTY YEARS of
1923·1973
FIRSTS in FLIGHT

PERSONNEL:

A RECENT STUDY AT D. A. LEVEL

CHANGES SEVERAL KEY AVIATION MOS

AN OPO UPDATE BY LTC BENNETT E. GREENFIELD

THE Department of the Army has recently completed a study reviewing the *Military Occupational Specialities (MOS)* in enlisted Career Groups of Aviation Maintenance and Aircraft Components Repair.

The purpose of the study was to determine the adequacy of the job structure in these two fields and, if necessary, develop changes to improve the identification of position requirements, and facilitate the effective utilization of aircraft maintenance manpower resources. These career groups have *not* been closely analyzed since 1967, and there has been a lot of air under the wings since then.

Highlights of study

Highlighted in the study were changes effecting the following MOS:

Aviation Maintenance Apprentice (67A) and Aircraft Component Repair Apprentice (68A). These MOS have been on the books for quite some time. They consist of rudimentary mechanics who, by virtue of their grade (E-2) and lack of experience, are normally employed in menial housekeeping activities. The initial purpose of these entry MOS was to provide a flexible distribution base from which to select personnel for advancement to higher skilled aviation maintenance positions. The MOS provided a home for dropouts from advanced aviation training.

While advantages of flexible distribution, assignment, and utilization accrued from this structure, it soon became apparent that it was being accomplished at the cost of less than desired maintenance effectiveness. The complexity and density of Army Aviation equipment today demands a highly skilled and competent mechanic, regardless of the fact that he may be on the bottom rung of the maintenance ladder. Discussions with maintenance officers and senior NCOs provided further evidence that field units should not be supported by unskilled mechanics.

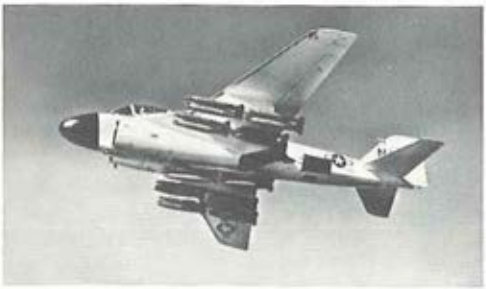
As a result, the study recommended that *both* entry MOS be deleted and personnel be sent directly from basic training to the journeyman level school course. Training for the apprentice level courses has been dropped, and approximately

(Continued on Page 28)

Another key element in

BOEING'S ADVANCED ATTACK HELICOPTER (AAH)

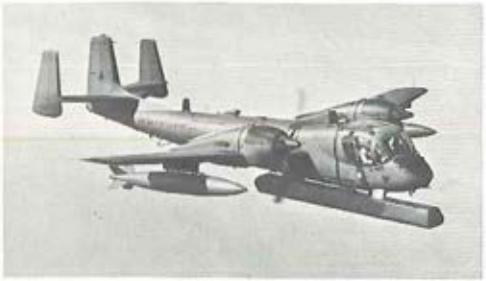
Combat proven...
Grumman's system integration capability:
weapons · visionics · avionics.
For accurate, reliable and cost effective firepower.



A-6E

The world's most advanced all-weather attack system includes:

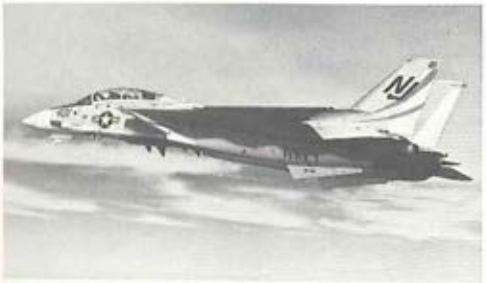
- Forward-looking radar and infrared
- Low light level television and laser targeting
- Multisensor displays
- All-weather navigation and weapons delivery



OV-1D

The free world's only fully integrated army surveillance aircraft system includes:

- Infrared
- Sidelooking airborne radar
- Multiple cameras



F-14

Latest state of the art in weaponry and integrated armament control includes:

- Long and short range missile systems
- 20mm gun
- All-weather navigation
- TV targeting
- Infrared
- Heads up displays

BOEING Helicopters
GRUMMAN AEROSPACE

A DOD study group completes an 18,000-person survey on . . .

MADDOX

MARR

No Fly-No Pay

By Brigadier General
WILLIAM J. MADDOX, JR.
Director of Army Aviation,
OACSFOR, D/A

LET'S try a short column for the shortest month of the year. February comes right after the Presidential Inauguration when the new Congress and revitalized administration are in the organizational period. Action usually picks up in March when the procurement and research and development hearings get under way.

The end of the year brought news of a promotion freeze and a pay raise. Effective with New Year's Day, all military members of the Services will receive fatter pay checks based on inflation factors, an effort to provide military personnel salaries equivalent to those received in private industry. The promotion freeze was to be terminated, or modified, after the President's budget was submitted to the Congress. As of Inauguration Day, no date had been determined for a promotion thaw.

The hottest topic among aviators today appears to be the flight pay issue, which was stirred up by the House Appropriations Committee during its consideration of the FY73 budget. The Committee recommended that the flight pay for "senior officers", i.e., colonels and generals, be terminated on the 1st of May 1973. The final appropriations bill extended the termination date to 1 June with the expectation that the Department of Defense would reconsider flight pay and make recommendations on the subject.

The 1st of November a study group was convened under the chairmanship of *Colonel John W. Marr,* former Chief of Aviation Branch in OPO. The other military Services also were represented on the study which was transmitted to the Office of the Secretary of Defense at the end of the year.

Before the study group started to write its report, it conducted a survey of over 18,000 servicemen, both rated and nonrated officers, that included officer trainees and cadets.

In the view of rated officers, the opportunity to fly and the receipt of flight pay were critical factors in their career decision concerning military service. The

study group said: *"The role of flight pay appears to be much more significant in retaining rated officers than it is in initially attracting them. The rated officer views flight pay as continuous compensation as long as he remains qualified . . ."*

The views of non-rated officers were considerably different. While they agreed there was a need for flight pay to attract volunteers, they also felt strongly that flight pay should be paid to individuals who are actually in flying jobs. They were less concerned with the fact that an aviator was receiving flight pay than that the aviator was competing with them in their career field.

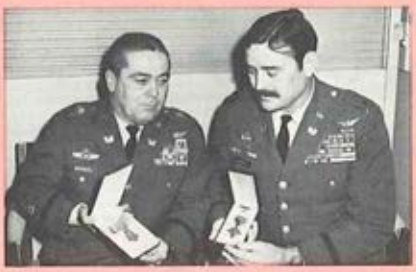
Effect on career retention

The study group focused on flight pay for its value in career retention. When the costs of acquiring and training an aviator are considered, the flight pay he receives is a modest amount. Continuance on flight pay *is* cost effective in comparison with the cost of acquiring and training a new aviator to replace one who is dissatisfied.

The study group examined the impact of several flight pay proposals on retention. Most aviators felt that the Congressional action had an adverse effect. Junior officers indicated that they were less inclined to select the Service as a career; more senior officers felt that their career would be shortened without flight pay.

If the *No Fly/No Pay* approach of non-rated officers were adopted, there would be a more severe impact on retention than under the Congressional curtailment for senior officers. Apparently this is because the threat is more immediate. A captain aviator commanding a rifle company would be denied flight pay under this approach.

Of the 18,000 who were surveyed, over 4,000 provided additional comments relating to improvements in the survey or suggestions on the administration of flight pay. Some 1,200 individuals addressed the career implications of flight pay; over 400 commented on breach of contract; more than 300 discussed hazardous aspects of flight; over 650 spoke to force management; some 450 would increase flight pay while 550 would decrease flight pay.



AWARDEES AT RUCKER . . . Old friends, CW3s Michael J. Novosel, (left) and Perry C. Hopkins, hold the Medal of Honor and the Distinguished Service Cross, respectively, the highest and second highest awards for bravery which each earned medals in Vietnam while serving as helicopter pilots. They met at Ft. Rucker, Ala., recently when Hopkins was completing and Novosel was beginning the Aviation Warrant Officer Advanced Course.

AWOs for equalization

The Army warrant officers *"almost universally cite their feelings that their pay and eligibility requirements should be identical to commissioned officers, that is, almost all these personnel indicate that flight pay should be directly based on length of service."*

The report continues: *"In general, these comments may be summarized by indicating that the rated officer feels he has earned his flight pay throughout his career and further that any acceptable managerial philosophy requires a continuing increase in total pay commensurate with increased responsibility."*

Air Force officers came out strongly for continuation of flight pay as a basic retention requirement.

Attitudes of rated officers

The report provides a summary of rated officer attitudes as follows:

- Flying in general is an important factor in attracting and retaining rated officers.

NO FLY/NO PAY (Cont. from P. 9)

- Flight pay was a critical factor in attracting some individuals to flying; however, for most this was not the prime factor.
- Flight pay is important in retention, but once an officer feels the "pull" of the retirement system, this factor is prime until retirement eligibility is attained.
- To the rated officer, flight pay is justified on a variety of reasons; the most important being hazard involved in flying, payment for a special skill and potential utilization in rated duties.
- The rated officer favors a supplement concept as an avenue to enhance his advancement opportunities.
- Rated officers react very negatively to any *No Fly/No Pay* proposal because it not only affects them financially, but it also severs him from the rated force and reduces his career opportunities.

Attitudes of non-rated officers

The report detailed the attitudes of non-rated officers as follows:

- Majority agree with need for flight pay to attract volunteers for rated duties but do *not* agree with the need for flight pay to retain rated officers to 20+ years.
- Strong agreement with payment of flight pay only to those in flying jobs.
- Air Force non-rated officers feel that rated officers have significantly better opportunities for promotion (O-6 and above) and more responsible jobs.
- The non-rated officer's morale is affected more by rated officers competing in their career field rather than by inequities in pay.

It is significant that *all* groups of respondents felt that flight pay should *not* be terminated for colonels and generals. Rather, they felt flight pay should be continued throughout their careers and that eligibility should be determined by individual qualification rather than "by the caprices of an assignment system for Congress." Following its analysis, the study group concluded that flight pay should be constructed so that it considers all groups and that it be part of a career until an individual is no longer a rated resource but has joined the most senior managerial levels.

Conclusions of report

Conclusions of the report are as follows:

- Military aviation has been and will continue to be a hazardous occupation.
- Except for a temporary situation in the Marine Corps and Navy, there is not a significant attraction problem.
- Retention has been and can continue to be a problem.
- A flying pay system should be designed to treat the retention problem.
- The flying pay schedule advocated by the study group is designed to remedy the retention problem by the payment of a sufficient amount of money in the early retention years so that the individual is financially indifferent when making the flying career decision.
- The anticipated effect of the proposed pay schedule is to increase retention of rated personnel which can decrease the training rate.
- A transition plan for movement from the present to a revised flying incentive pay system is necessary.
- Aviation officers' flight pay should be terminated after they have completed 25 years' active Federal officer service.

The study group recommended a revised pay scale which would be applicable to officers and warrant officers alike, and would be based on commissioned service or warrant service rather than upon rated service. The flight pay tables are not included here because they are subject to further rework during the staffing which is under way in the Pentagon today. However, the scales generally are somewhat higher than current flight pay

The production of the February, 1973 issue of ARMY AVIATION has been delayed in order to include a complete list of the Army Aviation personnel held as prisoners of war by North Vietnam. As at January 29, the complete list was not available for publication. An incomplete list of our POWs appears below, as extracted from the WASHINGTON POST:

Chief Warrant Officer (W2) Francis G. Anton
Captured 5 January 1968

Captain Luis G. Chirichigno, Signal Corps
Captured 2 November 1969

Chief Warrant Officer (W2) James H. Hestand
Captured 17 March 1971

Chief Warrant Officer (W2) Daniel F. Maslowski
Captured 2 May 1970

Chief Warrant Officer (W2) Roger A. Miller
Captured 15 April 1970

Chief Warrant Officer (W2) James E. Nowicki
Captured 2 November 1969

Chief Warrant Officer (W2) Michael F. O'Connor
Captured 4 February 1968

Captain John W. Parsels, Infantry
Captured 5 February 1970

Chief Warrant Officer (W2) Philip D. Prather
Captured 8 March 1971

Captain William S. Reeder, Field Artillery
Captured 9 May 1972

Chief Warrant Officer (W2) Joseph Rose, III
Captured 8 February 1968

Chief Warrant Officer (W3) David W. Sooter
Captured 17 February 1967

Chief Warrant Officer (W2) Roy E. Zeigler, II
Captured 8 February 1968

NO FLY/NO PAY (Cont. from P. 10)

except for individuals with over 25 years commissioned/warrant service who receive no flight pay. A three year save pay transition period is recommended which would permit individuals to continue to receive their current level of flight pay if they would lose money under the new tables.

As flight pay will continue to be a hot issue this year, I will keep you apprised of events as they occur in the flight pay game.

Hardware

The Army has designated the two aircraft to be built to meet the *Utility Tactical Transport Aircraft System (UTTAS)* requirement. However, no names have been applied to the aircraft as yet. The Sikorsky candidate is designated the *YUH-60;* Boeing Vertol's aircraft will be the *YUH-61.* Fabrication of these aircraft will begin this summer.

The UTTAS engine is designated the T-700 by the manufacturer, the General Electric Company. It is a product of the Advanced Technology Engine Program and promises significantly reduced fuel consumption but much greater reliability and maintainability. The first engine began fabrication in January at the General Electric Company plant in Lynn, Mass.

RAMSTEIN AIR BASE, FRG — At the reviewing stand for the opening ceremonies of REFORGER IV are (l-r) GEN Michael S. Davison, CINCUSAREUR; LTG Ernst Ferber, IG, German Army; LTG Charles Eifler, CDR, USTASCOMEUR; and MG Robert Maloy, CDR, 17th Air Force, USAFE. The event marked the start of the giant NATO exercise involving some 40,000 men, 10,000 of which will be airlifted from the U.S. (USA photo)

Delivery of the first *TOW* system to be retrofitted to a *Cobra* airframe should occur in early February with flight tests to begin in late March. Hughes Aircraft Company is providing the *TOW* system to the Bell Helicopter Company. Flight testing will be conducted at the Army's Yuma Proving Ground.

After an extensive re-evaluation of the *Heavy Lift Helicopter (HLH)* program, the Army approved the construction of an HLH flying prototype which will incorporate the three systems in the advanced technology program. The three systems are: cargo handling, flight controls, and rotor drive. A contract was signed with Boeing Vertol in late January for construction of the prototype. First flight is scheduled for the summer of 1975.

Progress was made in the aerial scout program. Because the New Initiative Aerial Scout was killed in the last Congress, the Army is reviewing its requirement and preparing for a new development. The FY74 budget contains sufficient funds for concept formulation in preparation for a new development in FY75 of a scout that can "run with the guns." Intention is to provide a target acquisition aircraft that will be compatible with the *Advanced Attack Helicopter (AAH).* Combat Developments Command should provide the Army staff with a requirements document by the end of March.

The personnel side

The end of the year brought senior service school and C&GSC selection lists for courses starting in 1973. Aviators fared well on both lists but not to the extent that they have in the past several years.

A total of thirty-six aviators was selected for 273 War College level openings. This constitutes 13% of the entire list. Aviators will fill 133 of the 1,128 C&GSC slots. This is approximately 12%.

Why Hughes believes a good small helicopter is better than a good big helicopter

A small helicopter has a better attack capability. It can take cover more completely and maneuver more quickly. It has more reserve power for emergencies.

A small helicopter is harder to see or hear, or to detect with radar or infrared. It is easier to armor and equip with redundant systems. The greater inherent strength of its compact structure means greater crash safety for its crew. And so it survives when a big helicopter would not.

Finally, a good small helicopter costs less than a good big helicopter.

We proved our point with the Army's OH-6A Light Observation Helicopter. It did everything the Army expected — and a lot more. With more than two million combat hours in Vietnam, it has been the tough machine the Army needed for a tough war — simple, rugged, easy to maintain, able to keep flying when shot full of holes, very kind to its crew.

Now we are designing an Advanced Attack Helicopter that will pack all the performance and firepower the Army wants, yet retain the small-helicopter advantages of the OH-6A. It will blend the combat-proved features of the OH-6A and the lessons we have learned in Southeast Asia with some exciting new technology we have developed for both helicopters and ordnance systems (we are the only company that builds both).

We are confident that our Advanced Attack Helicopter, like our OH-6A, will perform the Army's mission with distinction.

Hughes Helicopters
& Ordnance Systems

NO FLY/NO PAY (Cont. from P. 12)

Recent personnel changes have moved *Colonel Lloyd J. Picou* from the Deputy Director's job in this office to Fort Rucker, Alabama. He has been replaced by *Colonel Don Jersey*, who reported in after more than two years in Vietnam as Commander of the 34th General Support Group. During the last portion of his tour, *Colonel Jersey* served as Deputy Brigade Commander of the 1st Aviation Brigade. He brings a wealth of aviation experience to the Directorate. He has been rated since the Korean war and has served in a wide variety of combat and combat support jobs.

Rescue support

Following the Eastern Airlines jumbo jet crash in the Everglades on 29 December, the 347th Medical Detachment of the Army Reserve in Florida not only loaned a portion of its rescue equipment, but it took over rescue operations from the Coast Guard and removed 85 bodies from the crash site with its four *Hueys*. A "well done" is due the 347th for stepping in to help in the high tradition of the Dustoffs.

Ridiculous flight of the month

The December, 1972 issue of this magazine carried a comment by *CW3 Carl L. Hess* entitled: *"On Drinking Wet and Voting Dry."* This piece commented on some previous *Ridiculous Flights of the Month*. *Mr. Hess* is to be complimented for grasping the most important point in my *Ridiculous Flight* articles.

He states: *"A little more emphasis on 'before the fact' guidance would help clarify policy, particularly for the new aviator."* This *is* the meat of why I comment on accidents in the first place.

The second point is that the *Ridiculous Flights* should be commented on. This may help prevent an accident that otherwise would happen.

For those who read *Mr. Hess'* article you should understand that nap-of-the-earth training is to be conducted under close supervision and *not* by just any aviator going from point A to point B. The *Ridiculous Flight of the Month* that I cited results from unsupervised flight, which resulted in an unnecessary accident.

Thank you, *Mr. Hess*, for drawing attention to the aviation safety problem which we still have not mastered.

Draw your own conclusions!

For February there are two accidents which probably require no further analysis. The reader should be able to draw his own conclusions.

. . . Aircraft was parked on the transient ramp running at flight idle (to discharge student before continuing flight). Student was seated in the right seat and was putting his helmet into his flight bag which was placed on the console. It is believed that when he removed his flight bag it caught the emergency governor and placed it into the emergency position. After student had departed aircraft, pilot started increasing RPM with the throttle. Engine and rotor RPM exceeded 7,200 when the needle joined.

. . . On starting aircraft a noise was heard and a slight vibration followed. The pilot pushed the cyclic forward as a corrective action. The noise and vibration did not recur. The pilot departed on the assigned mission. When the aircraft was shut down for refueling, the crew chief could not find the main rotor tiedown. Further inspection revealed dents in the tail rotor blades.

Toddy, who takes these articles by dictation, provides the apt comment: *"Good night! What'll they do next!"*

FLY SAFER!!!

GARMISCH CANCELLATION

The USAREUR Region AAAA Executive Board regrets to inform its members that the 1973 AAAA Convention scheduled for 7-10 March has been cancelled due to major exercise commitments during the same period. Registration fees will be returned to all applicants as soon as possible. A later social affair is planned to recognize the outstanding USAREUR aviation units and individuals.

OUR FUTURE CONCEPTS AND REQUIREMENTS

BY LIEUTENANT GENERAL JOHN NORTON
Commander, U.S. Army Combat Developments Command

AT the beginning of any discussion about future concepts and requirements for our Army, we must place considerable stress on the word, *vision.*

We must have *men of vision,* and considerable vigor, who can ask the right questions and who can be realistic about the future of the Army — its role and its resources. If we have these men — in the right places — then the prospects are exceedingly bright that we can see the right path.

Time-phased projections

In designing our future Army, we must look at the problem in a time-phased sequence. First, we see a documented, short-range Army, which we call the *Program Objectives Memorandum (POM)* Army. This is a 5-year Program by which the Department of Defense and the Congress allocate the funds.

Beyond that we have a mid-range projection of our Army covering the period 1978-1985. This is an Army that would contain many new items such as *Lance, SAM-D,* the new main battle tank, *MICV, UTTAS,* and attack helicopter.

Finally, there is the long-range Army, our Army of the late 1980's and into the 1990's. It is interesting to see how some of the projections of the 1990's very definitely impact upon the mid-range Army and even the short-range Army. What this really tells us is that we must look concurrently at *all* the time frames, in order to make sure that we can select the best paths to get from our Army as it is now to the Army of the future.

We must also look at our Army's missions in conjunction with the time-phased sequence. Our U.S. Army is unique in at least one respect in that we have more missions and environments to solve than any other army in the world. We have the mission to provide and support forces (with their doctrine, organization, materiel, training, and logistics) to carry out all intensities of military operations all over the world.

These operations include maintaining domestic tranquility within the United States and securing the Western Hemisphere against the resurgence of a threat such as that posed by Cuba in 1962. Then there are worldwide contingency requirements in such areas as Northeast Asia, Southeast Asia, and the Middle East.

An overwhelming extension

Finally, the largest commitment of all — the defense of large land masses, such as Western Europe, in concert with our Allies — with or without nuclear weapons. It is obvious then that we have an extension of missions that is overwhelming in its full implications — and particularly in terms of doctrine, training and resources. Because in the final analysis how well our Army does these three, at all echelons of command, will determine our state of professionalism.

To make the picture even more difficult, we must also consider strategic deployability and tactical mobility. CDC has studied our current six divisions (airborne, airmobile, infantry, mechanized infantry,

(Continued on Page 16)

Presentation made by LTG Norton at the 1972 AAAA National Convention

FUTURE CONCEPTS

(Continued from Page 15)

TRICAP, and armored) in ascending order of their weight for strategic lift. We found that about 10,000 short tons must be lifted during movement of an airborne division and about 12,000 short tons for an airmobile division. Then, a considerable escalation occurs, and we find a 40,000-short ton requirement for a mechanized division and a 60,000-short ton requirement for an armored division.

This becomes a matter of considerable concern when we see that about 26,000 of the 60,000-short tons required in moving the armored division can be airlifted *only* by the C5A. The C5A can carry about 110 tons in one lift but their numbers will be limited.

In deveolping future concepts, then, we must also keep in mind the requirements for fast deployability within our national sea and airlift capabilities. When we get the troops into a theater, we need responsive, lightweight means of moving them around on the battlefield. In addition to helicopters, two of our newer concepts in this direction include the *dune buggy* and the *new style motorcycle.*

A quick comparison

When we look at the expanse of missions and the problems of deployability, we must reconsider what types of divisions are most important to our national defense. How many can we afford? We took a good look at the current six types and ran a quick comparison of their relative utility in relation to the intensities of conflict.

As might be expected, the infantry, airborne, and airmobile divisions have the highest utility in low-intensity conflict and good utility in mid-intensity.

NATIONAL WAR COLLEGE, FY 74 SELECTEES
(All are Lieutenant Colonels)

Ledwidge, Augustine — **Short, Frisco W.**
Rutkowski, Joseph F. — **Smart, Ernest A.**

(The reporting date is 6 August 1973)

AAAA MEMBERS SELECTED FOR AWOIC, CLASS 74-1*

*Subject to individual's acceptance of two year service obligation incurred through attendance at this course. Declinations to be submitted to DA prior to 28 February 1973.

Adkins, James M., CW2
Allred, Garry D., CW2
Bew, Joseph E., CW2
Connell, Thomas E., CW2
Covey, Lawrence E., CW2
Davis, James M., CW2
Ellis, James B., CW2
Fast, Ronald F., CW2
Katz, David R., CW2
Lockwood, Roy A., CW2
Luke, Charles C., CW2
Marchant, Charles D., CW2
McKnire, Russell W., CW2
Natale, Frank G., CW2
Powers, Richard W., Jr., CW2
Pretlow, Willard E., CW2
Quass, Carl R., CW2
Sands, Charles D., CW2
Shakallis, Michael G., CW2
Smith, Jack M., CW2
Squire, William R., CW2
Staigle, James E., CW2
Stein, Richard W., CW2
Swartz, Rexford W., CW2
Taggart, Thomas J., III, CW2
Tonelli, James D. R., CW2

We find the opposite is true with the mechanized and armored divisions. The *TRICAP Division* is a special case. These are not startling facts, but they do force us to take a harder look at the necessity of retaining all six different types of divisions.

The airborne and the airmobile divisions have about the same operational parameters. Strategically, they have to move rapidly and compactly; then they have to be very versatile after they are landed. Both divisions need to be like an airmobile division once they are on the ground. So the solution seems to be to make all airborne divisions airmobile and vice versa.

Armored-Mechanized

The armored and mechanized divisions are so much alike now that we can almost say, except for a few adjustments in the support base, that we have essentially one type of division. So we could easily adopt one basic armored/mechanized division.

As time goes on, we can see the long-term needs for a standard, basic light type division to do the missions in-close, such as domestic disturbances and Western Hemisphere security, and to handle quick-reaction worldwide contingency missions. We will need a standard heavy type di-

vision to perform the high endurance missions or defense of large land masses, and these two types have to complement each other when time permits.

Finally, it will be very important that we have an experimental, multicapable force, like the *TRICAP Division* at Fort Hood, with all the new capabilities — air cavalry, target acquisition, attack helicopters, automation of combat functions *(CS_3, TACFIRE),* and staff functions *(TOS)* and with all the proven hard-core units — infantry, armor, artillery, air defense, engineers, and logistical elements.

With so many new revolutions in technology, we really cannot write the requirements accurately unless we have a robust, versatile experimental force that will allow us to accurately evaluate the benefits and burdens of new concepts and systems by field test. Until recently this has been a major part of our problem in assimilating the new technologies such as the attack helicopter, new sensors, terminal guidance, and automation of our combat and support systems.

A closer look

A closer look at heavy and light divisions reveals other facts. A heavy division depends *very, very* much on its organic artillery fire. It *also* depends very much on close air support. The Air Force is expected to take out the majority of the big targets, but the division and the corps are well equipped to take care of the remaining targets with organic heavy weapons.

This is in contrast to the light division situation, which has far less organic heavy fire support. The light division has to have *"Close Air Supportability"* built-in like we have never known before. This has always been true of our airborne doctrine, and I think it will be even more true of new combined arms mixes at levels of battalion, brigade, and even division task forces that might be deployed. Each echelon must have automatic, built-in *"Close Air Supportability"* or we will be forced to take unnecessary risks. The artillery forward observer and the Air Force forward air controller will most often be collocated. If the FAC has trouble acquiring some of the most difficult targets, then maybe we should put him in a scout helicopter!

In our national interest, we need to concentrate our decreasing resources on two kinds of divisions: light and heavy. We need major advances in close air support for both types. We must find better means to acquire and engage targets. We must establish better techniques to optimize close air support, particularly for the light division. This will require more joint field experiments, and the sooner we get on with these the better!

Experimental force needed

Also in the national interest, we must have the experimental force for trying out new concepts. For example, we need to determine if the defense of Europe with armored and mechanized divisions on line and the *TRICAP Division* in mobile reserve is a viable concept. A typical scenario might show the enemy breaking through the line and heading for our vital rear areas. We use all available fires, including close air support, to try to break up the penetration. Quick intelligence is critical, so air cavalry elements of the *TRICAP Division* are used to pinpoint the

AAAA MEMBERS SELECTED FOR AWOIC, CLASS 74-2*

*Subject to individual's acceptance of two year service obligation incurred through attendance at this course. Declinations to be submitted to DA prior to 28 February 1973.

Bearden, Hillman E., CW2
Burbank, Richard W., CW2
Cargile, Gary N., CW2
Chapman, Alvyn G., CW2
Charbonneau, Thomas D., CW2
Clark, Jeffrey T., CW2
Cloud, Thomas M., CW2
Craig, William D., III, CW2
Davis, Stephen E., CW2
Dougherty, John R., CW2
Englemann, John W., CW2
Farmer, John H., CW2
Gulker, Duane, CW2
Harris, Cecil H., CW2
Higginbotham, Carter C., CW2
Hill, David W., CW2
Hill, Robert D., CW2
Koenig, Darell R., CW2
Koone, Michael T., CW2
Lang, Neal E., CW2
Myers, Kenneth B., CW2
Neal, Billy D., CW2
Strange, Gerald C., CW2
Thill, David C., CW2
Williamson, Robert L., Jr., CW2
Willis, Randall C., CW2
Wortmann, Duncan CW2

FUTURE CONCEPTS

(Continued from Page 17)

enemy situation and specifically the dimensions of the penetration. (Often it is going to be wide and deep and could occur anywhere along a large front. Attacking the nose of the penetration with attack helicopters may be the only way to quickly apply precise, effective, anti-tank fires, particularly in bad weather or when the Air Force is fighting for air supremacy.)

With the attack helicopters working on the nose of the penetration, we then organize and use the terrain for delaying tactics using the airmobile infantry brigade. (Here is where the real critical problem of airmobile tactics comes in — how to position the troops with anti-tank weapons and relocate them or extract them before they are overrun.)

Finally, the armored brigade is committed. Our studies show that if it can arrive and deliver the decisive attack within two to three hours, we can stop this type of penetration with the *TRICAP* force. To stop an enemy armored "corps", we need about 100 air-to-ground anti-tank systems and some 200 ground anti-tank systems. Without an experimental force that provides the framework for a practical field test and evaluation of these and other concepts, we run the unacceptable risk of making bad decisions on future Army forces.

Long range planning

For the longer range planning, we have a study that looks out into the 1980's and 1990's: the *Land Combat Systems Study*. Again, we assume we will be faced with advancing masses of enemy forces. Only, we expect to have better ways of acquiring these forces in 10 to 20 years. Near-real time satellite targeting capabilities will be in the hands of the corps commanders and the artillery. Unmanned surveillance drones and new tilt-prop manned aircraft that have true nap-of-the-earth navigational capabilities will be available.

ARMY WAR COLLEGE, FY 74 SELECTEES
(*denotes Colonel; all others are LTC)

Baumm, William F.	Jenkins, William M.
Baxter, George M.	Mills, Robert W.
Bennett, Willard M.	Molinelli, Robert F.
Davis, Willys E.	Nicholson, Allison
Dugan, John E.	Pergerson, Benard S.
Fountain, Charles D.	Porter, Edward J.*
Gibson, Mack L., Jr.	Sands, Thomas A.
Giles, George R.	Setzer, Howard L., Jr.
Godwin, Ralph L.	Stevens, Ronald J.
Henry, Frank L.	Tolfa, Edward, Jr.

Wilson, Carl A., Jr.

(The reporting date is 30 July-3 August)

All of these, working together, might have a profound change on what we finally need in the way of firepower and mobility. The aerial sensors are complemented by ground type sensors — which can also acquire targets in a precise fashion. These sensors will target short range multiple-rocket systems and long range terminal homing missile systems.

"Countermobility"

These developments will not, of course, win the war by themselves, so we will add even another dimension to our combat power — *countermobility*. We see the use of sensor-activated barriers working at very short ranges. These barriers have three-dimensional pop-up type explosives that can either punch holes in the belly of tanks or else take aircraft out of the sky. In every case, we see sensors orienting multilaunching systems at both long and close ranges. We still see the need for mobile forces.

But make no mistake about it, our investment in the third dimension will *not* take us all the way if we cannot solve the air defense suppression requirement. Finally, we see responsive, mobile logistics in the forward areas and an integrated command, control and communications system to tie everything together.

Roles and missions

What do the long-range fire support roles and prospects look like? Today, the Army with long range missiles and guns is capable of doing some limited battlefield interdiction, and the Air Force is

capable of doing the largest part of interdiction. I personally think that these new developments—rapid satellite intelligence, terminal homing, advancing enemy air defense threat capabilities, and the EW threat — will lead us in 10 to 20 years to the point where *Pershing* and *Lance*, nuclear or non-nuclear, will take on most of the interdiction missions and manned aircraft will be doing very little of it.

On the other hand, what about "close-in" fire support? Today, we see the Army doing most of this mission with its direct aerial fires and its own organic artillery, and close air support is still vital. But, if these developments take place — a smart bomb with increased reliability and accuracy, a continually advancing enemy air defense threat, and the EW threat in particular — it seems to me that the Air Force role in providing "close-in" aerial fire support will increase.

Finally, I think that the advancing technology says the air commander and the ground commander have to really have or share the same mission. I think that the man who is usually responsible for ground operations — the ground commander — really needs an experienced deputy who can take the responsibility for tying together air defense, close air support, and use of air space. This should lead us to an Army corps or division commander with an Air Force deputy commander. The problems of joint air ground operations are becoming so complex that we just cannot expect to hack it with SOPs and good intentions.

Don't forget — the reason we all exist is the ground Soldier. We must foresee and solve early our future combat problems. We must put our Soldiers on tomorrow's battlefield with the best chance of victory and the best chance of survival.

ADDITIONAL DISTRIBUTION

A copy of this issue of ARMY AVIATION MAGAZINE has been forwarded to each member of the U.S. Senate and House of Representatives. Normally, copies are sent only to specific Congressmen.

USNS Corpus Christi Bay Returns after Six-Year Tour in USARV

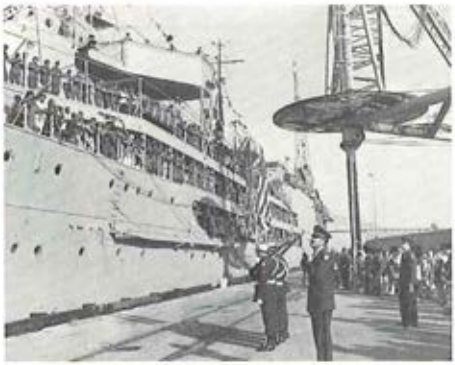
THE *USNS Corpus Christi Bay*, the Army's only Floating Aircraft Maintenance Facility (FAMF) and home of the First Transportation Corps Battalion (Aircraft Maintenance Depot) (Seaborne), arrived at the Port of Corpus Christi December 19 after spending more than six years in waters off the Republic of Vietnam.

The ship and the officers and men of the First Transportation Corps Battalion were honored in *"Welcome home!"* ceremonies where Army, Navy and local dignitaries were on hand to greet the Vietnam returnees.

Appropriate ceremonies

Attending and speaking at the ceremonies were *U.S. Representative John Young* of Corpus Christi; *General Henry A. Miley, Jr.*, Commander of the U.S. Army Materiel Command of which the ship is an element; and *Rear Admiral William S. Guest*, Commander of the Military Sealift Command, Pacific, which operates the *Corpus Christi Bay*.

Also attending the ceremonies were *Major General Frank A. Hinrichs*, Commander of the U.S. Army Aviation Systems Command, St. Louis, Missouri, and the *Sergeant Major of the Army Silas L. Copeland*. *General Miley* was the key speaker.



The First Transportation Corps Battalion on board the *USNS Corpus Christi Bay* has earned four Meritorious Unit Commendations. The battalion was responsible for repair and overhaul of a variety of aircraft components and, during its six years in Vietnamese waters, overhauled or repaired approximately 300,000 aviation components having an acquisition value in excess of $220,000,000.

USAAVNS, Ft. Rucker, September 19, 1972
WO Initial Entry Rotary Wing Aviator Class:
WO (W-1) Darrel P. Wentz, Wichita, Kan.
Officer Initial Entry Rotary Wing Aviator Class:
CPT Alfred L. Dibella, Tustin, Calif.
USAF Initial Entry Rotary Wing Aviator Class:
2LT Louis J. Laskarris, Peabody, Mass.

USAPHS, FT. WOLTERS, NOVEMBER 16, 1972
For Classes 73-07 and 73-08, USAF 2LT Charles R. Greer, Jr. (Flight); CPT Dana Q. Barber (Disting. Grad.); 1LT William Richer (Academic); WOC Paul R. Kenyon (Distinguished Grad., Flight & Academic); WOC John R. Tioaquen (Outstanding Mil. Grad.); WOC Howard R. Anderson (Military).

USAPHS, FT. WOLT
WOC Stephen K. Well
Elmer W. Matlock (Disti
demic & Outstanding
Marcus J. Lane (Flight
guished Graduate and A

USAAVNS, FT. RUCKER, NOVEMBER 14, 1972
USAF Initial Entry Rotary Wing Aviator Class:
CPT Allen L. Rosenbaum, Kenosha, Wis.
WO Initial Entry Rotary Wing Aviator Class:
WO (W-1) Anthony Dal Pozzo, Santa Barbara, Calif.
Officer Initial Entry Rotary Wing Aviator Class:
1LT Warren M. Snoddy, III, Greer, S.C.

USAAVNS, Ft. Rucker, October 3, 1972
USAF Initial Entry Rotary Wing Aviator Class:
2LT Raymond E. Hanger, Troy, Ohio
Officer Initial Entry Rotary Wing Aviator Class:
1LT Milan D. Tesanovich, Gary, Ind.
WO Initial Entry Rotary Wing Aviator Class:
WO (W-1) Troy W. Carbaugh, Coeburn, Va.

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Distinguished
Achievement
at USAPHS a
Gradu

USAPHS, FT. WOLTERS, OCTOBER 20, 1972
1st Row: 2Lt Mark C. Spear (Disting. Grad.), WOC Jonathon J. Long (Disting. Grad & Flight Achievement & Outstanding Military Grad.), WOC Larry D. Jones (Flight). 2nd Row: WOC John A. Davidson (Academic), 1LT James A. Mapes (Flight), USAF 2LT Francis C. Kelley, Jr. (Academic), WOC Bruce E. Bornkamp (Mil. Achievement).

USAPHS, FT. WOLTERS, NOVEMBER 3, 1972
For Classes 73-05 and 73-06, 1st row, l-r: WOC Barry B. Lewis (Outstanding Mil. Grad. & Military Ach.); 1LT Jack D. Morris and WOC Joseph A. DeAngelis (Distinguished Graduates & Flight Awards); CPT Ronald K. Druener (Academic). 2nd row: WOC Roy P. Dean (Academic); WOC Donald M. Clause (School's 40,000th graduate); WOC Mario S. Schmidt (Academic Ach.)

USAPHS, FT. WOLTERS,
1st Row: USAF 2LT Will
Terry S. Anglesey (Disting
D. Watson (Flight); 2LT Ke
2nd Row: WOC Michael
Petryk (Outstanding Mil.
(Academic); Marty D. Crab

S, SEPTEMBER 8, 1972
(Flight and Military); WOC
uished Graduate, AAAA Aca-
litary Graduate); USAF 2LT
Neil A. Youngman (Distin-
& Academic).

USAPHS, FT. WOLTERS, DECEMBER 20, 1972
1st Row: 2LT John T. McMahon (Flight); 1LT Ronald S. Ching and WOC Larry R. Brandt (Distinguished Graduates & Academic Achievement); 2nd row: WOC John E. Price (Military); WOC Kenneth J. Thomas (Outstanding Military Grad.); Mark Spezia (Flight Achievement).

USAAVNS, FT. RUCKER, OCTOBER 31, 1972
Officers Initial Entry Rotary Wing Aviator Class:
1LT James T. Beverly, Jr., Bristol, Tenn.
WO Initial Entry Rotary Wing Aviator Class:
WO (W-1) William A. Scott, Quincey, Calif.
USAF Initial Entry Rotary Wing Aviator Class:
2LT Donald R. Backlund, Kenosha, Wis.

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Graduates and
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USAAVNS, FT. RUCKER, NOVEMBER 28, 1972
Officers Initial Entry Rotary Wing Aviator Class:
1LT Peter L. Petoskey, Lansing, Mich.
USAF Initial Entry Rotary Wing Aviator Class:
2LT Ralph W. Canaday, Silver Lake, Kan.
WO Initial Entry Rotary Wing Aviator Class:
WO (W-1) Scott G. Woolman, Los Altos, Calif.

USAAVNS, FT. RUCKER, DECEMBER 12, 1972
Officer Initial Entry Rotary Wing Aviator Class:
1LT James E. Verity, St. Louis, Mo.
USAF Initial Entry Rotary Wing Aviator Class:
1LT Stuart F. Biggar, Bakersfield, Calif.
WO Initial Entry Rotary Wing Aviator Class:
WO (W-1) Lynn G. Hilden, Aromas, Calif.

NOVEMBER 30, 1972
am J. McGarvey and WOC
uished Grad.); 2LT Michael
neth F. Clausen (Academic).
A. Brown (Flight); Gene R.
Grad); James V. Torney
ree (Military Achievement).

USAPHS, FT. WOLTERS, DECEMBER 14, 1972
For Classes 73-11 and 73-12, 1st row: l-r; WOC Paul D. Welleler (Distinguished Grad, Academic Ach. and Outstanding Mil. Grad.); USAF 2LT Larry A. Helgeson (Distinguished Grad. & Academic Ach.); 2nd row: l-r: WOC Edwin C. Hamilton, Jr. (Flight & Military); 2LT Thomas E. Pardue (Academic); 1LT Donald G. Goff (Flight).

USAAVNS, FT. RUCKER, OCTOBER 17, 1972
USAF Initial Entry Rotary Wing Aviator Class: 2LT Charles J. Fagan, III, Annandale, Va. Officer Rotary Wing Aviator Class: 1LT Robert L. Beziat, Jr., Levittown, Pa. WO Rotary Wing Aviator Class: WO (W-1) Ross W. Miller, St. Paul, Minn. Officer / WO Rotary Wing Aviator Class: CPT Bruce G. Furbish, Falls Church, Va.

IN January, 1969, a picture appeared in *"Aviation Week and Space Technology"* (AW&ST) exhibiting the newest Soviet helicopter (NATO code name *Homer)* without its main rotor blades. The picture was a retouched photograph but it indicated a helicopter larger than any then currently known in the world.

The physical size of the aircraft was impressive but not surprising, because the Soviet's Mil Design Bureau has been constructing the world's largest helicopters since 1957. Previously Mikhail L. Mil, the chief designer for the bureau, had introduced the two heavy lift helicopters, the *Mi-6 Hook* in 1957, and the *Mi-10 Harke* in 1961.

A record-setter

In March, 1969, *"Flight International"* announced that the new Soviet helicopter had set four payload-altitude records. AW&ST in June, 1969 hinted that a primary mission of *Homer* was to rendezvous with the Soviet *An-22,* a large fixed-wing transport aircraft similar to our C-5A, and transport cargo from the *An-22* to the landing zones in forward areas.

In August 1969, *TASS,* the official Russian news source, announced the *Homer* helicopter had set another payload-altitude record. Designer Mil received the

A TECHNICAL REPORT BY 1LT WILLIAM B. BIGLER, II

Order of Lenin in November, 1969 for his development of *Homer.* Interviews with various Soviet personages revealed other details about the new helicopter, but the 1971 Paris Air Show proved to be the moment of truth when the Soviets unveiled *Homer* for public inspection.

It is believed development work was started as early as 1965 and that much project time entailed simulation on computers on *Homer* flight characteristics. Marat N. Tichtchenko, who replaced Mil as the chief designer after the latter's death in January, 1971, has stated that the lateral or side-by-side main rotor configuration was selected after comparison of single rotor, tandem rotor, and lateral rotor designs. The decision was made to use the same rotor system installed on the *Hook* and *Harke* helicopters.

Some design problems

Several problems had to be solved, however, before *Homer* could be flown. One problem was deciding whether the advancing or retreating blades should be above the fuselage; another was the interference of the wing in the downwash from

THE "HOMER"

THE RUSSIAN HLH — LARGER THAN THE DC-9

the rotor blades overhead. The third major problem, the high vibration of the wings when the helicopter was near the ground, was solved when the braces were stiffened. The Soviets now feel the lateral rotor system has been proven to be more stable, more reliable, and boasts better component fatigue life.

Various designations, such as *Mi-12, V-12,* and *B-12,* have been attributed to *Homer,* but visually the helicopter leaves only one lasting impression that prevents the viewer from confusing *Homer* with other helicopters. The length of the fuselage is 121 feet, or about as long as the commercial DC-9 jetliner (120 feet), and the width from rotor tip to rotor tip is 220 feet, or wider than the wing span of the Boeing 747 (196 feet).

Rotors and wings

The laterally placed rotors, sitting on top of each wing tip, have five all-metal blades and rotate with the advancing blades above the fuselage. The rotors, with a diameter of 115 feet, operate at about 112 revolutions per minute and overlap about 10 feet above the fuselage. The rotors are cross-shafted to insure operation of both rotors if any of the engines fail.

The wings are mounted at the top of the fuselage and are inversely tapered; that is, they increase in width or chord as they extend from the fuselage. They are made entirely of metal and are braced with a series of struts that resemble bridge trussworks. On top of the wings is a wire guideline used as a handhold by crewmen walking across to the engines. The main fuel tanks and the cross-shafting are located in the wings.

Four 6,500 shp engines

The engines are located in pods under each rotor hub with each pod holding two D-25VF Soloviev turboshaft engines, each rated at 6,500 shp. These engines are the uprated versions of those installed in the *Hook* and *Harke* helicopters. They have a zero stage on the compressor and utilize higher operating temperatures.

ABOUT THE AUTHOR

First Lieutenant William B. Bigler, II, is currently assigned to the U.S. Army Foreign Science & Technology Center at Charlottesville, Va. This is his first presentation in ARMY AVIATION.

Maintenance workstands are formed by pivoting the pod side panels downward and dropping the bottom pod panels. This feature enables the helicopter to be relatively free of external ground support equipment for maintenance work. The tricycle landing gear consists of dual wheels on each unit and a steerable nose unit.

Unique — two cockpits!

The fuselage is similar to conventional fixed-wing aircraft fuselages, except the nose highlights the essential difference — the two cockpits. The main cockpit is on the flight deck with the pilot and copilot sitting side by side, and the flight engineer and the electrical systems engineer sitting immediately behind them. The upper cockpit is for the navigator and the radio operator, who sit in tandem.

On the fuselage sides, the auxiliary fuel tanks are visible, a characteristic of Mil-designed helicopters. Farther back are four small wheels, which protrude from under the aft fuselage and protect the fuselage during rolling takeoffs and landings.

Readily apparent at the rear of the fuselarge are the large clamshell doors that open hydraulically to the side and allow the rear cargo ramp to swing down. On the cargo ramp are two large rubber blocks that protect the ramp from scraping the ground. Above the clamshell doors stands the tail structure of *Homer.* The tail consists of one main vertical fin (stabilizer) and two smaller auxiliary ones. The rudder (on the main fin) and the elevator (on the horizontal fin) provide flight control as on a fixed wing aircraft.

The dimensions of the interior of the fuselage (the cargo compartment) are 14 ft. wide, 14 ft. high, and 92 ft. long. The height and width are identical to the di-

mensions of the cargo compartment of the *An-22*. Mounted on the ceiling is a crane (capable of lifting 11 tons) that moves the entire length of the compartment on a track. This crane facilitates the rapid movement of cargo into and out of the fuselage, as well as helping maneuver the cargo within the fuselage to balance the aircraft for flight.

25-ton payload

Homer is more than just a machine for people to view on display. It currently holds several recognized world records including the lifting of a payload of 88,635 lb. to an altitude of 7,398 ft. and lifting a payload of 68,410 lb. to an altitude of 9,680 ft. These figures are just for the record book, however, because the Soviets have stated that the normal operational payload would be about 25 tons, which still is almost twice the payload capability of any U.S. helicopter. A payload of 25 tons would be roughly equivalent to the weight of 200 passengers.

With a normal payload, the takeoff weight of *Homer* approaches 213,500 lb., exceeding the TO weight of the Boeing 737 commercial jetliner (176,000 lb.). The Soviets claim that *Homer* with a normal payload has a range of 275 n.m. (316 miles. Its maximum and cruise speeds are 140 knots (161 mph) and 130 knots (150 mph), respectively.

Indications are that *Homer* will be operational in the Soviet Union within two years where it will serve as a vital transportation link throughout the Soviet northern regions in supporting mineral and oil explorations. Additionally, it will probably be used to resupply geographical exploration teams, weather stations, or other isolated communities.

NEW USAREUR CHAPTER

Some 35 AAAA members in the Greater Frankfurt Area activated a "Taunus Chapter," in mid-November, the USAREUR Region's eighth chapter activity. Following an opening address by COL Kenneth D. Mertel, former Regional President, on the importance of membership, the attendees elected the following interim slate of Chapter officers: CPT Donald B. Skipper, President; CW2 John Martin, Exec VP; MSG Thomas E. Huskisson, Secretary; VP (and VP, Programming); MSG Thomas E. Huskisson, Secretary; and CW2 Robert Albino, VP, Membership Enrollment.

Army Aviators Defy Weather to Complete Missions for USAF

FORT WOLTERS — Army 3, Texas Weather 0! That was the score at the end of the week of January 12 when Army helicopters and crews from USAPHS completed three missions for the Air Force despite a Texas ice storm.

On January 10, Dyess AFB at Abilene was paralyzed by 10 inches of snow and ice. The crew members of a B-52 bomber which had been downed in Thailand who were at Dyess were needed at Carswell AFB, Ft. Worth, but Air Force and commercial planes were grounded and ground travel was impossible. So, the Air Force asked the Army for help, and a Huey helicopter from Fort Wolters was dispatched to pick up the crew members and deliver them to Carswell.

That same day the crew members of three Air Force B-52 bombers shot down in Southeast Asia arrived in Fort Worth, but were still separated from their families at Dyess by 150 miles of ice and snow. Three Wolters helicopters enabled the men to complete the last leg of their 9,000 mile journey. Each of the three Hueys made two trips from Carswell to Dyess, and all the 28 crew members were in Abilene before nightfall.

Colonel Howard M. Moore, Ft. Wolters' commander, flew one of the helicopters. His crew members were CWO Douglas Sullivan, SGM Willie White and SP6 John Wilson, who served as crew supervisor for all three aircraft. The other helicopters were piloted by CPT John J. Thrash and CWOs Howard R. Crotty, Michael D. Magonigal, and Wallace R. Paddock.

On January 12, with Air Force planes still grounded by ice on runways, a USAPHS helicopter flew BG William Burkhart, 19th Air Division CG, from Carswell to Barksdale AFB at Shreveport, La.

Bad weather doesn't usually last very long in Texas, and the snow storm loosened its grip by the first of the week. By then the Army had demonstrated the fact three times that it takes more than stormy weather to stop Army helicopter pilots.

An impressive helicopter!

Militarily, *Homer* will provide the USSR with a capability of transporting heavy equipment or supplies (such as ammunition) and bulky equipment (such as artillery gun tubes) internally in a helicopter. These items can be offloaded from a fixed-wing aircraft at an airstrip and then *Homer* can transport the payload to areas accessible only by helicopter. Almost all Soviet Army equipment can be transported in *Homer* except the main battle tanks and some fully-assembled missiles and rockets.

Homer — a very large and impressive helicopter both visually and operationally!

CLOSE AIR/ Continued from Page 4

be accomplished concurrently with other air control personnel training at Elgin AFB.

3. Provide liaison to the Chairman, Joint Chiefs of Staff to develop and implement a detailed test plan to achieve the test objectives.

The Secretary of the Navy will provide liaison to the Chairman, Joint Chiefs of Staff to develop and implement a detailed test plan to achieve the test objectives.

The Chairman of the Joint Chiefs of Staff will:

1. Develop a detailed test plan to achieve the test objectives.

2. Direct the implementation of the detailed test plan in joint training and test exercises. Assure that test objectives are accomplished and that their results are furnished to the Service Secretaries and to the Office of Director, Defense Research and Engineering (Test and Evaluation).

The Director, Defense Research and Engineering will:

1. Provide liaison to the Chairman, Joint Chiefs of Staff to develop a detailed test plan to achieve the test objectives.

2. Provide guidance and monitor the development of the attached test objectives into a coordinated, detailed test plan by the JCS, and review and approve of the final test plan prior to implementation.

3. Provide funding for instrumentation, data collection, and data reduction, etc. as required.

Kenneth Rush

Enclosure

Testing of Close Air Support Command and Control

1. Phase II of the Close Air Support Study identified the need to conduct selected field tests/exercises for the purpose of collecting empirical data in the area of CAS. The overall objective of the test/exercise program is to reduce the areas of uncertainty in the quantitative and qualitative analysis of the CAS Study. It is anticipated that the majority of the tests can be conducted concurrently with planned Services and Joint Exercises.

Test Objectives

1. Determination of response times for immediate demands on the CAS command and control system, to include transmission, processing, and transit time.

2. Determination of communication requirements, both ground and airborne, at all levels, to include secure transmission needs.

3. Determination of the capability to integrate close air support with other tactical operations in the combat area, including the consideration of fire support coordination, air defense, and airspace control functions.

4. Determination of maximum system capacity to handle target attacks under clear weather conditions.

5. Determination of training requirements for qualification and annual maintenance training of observers, air controllers, and operators for each level above company. Determination of training requirements for combat battalions and TACS units in terms of CAS sorties per year.

6. Determination of the degradation of the system's ability to provide effective command and control of close air support at night, in bad weather, or under artificially reduced visibility.

7. Determination of the ability of various CAS target acquisition systems to detect and identify hostile targets and hand off these targets to an attacking agent (this objective is being addressed by the on-going OSD sponsored Airborne Target Acquisition Joint Test).

8. Determination of the extent of system degradation resulting from damage to individual elements.

9. Determination of the functioning of intelligence information and friendly data availability as aids in decision making within the command and control system. Examine information requirements, accuracies and times involved in entering it in the system and making decisions based on it.

10. Determination of the compatibility and interoperability of the elements of the close air support command and control system.

11. Evaluation of the improvements offered by new equipments in the performance areas above.

Honorable John C. Stennis
Chairman
Committee on Armed Services
Washington, D.C.

Dear Mr. Chairman:

In December 1971, the Deputy Secretary of Defense, David Packard, initiated Phase II of the Close Air Support Study to examine (1) the close air support command and control systems and (2) the basing concepts to be used for close air support weapons systems and their logistic demands. The Office of the Joint Chiefs of Staff organized a Joint Staff Task Force to perform the study under the guidance of a Steering Group chaired by the Assistant Secretary of Defense for Systems Analysis. Attached is the Joint Staff Task Force Executive Summary, a set of Conclusions and Recommendations developed by the Review Group with the assistance of the Task Force, and Test and Evaluation Objectives developed by my staff and the Joint Staff Task Force under the direction of the Review Group.

My review of the Phase II study and of comments on it provided by the Services and the Joint Chiefs has led me to the following conclusions:

1. The treatment of command and control was oriented toward close air support as viewed by lower echelon ground commanders.

CLOSE AIR/ Continued from Page 25

2. The Army command and control system for attack helicopters is responsive to the needs of the lower unit commanders.

3. The Air Force/Army command and control of close air support provided to the Army should continue to be improved.

4. The Navy close air support command and control system is dependent on the Marine Corps system in amphibious operations and upon the Air Force/Army system during other support of the land battle.

5. The Marine Corps command and control system is adequate for amphibious operations. The control of Marine aircraft in other land operations requires adaptation to overall theater requirements.

6. Portable, reliable, and secure communications equipment which can be used both by the individual soldier and by the attack aircraft is not available.

7. Close air support training provided to the Army should be standardized and improved.

8. Training provided to the Air Force in the close air support command and control system should be standardized and improved.

9. Current close air support command and control systems must be measured by the study criteria in selective field tests and evaluations.

10. The treatment of alternatives in Part IV of the Task Force Report should be considered in the proper context. These alternatives are not based on extensive analysis nor test data but must be field tested to evaluate their contribution to improve command and control.

Therefore, following receipt of advice from the Services and the Joint Chiefs on what actions would be appropriate, I am directing the following actions:

1. The Air Force and Army will determine the minimum close air support training sorties per year to be provided each Army combat battalion.

2. The Army and Air Force will develop courses of instruction for Army unit leaders and Air Force Tactical Air Control System personnel.

3. Selected field tests and joint training exercises will be conducted for the purpose of collecting empirical data on close air support command and control. The overall objectives of the test and exercises will be to verify command and control criteria and to measure quantitatively Service close air support command and control systems by these criteria, such as response time, fire support coordination, and capacity. These tests are expected to surface areas for improvement in current systems, and indicate where changes and efficiencies could lead to the greatest improvements in command and control system effectiveness. The Services will implement these improvements as they are borne out by the testing program.

The Army and the Air Force shall evaluate the implementation of the following additional actions:

4. The Air Force forward air controllers to be assigned to Army division and Corps units, to be responsible to the commanders of those units, and to deploy with those Army units.

5. Selected Army helicopter pilots to be trained, qualified, and designated as forward air controllers to request and control fixed-wing aircraft for close air support.

Sincerely,
Kenneth Rush

Enclosures

CONCLUSIONS

As a result of the study it is concluded that:

a. General. Each of the Services has developed a command and control system which meets basic requirements of integrating close air support firepower into the fire support requirements of the ground force. Except for Army attack helicopters which are completely dedicated to the ground commander, CAS elements of other Services perform multiple military functions in addition to close air support and respond to the priorities and requirements dictated by the demands of the tactical situation. The capabilities of various aircraft types to perform close air support are markedly different. For this reason, their method of operation, stationing, organization and degree of integration into ground operations have a direct effect upon their command and control. Close air support is not a mission performed by a single category of aircraft, by a single Service or under a single command and control system. The agencies within the command and control systems must perform multiple military functions in addition to close air support and are essential to the respective combat operations of each Service and are therefore complementary.

b. Evaluation of Current Command and Control

(1) Close air support command and control functions of the Services are generally common and are geared to processing and execution of close air support requirements; however, the approach to command and control of close air support resources varies among the Services because of operational requirements dictated by the Service missions.

(a) The Army command and control system is organized on the principle of unity of planning with decentralized control and execution. Combat forces to include organic weapons systems are task organized by the ground commander in a manner best suited to the exigencies of the tactical situation. This assures unity of command and maximum decentralized execution by subordinate

CALL FOR PROPOSALS

AAAA Members are encouraged to submit proposals to the AAAA Nat'l Office for consideration by the Nat'l Executive Board at its 26-27 Feb. business meetings.

commanders in the prosecution of land warfare.

(b) The Air Force Tactical Air Control System (TACS) is based on the concept of centralized direction and decentralized execution and control of tactical air resources and possesses multifunctional capability to conduct air operations throughout the theater.

(c) The Navy Command and Control System provides the attack carrier force the capability to conduct operations at sea and in support of the land battle. Navy aircraft operating in a target area will be controlled by the close air support command and control system in effect in that area.

(d) The Marine Corps Air Command and Control System (MACCS) provides for centralized command of aviation resources organic to an integrated air-ground team designed to project a self-sufficient combat force ashore in an amphibious operation to meet the requirements of the landing force commander.

(2) The ultimate measure of close air support effectiveness lies in its capability to fulfill the tactical requirements of the ground commander. These requirements, expressed in terms of study criteria for command and control and within the limitations of available data, can be met by the Service systems under the appropriate command and control arrangements.

(3) The fundamental objectives of close air support command and control are to responsively and effectively assign, launch, control and recover weapon systems engaged in close air support to meet the tactical requirements of the ground forces. Response time is made up of the elements of request time, processing time, execution time and for preplanned CAS, the planning process.

(a) Significant gains in close air support response time will result from improvements which permit the shortening of the request time and processing time.

(b) Execution time is minimized by forward employment procedures such as: ground loiter with the AV-8A aircraft, laagering of attack helicopters with front line units and operation of conventional fixed wing aircraft from forward land and sea bases, and airborne loiter.

(c) The principal constraint in the cycle for preplanned close air support is mission request and decision time. This is the requirement to forward, evaluate and prioritize the close air support requests, match them with the available aircraft and prepare the necessary plan keyed to a 24 hour cycle. These preplanned missions are coordinated with all other supporting fires insuring support to the ground commanders planned scheme of maneuver.

(4) Under good weather conditions the command and control systems have sufficient capacity to meet scenario requirements of the study, however, uncertainties exist concerning the limitations imposed by airspace, mission controllers and resources. Although close air support can be provided at night and in adverse weather, the degree of the degradation under these conditions is a serious limitation.

DISASTER RELIEF

Four Army CH-47 Chinooks from the 227th Aviation Battalion at Ft. Hood, Tex., airlifted food from Managua Int'l Airport as well as from ships in the harbor to the earthquake-stricken area, effectively stopping the black market in food stuffs. Illustrating the emergency use of Army resources, the Chinooks completed the Ft. Hood-Managua flight in 15½ hours. In an individual gesture of goodwill, 227th flight personnel presented hundreds of T-shirts to the native children.

(5) Training, tests and exercises generally follow a similar sequence in all Services although some variations exist because of unique Service functions. The value of uniservice and joint tests and exercises, in addition to the training of personnel, accrues from the identification of problem areas, the development of corrective action, and improved systems.

c. Evolutionary Improvement. Most of the existing systems designed for providing control of resources which perform CAS functions are soundly based on experience, combat employment, and evolutionary changes of a period of three decades. All Services have modifications and improvements (organizational, equipment, or procedural changes) underway intended to enhance the effectiveness of close air support command and control systems as currently constituted.

(1) The evaluation of organizational and procedural alternatives to the Army-Air Force air-ground system reflect advantages, disadvantages and uncertainties which require continued Army-Air Force study.

(2) Equipment alternatives incorporate new technology into the command and control systems for close air support, most of which require further development, test and evaluation to determine their feasibility and actual values.

d. Alternative Concepts and Procedures

(1) More centralized control could provide a broader range of assets to the joint force commander thus improving the total allocation of theater resources and facilitating the massing of firepower. However, there is a possible attendant cost in response time.

(2) More decentralized control could; decrease the span of control, provide improved response time, facilitate integration of close air support into the ground commander's fire and maneuver plan and distribute assets (to include fixed wing aircrafts) to meet minimum essential requirements. There could be an attendant cost of possible early resource exhaustion and in-

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MOS CHANGES

(Continued from Page 4)

three weeks will be added to the journeyman courses to cover the basic skills previously instructed through OJT or the apprentice training.

Aircraft Turbine Engine Repairman (68B). Solicitation of field comments brought in several recommendations for improving the career structure of this MOS. The basic problem appeared to be one of too many skills at one skill level; the journeyman "2" skill level repairman is responsible for maintenance of a variety of turbine engines: T53, T63, T55, T73, R1340, O-335, O-470, etc.

The alternatives

There are several solutions to this problem. We can increase the training time, but since the 68B doesn't necessarily work on all of these engines, we would be overtraining him at considerable expense and loss of time. We could establish a separate MOS for maintenance of some of these engines, but since it is recognized that a close relationship exists between aircraft turbine engine repair jobs, this action would be inconsistent with the definition of an MOS. AR 611-201 defines an MOS as *". . . a grouping of military jobs possessing such close relationship that an optimal degree of interchangeability exists among persons so qualified."*

The third alternative, and the one selected and approved, was to establish an additional skill level in the MOS. Skill level "2" will be used to identify repairman positions required to maintain the type turbine engines used on single engine aircraft; skill level "3" will identify maintenance skill for turbine engines on multiengine aircraft (fixed and rotary wing). Since skill level "2" is a prerequisite for "3", the latter will identify repairmen qualified to repair all types of turbine engines.

Adoption of this type classification will allow more definitive description of duties, control scope of proficiency testing, and reduce initial training time requirements. It is recognized that maintenance skills on a limited number of turbine engines will overlap between the two skill levels. This doesn't pose a problem in that the training responsibility can omit the redundant portion which has been included in the "2" skill level. This more concise identification of skills has received the overwhelming support of the major field commands.

ABOUT THE AUTHOR

LTC Bennett E. Greenfield, a recent graduate of the C&GSC, Ft. Leavenworth, Kan., is currently assigned as Military Job Analyst in the Personnel Management Development Office, OPO, DA.

MOS 67V

OH-6/OH-58 Helicopter Repairman (67V). When the OH-58 was adopted, existing MOS 67V was selected to identify the positions and people who would maintain this aircraft. To differentiate between the OH-6 and OH-58 skills, the Special Qualification Identifier (SQI) "T" was assigned to identify OH-58 products of training . . . MOS 67V2T.

This action was an exceptional application of an SQI, the normal purpose of which is to classify transitory training. Inasmuch as separate training exists for both aircraft, and there is little if any interchange in personnel assignments between the two systems, the decision was made to recognize the independent integrity of each by separate MOS.

Therefore, MOS 67V will continue to identify OH-6 mechanics; MOS 67R is established for maintenance skills associated with the OH-58. SQI "T" is eliminated for use with MOS 67V.

CH-37 MOS deleted

CH-37 Helicopter Repairman (67T). This aircraft system is no longer in the active inventory and requirements for maintenance are nonexistent. *The MOS is deleted.* Personnel holding this MOS will be afforded training opportunities in other

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CLOSE AIR/ Continued from Page 27

creased chances of less than optimal assignment of resources.

(3) Changes in joint procedures could permit the unified commander, the joint force commander, or a subordinate joint force commander greater latitude to centralize or decentralize control of close air support assets contingent on the tactical situation thus taking advantage of the best in each control process.

e. Basing and Logistics. Close air support is but one of the many functions required in the theater of operations and logistic support of that function is integrated into the support provided other military activities. Basing and logistics support systems have been developed by each Service to provide the most effective employment of its respective close air support forces. These support systems are integrated into overall combat logistic support requirements of the Services, with maximum utilization of common user systems to minimize unnecessary duplication of logistic services.

(1) All basing and logistics concepts and procedures are adequate and involve some form of main base support combined with forward employment.

(2) Basing and logistics schemes are scenario dependent and adequate flexibility exists in the concepts and procedures to accommodate scenario variations.

(3) The variances in logistic support are basically weapon systems oriented and emanate from Service unique operational requirements within the theater of operations.

f. Verification

(1) Some uncertainties exist in both the quantitative and qualitative evaluation contained in the study; however, the general finding that the present systems work and that they can meet the study criteria is arrived at with confidence.

(2) Quantitative estimates in the command and control evaluation may be optimistic; however, study estimates accurately portray the proper relationships among the various alternative ways of providing close air support.

RECOMMENDATIONS

The current Service command and control systems have been developed through evolutionary changes over the past thirty years and have functioned well during three major wars and several lesser conflicts. As a result of the study it is recommended that:

a. The basic organizational structure for overall Service command and control systems be retained.

b. Efforts continue to pursue evolutionary improvements to concepts and procedures of the Services and interoperability of command and control systems for close air support.

c. Further evaluation and test of changes to joint procedures for air support of land operations over a wide spectrum of conflict situations be conducted.

d. Efforts be continued to develop equipment which improves CAS procedures, capabilities, and systems interoperability for command and control.

e. Improvements to command and control equipment be continued by greater emphasis on equipment development which provides increased capability in acquiring and attacking targets at night and/or in adverse weather.

f. Efforts be continued to enhance the forward employment of close air support resources.

g. Intensified efforts toward improvements in close air support request and processing time be continued.

h. Efforts continue toward optimizing and testing basing and logistics concepts and procedures.

i. Prior to further study of close air support, comprehensive field tests, data collection efforts and evaluations be conducted to provide realistic results designed to reduce the areas of uncertainties in the qualitative and quantitative analyses of the study. Some of these tests should be of such magnitude that command and control for close air support could be realistically assessed from the perspective of all command echelons.

MOS CHANGES

(Continued from Page 28)

aircraft equipment systems in the Aviation Maintenance Career Group.

MOS 68C deleted

Aircraft Reciprocating Engine Repairman (68C). Examination into the reciprocating engine field revealed that there is insufficient justification to sustain an MOS for this skill. The density of aircraft employing this type engine is minimal. Additionally, as there are no position requirements for supervisors in this MOS, journeymen were required to reclassify to MOS 68B (Turbine Engine Repairman) to achieve grade progression.

It has been decided to delete the MOS from the structure. An Additional Skill Identifier (ASI) has been established to identify reciprocating engine repair skills. Personnel currently holding MOS 68C will be afforded the opportunity for training in turbine engine repair and awarded MOS 68B, with the suffix ASI to indicate their additional reciprocating engine skills.

New skill level

Aircraft Rotor and Propeller Repairman (68E). This MOS encompasses the skills required to repair both helicopter rotor blades and airplane propellers. These qualifications, less those for supervision, are contained in the journeyman "2" skill level of the MOS. Job requirements for 68E vary, depending on the type of unit to which assigned, type of aircraft supported (fixed or rotary wing), etc.

Although an individual is trained in both rotor and propeller maintenance, on the job he is normally specialized in repair of either one or the other. Since the present classification structure does not distinguish between the type of duties performed in the field, training must include all aspects of field requirements.

This situation suggests the need to "shred-out" MOS 68E skills. The fact that some positions require incumbents to repair rotor blades as well as propellers dictates that these skills remain in a single MOS. Recognizing this problem, a "3" skill level in this MOS has been established. Since rotor blade repair represents the majority of the workload in the field, as evidenced by the high ratio of helicopters over fixed-wing airplanes in the Army, identification of this skill will be at the "2" skill level. Skill level "3" will be used to classify and grade propeller repair positions. Since "2" skill level qualifications are prerequisite for the "3" skill level, the latter will embrace all duties, except supervision, of the MOS.

This revised structure for grading and classifying rotor blades and propeller repair jobs allows personnel to be trained in a shorter period of time for the majority of the job requirements in the field. Training will be focused on the specific tools, equipment, and components generally associated with the trainee's initial duty position. Translating this into benefits to the field means lower training costs and increased proficiency, as well as reduction in the OJT time requirements for an incumbent's initial duty position assignment.

INDUSTRIAL COLLEGE OF THE ARMED FORCES
FY 74 SELECTEES
(* denotes Colonel; all others are LTC)

Brown, John P.	Jackson, Wilfred A.
Calcatera, Kenneth*	Kenyon, Richard D.
Hegdahl, James D.	O'Donohue, John D.

(The reporting date is 6 August 1973)

Effective 1 September

The above discussion covers only a few of the various changes resulting from this approved study. The effective date for implementation is September 1, 1973.

Personnel management in the aviation maintenance field is as complex as the equipment itself. The axiom that the machine is no better than the man behind it is no less true for the mechanic than it is for the pilot. The study described herein is but one of many on-going personnel management projects, all of which have a single purpose — getting the right man in the right job at the right time!

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ORIENTATION — U.S. Senator Strong Thurmond (cen.), of South Carolina, inspects an M-22 armament system on a UH-1B during a recent tour of Matteson Range at Ft. Rucker. Accompanying him are LTC Edward B. Kenney (left), staff member of the Senate Armed Services Committee, and SSG James M. Foltz, who assisted in the briefing. (USA photo)

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AAAA Activities

AAAA National and Chapter Meetings during Jan.-Feb., 1973

Fort Sill Chapter. Professional meeting. **John H. McMinn,** Boeing Vertol Co., UTTAS presentation. 15 January.

Embry-Riddle Chapter. Professional after dinner meeting. **Ralph P. Alex,** Sikorsky Aircraft Div., UTTAS presentation. 15 January.

Northern Lights Chapter. Professional meeting. **Bob Reeve,** Reeve Aleutian Airways, guest speaker. 16 January.

Suncoast Chapter. Professional after dinner meeting. **Ralph P. Alex,** Sikorsky Aircraft Div., UTTAS presentation. 16 January.

Fort Hood Chapter. Professional meeting. **John H. McMinn,** Boeing Vertol Co., UTTAS presentation. 17 January.

Coastal Empire Chapter (Savannah). Professional after dinner meeting. **Ralph P. Alex,** Sikorsky Aircraft Div., UTTAS presentation. 17 January.

Alamo Chapter. Professional meeting (afternoon). **John H. McMinn,** Boeing Vertol Co., UTTAS presentation. 18 January.

Fort Benning Chapter. Professional meeting (After dinner). **Ralph P. Alex,** Sikorsky Aircraft Div., UTTAS presentation. 18 January.

Sun Bowl Chapter (El Paso). Professional luncheon meeting. **John H. McMinn,** Boeing Vertol Co., UTTAS presentation. 19 January.

Greater Atlanta Chapter. Professional meeting (afternoon). **LTC Richard Gile, Ret.; MAJ Charles A. Robinson,** UTTAS presentation. 19 January.

Air Cavalry Chapter (Ft. Knox). Professional luncheon meeting. **MAJ Al Morrison,** USACDC, guest speaker. 24 January.

TENNKY Chapter (Ft. Campbell). Professional dinner meeting. **BG William J. Maddox, Jr.,** Director of Army Aviation, guest speaker. 26 January.

Mount Rainier Chapter (Ft. Lewis). Professional luncheon meeting. **MAJ George Jordan,** CDEC, guest speaker. 30 January.

Monmouth Chapter. Professional luncheon meeting. **Ralph P. Alex,** Sikorsky Aircraft Div., UTTAS presentation. 6 February.

Twin Cities Chapter (Minneapolis-St. Paul). Activation meeting. **MAJ Everett S. McDaniel,** CDC Combat Systems Group, Ft. Leavenworth, guest speaker. 8 February.

Washington, D.C. Chapter. Annual formal dinner-dance. Fort Myer, Va. 10 February.

Embry-Riddle Chapter. Professional meeting (after dinner). **John H. McMinn.** Boeing Vertol Co., UTTAS presentation. Howard Johnson's, 1830 hours. 19 February.

Suncoast Chapter. Professional after dinner meeting. **John H. McMinn,** Boeing Vertol Co., UTTAS presentation. MacDill AFB Officers' Open Mess. 1900 hours. 20 February.

Ft. Wolters Chapter. Professional dinner meeting. **Ralph P. Alex,** Sikorsky Aircraft Div., UTTAS presentation. FWOOM. 1830 hours. 20 February.

Chicago Area Chapter. Professional meeting (after dinner). "Job Opportunities in Aviation," Panel with FAA, Bell, United Airlines, Civil Svc Commission reps. ILLNG Armory, 1930 hours. 21 February.

Coastal Empire Chapter (Savannah). Professional meeting (after dinner). **John H. McMinn,** Boeing Vertol Co., UTTAS presentation. HAAF Officers Club. 1830 hours. 21 February.

Ft. Hood Chapter. Professional meeting (afternoon). **Ralph P. Alex,** Sikorsky Aircraft Div., UTTAS presentation. Palmer Theater. 1530 hours. 21 February.

Ft. Benning Chapter. Professional meeting (after dinner). **John H. McMinn,** Boeing Vertol Co., UTTAS presentation. Country Club. 1930 hours. 22 February.

Alamo Chapter. Professional meeting (afternoon). **Ralph P. Alex,** Sikorsky Aircraft Div., UTTAS presentation. Willis Hall. 1500 hours. 22 February.

David E. Condon Chapter (Ft. Eustis). Fourth Annual "LTG William B. Bunker Scholarship Memorial Dinner Dance" with Ft. Monroe Chapter. (Informal). FEOOM. 1900 hours. 23 February.

Greater Atlanta Chapter. Professional dinner meeting. **John H. McMinn,** Boeing Vertol Co., UTTAS presentation. FMOOM. 1830 hours. 23 February.

Sun Bowl Chapter. Professional luncheon meeting. **Ralph P. Alex,** Sikorsky Aircraft Div., UTTAS presentation. Top 4 Club. 1100 hours. 23 February.

Lindbergh Chapter. "Cocktail Mixer" in conjunction with business meeting of AAAA Nat'l Board in St. Louis. Marriott Motor Hotel (Airport). 1815 hours. 27 February.

AAAA CONVENTION PHOTOGRAPHS

All photographs taken during the 1972 AAAA National Convention in Washington, D.C. were taken by Miss Rosemarie Vernell, Creative Services International, 1748 "M" Street, N.W., Washington, D.C. 20036.

AAAA plans May, '73 Group Flight to Paris Air Show

The AAAA will coordinate a 15-day group flight to the 1973 Paris Air Show for interested members and their wives with departure by Pan Am/TWA jet from JF Kennedy Airport, N.Y., on Monday, May 28, and return from London on Monday, June 11. The flight is timed to bring participants to Paris just prior to "Helicopter Day" at the Air Show on Wednesday, May 30. An optional motor tour of Scotland and England will be taken by a limited group of 36 persons prior to a June 5-11 stay in London. Exact costs (economy airfare) and details of the optional motor tour will be furnished after February 8. If interested, write to AAAA National Office, 1 Crestwood Road, Westport CT 06880 prior to February 24.

BROKEN WING — For safely landing his Miss-ARNG helicopter after breaking a drive shaft while airborne, MAJ James H. Burns (2d from left) receives DA's Broken Wing Award from MG E. A. Beby Turnage, Mississippi Adjutant General. LTC William A. Bruce, Aviation Adviser (left), and COL James Coleman, State Aviation Officer (right), take part in the ceremony honoring the commander of Jackson's aviation facility.

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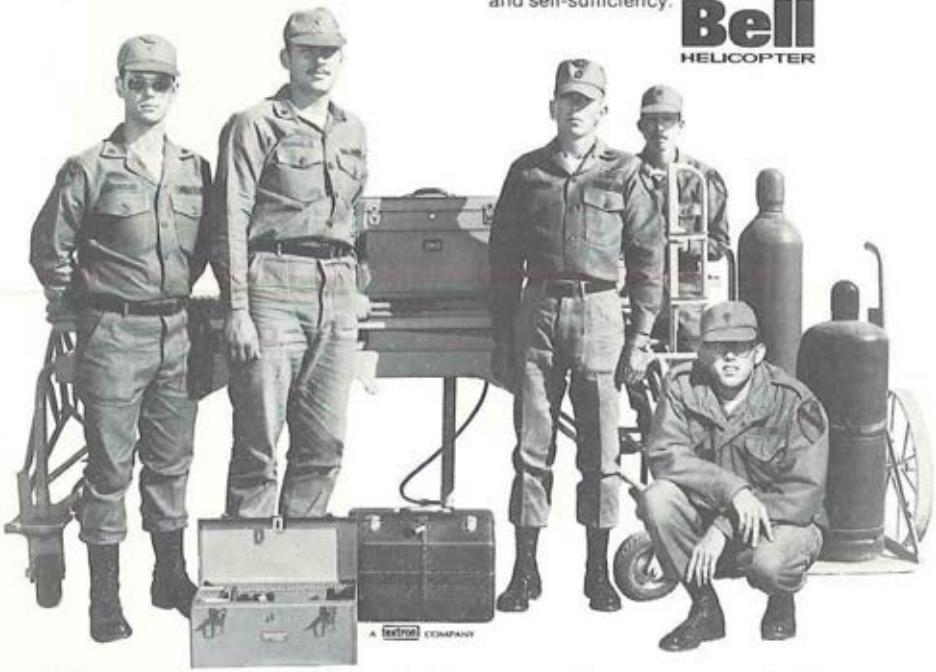

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