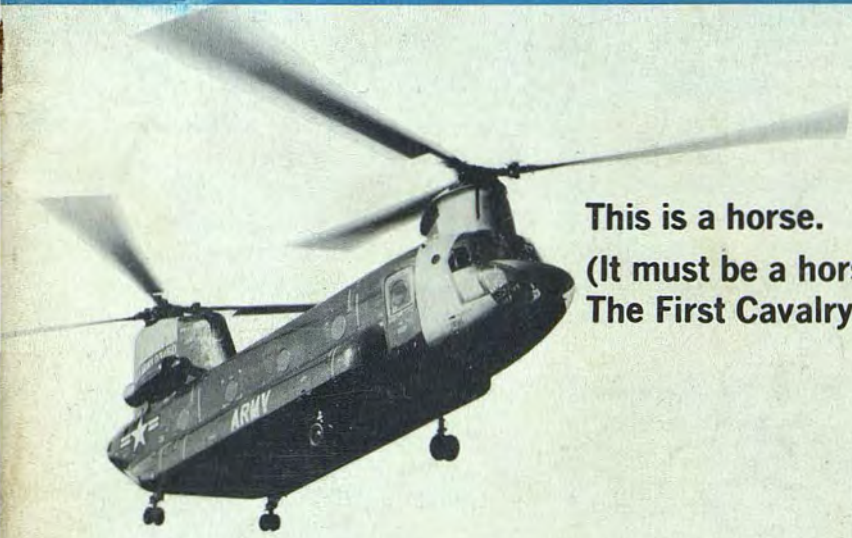
JANUARY 31 ★ 1966

ARMY AVIATION



This is a horse.

**(It must be a horse.
The First Cavalry rides it.)**

(See back cover)

CHINOOK USED AS SKY PLATFORM

For the first time in combat, Chinooks delivered troops by ladder into Vietcong infested territory. The mission was a blocking force to intercept a possible Vietcong movement. Because dense jungle made it impossible to land any aircraft, the Chinook unit delivered 140 men by the ladder technique. Lieutenant Colonel Max A. Clark piloted the lead Chinook. First Cavalry Division officers observing the maneuver were impressed by the effectiveness of the new concept and ladders may be used frequently to deliver troops in future operations.

SUMMARY

February, 1966

BOEING Helicopters

VERTOL DIVISION / MORTON, PENNSYLVANIA, U.S.A.

LETTERS

BRIEF LETTERS FROM READERS ON ANY PERTINENT SUBJECT ARE WELCOMED BY THIS PUBLICATION. NO ANONYMOUS LETTERS WILL BE PUBLISHED.

LAST LOOK!

Dear Editor:

The photograph below may be of interest. Shown, left to right, are William Rollnick, Contracts, Hiller Aircraft; the writer; and Stanley Hiller, Jr.

The occasion was the "last look" at the final production OH-23G which rolled down the rapidly disappearing assembly line and was completed and delivered to the Army. Mr. Hiller, who had resigned from the Fairchild-Hiller Corp. to pursue private ventures in California, had stopped by the plant to see the last of a long line of military helicopters which carry his name.

The Palo Alto facility has since been closed with the company's transfer of its operations to Hagerstown, Md.

Incidentally, while performing the acceptance test flight on this final aircraft for the Army, I completed my 5,000 hour of military flight time, and, boy, did it take a long time to get those last 1,000 hours!

Lt. Col. William R. Dodd
Chief, Hiller Plant Div.

THE ZING!

Dear Editor:

As an old - and now retired - World War II Army Aviator, I enjoyed the issues of the magazine that you published throughout the 'fifties. They were informative, crammed with personnel and unit trivia of high interest to me, and above all, they were controversial and had some zing!

While I still subscribe - how else can I keep track of my old friends? - and wouldn't knock the product since many of these same friends are infrequent "contributors" to the present magazine, there is no question but that the old zing has gone. In glancing through a half dozen 1965 issues the other night, I couldn't find one solitary controversial thought or expression indicating a difference of opinion. I can't believe that you are now refusing to publish material that's contrary to the obvious "team play," and would rather believe that either the mass that we know as Army aviation today is a homogenized, self-satisfied lot, or the more likely explanation, the people in it today are not so contented and homogenized, but are simply too busy or too lazy to create the tiny ripples that rock big boats! Which is it?

Major Harry B. Mackel
Patterson, New Jersey

(Ed. Moo-o-o!)

A "FIRST!"

Dear Editor:

Recently, you published an article from one organization showing its percentage of Master Army Aviators, which was rather high. At the time, you promised to print any Army aviation "Firsts," and solicited items on this (subject) from the field.

We believe that we were the *first* Army aviation unit to achieve a goal of 100 per cent Master Army Aviators!

As at 18 September 1964, the Army Aviation Unit, G-3 Branch, U.S. Element, Joint U.S. Military Mission for Aid to Turkey (JUSMMAT) reached this goal.

At the time the unit consisted of Lt. Col. Clifford S. Athey (now at USAAVNS), Major Alfred J. Wolfe (now at Ft. Eustis), and the writer. Can you beat this?

Maj. Thomas N. Hurst
APO New York 09254

ARMY AVIATION

VOLUME 15 — JANUARY 31, 1966 — NUMBER 1

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Copy should bear the name and address of the writer. The magazine cannot assume responsibility for the safe return of copy, photographs, etc., unless the submission is accompanied by an addressed envelope having sufficient return postage. Exclusive articles pertinent to any Army aviation subject except AAAA, industry, unit, or major command activities are reimbursible at the rate of ten cents per published line.

The editor reserves the right to quote all or part of any material that is submitted for publication, except those particular passages that the writer specifies are not for publication. Copy additions or deletions made necessary by space requirements may be made. The publisher assumes that the correspondent has not submitted any material that is classified, proprietary, or copyrighted. The use or reproduction of any of the by-lined contents of the publication, in whole or in part, without the expressed permission of the publisher is prohibited.

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Secretary of the Army Stanley R. Resor (seated) is shown being briefed on the operation of the gun sight of a UH-1 helicopter by officers of the 11th Aviation Battalion, 1st Cavalry Division, at Loi, Vietnam.

The commanding officer of the 11th, Lieutenant Colonel John W. Lauterbach (center background), looks on. Other officers in the picture are unidentified.

The photo was taken during Secretary Resor's recent trip to visit combat and support units in Vietnam.

FEATURES

ADVERTISERS

AVIATION EMPHASIS IN THE ARMY SCIENTIFIC ADVISORY PANEL

By
Major
Donald E. Rosenblum

The Army senior scientific advisory group has geared itself for the impact of aviation in the modern force structure. Five members and consultants of the Army Scientific Advisory Panel (ASAP) are directly concerned with aviation or aeronautical engineering while many others represent fields related to air mobility problems.

VARIED BACKGROUNDS

The members in the aviation field include Dr. Antonio Ferri, Director, Guggenheim Aerospace Laboratories, New York University; Dr. Allen E. Puckett, Executive Vice President, Hughes Aircraft Company and Mr. Eugene L. Vidal, consultant in general aviation and plastics. Among the Panel's aviation-oriented consultants are Dr. C. Stark Draper, Head of the Department of Aeronautical Engineering, Massachusetts Institute of Technology and Mr. Robert E. Hage, Vice President for Advanced Product Planning, McDonnell Aircraft Corporation.

The new chairman of the Army Scientific Advisory Panel, Dr. Finn J. Larsen, is a pilot and has maintained a keen interest in the Army's aviation development program. Dr. Larsen is Vice President of Honeywell, Incorporated and was formerly Assistant Secretary of the Army (R&D).

SERVE BY APPOINTMENT

The Secretary of the Army appoints ASAP members and consultants from eminent members of the civilian scientific, engineering, and industrial communities. The Panel advises the Secretary of the Army, the Chief of Staff, the Assistant Secretary of the Army (R&D) and the Chief of Research and Development on specific scientific and technical problems which concern the Army. There are now 19 Panel members and 44 consultants representing 16 scientific disciplines. The membership has affiliation with 21 colleges and universities and 16 industries.

Rosenblum

Dewey

The Panel works principally through its ad hoc groups. As an example, one Ad Hoc Group of Army Aircraft Research and Development recently completed its study and made recommendations with respect to specific V/STOL research projects. Mr. Charles H. Zimmerman, formerly with the National Aeronautics and Space Administration and now Chief Engineer of the U.S. Army Materiel Command, was chairman of the group. Other members were Lt. General James M. Gavin, USA (Ret.), Dr. C. S. Draper, Dr. C. C. Furnas and Mr. Eugene Vidal.

Mr. Willis M. Hawkins, former Vice President of Lockheed Aircraft Corporation, was a member of this group until he became Assistant Secretary of the Army (R&D) in October, 1963.

THE SECRETARIAT

The Panel Secretariat, furnished by the Office of the Chief of Research and Development (OCRD), also reflects the current emphasis on air mobility. The Executive Secretary is Major Donald E. Rosenblum who came to the Secretariat from OCRD's

Special Warfare Division and who has served with airborne infantry units. Major Arthur E. Dewey, the Assistant Executive Secretary, is a Senior Army Aviator with a record of combat support time in Vietnam and service with the 11th Air Assault Division (Test) during its final field exercise—Air Assault II.

Secretary of the Army Stanley R. Resor discussed the revolutionary progress of air mobility in a speech to the Army Scientific Advisory Panel at its spring meeting at For Bragg in June, 1965. He brought to the attention of the Panel as a whole the scientific challenges of these new mobility concepts, with specific reference to their applications in the newly operational 1st Cavalry Division (Airmobile).

The Panel is organized to help the Army meet these challenges, not only through its members in the aviation field, but through those in a broad spectrum of related disciplines as well.

MID-AIR REFUELING

Successful air-to-air refueling tests recently completed at Cherry Point, N. C.—involving both a fixed wing tanker and a helicopter—promise unlimited range for helicopters in the future.

The experiments were considered important by the Air Force to pave the way for extended ferry flights and long-distance missions. Special rescue versions of the Sikorsky CH-3Cs (HH-3Es) are used by the Air Rescue Service in Vietnam.

A Marine Corps KC-130F was used as an aerial tanker. At least 10 such connections were made without difficulty. During one, the two aircraft were linked together for five minutes (two minutes longer than necessary to refuel the helicopter). Speeds ranged from 120 to 140 MPH at an altitude of 4,000 feet.

FACES IN THE NEWS

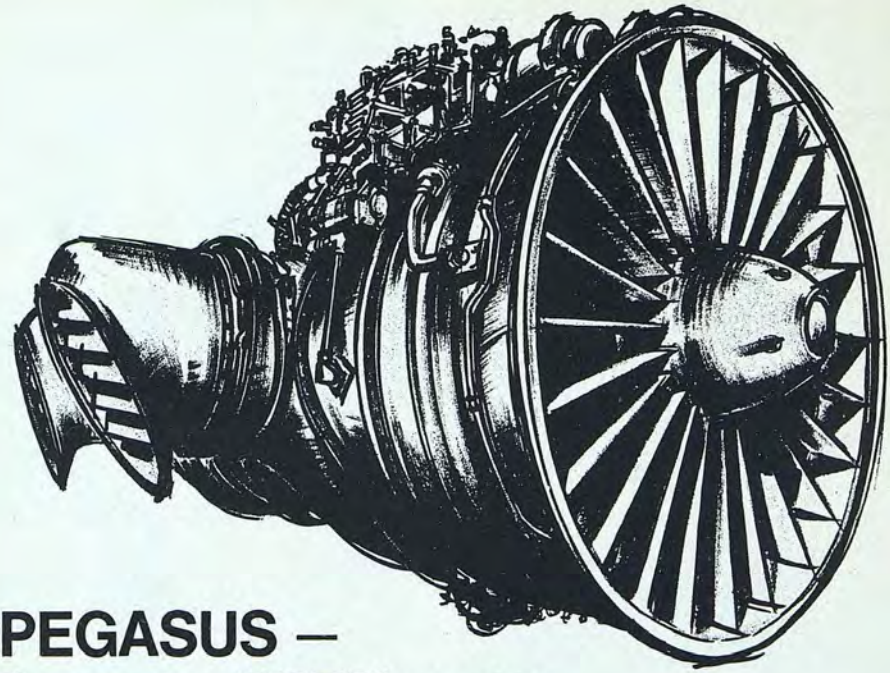
Brigadier General Robert R. Williams, who is currently serving as the Assistant Commanding General of the 2nd Infantry Division in Korea, is scheduled to become the new Director of Army Aviation, OACSFOR, Department of the Army, in April. He will replace Brigadier General George P. Seneff, Jr., who is being reassigned to Vietnam. (For further details, turn to the Army Aviation Director's Newsletter on page nine.)

Brigadier General George P. Seneff, Jr., who until recently has been the Director of Army Aviation, OACSFOR, has been reassigned to Headquarters, U.S. Army, Vietnam. He had formerly served as the Commander of the 11th Aviation Group of the 11th Air Assault Division, during its inception and testing. General Seneff has been an Army Aviator since 1956 and is rated in both fixed wing and rotary wing aircraft.

In a late December ceremony at the 16th Armor Group Hqs, Ft. Knox, Ky., Lt. Col. Charles M. Grandelli was presented with the wings of a Master Army Aviator. Col. Grandelli began his flying career as a Liaison Pilot in 1943. He has served in a variety of aviation assignments including Aviation Advisor, IV Corps ARVN, Vietnam, recently. He is now attending the Command and General Staff Course.

Major Raymond J. Kangas, the Executive Officer of the 174th Aviation Company, recently logged his 10,000th hour of flying time as a pilot. His first flight was at the age of 16 in a trimotor aircraft. Major Kangas flew L-4s and L-5s during WW II. He was recalled in 1950 as a flight instructor at Ft. Sill. He left for Korea in March of 1951 with the Army's first L-19 aircraft, in which he flew varied combat missions.

Captain Vincent J. Cedola, while serving as a "Dustoff" pilot with the 82nd Med.Det. in Vietnam, was presented Honorary Vietnamese Air Force Pilot Wings and a citation signed by Premier Nguyen Cao Ky for heroic acts performed in June of 1965. Capt. Cedola's UH-1B crew was responsible for locating and rescuing the crew of a downed VNAF C-47 flareship at night and under intense Viet Cong ground fire.



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The Pegasus-powered Hawker Siddeley P 1127.

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THINGS ARE ON THE MOVE!

By BRIGADIER GENERAL GEORGE P. SENEFF, JR.
Director of Army Aviation, OACSFOR

AS SOME of you may have heard, not only are things on the move but so am I. I can remember noting shortly after I took over this job that "*at the rate my aircraft and people are going to Vietnam they might as well move me and the Army Aviation Directorate out, too*" – I didn't realize I'd be taken seriously.

Happily for you, they've left the rest of the Directorate here to continue to look after your interests. *Colonel Del Bristol* will run the show for a few months until *Brigadier General Bob Williams* can move in to take up the cudgel.*

I scrawl this, my last letter to you from this job, with regret because I've enjoyed writing them. As I pack, and in haste, I would like to touch on a few things that are moving with us all.

First, aviation training: *the schools are on the move!*

The courses of instruction at both Wolters and Rucker have been changed to give earlier and better indoctrination in low level navigation, maximum load operations, tactical applications of Army aircraft, formation flying, and tactical autorotations (low level and minimum forward speed).

A young aviator will come to you qualified for instrument flight in a tactical environment – helicopter gunnery training is given all rotary wing students. Night

**Brig. General Seneff departed his assignment 14 January for a 30 January arrival in USARV; Brigadier General Williams is expected to report for duty in the Aviation Directorate on 11 April.*

flying has been doubled; particularly work with tactical lighting.

The UH-1 mechanic trainee now receives a week of tactical field training consisting of field and flight duties of the crew chief, maintenance of weapons systems, and door gunnery. In short, the training in the schools from one end to the other is pointed toward producing a man tailored for the conditions under which he is going to have to operate.

Devoted People

General Tolson, Colonel Putnam, and *Colonel Fleming* have been the leaders in making these changes but they have been helped tremendously by devoted people all up and down the line. Particularly good emphasis has been lent by the more than 500 veterans of RVN who are now members of the faculties at the schools.

It's heartening to note also that even with the expansion we have shown no signs yet of failing to get the numbers of applicants we will need to get the job done.

The Vice Chief of Staff, *General Creighton W. Abrams,* after a recent visit to Fort Rucker, enthused that "*this school is really trying to turn out a product that is equipped to do the job and to meet the requirements of the field.*"

Change in Atmosphere

I point to the schools as being typical because they do typify the whole program. In every direction I look I can conclude only that "*nothing succeeds like success.*" By and large throughout the Army today there is a tremendous change in atmosphere and attitudes concerning aviators and the Army Aviation Program. This is attributable to only one thing – the manner in which you people have proved yourselves and have proved the concept in the field (not that we don't still have much progress to make).

There are still many things that we have not undertaken because of pressures and the problems of the times but which

are in trail and which should be to the benefit of all of us before too much longer.

We are, for example, initiating a complete new look at the *Warrant Officer Program.* The program as it now exists was established about fifteen years ago and there is no doubt that time has caused it to lose some of the equities that were intended when it was set up, and that this has caused the program to become less attractive than it should be.

I recently received a very fine and thought provoking letter from *CWO Robert L. Hamilton* of Fort Rucker that typified in a very constructive fashion the gripes of some of our best Warrants. We will use this and others as a basis for overhaul.

We are starting another hard look at the enlisted program in the same way to try

"OLD NEWSBOYS"

Old Newsboys from the Army Aviation Materiel Command (AVCOM), and AMC Project Manager, and Project Manager Field Offices in St. Louis helped to make the Annual Old Newsboys Day the most successful one to date. It is sponsored by the Globe-Democrat each year to raise money for children's charities. The group shown above sold more than $800 worth of newspapers. All the money goes to charity, with the administrative costs paid by the paper. The Old Newsboys represent St. Louis civic, business, and governmental leaders. (U.S. Army Photo)

to make sure that our superb career enlisted men get the breaks that they deserve. Along either of these lines the constructive thoughts of all of you are welcome. If you have ideas, send them in – My successor has broad shoulders.

Around the Clock

Things are moving in the fields of material, too. Out on the ends of the line we all beef about parts, supplies, the adequacy of our equipment and so on, and there is always reason to beef; but by the same token AMC, the project managers, and everyone in the business are working around the clock trying to make your equipment better whether it is bearings or weapons and devising better means of getting it to you faster and more effectively. It's going to be awhile before you all see it; but it's coming.

I close in thanking my staff for their superb support during the past ten months, and in offering my best wishes for a happy tour (and my bottle of aspirin tablets) to *Bob Williams.* He laid the foundation for much of the motion that we now see, has taught us all a great deal in the past, and I know will look out for us well in the future.

See you in Vietnam – win in Vietnam!

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DEVELOPING THE

ARMED AND ARMORED CH-47A CHINOOK

BY

TRUXTON R. BALDWIN

HEADQUARTERS, ARMY MATERIEL COMMAND

On 30 June 1965 the Army Materiel Command (AMC) took a decisive step in initiating development of the first heavily armed and protectively armored helicopter. Making use of funds and assets within AMC jurisdiction, a letter contract was issued to The Boeing Company's Vertol Division providing for production of an evaluation quantity of armed CH-47A helicopters.

Four *Chinooks* previously on order as standard transports have now been modified to an armed and armored configuration. This article will discuss the new configuration and examine the sequence of events that will be followed in a development program.

The armed *Chinook* mission is to augment the current suppressive fire capability of the armed *Huey* (UH-1) and by virtue of its speed advantage to provide an escort to transport Chinooks and UH-1 helicopters. The value of armed helicopters, particularly the *Huey*, has been proven in combat operations and the armed *Chinook* will supplement these successes.

There are a number of reasons for employing the *Chinook* helicopter in this critical role. Any aircraft selected should have one or more outstanding qualifications.

The *Chinook's* heavy payload capability, par-

ticularly under hot day conditions, can carry large amounts of ordnance even when protected with armor against .50-cal. fire. This payload capability allows greater flexibility in the selection of armament, ammunion loads, and gunnery crews. Another useful tradeoff can be found in the off-loading for increased fuel with a resulting endurance.

Armament Flexibility

The armament configuration allows a wide variation in weaponry. A 360° suppressive fire capability is obtained through installing the M-5 40mm grenade launcher in the nose and employing five gunner stations; two on each side of the cargo compartment and one in the rear ramp. At these stations .50-cal. machine guns, interchangeable with 7.62 mm, have been installed.

The armed *Chinook* also has a long range standoff capability in that a 20mm, M-24A-1 cannon is mounted on two pylons, one on each side of the helicopter. These same pylons accommodate two other weapons: the 7.62mm minigun, or alternatively, a 2.75-inch, 19-round rocket pod. The pylon weapons are fixed and are fired forward by the pilot with the co-pilot serving as gunner for the grenade launcher.

A basic armament package has been derived which comes to an impressive 3,595 lb. figure. [One M-5 40mm system, 500 rounds, with 2 minuttes of fire, 650 lbs; two M-24 20mm cannon, 1,600 rounds, one minute of fire per gun, 1,325 lbs.; five .50-cal. machine guns with 4,000 rounds, one minute of fire per gun, 1,625 lbs OR five 7.62mm machine guns, with 20,770 rounds, seven minutes of fire per gun, 1,625 lbs.]

The operating gross weight of the *Chinook* with this basic armament package is approximately 31,500 lbs. Further ammunition load is available by operating closer to the *Chinook's* alternate gross weight of 33,000 lbs.

Another advantage accruing from the *Chinook's* large payload capability is that adequate weight allowance can be given to passive protection. Heretofore, scant protection could be given to defeating .30-cal. ground fire to protect the crew with no protection being afforded to the helicopter's critical dynamic components.

Crew Protection

Approximately 2,000 lbs. is allotted to protect the helicopter critical components, 500 lbs. to protecting the pilot and co-pilot, and 40 lbs. each for the five remaining crew members and gunners. The critical components requiring protection on the *Chinook* are mostly non-redundant parts of the flight control system. Vulnerability studies by the U.S. Army Ballistics Research Laboratory on the *Chinook* in both its

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Truxton R. Baldwin currently serves as Technical Director of the Chinook Project Office, Hqs, Army Materiel Command in Washington, D.C.

armored and unarmored states show a relative vulnerability picture vastly improved through adding .50-cal. protection.

The armed *Chinook* will have a speed advantage over present armed helicopters. A 120-knot cruise speed is calculated while carrying the described basic armament and armor packages. A definite speed differential exists for escorting heavily loaded *Hueys* or transport *Chinooks*. During the development program, a speed increase of 15 to 20 knots will be explored by raising the rotor RPM for the armed version.

Single Engine Capability

Still another desirable feature of the *Chinook* is its superior single engine capability in the event one engine is disabled. The power from one T-55-L-7 as installed will allow a ceiling at the basic operating weight of 4,000 feet. The *Chinook* has always excelled when considering hovering ceilings. The armed *Chinook* will hover out of ground effect at 3,000 feet and 95° F.

With full integral fuel, the *Chinook* has an endurance of 1.9 hours. After modification and provisioned with an auxiliary fuel system, the armed *Chinooks* will increase their endurance to three hours.

In defining the program and selecting a technical approach the term *development* cannot be overstressed. If the true capabilities of an armed and armored helicopter are to be obtained and its evaluation to be a success, the armor and the armament must be fully integrated into the helicopter using the *weapons systems* approach. The alternate *"hang on"* method is fraught with technical shortcomings and operational difficulties. More importantly, the basic safety aspects cannot be determined without a thorough engineering and test substantiation effort.

The first step in this development program occurred on 11 June 1965 when the Chief Engineer, AMC, established a number of basic ground rules in keeping with the requirements.

The AMC complex was to start immediately to develop an integrated helicopter weapon system as soon as possible. The system need not be optimum, but must meet the basic tenets of the requirement—to deliver maximum sustained suppressive fire against soft targets and incorporate a standoff, point fire capability. Existing and available weapons were to be used to facilitate the demanding time frame. Protection against .50-cal. ground fire in lieu of .30-cal. was established. A degree of protection was specified to at least the "K" Kill level (immediate loss of control).

The second step in the development program was to define the configuration in regard to both armor and armament. On 16 June 1965, two weeks prior to contract, a configuration conference was held at AMC headquarters attended by key Army personnel from the responsible laboratories, arsenals, and other agencies. The armament arrangement previously discussed was derived.

Type of Armor

A basic decision regarding the armor was the choice of dual properties' steel, which was not used extensively prior to this program due to questions on producibility. This material features a metallurgical bond between two alloys; one having the necessary hardness property to break up the projectile and the other having the proper hardness to contain the particles.

The merit rating or degree of protection for

a given weight of this material is an improvement over ceramics and can better sustain multiple hits. The pilot and co-pilot armor for the seats is of the same material and includes torso protection. The .30-cal. self-sealing tanks in the transport *Chinook* have been replaced.

Following letter contract, the development program has proceeded at an accelerated, though orderly pace. Chronologically, armor testing at Aberdeen Proving Ground and wind tunnel tests were conducted in July culminating in a full scale mockup inspection on 23 July 1965. Initial maintenance support and test planning conferences were also held during this month.

August saw some ground firing tests of the weapons completed, and the initiation of flight testing on an early 1959 test helicopter. This helicopter was ballasted to the weight of the armed *Chinook* configuration for the purpose of initial noise, vibration, and sighting investigations.

September and October have been spent in the fabrication of four helicopters, one of which will remain in test status while the other three will be used for end item evaluation. Most of the weapons and ammunition which are government furnished by the U.S. Army Weapons and Missile Commands were delivered during this period also.

The roll out and first flight demonstration of the *Chinook* was held on 10 November 1965. The in-flight armament firing tests at Aberdeen Proving Ground followed immediately thereafter and concluded in a second demonstration on 2 December. As part of the continuing development, a stress survey of the helicopter is being conducted to completely define the flight envelope, to include the increased rpm mentioned previously. The program on this aircraft will conclude with tests of the performance and flight qualities by the Army Test Activity at Edwards AFB and a service test by the Aviation Test Board at Ft. Rucker.

January Delivery

The second armed *Chinook* will have the latest avionics equipment installed by the New Cumberland Army Depot prior to radio frequency interference (RFI) tests to preclude inadvertent weapons firing. This aircraft and the remaining two are to be delivered to CONARC in January, 1966, for crew transition and unit training. Maintenance training on the weapons and aircraft systems peculiar to the armed *Chinook* will precede the assignment of the aircraft to the user.

The three armed *Chinooks* are to be assigned to a detachment or platoon which will be a satellite to a larger organization. The spares, repair parts, and ground support equipment peculiar to these helicopters are now being stockpiled at Boeing Vertol and will be delivered with the helicopters to the gaining unit.

The armed *Chinook* program involves a multiplicity of agencies and organizations. Overall direction of the program is being provided by the *Chinook* Project Manager, AMC[1]. His office is responsible for providing the using unit with the armed and armored version of the *Chinooks*, the responsibility to include the delivery of a safe, operational aircraft and the necessary support: peculiar spares, ground support equipment, and special services entailed with the unique armor and armament features.

The Aircraft Weaponization Project Manager, AMC[2], is providing the GFAE weapons, ammunition/weapons checkout, and technical assistance in these areas to the contractor. The Director of Research and Development, AMC[3], has primary cognizance of the armor configuration.

The program has a strong inter-service flavor in that the Air Force Aeronautical Systems Division is providing the flight safety release for the helicopter. The Army is assuring the safety aspects of the weapons and avionics.

The armed *Chinook* helicopter program, although small in the number of aircraft involved, has most of the facets and interrelationships of a major end item program. The program is being conducted with a relatively small amount of funds and personnel, many of the latter having other primary duties.

The biggest problem which has defeated other armed and armored helicopter aspirations has been surmounted—getting started! An armed and armored *Chinook* is in being.

[1]*Colonel Edward B. Bissell;* [2]*Colonel Nelson L. Lindstrand;* [3]*Brigadier General W. C. Gribble, Jr.*

HOW THE ARMY DECIDES WHAT AND HOW MANY AIRCRAFT IT WILL HAVE

By
FRED O. WOLCOTT
Vice President - Operations
Research Analysis Corp.

THE subject of how the Army decides what and how many aircraft it needs can be separated into two parts: the "What" is the process leading to Qualitative Military Development Objectives (QMDO's) and Qualitative Military Requirements (QMR's) for an end item of equipment; the "How Many" is the numbers game, or the quantitative military requirement.

The two are interdependent, but tend to be approached with quite different degrees of precision. Elements of the choice process in both cases include technology, manufacturing, support, operations, and cost.

First Purchase

The first advertisement and specification for a heavier-than-air flying machine was issued by the Signal Office on December 23, 1907, and specified *an aircraft supported entirely by dynamic reaction, having no gas bag.*

It was to be packed for construction in wagons and capable of being assembled or taken apart in one hour. Payload was to be 350 pounds, range 125 miles, and speed greater than 40 mph. The Wright brothers' bid of $25,000 was accepted, and Army Aircraft #1 was delivered in August of 1909. The Army strugged along with one aircraft and one pilot until 1911 when Congress appropriated $125,000 for Army aviation.

Three significant lessons can be learned from this early example: First: historically, specifications describe the best capability attainable. Secondly: an Army aircraft is expected to live with the troops. Thirdly: the number that can be procured is limited by external influences. During the period 1909-1942, Army aviation progressed through the growth of the Army Air Corps, the establishment of the strategic bombing principle, and the advent of aircraft

BEECH "IMAGINUITY" IN MANNED AIRCRAFT

New "off-the-shelf" flying classroom pilots–the speedy, roomy Beechcraft for U. S. Army T-42A:

Accepted and approved by the U. S. Army as its new twin-engine instrument and transition trainer, the Beechcraft T-42A is now under contract for "off-the-shelf" delivery.

When pilots train and maintain proficiency in instrument flying in the Beechcraft T-42A instead of larger aircraft, savings in operating and maintenance costs can add up to hundreds of thousands of dollars.

Check these advantages the Beechcraft T-42A offers to training and proficiency programs:

High speed. Gets students to training areas faster. Powered by two 260 hp Continental fuel injection engines, the Beechcraft T-42A has top speed of 205 knots and cruising speed of 195 knots.

Long nonstop range of over 1,000 nautical miles with full load–even under instrument flying conditions–makes possible longer, more productive training missions.

Large cabin permits multiple student sessions. Seats up to 6 in comfort and roominess. Exceptional visibility.

Extremely stable at all speeds. Outstanding single-engine performance.

The Beechcraft T-42A has the best combination of speed, range, comfort, carrying capacity and structural strength.

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There's plenty of room for equipment *in the T-42A, including dual omni; UHF; ADF; dual RMI; glideslope and marker beacon; transponder and standby VHF transmitter. Complete dual controls, including yoke, brakes and nose steering are standard equipment. Other standard items include all-weather equipment–including deicing and anti-icing–plus oxygen and unfeathering systems.*

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Beech Aerospace Division

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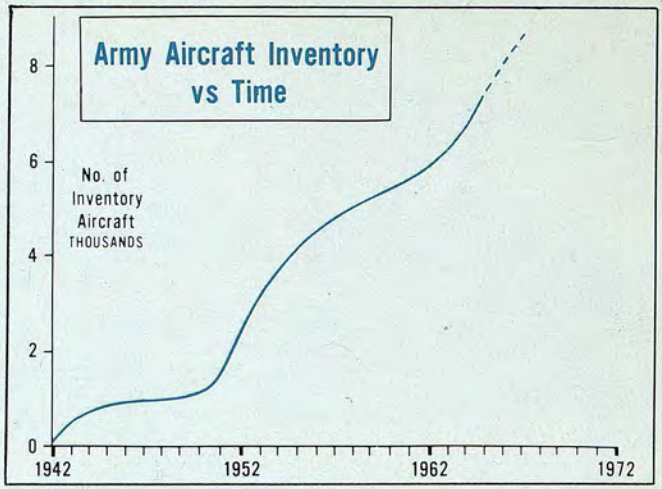
CHART 1



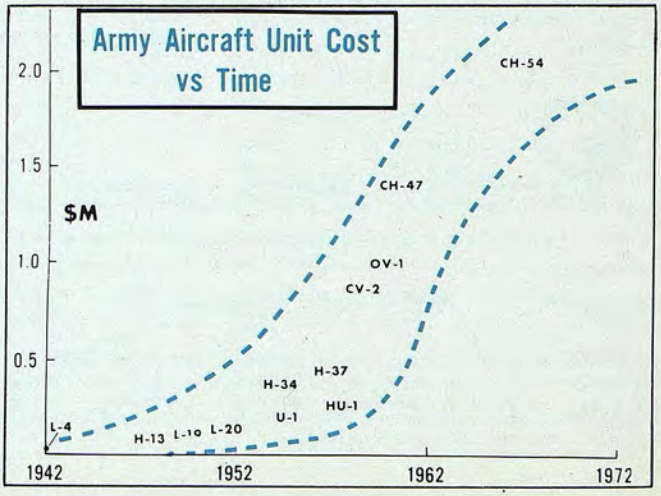
that flew higher and faster. It is no news to this group to state that Army aviation, as we recognize it today, re-started in 1942 with the graduation of the first class of Army (Liaison) Pilots and the establishment of units of light aircraft for artillery spotting and the liaison missions in WW II.

The rapid growth of the Army aircraft inventory from 1942 to the present, with projections beyond that time, are shown in Chart #1. This growth in number has been accompanied by an increase in the capability and cost of Army aircraft, Chart #2 showing the significant rise in the unit cost of Army aircraft in the period from the Korean War to the present.

Qualitative requirements of the past can be summed up by the phrase, *"Faster, higher, more payload."* Quantitative requirements were approached on the basis of, *"Replacement of the current inventory on a one-for-one basis, plus so-and-so many more for the new units which we must have to exploit the increased qualitative capability."*

First, let's consider evolution of the process of deciding what aircraft the Army will have. Prior to 1960, aircraft were selected in most cases from what the aircraft industry had available on the shelf. Since then the desire for significantly increased and special capabilities for

CHART 2



Army aircraft has led to major modification and new development programs with an associated increase in cost.

Concurrently, a new management philosophy was adopted by the Department of Defense which required thorough analysis of the prospective contributions of a proposed system to the nation's military posture and which demands that performance specifications represent an optimum effectiveness relationship to the resources involved in engineering, producing, deploying, and maintaining a proposed new system.

A new development cannot proceed without evidence that *concept formulation* has accomplished the following prerequisites:

1. Primarily engineering rather than experimental effort is required, and the technology needed is sufficiently in hand.
2. The mission and performance envelopes are defined.
3. The best technical approaches have been selected.
4. A thorough trade-off analysis has been made.
5. The cost effectiveness of the proposed item has been determined to be favorable in relationship to the cost effectiveness of competing items on a DOD-wide basis.
6. Cost and schedule estimates are credible and acceptable.

The method by which aircraft characteristics are actually established is subject to a great deal of difference of opinion. If you ask the Combat Development agencies, they will say that the operators establish user requirements based on field needs.

If you ask the Materiel agencies, the answer will be that they know what is technically feasible and, therefore, really establish the requirements which are then adopted by the Combat Development agency.

If you ask industry representatives, some will claim, based on past experience, that they determine what the user really wants and then propose state-of-the-art systems, the description of which become the requirements. The true situation is, of course, somewhere between the extremes.

Group Evaluation

Who should determine the military characteristics of an aircraft system? Should it be the Combat Developments agency with its superior knowledge of what advances would be particularly valuable from a military point of view?

Should it be the Materiel Development agency with its superior knowledge of what technology can supply? Or, should it be the Comptroller with his superior knowledge of what the Army can afford.

Clearly, all considerations are relevant and must be brought into the decision-making process. The desired solution is to work out procedures for achieving a good balance among conflicting objectives, while leaving the Materiel agency and industry sufficient latitude for technical ingenuity in meeting the requirements.

The Army combat development cycle is intended to accomplish this objective.

As shown on Chart #3 (on this page), the Combat Developments Command establishes development objectives which become Qualitative Military Requirements after coordination with the Army Materiel Command as to technical feasibility. The Combat Development cycle is effective for routine developments, but has limitations for a complex aircraft system development involving interfaces, trade-offs, and over-lapping responsibilities (Chart #4). Such

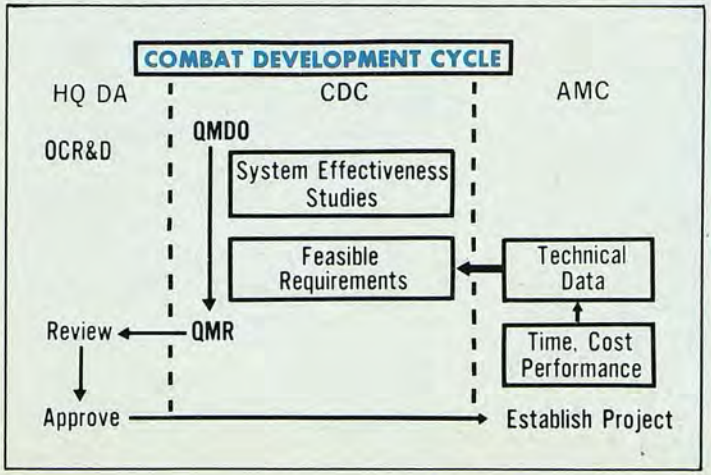


CHART 3

major development programs must run the entire gamut of DOD requirements through Program Change Proposal and Contract Definition Phase.

Ad hoc groups can and have been applied as a practicable in-house method for a solution to problems involving many interfaces and compromises, both technical and operational. The Army Aircraft Requirements Review Board, better known as the Rogers Board, functioned quite effectively in 1960 with the cooperation of industry to develop its best estimates of Army aircraft requirements during the 1960-70 time period. Another example is the aircraft requirements work done by the Howze Board

Industry can and should be asked to contribute solutions, as in the case of the Rogers Board, and should be given study contracts for technical aspects of a new aircraft system. Industry is, however, barred by conflict-of-interest statutes from later hardware development through direct participation in the systems concepts and operational requirements phases.

The not-for-profit *systems analysis groups* with their experience and capability for defense problem-solving, together with a detachment that is possible because of their relatively independent status, were created to perform unique services not amenable to in-house accomplishment. These groups can help in solving interface conflicts, coordinating parallel efforts, and conducting systems analyses, trade-offs, and cost/effectiveness comparisons needed in concept formulation.

CHART 4

For example, in the case of the STAAS development, Research Analysis Corporation (RAC) has conducted a requirements analysis, systems evaluation, and military characteristics trade-off study between QMDO and QMR. In cases such as this where the Army is faced with a difficult task in choosing a particular approach to pursue to the development stage, independent judgment and a variety of disciplines are being used as an aid to decision.

Systems Analyses

Systems analyses of aircraft systems include four basic steps as shown by Chart #5. First, a functional requirements analysis is conducted in order to determine the objectives to be accomplished by alternative systems in the operational environment. Alternatives' analysis produces delineation of feasible and significant candidates for accomplishment of these objectives. Cost analysis provides estimates of the incremental cost of adopting each alternative, including all resource implications.

The comparison of alternatives is then made through some simulation of the real or expected situation involving a set of relationships among the objectives, alternatives, environment and resources. Preferred alternatives are determined in accordance with the selection criteria used.

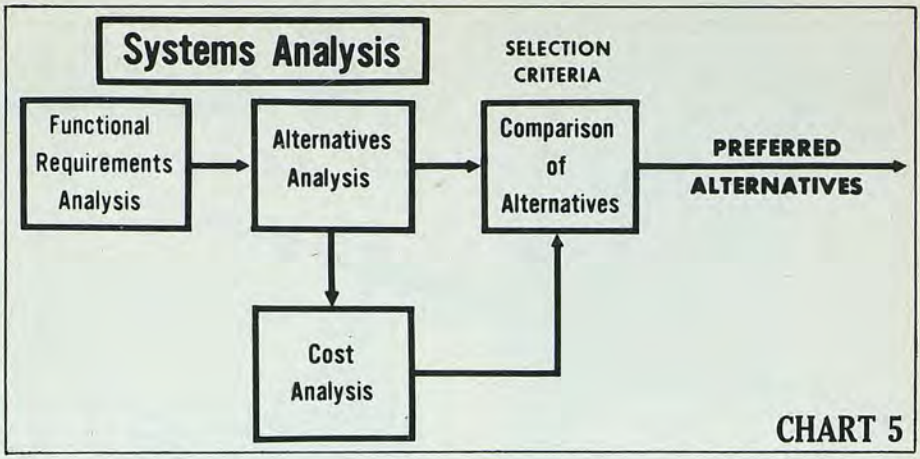
System analysis methods are beginning to be used for addressing the second part of my subject, namely how the Army decides how many aircraft of various types it will have. Numbers are determined to a large measure by the major force structure decisions which are made yearly as a part of the JCS and OSD planning process. Force development planning within the Army matches numbers of aircraft to the approved organizational structure of the Army.

The principal determinants of quantity are force size, force composition, total cost, total cost by type, and unit cost, including all resources. These factors are interdependent and should be traded with one another.

Considerations

Some obvious, but sometimes overlooked, considerations should be reviewed in connection with quantitative requirements:

- Over-all contraints on *"force cost"* influence numbers.
- Additional numbers of the same type tend to cost less to buy and operate and to be more reliable than new types.
- Nothing is cheaper than the "sunk cost" of what you have in inventory.
- Maintenance man-hours require people—they are scarce and costly.
- The ratio of support personnel to combat personnel is constrained; somebody has to fight on the ground, so the Army can have just so many aircraft mechanics.



• The Army does not man equipment as do the other services, but equips men. The airplane must, therefore, be compared with other weapons and equipment, both in type and quantity.

• It makes no sense to add up the TOE's for current aircraft and call that a requirement for a future weapon system, a mistake sometimes made by planners.

• Savings will continue to be sought by replacing many models with a fewer number, and by longer production runs of joint developments of a few basic engine/airframe combinations.

External factors strongly influence the numbers of aircraft that are in the Army aircraft inventory. Referring to Chart #1, it's been noted that the first sharp rise in numbers was in connection with the build-up during the Korean War.

The flat part of the curve prior to 1950 reflects the cutback to austere force levels experienced under the Louis Johnson Administration. The increase in slope after 1962 reflects the policy of the incoming Kennedy Administration in building up our conventional forces. Inventory objectives have recently been affected considerably by the events in Vietnam.

A systems analysis has recently been employed in determining the numbers of aircraft that the Army will have. The ARCSA Study Group, consisting of representatives of several Army staff agencies with outside consultant support, recently completed the comprehensive analysis leading to recommendations for inventory objectives between now and 1970.

Summary

In conclusion, both the type of aircraft being procured and the numbers needed have resulted in a multi-billion dollar program. This requires that lots of homework be accomplished if costly mistakes are to be avoided. Where once the statement of a user need and purchase of an off-the-shelf aircraft was sufficient, it is now necessary to conduct extensive trade-offs and to answer the following questions:

Do we need it? (Requirements)

Can we afford it? (Cost)

Can we build and maintain it? (Technical Feasibility)

Can it be done better, at a reasonable cost, than other alternatives, including current systems? (Cost-Effectiveness)

The use of systems analysis methods, in-house, in-ad hoc team approaches, and thorough contractual support is helping to eliminate some of the variables and to quantify others. The Army aircraft requirements process has grown in pace with the improved performance of individual aircraft types and increased inventory totals.

ABOUT THE AUTHOR

Mr. Fred W. Wolcott received his B.S. degree in Aeronautical Engineering from the University of Michigan in 1939. He joined Douglas Aircraft Company in 1939 and held a variety of positions in engineering and test until 1959.

He was appointed Special Assistant to the Director, Defense Research and Engineering, in 1959 and appointed Assistant Director, Defense Research and Engineering for Tactical Weapons, Office of the Secretary of Defense in 1960. Mr. Wolcott joined the staff of Research Analysis Corporation in 1963 as Director of Systems Engineering, and now serves as consultant to the Director, Defense Research and Engineering, OSD.

AIR CAV...

Revolution in Tactics

...and the Hueys were there

For the first time in history, an infantry division — the U. S. 1st Cavalry (Air Mobile) — fought a sustained, weeks long battle using helicopters as its basic means of battlefield transport.

Military tacticians who followed the combat reports see this test of the airmobile concept as one of the most significant actions since World War II . . a revolution in the conduct of land warfare comparable to the dispatch of German tank divisions into Poland in 1939.

Night movement of troops into night battle and close support from Huey-mounted airborne artillery is credited with turning the tide of battle against the Viet Cong. Helicopters were able to deliver decisive firepower and manpower in the most critical areas of the battlefield at the most critical time of the battle.

Bell helicopters have been in the Army inventory since Korea and have matched their improved capabilities with the advancing requirements of the nation's military effort.

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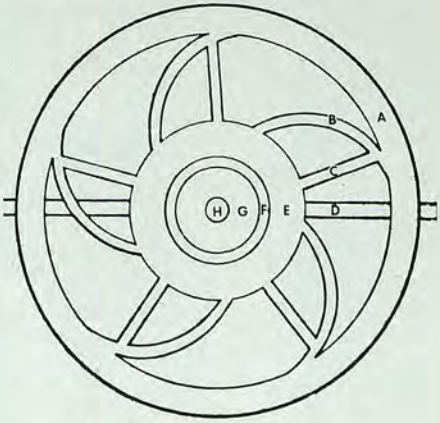
LEFT: Colonel E.P. Fleming, Jr., Fort Wolters commander and Primary Helicopter School commandant, tests the latest device that can be used in training helicopter student pilots, as P.C. Jacobs (right), inventor of the training aid and vice president of the Jaycopter Corp. Ltd. of Canada, looks on. Called the Jaycopter Demonstrator-Trainer (JDT), it is a miniature captive helicopter connected to the controls by hydraulic lines. Cyclic control movements are resolved into electronic impulses which are fed into the operator's instrument panel. Present plans call for experimental use of the JDT with a limited number of helicopter students to determine its training effectiveness. BELOW: Lt Gen Robert W. Colglazier, Fourth Army CG, inspects members of the Fort Wolters honor guard during ceremonies January 11 at the Primary Helicopter School. The occasion for the visit was Gen. Colglazier's farewell prior to his coming retirement.

ABOVE: Col Joseph W. Marks, CO, 171st Infantry Brigade, is shown receiving symbolic wings from Lt Col Jack Oliver (2nd from right), Avn Off, Yukon Command, Ft Wainwright, Alaska. The wings represented the assignment of the first aircraft to the 171st Aviation Company, activated in Sept. 65. Also shown are Lt Col G.A. Roberts (left), Deputy CO, 171st Infantry Brigade, Maj Lauren S. Davis (right), CO of the 171st Aviation Company, and unit members in the background. Col Marks commented that Army aviation has proven itself to be an essential element to any effective combined arms team and particularly under conditions of climate and terrain found in Alaska and other Arctic regions. RIGHT: Lt Floyd L. Larson is shown operating the controls of the new maneuverable cockpit of the Tactical Avionics Systems Simulator (TASS). The computer controlled TASS is operated at the Avionics Laboratory of ECOM, Fort Monmouth, N.J.

CIRCULAR AIRPORT



(A) The runway, (B) high speed turn-offs, (C) straight-out taxi ways, (D) auto access roadway, (E) aircraft parking and loading ramp, (F) terminal building, (G) open auto parking area, (H) control tower.

THE ART OF FLYING DOWN INTO A HOLE

The idea first occurred to Navy Pilot James R. Conrey in 1960, while he was jockeying his plane through a tricky cross-wind landing at Lincoln, Neb. The field—like many military and small private airports—had only one runway, leaving him little choice in the direction of his approach and landing. As he struggled with the controls, Conrey longed for a landing strip that would always allow him to approach into the wind—no matter what its direction. Why not a circular runway? he asked himself.

With great singlemindedness, he polished his idea, found an ideal test site—the banked, circular General Motors test track at Mesa, Ariz.—and persuaded the Navy to get G.M.'s permission for landing and takeoff tests.

In 1963, before his concept was tried, Conrey was killed in an aircraft-carrier landing accident. But now he has won post-mortem recognition. In a report on tests made at Mesa in 1964, the Navy has predicted "a definite and vital place in future aviation" for the circular runway.

Directional Stability

Because it would slope upward in a graduated bank from its inner edge to its raised outer edge —much like the inside of a shallow bowl—the circular runway would provide great directional stability to a plane landing at high speed. It would prevent the plane from veering out of control to the right or left.

Pulled outward by centrifugal force and downward by gravity, a fast-rolling plane would be confined to a circular path high against the outer, steeply sloping part of the runway. As its speed decreased, centrifugal force would lessen, and gravity would pull it in a slowly descending spiral toward the lower, more horizontal section.

Many Advantages

There would be other considerable advantages. Planes would never run out of landing room, as they often do at conventional airports; they could simply continue to circle until they slowed sufficiently to use a banked turn-off ramp that would lead them to a centrally located terminal, conveniently spotted for passengers or freight.

A circular runway would also be able to handle more traffic than straight runways. With a diameter of 10,500 ft.—about the length of most jet runways—it would have a circumference of more than 32,000 ft., allowing the simultaneous takeoff or landing of several planes spaced at safe distances around the circle, and directed by an elaborate ground-control system.

Little additional pilot training would be required. Navy pilots who landed at G.M.'s Mesa track felt at first that they were "flying down into a hole"; they were uneasy about touching down at an angle on the sloping surface on the runway. But they became oriented after only one or two landings, and reported that the runway tended to correct some of their errors in landing speed, degree of bank and point of touchdown.

The Federal Aviation Agency, which has been closely following the Navy experiments, is less enthusiastic about the new concept. Its advantages, the FAA feels, would be far outweighed by the extra cost of building the banked circular runways, burrowing under them to provide access roads to the central terminal area, and installing complex ground-control systems.

Even so, the Navy report has stirred the interest of aviation officials. It may well trigger more imaginative research into an area of aeronautics that has remained relatively unchanged since the Wright brothers used the dunes at Kitty Hawk as one of the world's first airfields.

LEFT: General Creighton W. Abrams (left), vice chief of staff, U.S. Army, accepts a plaque designating him an honorary Army Aviator during his recent visit to Fort Rucker, Alabama. Making the presentation is Major General John J. Tolson, commanding general of the Army Aviation Center and commandant of the Army Aviation School, Fort Rucker. BELOW:Captain Gonzalez Bueno (center), of Mexico, a student at the Primary Helicopter School, Fort Wolters, Texas, became an honorary citizen of the state of Texas when Marshall Hamilton (left), Chairman of the Mineral Wells Chamber of Commerce Military Affairs Committee, presented him with an honorary Texas Citizen Card signed by Governor John Connally. Looking on is Colonel E.P. Fleming, Jr., the Fort Wolters commander and commandant of the U.S. Army Primary Helicopter School, Ft. Wolters, Texas.

ABOVE: Members of the 19th Transportation Company have been awarded the Sikorsky Aircraft Corporation's "Winged S" award for "skill and courage while participating in a life saving mission with a Sikorsky helicopter." The awards, presented by Col. Henry E. Bielefeld, CO, Humphreys District Command, Korea, were the result of a rescue mission July 16-17, 1965, when CH-37Bs of the 19th Trans Co carried more than 2,000 Koreans to safety from flooded areas. Pictured after the ceremony, left to right, are: Majors Robert G. Cox and Arthur C. Bowdoin; CWOs Daniel R. Hurst and William H. Ruffin; Col. Bielefeld; Capt. Gary Monroe; CWOs Darrell J. Mose, Jack G. Mendel, and Billy G. Hitt. RIGHT: 1st Lt James C. McKee (left), a recent graduate of the Fixed Wing Aviator Course, has his wings pinned on by his father, Col. Henry McKee, 4th USA Avn Officer.

THE MONTH'S TAKEOFFS

GENERALS

KNOWLES, Richard, BGen

COLONELS

BEATTY, George S., Jr.

BECKER, William A.

BONASSO, Russell P.

CAMPBELL, Hubert S., Jr.

COGSWELL, David G.
13

GUST, Daniel G.

JENKINS, John F.

PEYER, Gustave A.

SANDRIDGE, James W., Jr

SCLOES, Peter S.

TIDMARSH, Harold A.

LT. COLONELS

ARMFIELD, William F.

BARFOOT, Van T.

BERRY, John T.

CLARKE, Arthur M.

CLEVELAND, John G.

DRUENER, Hanz K.

LT. COLONELS

ERICKSON, Floyd C.

HARRISON, Ben L.

HURST, Robert H.

KILLPACK, Paul E.

KNOWLES, William R.

LITLE, Robert F., Jr.

LOWE, James V.

MATTSON, Bernard, II

NEWPORT, Elswick

PAULSON, Norman W.

RICE, Foy

RUSSELL, Walter B., Jr.

SIBERT, William C.

SMITH, James C.

SOLT, Lowell K.

SUTCLIFFE, Maurice W.

THAYER, George E., Jr.

TUMLINSON, Jack M.

URRUTIA, Carlos E.

VANDYKEN, Harold B.

LT. COLONELS

VOHS, Ralph H.

WILLIAMS, Ernest M.

WILSON, Clifford C.

MAJORS

AHERN, John J.

AINSLIE, Robert E.

ALLGOOD, Charles N.

ALTER, Allen G.

ANDERSON, John H.
3

ATCHISON, Eulen D.

ATKINSON, Robert V.

AVEY, James F.

BALDWIN, Noland B.

BALLARD, Lowell L., Jr.
Annandale, Virginia

BALTZELL, Lowell F.

BARBOUR, Frank P.

BEASLEY, Lewis E.

BELL, John E.

BENJAMIN, William J.

BESSLER, Felix J.

MAJORS

BETTINGER, Francis D.

BINDRUP, Lavere W.

BLOOMQUIST, Paul A.

BOORAS, Thomas J.

BOUNDS, Merle E.

BOYDSTON, Arland D.

BRIDGES, James T.

BRIONES, Ronald S.

BROMAN, Ralph W.

BROPHY, Edward R.

BROWN, Edward C.

BROWN, Lewellyn A.

BROWN, Raymond V.

BUFFINGTON, Dale W.

BUNYARD, Jerry M.

BURRESS, Eugene W.

BUSH, Franklin D.

BYERS, Ben A.

CALLINAN, William F.

MAJORS

CAMPBELL, Bruce B.
CARLSON, Billy H.
CARSON, Ray M.
CHOATE, Harlan E.
CLARK, Norman S.
CLARK, Paul E.
CLAUNCH, James E.
COBB, Bernard R.
COMER, John F.
COOPER, James F.
COOPER, Joseph B.
COOPER, Robert G.
COVINGTON, Guy M.
CREAMER, Edmund J., Jr.
CROSS, Raymond E.
CROUCH, William E., Jr.
DANIELSON, Virgil L.
DARRAH, Robert F.
DAVIS, Lauren S.
DAVIS, Willie S.
DEAN, Edward R.
DEAN, Wesley A.
DEGENEFFE, Delano E.

MAJORS

DENNIS, Harold
DRUMM, Donald R.
DRUMMOND, Charles H.
DURIE, Robert E.
EBAUGH, Glenn M.
ECKERT, Edward N.
ECRETTE, Joe D.
EGGERS, John F.
ERHARDT, Chris
FARRIER, Steve, Jr.
FAULK, Emmett A.
FLEMING, Charlie P.
FLINT, Robert W.
FUST, John W., Jr.
GARRETT, Curtis
GREYHOSKY, August
GWINNER, Maurice D.
HALL, Billy C.
HANNON, James P.
HARDIN, Cletus A.
HARRIS, Charles E.
HAWTHORNE, James D.
HAXTON, Owen V.
HEISEL, Bill R.

MAJORS

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HOUSE, Gordon H.
HOUSER, John W.
HOVER, Charles E.
HOWLETT, Byron P., Jr.
HUFF, Cecil R.
HUMES, Richard A.
HUNTLEY, David L.
ILLER, Alfred J., Jr.
ISAAC, James E.
JARRETT, Richard S.
JOHNSON, James A.
JONES, Clynne T.
JONES, Robert A.
JONES, Robert L.
JUNOT, Arthur J.
KAKUK, Frank J.
KANGAS, Raymond J.
KASER, William T.
KINCAID, Jack D.
KINNEY, Arthur K., Jr.
KIRKLIGHTER, Gerald
KLEIN, Frank S.
KOCH, Owen A.

MAJORS

LAUTZENHEISER, R.D.
LAWRENCE, William A.
LAYNE, Leslie A.
LEACH, Ercie J.
LEDWIDGE, Augustine T.
LEGENER, Richard G.
LEWIS, Paul G.
LOHMANN, Harlan W.
MANIERI, Americo A.
MATHES, William R.
McANDREW, Thomas J., Jr.
McCLINTOCK, Alfred B.
McDONALD, Malcolm G.
McILWAIN, George W.
McKENNEY, Hubert F., Jr.
McKENNEY, William R.
McLEOD, John S.
McMURRAY, Thomas I.
McRAE, Donald
McRILL, Billy I.
MELLISH, James R.
MENDENHALL, Thomas D
MERRITT, Ronald H.
MIELKE, Virgil E.

MAJORS

MILLER, James E.

MONTS, William B.

MOORE, Francis D.

MOORE, Raymond E.

MORRIS, Charles A.

MORRIS, Thomas L., Jr.

NEEDLES, Paul E.

OLIVER, John F., Jr.

PALADINO, Henry A.

PASSANO, John D.

PEACH, Charles B.

PEAVY, Jack D.

PETERSON, James M.

PHILLIPS, Donald W.

PRATT, Theodore W.

PROVENCHER, Conrad J.

RAWLINGS, Harry E.

REEDER, James D.

RIVIERE, George L.

RIZOR, George A., Jr.

ROSE, Gerald S.

ROSE, Harold L.

ROUSSE, William C.

SANDERS, Curtis M., Jr.

MAJORS

SANDERS, Drexel E.

SCHARF, Stanley L.

SCHOBER, Henry W.

SEARS, Thomas E.

SEATON, Peter P.

SHEIDER, Augustus L., Jr

SIMMONS, Jerry A.

SISK, John R.

SMITH, Clair B.

SMITH, Donald A.

SMITH, Eugene I.

SMITH, Joe L.

SMITH, William A., Jr.

SPENCER, Lloyd E.

STEIN, Henry J., Jr.

STEWART, Donald B.

STEWART, John P.

STONE, Leon H., Jr.

STUART, Robert M.

TALBERT, Kenneth B.

TEESE, James L.

THOMAS, Michael R.

THOMPSON, Kenneth R.

VANCE, James R.

MAJORS

WAINER, Douglas F.

WALKER, Ronald T.

WARD, Charles E., Jr.

WARNER, Ramon F.

WATKINS, Charles W.

WATSON, Norman T.

WAUGH, Lionel C.

WEAVER, Eugene E. 1st CD

WHEELER, Douglas E.

WHITTEN, Millard

WIEGMAN, Donald J.

WILLIAMS, Billie G.

WILLIAMS, Donald L.

WILLIS, John A.

WINTERS, William F.

YOUNG, George J.

ZUGSCHWERT, John F.

CAPTAINS

ADAMCIK, Merrill T.

ADAMS, Frank C.

ADLER, James M.

CAPTAINS

AICKEN, Larry B.

ALLEN, Teddy G.

ANCELIN, Donald R.

ANDREE, Robert G.

ANGLIN, Richard C.

BADGER, Bill D.

BARRY, John W.

BARTHOLMEY, Duane A.

BARTOLO, Anthony M.

BASOM, Darrel W.

BASS, Louis R.

BASTA, James M.

BEAM, James D.

BECKEL, Charles E.

BELCHER, Fred L.

BENSON, Theodore D.

BERGDAHL, Harold E.

BERNER, Ronald E.

BERRY, Thomas P.

BIRELEY, Judson L.

BISBEY, Jay B.

BEAR WITH US!

The 10-page PCS Section is a result of the extensive number of address changes associated with the movement of entire units, and the companion lack of editorial space for PCS purposes in the two previous "Annual Meeting Issues." We expect to return to the normal 7-page section in March, 1966.

CAPTAINS

BISPING, Jack F.

BLEVINS, Virgil E.

BONNARENS, Frank O.

BOONE, James M.

BOOTH, Benny L.

BOSKING, William H.

BRADY, Patrick H.

BRANDT, Robert J.

BRANTLEY, Danon L.

BRISTER, Delano R.

BROADHURST, Donald G.

BROWN, George A.

BROWN, George P.

BROWN, Isham H.

BRUGGER, Karl A.

BRUNELLE, Pierre V.

BUDIG, Sherwood R.

BUFORD, William C.

BURBANK, Robert A.

BURROW, George D.

BUSCH, John M.

BUSDIECKER, Carl

BUSH, Emory W.

CAPTAINS

CAMPBELL, Billy J.

CARTER, Harold M.

CEDOLA, Vincent J.

CHAPMAN, Thomas R.

CLAPP, Randolph B.

CLARK, Davis

CLARK, Gary L.

CLARK, Richard M.

CLELAN, Joseph R.

CLEMENS, Paul J.

CLINE, Richard T.

COLEMAN, Lynn F.

CONARTON, Michael D.

COOK, Robert W.

COOKE, Charles B.

COTTER, Paul L.

CUBINE, Gerald W.

DANHOUSER, David C.

DANIEL, James M.

DANIELSON, James D.

DAVIS, Conrad W.

DAVIS, Graham C.

DAY, George E.

DeBOER, Duane D.

CAPTAINS

DEMM, Paul W.

DODDS, Stanley C.

DOIRON, Nicholas H.

DONALDSON, Orlow B.

DOYLE, John P.

DREW, Joseph A.

DRYDEN, David D.

DUGAN, Daniel C.

DUNAWAY, Fred C.

ECKERT, William N.

EGGLESTON, Carl B.

ELDRETH, Lillard

EPPARD, Jack L.

EVANS, Wallace M.

FAMBROUGH, John A., II

FARMER, Garry H.

FEAR, Robert E.

FEARING, Harold E.

FERGUSON, William H., Jr.

FERNANDEZ, Walter E.

FIEBIG, Ernest L.

FIELY, Linus H.

FINK, Harold H.

FLANDERS, John P.

CAPTAINS

FLEMING, Blaine T.

FOLTA, Russell J.

FOOTE, Brian G.

FORD, William W.

FOURNIER, David H.

FUNK, David L.

GARRISON, Darrold D.

GASPARD, Glaudis P., Jr.

GAUZE, James E.

GENTRY, Roy C.

GESS, William D., Jr.

GHERE, John R.

GOLDSTEIN, Sanford B.

GOOD, James G.

GORDY, John W., Jr.

GOTTLIEB, William J.

GREENWOOD, Everett O.

HALEY, Robert H.

HARDY, Raymon L.

HARPMAN, David A.

HARRIS, Edwin H., Jr.

HASWELL, Edward A.

HAVILAND, Douglas E.

HAYNE, Paul, III

AWARDS AND Decorations


DISTINGUISHED SERVICE CROSS

DISTINGUISHED SERVICE CROSS

Stewart, Harvey E., Major

SILVER STAR

Childers, Jerry W., Lt
Myers, Marvin O., Capt
Sanford, Jack W., Maj*

LEGION OF MERIT

Anderson, Warren S., LCol
Cabell, Derosey C., LCol
Huntsman, Howard A., Maj

DISTINGUISHED FLYING CROSS

Cedola, Vincent J., Capt
Childers, Jerry W., Lt
Chubboy, Robert A., Maj
Dennis, Leonard R., LCol
Dryden, David D., Capt
Foster, John K., Maj
Huntsman, Howard A., Maj
Jackson, Raymond A., Capt
Johnson, Jack O., Maj
Moore, Douglas E., Capt
Odneal, Billy L., Maj
Poston, Robert E., Maj
Saegaert, Donald R., WO*
Sampson, Eldon F., Maj
Sanford, Jack W., Maj, 1*
Sheriff, James C., Maj *
Stringer, Paul C., Capt
Wray, Donald P., Capt
Young, Luther D., Capt

SOLDIERS MEDAL

Beasley, Rodney S., Capt

BRONZE STAR FOR VALOR

Christie, Thomas C., Maj
DeAmaral, Chas. F., Capt*
Pires, Paul E., PFC
Sanford, Jack W., Maj*

BRONZE STAR

Baxter, Warner R., Capt
Dillard, William H., Maj
Estes, James O., Capt
Hefford, Robert A., Capt
Hite, Delbert E., CWO
Howard, Freeman I., Capt
Humphries, Chas. E., Capt
Isbell, Ernest L., Capt
Moses, George W., Capt
Munson, Vernon G., Maj
Nye, Robert C., Maj

* Posthumous Award

AIR MEDAL FOR VALOR

Bruce, William A., Capt
Campbell, Paul M., Capt
Crotty, Howard R., WO
Dryden, David D., Capt
Estes, Ernest F., Capt
Gray, Bobby J., CWO
Kemp, Billy, Sgt
Pederson, Leonard M, Capt
Pettibone, Larry E., WO
Thompson, James E., Capt
Wren, Charles, Lt

AIR MEDAL

(The number after the recipient's name indicates the number of Oak Leaf Cluster awards received.)

Aguilar, Ricardo, CWO, 13
Anderson, Warren, LCol, 5
Beasley, Rodney S., Capt, 2
Bender, Armon J., Sp4, 13
Brann, Dana E., WO*
Buchanan, Paul J., Capt, 6
Cedola, Vincent J.,Capt, 16
Clapp, John W., WO, 4
Clark, Donald R., Capt, 4*
Cloutier, Robert W.,Sp5, 14
Colbert, Bill N., Capt
Coyan, Carl A., WO, 16
Daws, Robert N., Capt, 19
Dibrell, Jack H., LCol
Dryden, David D., Capt, 11
Dunn, Colin B., CWO, 13
Estes, James O., Capt, 5
Evans, Kenneth E., CWO, 8
Fleming, Robert V., Sgt, 8
Fowler, Billy J., CWO,
Gall, Frank, Jr., Lt, 12
Gault, William J., WO, 16
Gnecco, Robert J., WO, 5
Gray, David B., Capt, 5
Haggerty, Richard, CWO, 8
Halverson, Douglas, Sp5,14
Hampton, Billy J., CWO, 10
Hensinger, William, WO, 9
Hill, John L., Jr., Capt, 6
Hill, Kennard F., Lt, 16
Humphries, C.E., Capt, 9
Hunter, John L., Lt, 3
Huntsman, H.A., Maj, 9
Huwyler, Josef S., WO, 5*
Jackson, Raymond, Capt,12
Jarrard, Richard D.,WO, 6
Jones, Colver H., Capt, 2
Jones, James M., Capt, 3
Joyner, Gary W., WO, 7
Kamenar, John M., Lt, 4
Kanode, Chas. E., CWO, 2
Kaplan, Sanford N., WO, 5
Knowlton, Don G., WO, 9*
Kuba, Dennis J., WO, 5

AIR MEDAL

LeCocq, Charles R., WO,14
McLarney, Patrick, WO, 13
Macklin, Ronald W., WO, 8*
MacNamara, G.M., Lt, 15
Martin, Nelson M., CWO,16
Mills, Robert W., Capt, 17
Moody, Thomas G., Lt, 6
Morgan, Robert J., CWO,11
Munson, Vernon G., Maj, 4
Myers, Marvin O., Capt, 3
Nasche, John A., Lt, 11
Peffers, Gerald L.,Capt, 13
Peplow, L.D., CWO, 14
Pettis, Kenneth, SSgt, 6
Preisendefer, H., Lt, 4*
Rawls, Marion H., WO, 15
Reed, James L., Capt, 22*
Reynolds, Robt. S., Capt, 1
Rheault, R.B., LCol, 4
Riley, Thomas W., Col
Saegaert, Donald R., WO,7*
Sanford, Jack W., Maj, 20*
Shade, Richard E., LCol
Simpson,John W., WO, 16
Spelios, Angelo, WO, 11
Steele, Avron L., CWO
Straub, Delbert M., Lt, 27
Streeter, Gary L., WO
Swenson, Frederick C., WO
Thiels, Jerry M., Lt, 29
Thorpe, Marvin J., Capt, 3
Tolfa, Edward, Jr, Capt, 13
Tooloose, Dale L., WO, 8*
Trotter, Gary B., PFC
Wardwell, Devon E., WO
Watke, Frederic W., Capt
Wheelock, Robert L., III,Lt
Whitehead, Gordon, CWO,3
Whitten, George L., MSgt
Wilkie, Jimmy, Lt, 3
Williams, Jack L., SFC
Williams, Ralph T., WO,14

AIR MEDAL

Wood, Stephen S., WO, 5
Woods, Alfred G., PFC
Wright, Robert K., Capt
Yamasaki, Harold M., SSgt
Young, Gary B., Lt
Young, Luther D., Capt, 7

COMMENDATION MEDAL - VALOR

Campbell, Paul M., Capt
Frederick, Gilbert H., Lt
Juchau, Donald J., SP4
Licha, Charles A., Maj

COMMENDATION MEDAL

Andrews, Donald G., Maj
Cedola, Vincent J., Capt, 1
Coggins, Donald W., Maj
Dryden, David D., Capt
Frownfelter, James O, Maj
Hensinger, William, WO
Hill, Kennard F., Lt
Moore, Douglas E., Capt
Myers, Marvin O., Capt
Pederson, Leonard M, Capt
Porcella, Stephen R., Capt
Preston, James F., SMaj
Sanford, Jack W., Maj*
Smithson, Royce M., Capt
Woliver, Clarence H., Maj

Brig. Gen. Glenn J. Collins (left), commandant of the Medical Field Service School, is shown congratulating four student officers presented with DFC's and other awards. Left to right are; Capts. David D. Dryden, Raymond Jackson, Douglas E. Moore, and Vincent Cedola.

CAPTAINS

HAYNES, Floyd E.

HAYNES, Harris E.

HEAD, William J.

HEFFORD, Robert A.

HEINMILLER, Arthur E.

HERRICK, Leroy C.

HERRON, Roy H.

HIBBS, William N.

HOFFMAN, Glenn F.

HOLDCROFT, George T.

HOLT, Charles T.

HOLTER, John H.

HOOK, Bruce E.

HORNE, J.D.

HOWARD, Freeman I.

HOWE, Robert B., Jr.

HUDNALL, Vernon H.

HUDSON, Samuel R.

HUGHES, Jimmie T.

HUNTER, John W., Jr.

IRONS, Richard L.

IVEY, Charles E.

IVEY, Claude T.

CAPTAINS

JAENICHEN, Paul H.

JAMES, Robert B.

JERNIGAN, Cecil L.

JOHNSON, Benjamin F., III

JOHNSON, James C.

JOHNSON, James Y.

JOHNSON, Ralph W., Jr.

JOHNSTON, Norbert B.

JOHNSTON, William B.

JONES, Colver H., Jr.

JOYCE, John J.

KELLY, James B.

KENNEDY, Jess S.

KERNWEIN, Carl M.

KIDD, James L.

KIMZEY, Guy S.

KIRKEGAARD, Martin L.

KOLLHOFF, Ronald K.

KRAMER, Leo A., Jr.

KUYPERS, Thomas O.

LaGRASSA, Joseph E.

LANE, John H.

LARCOMB, David J.

LARGE, Ulysses S., Jr.

CAPTAINS

LERDA, Louis J.

LEYDA, Craig H.

LINDSAY, Rodney C.

LOBAN, Gary G.

LONGAROZO, William L.

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LYNN, Ellie E.

MACKIN, Richard E.

MACWILLIE, Donald M.

MAY, James L.

MAYER, Henry A.

McCONNELL, John R.

McCRACKEN, James A.

McINTOSH, Bernard W.

McNAIR, Jeptha I., Jr.

McNAMEE, Vernon D.

MEIHOFER, Albert E.

MELENDEZ, Hector N.

MENLOVE, Merrill R.

MEULEMANS, Vincent J.

MICHELSON, Dale L.

MILLETT, Michael R.

MITCHELL, Max H.

MITCHELL, Sim C.

MOLDEN, Daniel E., Jr.

CAPTAINS

MORRIS, Marvin E.

MULVANEY, Merle L.

MURPHY, Claud H.

NELSON, George R.

NEWPORT, Dennis E.

NEWTON, George F.

NYSTROM, Robert C.

OAKES, William E.

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ORR, Gerald W.

OSHESKY, Gerald K.

OTIER, Harry V.

PAWLIK, Eugene A., Sr.

PERSCH, John T.

PETERSON, Franklin G.

PETERSON, Ronald N.

POCHER, Charles R.

POE, James F.

POOL, Russell F.

POOLE, Arthur J.

PULLIAM, Nathan M.

RANKIN, Thomas C.

RICE, Daniel J.

RICHARDSON, Robert A.

ROBERTS, Benjamin D.

ASSOCIATION OF THE UNITED STATES ARMY

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SOME OBJECTIVES FOR 1966

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Support policies and programs that will enhance career incentives, to include retention of traditional service benefits, and service pay which reflects cost of living indices and recognizes the responsibilities and hazards of the military profession.

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Maintain all components of the Army at strengths guaranteeing the timely meeting of all commitments and contingencies.

Advocate prompt clarification of the status of individuals and units in the Army Reserve and Army National Guard.

Support all measures to maintain all components of the Army at the highest level of combat readiness, including accelerated procurement of modern weapons and equipment.

Advocate provision of adequate personnel, materiel and funds, to meet unprogrammed requirements.

Support full development of all modes of tactical mobility.

Advocate sea and air lift adequate for Army needs.

Support world-wide deployments of the Army in the interests of peace and security.

CAPTAINS

ROBINSON, Jerry W.

ROWLAND, Jerry D.

SAATHOFF, Don I.

SANDERSON, Roland O.

SATTERWHITE, James J.

SAUER, Charles E.

SCHANZENBACH, A.P.

SCHNEIDER, Robert S.

SCOTT, Augustus D.

SCOTT, James A., III

SCULLY, Robert C.

SERRATT, Jerry W.

SHAVER, Charles W., Jr.

SIMS, Dan F.

SINOR, Donald R.

SLAYTON, Emmett, Jr.

SLYE, Kenneth M. 4965

SMITH, Albert M.

SMITH, Harold L.

SMITH, John E.

SMITH, Kenneth S.

SMITH, Peter T.

SNAVELY, Charles C.

CAPTAINS

SPIVACK, Joel S.

SPRAGUE, Martin C.

SQUIRE, Joseph W.

STANLEY, Norman L.

STANSELL, Harold D.

STERNAT, Robert F.

STEVENS, Darryl M.

STEVENS, Jackson C.

STEVENSON, Carl B.

STEVES, Roy R.

STEWART, Frank S., Jr.

STEWART, William P.

STIPE, John W.M., Jr.

STONE, Gordon L.

STRENNEN, Theodore D.

STRINGER, Paul G.

SWEENEY, Robert F.

TEETER, Charles E.

TENNANT, Charles E.

TOUCHET, James C.

TRENT, William E.

TRIPP, Frederick G.

TWILLEY, Leroy G.

ULLMAN, Cornell L.

CAPTAINS

VAUGHAN, Charles U.

VAUGHN, Ronald L.

WAGNER, Ronald E.

WALKER, James M.

WARD, Billy E.

WATTS, James H., Jr.

WEEKS, Richard G.

WELCH, Elliot J.

WHITE, John W., Jr.

WHITE, Robert L., III

WHITWORTH, David C.

WICKER, Rush R.

WIDMER, Edwin R.

WILLARD, Jack T., Jr.

WILLMORE, George A.

WILSON, Leonard R.

WINTERS, Donald L.

WOLFE, Michael J.

WOLIVER, Clarence H.

WOOD, Douglas J.

WOODWARD, Vernon W.

YAZINSKI, Edward C.

YOPP, Dewey C.

ZAVERTNIK, J.J.

LIEUTENANTS

ACTON, Randall R.

ALLOWAY, George D.

BANKSTON, Edward L.

BARATI, Stephen G.

BARKER, Jack L.

BASS, Walter E.

BAVETZ, Richard A.

BEAL, Wesley A.

BECKWITH, Howard B.

BELL, Jack O., Jr.

BILLINGS, Merlin D.

BOWDY, James B.

BOWEN, Wallace J.

BOYD, Clinton B.

BRACKETT, Thomas R.

BRADLEY, Glynn R.

BREWSTER, James E.

BRISTOW, Robert E.

BROOKS, Jerry R.

CHLADEK, Richard M.

CLEMENTE, Anthony

CONVERSE, Kent D.

DALTON, Robert B.

DAVIS, Melvin L.

LIEUTENANTS

DOLAN, David A.

DREILING, Gerard F.

DURHAM, Hugh C., III

EBERT, Marlin J.

ELLIS, Kent G.

ENGELBRECHT, Don L.

FIDDLER, John L.

FLAHERTY, Daniel J.

FRITZ, Ronnie E.

FRY, Roland J.

FULLER, George D.

GOODEN, Alphonso

GRANT, Charles R.

GRETT, Stanley E.

GUNDERSON, Kenneth L.

HALE, Dick

HALL, William A., III

HARPER, James W.

HASTINGS, George F.

HAWS, Leroy

HELM, Ellis S.

HIPP, Gerald T.

HOLMES, Raymond T.

HONAKER, John D.

LIEUTENANTS

IMEL, Gary L.

JACOBY, Thomas G.

JANELLE, Gerald F.

JENNE, Ned P.

JOHNSON, James B.

JOHNSON, Lawrence D., Jr

JONES, Stanton W.

KAPELKA, Stephen R.

KELLER, James J.

KING, Warren L.

KRISIK, Gerald A.

LAFERTE, Albert E.

LINDEMANN, Edward J.

LONG, Walter M.

LORES, Manuel, Jr.

McNAMARA, Gervase M.

MASSION, Barry W.

MATTHEWS, Daryl B.

MATTSON, John P.

7

MAXWELL, Paul F.

McKEITHAN, Clifford M.

MIX, Terry P.

MOSLEY, Henry D.

MOSS, Pat L.

LIEUTENANTS

MUSSELMAN, Dennis G.

NEWMAN, James T.

NICHOLS, Charles L.

ORLIN, Peter A.

ORR, Edward J.

OWENS, Jasper G.

PEARSON, Marce M.

PERRIN, Frank M.

PHILBRICK, John C.

POPE, Richard L.

RAINEY, John W.

REMY, James E.

RESING, Mervyn L.

RIBLETT, Richard E.

RIDDLE, Ralph E., Jr.

ROBERTSON, Michael P.

ROUSH, Marvin D., Jr.

SABINE, John S., IV

SAWERS, Charles H.

SEELY, Michael L.

6307

SMITH, Freeman W.

LIEUTENANTS

SMITH, Richard A.

SPARKS, Ernest A.

STACY, Joseph W., Jr.

STAIGER, Richard D.

STEPHENSON, Alan J.

SWORTS, Ned

TAYLOR, Daniel E.

THACKER, James H.

TOWNSEND, Kenneth A.

TRADER, Michael W.

TURLEY, Max W.

TURNER, Dennis M.

URQUHART, John C.

VAN RENSSELAER, H.B.

WATKINS, Jerry L.

WATSON, Paul R.

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WEBB, Richard G.

WELCH, William D., Jr.

WEYNAND, Anthony E.

WHIPPLE, Robert E.

WHITTINGTON, Curtis C.

BEAR WITH US!

The 10-page PCS Section is a result of the extensive number of address changes associated with the movement of entire units, and the companion lack of editorial space for PCS purposes in the two previous "Annual Meeting Issues." We expect to return to the normal 7-page section in March, 1966.

LIEUTENANTS

WILLER, Edward H.

WILLIAMS, Larry G.

WILSON, Willie M.

WROBLESKI, Dennis A.

YOUNG, Gary B.

CWO'S

AKERS, Robert E.

ANORGA, Jose

ARTHUR, Marvin H.

BAKER, Delmar G.

BENNETT, Howard H.

BERRY, Kenneth A.

BLUMEN, David J.

BRANCH, Edward B.

BROWN, Ulyess V.

BURROUGHS, Wyburn H.

CARGEN, Alfred J.

COOK, Thomas D.

COSLER, McKinney P.

CROUCH, Jacob C.

CUSTIS, Warren L.

DANEKER, John G.

DOBLADO, Edmundo M.

CWO'S

DUNCAN, Kenneth E.

ELDRETH, Charles

ERVI, James R.

EWAN, Randolph J.

FARNHAM, Robert E.

FERGUSON, Edward O., Sr

FIELD, Eugene M., Jr.

GIBSON, Cecil C.

GODFREY, James A., Jr.

GOSS, W.J.

GRAY, Richard E.

HAMILTON, Jesse

HANSON, Bobby G.

HARDWICK, Robert H.

HENRY, Raymond L.

HILEMAN, Blair R.

HULETT, Byron C.

INGRAM, William B.

IWAMASA, Robert H.

JACOBS, Allen H.

JARDINE, David C.

JOHNSON, Gwain L.

JOHNSON, Jimmie E.

JOHNSON, Robert L.

CWO'S

JOHNSON, Robert M.

JONES, Clarence T.

KEAN, Robert J.

KEEHN, Richard C.

KEPNER, Alva W.

KETCHERSID, Foy R.

KEYS, Meckie I.

KIDD, Denver G.

KITTEL, George W.

KNIGHT, Howard L.

LARSON, Walter C.

LEACH, James T.

LIVINGSTON, Donald J.

LORETT, Robert M.

LOWERY, Roy J.

MARTENS, John H., Jr.

McCULLOUGH, James L.

McGEHEE, James I.

McGRAW, Arnold J.

McGUFFEY, Jerry O.

McVAY, Clarence H.

McVEY, Curtis A.

MERCHANT, Johnnie H.

MOULTON, James E.

CWO'S

MURRAY, George, Jr.

MURRAY, James T.

NEWMAN, Donald N.

NILES, Douglas W.

NYSEWANDER, Frank T.

ODEN, James R.

PARK, Stewart R.

PARKER, William S.

PARNELL, James I.

PROUTY, Richard W.

PUFPAFF, Clifton A.

RAULSTON, Bobby E.

RAY, James P.

RILEY, Carl J.

ROLSTON, Bert D.

SCHRAMM, Walter J.

SCOTT, Donald R.

SHORTRIDGE, Richard B.

STEWART, Wayne M.

STROUD, Richard L.

TILGNER, Armit C.

TREGLOWN, Robert J.

TURMAN, Willard G.

TURVEY, Clifford V.

LINDSEY H. CROW

Chief Warrant Officer Lindsey H. Crow, an Army Aviator assigned to the 54th Signal Battalion, Vietnam, sustained fatal injuries in the crash of his OH-13S helicopter. The fatal accident occurred during the conduct of a combat mission on November 18, 1965. He is survived by his mother, Mrs. Harriet Crow of [redacted]

RONALD M. FERO

Warrant Officer Ronald M. Fero, an Army Aviator on assignment to the 220th Aviation Company, Vietnam, died as a result of injuries received in the crash of his O-1A aircraft on December 20, 1965. He is survived by his mother, Mrs. H. Q. Fero of [redacted]

JAMES A. GRUEZKE

Warrant Officer James A. Gruezke, assigned to the 82nd Aviation Bn, 173rd Airborne Brigade, died as the result of hostile action in the Republic of Vietnam during the conduct of a mission on December 23, 1965. He is survived by his widow, Mrs. Lila Gruezke, [redacted]

JOSEPH R. MENDES

Chief Warrant Officer Joseph R. Mendes, on assignment with the 19th Aviation Company, 19th Aviation Battalion, died as a result of injuries received in the crash of his U-1A Otter. The accident occurred near Fort Richardson, Alaska, on December 10, 1965. He is survived by his widow, Mrs. Marialuise Mendes, c/o Mr. Tony Mendes, [redacted]. At the request of Mrs. Mendes, all floral donations are to be placed in the AAAA Scholarship Foundation, c/o AAAA, Westport, Conn.

THE YOUNGEST EAGLE HAS FALLEN . . .

Believed to be the youngest combat pilot in the Armed Forces in the world, Warrant Officer Dana Edward Brann was killed in action in Vietnam on November 15, 1965.

Assigned to the 120th Aviation Company at Tan-Son-Nhut Air Terminal, Saigon, Brann had been in Vietnam only 39 days at the time of his death.

He had his 19th birthday on last August 8 while undergoing primary flight training at Fort Rucker coming home September 4 for a 35-day leave before reporting for further duty. On October 7 he flew to San Francisco, arriving in Vietnam several days later.

Brann had signed up for the Army Warrant Officer Flight Training Program on turning age 18, being accepted two days later on August 10, 1964. Upon completion of his basic training at Fort Jackson, S.C., Brann reported to USAPHS in early 1965, graduating from Fort Rucker in August as the youngest instrument-rated pilot in the Army.

He is survived by his parents, Mr. and Mrs. Edward M. Brann of [redacted]

OBITUARIES

GEORGE W. RICE

Warrant Officer George W. Rice, an Army Aviator assigned to the 15th Medical Bn, 1st Cavalry Division, Vietnam, died as the result of hostile action on December 18, 1965. He is survived by his widow, Mrs. Frankie S. Rice, P.O. [redacted].

BARTON F. RICHARDS

Major Barton F. Richards (Retired), a Senior Army Aviator, died November 17, 1965, at St. Francis Hospital, Tulsa, Oklahoma, following a heart attack. He is survived by his widow, Mrs. Patricia Richards, two sons, Michael and James, and his daughter, Mrs. Gay Kinnard. Burial was at Chelsea, Oklahoma.

JOHN T. STICHER

Warrant Officer John T. Sticher, assigned to the 120th Aviation Company, Vietnam, died as the result of hostile action during the conduct of a mission on December 6, 1965. He is survived by his parents, Mr. and Mrs. John H. Sticher, [redacted].

ALVAH A. WALLACE

Second Lieutenant Alvah A. Wallace, on assignment with the 82nd Aviation Bn, 82nd Airborne Division, Fort Bragg, N.C., died as a result of injuries received in the crash of his U-6 Beaver. The accident occurred on December 27, 1965. He is survived by his widow, Mrs. Margret Wallace, [redacted].

ARMY AVIATION MAGAZINE publishes each notice that it receives from the Army Aviation Directorate, OACSFOR, Department of the Army, concerning a fatality suffered in an official aviation accident. The magazine also publishes all notices of non-accidental deaths that are submitted directly for publication by individuals.

CWO'S

ULM, Arthur J., Jr.

VLECK, Burton J.

VORCE, Daniel B.

WAGNER, Edgar J.

WAYMAN, John R.

WENDT, Frank L.

WESTFALL, Robert S.

WILKINSON, Robert M.

WILLS, Walker T.

WO'S

ALLEN, James R.

ALLEN, Ronald E.

ANDERSON, David

ARMSTRONG, Lorraine F.

ARSENAULT, Brian R.

ASHLEY, Paul J.

ASKREN, James D., II

BAGLEY, Cleveland H.

BALLWEG, John R.

BAYER, William B.

BELL, Wayne M.

BENHAM, John R.

BIEDLINGMAIER, J.F., Jr

WO'S

BIGELOW, Berle C.

BLACK, James L.

BLAD, Hjalmer R.

BRESNIK, Albert R.

BRETON, Joseph A.S.

BROWN, Robert L.

BURKS, William R.

BURNS, Foy M.

BUTCHER, Ralph L., III

CAPEHART, George W.

CARROLL, William V.

CHASE, Robert M.

COBB, Martin J.

COCHRAN, Thomas C.

CONSTANT, Edwin R.

CRONIN, Robert E.

CUMBERLEDGE, Berlin C

DAVENPORT, John D.

DAVIS, David P.

DAVIS, George B.

DISMER, John D.

DISNARD, Paul J., Jr.

DORMAN, Joseph V.

WO'S

DUNBAR, Robert A.

DUNN, James W.

EBBERS, Allen F.

ENGMAN, Darwin H.

EVANS, Thomas J., Jr.

FORT, Foster W., Jr.

FORTENBERRY, Richard

FRAZER, William A.

FREEMAN, Ronald R.

FRITZ, Raymond G.

GENTRY, Earl E.

GINGRAS, Leonard L.

GOULD, William R.

GRAVES, Stanley H.

GREGORY, Stanley A.

HALL, Tommy P.

HAMBY, Terry R.

HANSEN, Wilbur W.

HARDISON, Marvin G.

HARING, Chad L.

HARRELL, James R.

HAYNES, Thomas R.

HEAD, Jimmie M.

HELM, Pruett B.

WO'S

HENSINGER, William M.

HINKLE, William C.

ILER, Michael L.

IVERSON, Keith G.

JACKSON, Larry L.

JEFFRIES, Gerald E.

JOHNSON, Dale L.

JOHNSON, Michel H.

JOHNSON, Thomas E.

KENNEDY, Carl P.

KNAUSE, Charles A.

KOSONEN, Matti S.

LAKARI, Walter P.

LARSON, Donald J.

LEHMAN, Shannon D.

LE RICHE, Manfred L.

LOHMAN, Douglas J.

MAIER, Bradley D.

MAYES, Frederick A.

MENZL, Albert J.

MICHIE, James B.

MILLER, Charles A.

MILLES, Joseph W.

MINERVA, Thomas J.

■ Lockheed-California Company, Burbank, Cal., for design of a "composite" VTOL Aircraft. $297,000 on Nov. 18, by AVLABS.

■ Aerosonic Corporation, Clearwater, Florida, for production of airspeed indicators applicable to various Army aircraft. $132,592 on Nov. 22 by AVCOM.

■ Revere Corporation of America, Wallingford, Conn., for production and delivery of 70 aircraft weighing scales. $136,290 on Nov. 22 by AVCOM.

■ U.S. Rubber Co., Engineered Systems Dept., Mishawaka, Ind., for production of aircraft fuel tank assemblies. $369,852 on Nov. 24, by AVCOM.

■ General Electric Company, Burlington, Vt., for production of an improved 20mm Vulcan gun pod. $8,952,250 on Nov. 24 by U.S. Army Weapons Command.

■ LFE Electronics Division, Boston, Mass., for production of Decca navigation sets. $3,194,000 on Dec. 3.

■ Simmonds Precision Products, Inc., Tarrytown, N. Y., for fuel gauging systems for UH-1 helicopters. $1,039,000 subcontract on Nov. 23 from Bell Helicopter Company.

■ Bell Helicopter Company, Fort Worth, Texas, for machine tools to increase U.S. Army UH-1 production. $9,800,000 on Nov. 15 by AVCOM.

STUDENT HELICOPTER PILOTS FROM THE U.S. ARMY PRIMARY HELICOPTER SCHOOL AT FORT WOLTERS LISTEN AS CLIFF KALISTA OF THE BELL HELICOPTER CO. DESCRIBES SOME OF THE RESEARCH PROGRAMS BEING CONDUCTED BY HIS COMPANY. THE OFFICER AND WARRANT OFFICER CANDIDATE STUDENTS WERE A PART OF A GROUP THAT TOURED BELL'S HURST PLANT ON JAN. 8. (USA PHOTO)

CONTRACTS

■ Bell Helicopter Company, Fort Worth, Texas, for preliminary design study for a new research VTOL composite aircraft. $297,000 on Nov. 17 by AVLABS.

■ Weston Instruments, Inc., Newark, N.J., for 1,440 aircraft temperature indicators. $37.85 per unit on Nov. 26 by AVCOM.

■ Hydraulic Research and Manufacturing Co., Burbank, Cal., for production of tail rotor cylinder assemblies. $1,745,047 on Nov. 29 by AVCOM.

■ Mills Manufacturing Co., Asheville, N.C., for production and delivery of 100-foot cargo parachutes. $840,186 on Nov. 30 by AVCOM.

■ Lycoming Division, Stratford, Conn., for production of aircraft engine components and support equipment. $344,091 on Nov. 30 by AVCOM.

■ Lewis Engineering Company in Naugatuck, Conn., for 2,958 aircraft temperature indicators. $92,289 on Dec. 3 by AVCOM.

■ American Machine and Foundry Company, Leland Airborne Products Division, Vandalia, Ohio, for aircraft generator assemblies. $52,793 on Dec. 7 by AVCOM.

■ International Telephone & Telegraph Corp., Burbank, Calif., for motor-operated aircraft fuel shut-off valves. $85,288 on Dec. 7 by AVCOM.

■ Canadian Commercial Corp., Ottawa, Ontario, for aircraft components and support equipment. $63,971 on Dec. 7 by AVCOM.

■ Curtiss-Wright Corp., Wood Ridge, N. J., for aircraft support items, including rocket tube assemblies. $52,723 on Dec. 7 by AVCOM.

■ Janke & Company, Hackensack, N.J., for oil heating equipment used in preparing aircraft engines for flight under adverse weather conditions. $56,384 on Dec. 10 by AVCOM.

■ Lycoming Division, Stratford, Conn., for an undisclosed number of T53-L-11 and T-53-L-13 engines for use in UH-1 aircraft. $11,962,122 on Dec. 15.

■ Switlik Parachute Company, Trenton, New Jersey, for 14,529 personnel parachutes. $1,692,628 under Dec. 7 contract as modified by AVCOM.

WO'S

NALE, Roger A.

NEWMAN, Thomas B., Jr.

OLSEN, James D.

OWENS, Odell

PARR, Sanford E.

PARSONS, James E.

PERRY, James H.

PERRY, Robert F., Jr.

PETERS, David E.

PHILLIPS, Charles L.

PIAZZA, August A.

PLANTE, James R.L.

RAAZ, Dana A.

RANDALL, Gaylen N.

REDMOND, John D.

REHN, Richard I.

REILLY, Michael B.

REZENDES, Anthony G.

ROLLER, Hebern P.

ROONEY, Terrence M.

RUDEL, Dennis A.

RUGG, William A.

SANCHEZ, James M.

WO'S

SCHMIDT, Eugene J.

SCHMIDT, John L., III

SEVIN, Richard P.

SHARP, Wavie C.

SILVERSTEIN, William I.

SIPPLE, Adrian J.

SMALL, James A.

SMITH, Thomas L.

SPEARS, James C.

STIETENROTH, Philip B.

STUCK, William W.

SWEAZEY, Robert W.

SZABO, John M.

THIOULON, Robert L.

TRASK, Arthur H.

VAN ROPE, Jeffrey W.

VAQUERA, Albert A.

VIGAR, William A.

WAGGENER, Thomas E.

WARREN, Alan D.

WATSON, Eddie L.

WATSON, Raymond D.

WELFARE, Bradley L.

WELLS, Charles B.

WO'S

WHITEHEAD, Gordon K.

WILLIAMS, Howard M.

WILSON, Donald H.

WILSON, Jerry T.

WILSON, Stanley C.

WINCHESTER, Clark D.

SP/6'S

BAKER, Lois A.

FOWLER, Claude W.

MRUCZKOWSKI, Leon, Jr.

WILLIAMS, Robert D.

SP/5'S

KESTNER, Duane

WHITE, Clifford A.

ASSOCIATES

ATTRIDGE, Mr. George S.

BOHN, Mr. George H.

BOUVIER, Mr. Michel

CARTER, Mrs. Jean B.

CONROY, Mr. John T.

HACKETT, Mr. Gerald R.

HILLER, Mr. Stanley, Jr.

HORMANDL, Mr. Aldrich

JONES, Mrs. Betty

ASSOCIATES

McGEE, Mr. Robert C., Jr

MITTON, Mr. Robert L.

NICHOLS, Mr. John

PATERSON, Mr. Norman K

SEELY, Mr. Charles D.

SLATEN, Mr. Bernard A.

STRIKER, Mr. Harry A.

WATTS, Mr. Joseph C.

WILSON, Jerry D.

ZENSEN, Lt.j.g. Wm N.

RETIRED

CASSIDY, Robert F., Col

FOX, Elmer M., LCol

JEFFREY, Robert J., LCol

LAMOTHE, Frank E., LCol

MILLER, William R., LCol

STACY, John F., LCol

CHAPMAN, Ray C., Maj

GIEFER, Ira, Maj

GRIFFIN, William R., Maj

SHIVELY, Jowarren, Maj

WILSON, Deanel B., Maj

KEMP, James M., Capt

LOYNACHAN, R.E., CWO

AAAA NEWS

1965 NATIONAL WINNERS

Major General Austin W. Betts, Deputy Chief of Research and Development, D/A, is shown congratulating the five youngsters who won $100 AAAA cash awards and plaques for their outstanding aviation exhibits at the early May National Science Fair-International held in St. Louis, Mo. Shown, left to right, are Joel Breger of Silver Spring, Md.; Ann Bigelow of Galion, Ohio; Gen. Betts; Jerry W. Childers of North Augusta, S.C.; John Rollins of Lawton, Okla.; and James H. Oberlin of New Haven, Ind. The winning exhibits were selected by a 5-member team of judges provided through the cooperation of Brig. Gen. Howard F. Schiltz, CG, U.S. Army Aviation Materiel Command, St. Louis, Mo. ■

1966 ANNUAL MEETING

Preliminary staffing of the 1966 AAAA Annual Meeting Committee has been completed with the several committee members to participate in their first planning session on February 11. The Vice President for National Functions on the AAAA's National Executive Board, Colonel John Dibble, Jr., will serve as the General Chairman of the 1966 AAAA Annual Meeting assuming responsibility for its overall direction. Colonel Dibble served as the Chairman of Programming at the 1965 AAAA Annual Meeting, a position in which Colonel John L. Klingenhagen will serve this year. The 1966 Convention will be held at the Shoreham Hotel in Washington, D.C., during the period October 12-14.

GARMISCH MEETING FEATURES AAAA REGIONAL AWARDS

The Sixth Annual Meeting of the USAREUR Region of AAAA will be held at the U.S. Army Recreation Area, Garmisch, Germany, during March 9-12. The 3-day program will be highlighted by Army and industry presentations, AAAA Awards to the "Outstanding Company-Sized Unit" in the USAREUR Region, to the "Outstanding Aviation Support Unit," to the "Aviation Soldier of the Year" within the Region, and to the "Army Aviator of the Year" (Restricted to Company Grade and Warrant Officers Only).

Some 300-400 members and their families are expected to attend the combined professional-recreational gathering. Colonel Edgar C. Wood, Operations Division, Hqs, USAREUR serves as the Regional president. The Region's "Outstanding Aviation Unit" in 1965, the 2d Armored Cavalry Aviation Company, serves as the 1966 Host Unit for the meeting with Capt. Richard V. Coulter of the 2d as Assistant Project Officer.

SCIENCE FAIR AWARDS

Well over 175 local and Regional Science Fairs will be supported by voluntary AAAA judges and Ass'n "Certificates of Achievement" during March-April. AAAA support of the National Science Fair is described in the photo at the top, left.

SUMMARY OF 1965

ALAMO CHAPTER

Feb. 25 - Informal Dinner-Dance with concurrent business meeting.
Apr. 20 - Hospitality Suite at 4th USA Aviation Conference at Ft. Bliss, Tex.
Dec. 6 - Combined business-social with "AA of the Year" as honored guest.

ALASKA CHAPTER

June 3 - Business Luncheon to meet the new officers and plan later activities.
Aug. 28 - Informal Dinner-Dance with business meeting to fill vacancies. Maj Gen G.A. Carver as guest speaker.
Oct. 14 - Business luncheon to meet new officers and to plan later activities.
Nov. 4 - Business Luncheon to hear the Delegates' Report on Annual Meeting.

ARMY AVIATION CENTER CHAPTER

Mar. 23 - Buffet Dinner with the Hon. William Bray, Member, House Armed Services Committee, as guest speaker.
June 6 - Old Fashioned Picnic to celebrate 23rd Anniversary of AA.
Sept. 21 - Beer and Shrimp Stag followed by a short business meeting.
Nov. 30 - "Happy Hour" followed by a short business meeting.

ATLANTA CHAPTER

Apr. 28 - Dinner meeting with election of 1965 officers and Chapter Awards
July 31 - Picnic for general members and their families; entertainment.
Sept. 20 - Stag dinner meeting with the election of new officers & delegates.
Dec. 3 - AAAA "Social" for members & wives at the Atlanta PLAYBOY CLUB.

BLUEGRASS (FT. KNOX) CHAPTER

Apr. 29 - Business meeting to elect the Chapter's 1965-1966 officer slate.
Aug. 2 - Business-social stag meeting to plan Chapter's late '65 activities.
Sep. 29 - Business-social stag meeting. Selection of Annual Meeting Delegates.
Dec. 16 - Business-social stag meeting to hear Chapter Delegates' Reports.

DAVID E. CONDON CHAPTER

May 22 - Dinner-Dance held in conjunction with the quarterly meeting of the AAAA Nat'l Board at Fort Eustis.
June 15 - Business Luncheon. Installation of officers; awards' presentations.
July 30 - Mid-Summer General Membership Dinner-Dance.
Dec. 4 - Members' "Yuletide Kick-off Party" and Dinner-Dance.

DAVISON ARMY AIRFIELD CHAPTER

Mar. 24 - Stag Social with refreshments & dinner followed by business meeting.
June 17 - Membership business meeting.

FORT BENNING CHAPTER

Sept. 29 - "Re-activation" meeting with election of '65 officers and delegates.
Dec. 10 - Professional-social evening meeting with refreshments followed by a business meeting and guest speaker.

FORT BRAGG CHAPTER

Mar. 3 - Professional dinner meeting with Brig. Gen. Joseph W. Stilwell, Jr. as guest speaker.
June 18 - Late afternoon business meeting to plan Chapter summer outing.
Sept. 23 - Late afternoon Happy Hour & business meeting to initiate planning for 2d Annual Fort Bragg Cotillion.
Dec. 15 - Professional dinner meeting with Lockheed Aircraft Corp. representatives giving AAFSS presentation.

FORT CAMPBELL CHAPTER

Aug. 30 - Late afternoon business meeting to plan Chapter "reorganization" and '65-'66 programming activities.

FORT HOOD CHAPTER

Mar. 19 - Afternoon business meeting with election of '65-'66 officers and award to Area Science Fair Winner.
Apr. 24 - Professional dinner meeting with Col. Kemuel K. Blacker as guest speaker.
Sept. 17 - Afternoon professional meeting to fill Board vacancies and plan Fall, 1965 Chapter activities.
Nov. 13 - Professional dinner meeting with Maj. J.J. Morris of the U.S. Army Aviation Test Board as guest speaker.

FORT MONROE CHAPTER

Mar. 26 - Business-social dinner meeting with installation of '65-'66 officers.
May 22 - Dinner-Dance held jointly with the David E. Condon Chapter in conjunction with the quarterly meeting of the AAAA Nat'l Board at Fort Eustis.
May 29 - Professional dinner meeting with Lockheed Group Vice President M.C. Haddon as guest speaker.
Sept. 28 - Business Luncheon to fill the officer vacancies and select Delegates.
Dec. 4 - Pre-Holiday dinner meeting.

FORT RILEY CHAPTER

June 12 - Professional dinner meeting with Vietnam presentation by G-2 Air.
Sept. 17 - General membership meeting to fill vacancies in Exec. Board.
Dec. 8 - Interim election of officers to run a "reduced strength" Chapter due to extreme shifts of personnel.

FORT SILL CHAPTER

Mar. 3 - General membership business meeting to elect '65-'66 Chapter officers and plan later Birthday Ball.
Apr. 20 - Hospitality Suite at 4th USA Aviation Conference at Ft. Bliss, Tex.
June 4 - Formal "Anniversary Ball" commemorating 23rd Birthday of AA.
Sept. 17 - Late afternoon business and social meeting to select '65 Delegates.
Dec. 4 - Annual Christmas Ball with Col. Robert M. Leich, USAR (Ret.), first nat'l president, as honored guest.

FORT WOLTERS CHAPTER

Mar. 30 - General business meeting to elect '65-'66 Executive Board officers.
June 5 - Professional dinner meeting commemorating AA's 23rd Birthday with Col. John W. Oswalt (Ret.), nat'l VP, Industry Affairs, as guest speaker.
July 23 - Swimming Party and Picnic for members and their families.
Oct. 8 - Combined business-social get-together to welcome new members and to select '65 Annual Meeting Delegates.
Nov. 19 - Professional dinner meeting with Maj. Gen. Charles Born, USAF (Ret.), as guest speaker.

FRANCE CHAPTER

Feb. 5 - Chapter activation meeting and election of initial slate of officers.
June 25 - Professional dinner meeting with after-dinner film presentation.
Sept. 24 - Business-social dinner meeting to meet new Chapter officers.
Feb. 11, '66 - Professional dinner meeting with film presentations.

FULDA CHAPTER

Feb. 5 - General membership meeting to elect 1965-1966 slate of officers.
May 15 - Chapter operation of food and drink concessions at 14th ACR Annual Air Show during German-Amer. week.
May 17 - Professional-business meeting; presentation of Honorary Memberships to regimental commanders.
June 17 - Professional-social "Outdoor Steak Cook-Out" with participation by various CO's as the honored guests.
Sept. 4 - Late Summer Chapter Picnic
Oct. 5 - General membership business meeting; elections to fill vacancies.
Nov. 26 - Professional dinner meeting with after-dinner business session and slide presentation on "AA in Vietnam"

GRAND CANYON CHAPTER

The Chapter did not disseminate a 1965 meeting notice through the National Office, or provide minutes of any local 1965 meeting. It was considered deactive as at Dec. 31, 1965.

HANAU CHAPTER

June 17 - General business meeting to elect 1965-1966 Chapter officers.
July 8 - Business luncheon conducted to plan later year membership activities.
Nov. 24 - Dinner Business Meeting with elections, review of early '66 plans.

HAWAII CHAPTER

Feb. 24 - Late afternoon business and social meeting to elect '65-'66 slate.
Apr. 2 - Business luncheon to greet new officers and cite the retiring officers.
May 26 - "Happy Hour Get-Together" to meet with new Chapter members.
Aug. 7 - Old Fashioned Beach Picnic for members and their families.
Oct. 6 - Late afternoon business meeting to fill vacancies in Exec. Board.
Nov. 10 - Afternoon business meeting to hear reports of the Chapter Delegates.

SUMMARY OF 1965

ILLESHEIM CHAPTER

Mar. 24 - Re-activation of Chapter with election of 1965-1966 slate of officers and proposed plan of 1965 activities.
May 20 - Professional meeting with film presentations from the AAAA Library.
Dec. 29 - Professional dinner meeting (Stag) with Vietnam film presentation.

KEYSTONE CHAPTER

Mar. 26 - Professional dinner meeting with MGen T.R. White, Adjutant General of Penna. as guest speaker.

KOREAN CHAPTER

May 7 - Business dinner with '65-'66 elections, presentation of hon. memb. to ROKA Director of Army Aviation.
Sept. 18 - Business-social dinner with selection of Chapter Delegates.
Nov. 22 - Membership "social" with a Delegate report on '65 Annual Meeting.

LATIN AMERICAN CHAPTER

Mar. 27 - Breakfast professional and business session with '65-'66 elections followed by films from AAAA Library.
May 8 - Hawaiian Luau Costume Party to welcome new 1965-1966 officers.
Sept. 27 - Luncheon meeting to plan '65-'66 functions, select the Chapter Delegate, and fill Board vacancies.
Oct. 28 - Professional luncheon meeting with Hughes Tool Co presentation.
Dec. 16 - Business luncheon meeting to plan early '66 professional gatherings.

LECH RIVER CHAPTER

Mar. 26 - Late afternoon business meeting to elect '65-'66 Exec. Board slate.
June 19 - "Crash & Rescue - Come as You Are" Party for members & wives
Oct. 9 - Professional luncheon meeting (Stag) with Air Assault/VTOL films.

LINDBERGH (St. Louis) CHAPTER

Jan. 21 - Professional dinner meeting. Col Floyd Buch, CO of ARADMAC, as guest speaker.
Feb. 18 - Professional dinner meeting. Col Robert M. Hamilton, Director of USABAAR, as Chapter guest speaker.
Mar. 18 - St. Patrick's Day Dinner-Dance for members and their wives.
Apr. 15 - Professional dinner meeting. John Van Bergen, Canadian Dept. of Defense Prod'n Ln Office, as speaker.
May 27 - Professional dinner meeting. Hon. A.J. Cervantes, Mayor of the City of St. Louis, as guest speaker.
June 8 - Chapter Delegate contribution of their Delegate Refunds to the AAAA Scholarship Foundation, with an assist from the Chapter Treasury ($100.00).
July 17 - Annual "Summer Festival" Dinner-Dance of Chapter membership.
Aug. 26 - Professional dinner meeting. Frank M. Taylor, Acting Consul General at British Consulate General, as the Chapter's guest speaker.
Sept. 16 - Professional dinner meeting. Col. Raymond E. Johnson, President of the U.S. Army Aviation Test Board, as the Chapter's guest speaker.
Oct. 14 - Professional dinner meeting. Thomas Murphy, Midwest Regional Representative of FAA, as speaker.
Nov. 18 - Professional dinner meeting. Col. Delbert L. Bristol, Deputy Director of Army Aviation, as guest speaker.
Dec. 10 - Annual "Christmas Formal"

MAIN RIVER VALLEY CHAPTER

June 18 - Late afternoon general membership business meeting (Stag).
Aug. 13 - After-dinner general membership business meeting.

MAINZ CHAPTER

June 26 - General membership business meeting, '65-'66 Chapter Executive Board elections, and Dinner-Dance.

MT. RAINIER (Ft. Lewis) CHAPTER

June 26 - Activation Meeting. Election of first Chapter Executive Board slate.
Aug. 27 - General membership meeting. Planning for later 1965 activities.
Oct. 21 - Professional meeting with presentation and film by E.C. Crow, Chief of McChord AFB (Wash.) RAPCON.

MUNICH CHAPTER

Mar. 19 - General membership meeting. Election of '65-'67 Chapter officers.
May 14 - General membership business meeting; plans for late '65 activities.
July 6 - General membership "Pool" Party; Introduction of new officers.

NORTHERN ITALY CHAPTER

Jan. 28 - General membership business meeting; Garmisch delegate selection.
Mar. 16 - General membership business meeting & cocktail hour; report by delegate on 1965 Garmisch convention.

NURNBERG CHAPTER

May 27 - Combined professional, business and social meeting with Chapter elections, films from AAAA Library.
Dec. 10 - General membership business meeting; elections to fill vacancies, planning for February Stag "social."

PIKES PEAK (Ft. Carson) CHAPTER

Feb. 5 - General membership meeting to select '65 Nominating Committee.
Nov. 9 - Executive Board meeting. Plans to have "reduced strength" Chapter in view of extreme shifts of personnel.

RHINE VALLEY CHAPTER

Jan. 29 - Professional-business meeting with Col Frank Meszar, guest speaker.
Apr. 17 - General membership Dinner-Dance; limited business meeting.
June 5 - General membership Dinner-Dance; Election and Installation of the 1965-1966 Chapter Executive Board.
Sept. 26 - Combined business and social meeting; cocktails, dinner, floor show. Selection of Annual Meeting Delegates.
Dec. 4 - Professional dinner meeting with Maj. Paul R. Curry, U.S. repr. to P1127 Project, as guest speaker.

RICHARD H. BITTER CHAPTER

Feb. 19 - Professional dinner meeting. Henry Naulton, Boeing Vertol Service Manager for CH-47, as guest speaker.
May 14 - Joint professional dinner meeting with AUSA-NDTA. Lt. General J.E. Engler, CG, USA Supply & Maintenance Command, as guest speaker.
July 9-23 - Happy Hour at CPO Club at NAS on alternate Fridays.
Aug. 23 - Executive Board meeting to develop a Chapter Scholarship.
Sept. 17 - Fourth General Membership "Happy Hour" in fourth new location.
Sept. 29 - First General Membership Buffet and Dinner-Dance.
Dec. 11 - Annual Membership "Christmas Dinner Dance."

SOC TRANG TIGER CHAPTER (Vietnam)

Mar. 20 - Professional dinner meeting with Capt. Rob't Fitzgerald, speaker.
May 8 - Professional and social dinner meeting with guest speaker, gaming.
July 31 - After-dinner business-social meeting with '65-'66 officer elections.
Oct. 1 - Business-social Get-Together with election of new Chapter president.

STUTTGART CHAPTER

May 6 - Professional dinner meeting with presentation by D/A Team from OPO; elections of '65-'67 Chapter officer slate; cocktails, dinner-dance.
Sept. 24 - Neckar River Evening Boat Cruise with Dinner and Dancing for members and their wives.
Dec. 29 - General membership "Stag" social with films, membership drive.

VINH LONG (Vietnam) CHAPTER

Jan. 13 - General membership business meeting; plans for '65 activities.
June 1 - General membership business meeting; election of new officers. Donation of school playground equipment.

WASHINGTON, D.C. CHAPTER

May 20 - Luncheon meeting to install and welcome new Chapter officers.
Sept. 9 - Professional luncheon meeting with Maj. Gen. Delk M. Oden, Director, OPD, OPO, as guest speaker.

TOTAL MEETINGS, CY 1965 137

Professional-Social Meetings 41
Dinner/guest speaker (30), awards (1), films (4); breakfast/films (1); luncheon speaker (2), luncheon/films (1).
Business-Social Meetings 38
Dinner/business meeting (13), Dinner-Dance/bus. meeting (13), Cocktails/bus. meeting (11), Poolside (1).
Business Meetings 50
Business luncheons (11), afternoon or Happy Hour (15), dinner meetings (24).
Social Meetings alone 8
Family Picnics (5), Swimming Parties (1), "Cook-out"(1), Boat Cruise (1).

AAAA SEEKS SCHOLARSHIP APPLICANTS

The AAAA Scholarship Foundation announces the availability of $3,500 in 1966 scholarship assistance funds for the sons and daughters of members of AAAA.

Application forms for the 1966 scholarships may be obtained by writing to the AAAA Scholarship Foundation, Inc., 1 Crestwood Road, Westport, Conn. 06882. The applications, together with other supporting application data, must be returned to the Foundation on or before 27 February 1966 to receive Awards Committee consideration.

ELIGIBILITY

Eligibility requirements for the awards have been minimized. The applicant must be:

The son or daughter of a member or deceased member of AAAA.

A high school graduate or senior who has made application to an accredited college or university for Fall, 1966 entrance as a freshman, or who has been accepted for freshman enrollment in the Fall of 1966.

Unmarried and a citizen of the United States.

AREA INTERVIEWS

Following the receipt of the completed application form, the financial statement, and the required academic transcripts, the Foundation will notify the applicant to report to a group of interviewing officers selected from among the AAAA membership residing in the applicant's area. The "Report of Interview" serves as an important, but not mandatory part of the documentation required for awards consideration.

FINAL SELECTION

The final selection will be made by the AAAA National Awards Committee, a permanent standing committee of the National Executive Board of the AAAA that has been designated as the Foundation's judging agency. The selection will be made during the month of March, 1966 period with the winners to be notified no later than 31 March 1966.

LINDBERGH CHAPTER — Col. Delbert L. Bristol (center), Acting Director of Army Aviation, OACSFOR, D/A, chats with Brig. Gen. Howard F. Schiltz, AVCOM Commander (right), and Carl D. Stephenson, national VP for Public Affairs, prior to a recent AAAA meeting in St. Louis. Col. Bristol was principal speaker at a dinner meeting of the AAAA's most active chapter.

Military Aviation Placement Service

SENIOR AA desires challenging position where he can utilize his administrative and materiel management knowledge in conjunction with his diversified flying experience. Age 38; retired December 1965. Write AAAA, Box 3395.

OPENINGS available now and in the foreseeable future for qualified personnel in the fields of Aviation Logistics; Procurement; Maintenance Planning; Supply Requirements and Distribution; and Research, Development, and Engineering. Interested personnel should submit a completed Standard Form 57 to the Civilian Personnel Office, Headquarters, U.S. Army Aviation Materiel Command, P.O. Box 209, St. Louis, Mo.

HELICOPTER PILOTS: Satisfying opportunity flying new Bell equipment. Permanent employment, all benefits. Retired military welcome. Send resume to AAAA, ATTN: Box 20164.

MECHANIC seeks employment with commercial or military connected firm as a mechanic or in any other type of Aviation employment available. 1,200 hours flying time as CH-37 Crew Chief. School trained and able to pass physical without waiver. 21 years old; location open. Willing to be trained in other Aviation fields. Write AAAA, Box 8841, 1 Crestwood Road, Westport, Conn.

1964 CLAIMS

Colonels (2):
Hanburger, Christian C.....$2,352
Kyle, David M.....$1,836
Lt. Colonels (6):
Hamlet, James F.....$1,963
Peyer, Gustave A.....$2,086
Rike, James C.....$2,352
Staples, James T.....$192
Warzecha, Edward.....$2,304
Williams, Robert H.....$2,352
Majors (11):
Baringer, Henry J.....$2,112
Dalusky, George A.....$2,208
Fitts, William T.+.....$1,376
Gilroy, John E.....$2,304
Hudson, Charles F.....$1,127
Kent, George S*.....$768
McClintock, Alfred B*.....$1,344
Moyers, G.A.*.....$1,472
Richards, David A*.....$736
Warner, Ramon F*.....$1,476
Captains (13):
Brophy, Edward R., Jr.....$794
Burwell, James M*.....$1,008
Costino, Michel*.....$2,960
Cunningham, Donald E.....$752
Dunn, Jack A*.....$736
Gafner, Richard L*.....$1,480
Gulledge, Kenton.....$360
Hook, Bruce*.....$1,760
Miller, Oral D*.....$656
Pedersen, William W*.....$1,640
Delaney, James*.....$691
Denning, Stanley P*.....$1,008
Ferguson, James D*.....$540
Gaines, William G*.....$624
Henderson, Robert P*.....$1,344
Herbst, Joseph A*.....$672
Holmes, Thomas E*.....$600
Iwamasa, R.H.*.....$702
Jones, Brady C*.....$1,152
Lockhart, James*.....$972
Norton, Henry C*.....$540
Odem, James R*.....$648
Pinard, Joseph L.R.*.....$300
Ray, James O*.....$208
Sevigne, Edward J*.....$1,000
Slusher, Darius S*.....$1,080
Ulm, Arthur J., Jr*.....$560

SEMI-ANNUAL REPORT TO AAAA MEMBERS ON FLIGHT PAY PROTECTION PLAN CLAIMS

Kramer, Joseph E.....$2,168
McDermott, Francis P.....$693
Smith, Clair B.....$1,152
Smithey, Paul C.....$1,056
Sumrall, Hendri A.....$650
Thrall, Dewell O.....$1,824
Vandiver, Gilmer L.....$1,288
Captains (13):
Bergman, Ronald A.....$1,776
Gibson, Melville D.....$1,723
Graham, Jack C.....$1,968
Hammond, John A.....$1,824
Jones, Junius L.....$1,776
Matos, Joseph A.....$660
McConnell, Delmer M.....$302
Molden, Daniel E.....$1,968
Rask, Richard H.....$1,606
Scudder, James.....$1,804
Smith Everett A.....$979
Vaughn, John P.....$1,584
Walczak, Sylvester.....$1,584
CWOs (5):
Brown, Charles E., Jr.....$1,296
Cooper, Thomas E.....$1,296
Kuntz, Joseph T.....$1,344
McVay, Clarence H.....$1,296
Roberts, Carl P.....$1,248
SFCs (1):
Smith, Louis B.....$960

1965 CLAIMS

Colonels (3):
Beaumont, Harry C.....$2,352
Bush, Harry L.....$2,352
Ferriter, Richard H.....$588
Lt. Colonels (6):
Anderson, Norman I*.....$588
Bergner, John*.....$1,864
Dobson, Robert*.....$1,568
Morrow, Jack G*.....$576
Tugman, Robert F.....$1,372
Van Sant, Jesse F*.....$1,152
Majors (16):
Bowman, James E*.....$960
Cave, William R.....$1,436
Chamberlain, Warren*.....$984
Crooks, Eugene F.....$1,104
Curd, Vernon*.....$2,112
Downes, Thomas W., Jr.....$783
Finley, John L.....$691
Grimes, Cecil H.....$960
Healy, Radcliffe*.....$886
Headley, Fred C.....$1,021
Stuart, Clark D*.....$1,481
Sullenberger, L.E., Jr.*.....$1,188
Tucker, Jackie L.....$510
Turley, James R*.....$1,184
CWOs (22):
Ahlstedt, Herbert A.J.*.....$540
Baker, Delmar G*.....$264
Beaston, George F*.....$1,232
Brown, William E*.....$772
Carroll, Walter J*.....$560
WOs (2):
Miller, Jensen H*.....$576
Wright, Richard J.....$380
Staff Sergeants (1):
Hughes, Joseph M.....$400
Specialists, Sixth Grade (2):
Chambers, Leon*.....$380
Mruczkowski, Leon*.....$836
*Current claim with 1966 payments
+Deceased

FPPP CLAIMS SUMMARY, 1957-1965

- INITIATED IN 1957: 4 claims.....$13,910.00
(1 Lieutenant, 2 Captains, 1 Major)(4 illness claims, none for bodily injury)
- INITIATED IN 1958: 11 claims.....$41,585.00
(2 CWOs, 3 Lieutenants, 4 Captains, 2 Majors)(All 11 claims for illness)
- INITIATED IN 1959: 39 claims.....$86,103.38
(1 Sp/6, 6 CWOs, 11 Lieutenants, 11 Captains, 5 Majors, 2 Lt. Colonels)
(35 claims for illness and disease, 4 claims for accidental bodily injuries)
- INITIATED IN 1960: 44 claims.....$67,911.19
(7 CWOs, 2 Lieutenants, 19 Captains, 12 Majors, 3 Lt. Colonels, 1 Colonel)
(40 claims for illness and disease, 4 claims for accidental bodily injuries)
- INITIATED IN 1961: 40 claims.....$62,484.86
(10 CWOs, 5 Lieutenants, 19 Captains, 3 Majors, 2 Lt. Colonels, 1 Colonel)
(34 claims for illness and disease, 6 claims for accidental bodily injuries)
- INITIATED IN 1962: 51 claims.....$73,551.67
(2 Sp/6s, 12 CWOs, 2 Lts., 22 Captains, 8 Majors, 4 Lt. Cols., 1 Colonel)
(40 claims for illness and disease; 11 claims for accidental bodily injuries)
- INITIATED IN 1963: 62 claims.....$99,807.64
(1 SFC, 9 CWOs, 2 Lts., 25 Captains, 13 Majors, 11 Lt. Cols., 1 Brig. Gen.)
(52 claims for illness and disease, 10 claims for accidental bodily injuries)
- INITIATED IN 1964: 38 claims.....$59,261.79
(1 SFC, 5 CWOs, 13 Captains, 16 Majors, 6 Lt. Colonels, and 2 Colonels)
(33 claims for illness and disease, 5 claims for accidental bodily injuries)
- INITIATED IN 1965: 65 claims.....$65,363.00#
(2 Sp/6s, 1 S/Sgt, 2 WOs, 22 CWOs, 13 Captains, 16 Majs, 6 Lt Cols, 3 Cols)
(54 claims for illness and disease, 11 claims for accidental bodily injuries)
Represents incomplete 1965 total claims paid in view of 48 active claims.
- FLIGHT PAY PROTECTION PLAN SUMMARIES AS AT 1 JANUARY 1966
Number of Insured Members holding individual policies.....4,233
Individual "Claim Alert" correspondences received.....494
Number of Insured Members receiving flight pay indemnities.....353
Insured Members now in initial 3-month period of grounding.....24
Insureds grounded, but returned to flight status prior to loss.....101
Individual claims disapproved by underwriters (1957-1965).....15
Total Flight Pay Indemnities Paid through 31 December 1965 ..$569,978.53

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