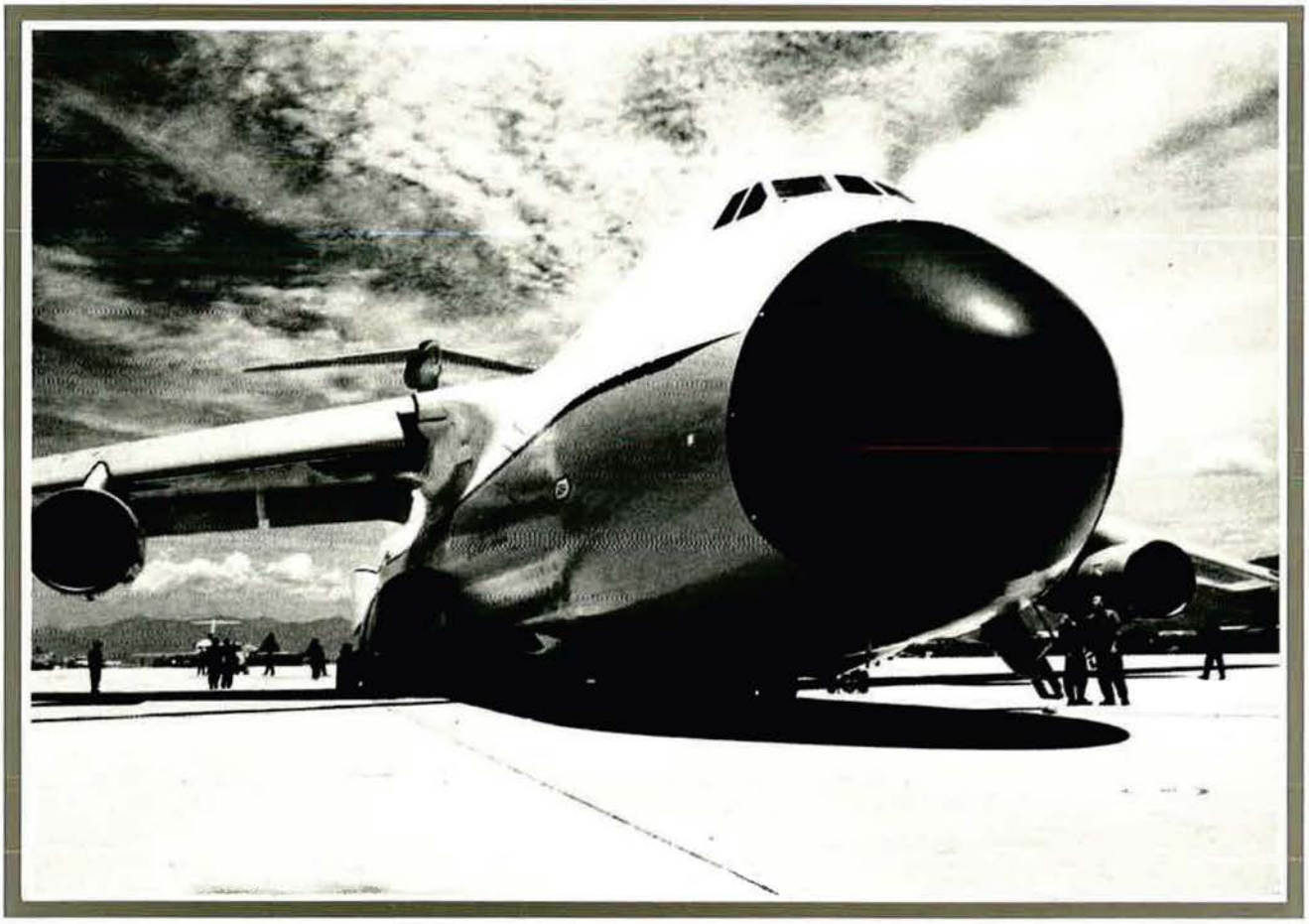
NOVEMBER 1973/$1

AIR FORCE

PUBLISHED BY THE AIR FORCE ASSOCIATION

MAGAZINE

A Pilot's View of the C-5



ALSO IN THIS ISSUE: COMPLETE REPORTS ON AFA'S 27th ANNUAL NATIONAL CONVENTION

Once a hunter.

Now the hunted.

The F-102 Delta Dagger... delivered to the Air Force in the early '50s... an excellent record as an all-weather interceptor.

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Drawing on experience in converting the F-80, F-86, and F-104 for RPV roles, Sperry is making it possible for a ground-based pilot to "fly" the PQM-102 through programmed evasive maneuvers he could not physically subject himself to in the cockpit.

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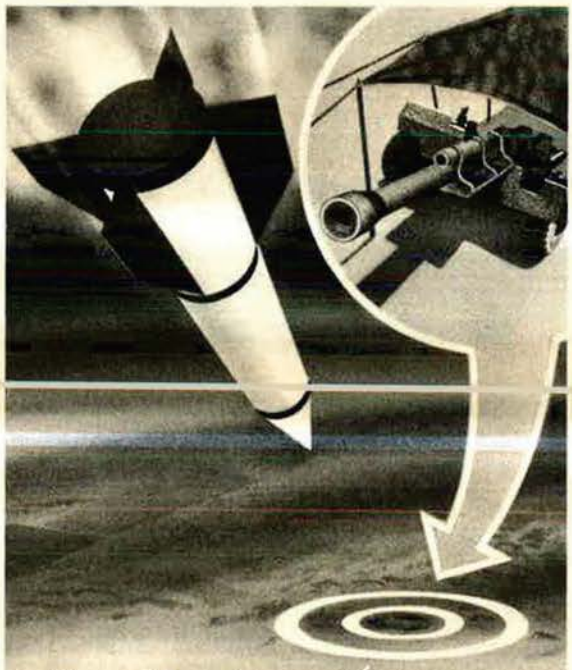

Camouflaged or no-show targets.

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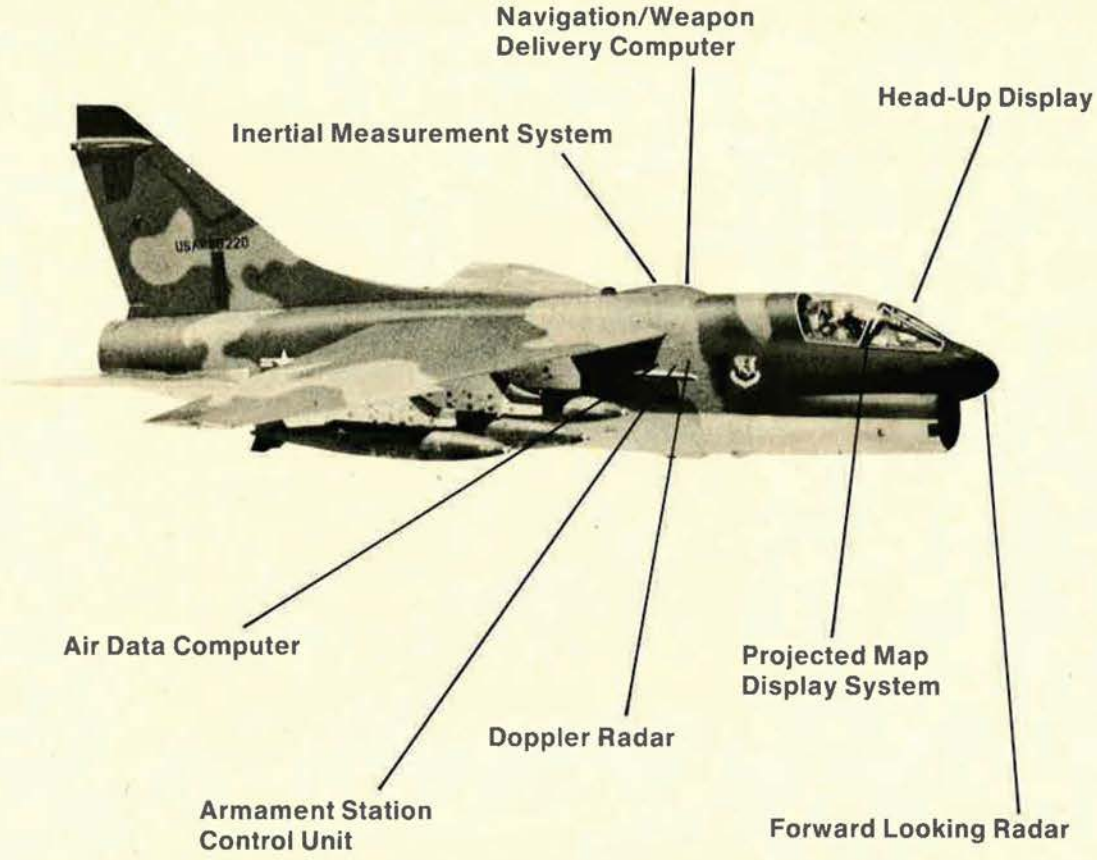

The whole is greater than the sum of its parts.

This simple statement is the best way to describe today's A-7. Its advanced electronic systems are so skillfully integrated that they out-perform each of their individual capabilities. Together they make the A-7 the most versatile and effective close air support and interdiction aircraft in the world.

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Other aircraft today contain many of the same components found in the A-7. But the A-7 is the only weapons system in operation with demonstrated proof that its integrated whole is greater than the sum of its component parts.

VOUGHT SYSTEMS DIVISION
LTV AEROSPACE CORPORATION

AIR FORCE MAGAZINE

PUBLISHED BY THE AIR FORCE ASSOCIATION

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NOVEMBER 1973

THIS MONTH

THIS MONTH'S COVER . . .

The cover photo, by USAF Sgt. William F. Diebold, shows the C-5 at Cam Ranh Bay, on its maiden voyage to Vietnam, back in 1970. For a pilot's report on the giant transport, *see p. 38.*

THE DEPARTMENTS

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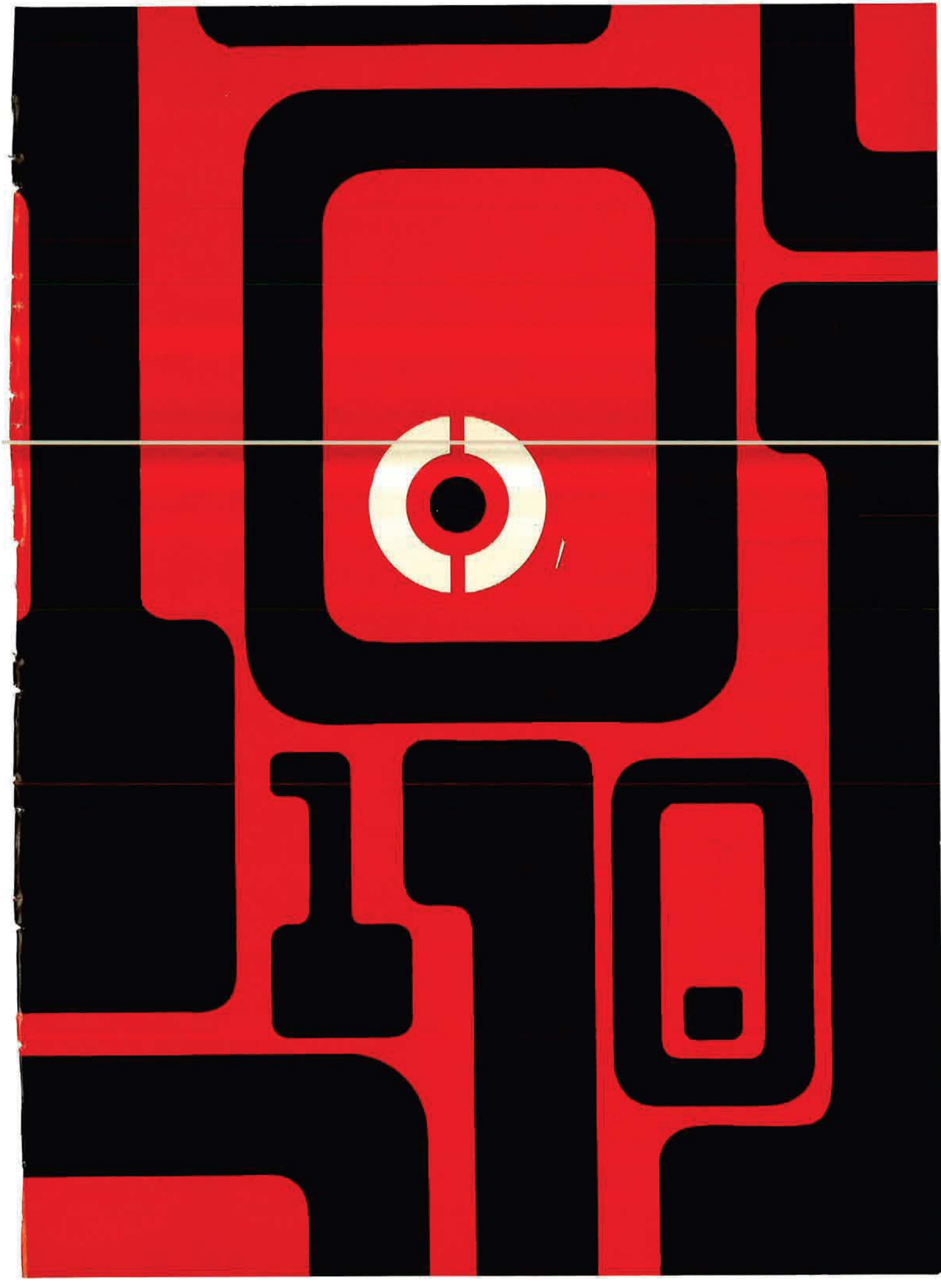


ADOPTED AT THE WASHINGTON CONVENTION...

The Air Force
1973-74
O

"This we pledge. . . ." Following is the text of the Air Force Association's annual Statement of Policy, as unanimously adopted on September 17, 1973, by delegates to AFA's twenty-seventh annual National Convention, meeting in Washington, D. C.

THE central defense issue of today is people.

For the first time in more than three decades, the United States has chosen to man its armed forces on a purely voluntary basis, without the pressures of conscription. Whether this can be accomplished without jeopardizing the strength needed to deter war and preserve our national influence on world affairs remains to be seen. But the surest way to make the volunteer force work is by enhancing the values of the professional military career. And the quickest way to make sure the volunteer force will not work is by degrading, eroding, and mocking those values.

Ironically, there is a concerted, and growing, effort to do just that.

Money is not the only issue, although it obviously is the ultimate one. Long years of hard effort, in which the Air Force Association is proud to have played an influential part, has resulted in a scale of compensation for military men and women that is not far out of line with those in the civilian segment of the economy.

But man does not live by bread alone. He also needs dignity, pride, and satisfaction in his life work, recognition and appreciation by his peers, and a sense of purpose and direction.

The disadvantages inherent to life in the military—frequent moves of home and family, hours and working conditions dictated by mission requirements, lack of job mobility, the inability to strike, restrictions on personal freedom made necessary by the structured discipline of military service, and frequently the risk of life and limb—find no comparability in civilian life.

Traditionally, these military "fringe penalties" have been compensated for by benefits peculiar to and suited for the serviceman and woman—the convenience and economies of the exchange and commissary, medical care for the individual and his dependents, self-financed on-base recreational facilities, special incentive pay for critical skills, and the like. "The Air Force takes care of its own" has become more than a slogan.

Association's Statement Policy

Now the ability of the Air Force, and its sister services as well, to "take care of its own" is under severe attack. At a time when the services are completely dependent on their ability to attract and, more importantly to retain, the highest quality personnel they have ever needed, the human incentives that must underlie the achievement of a volunteer force are being chipped away, derided, distorted, legislated against.

An examination of this effort reveals an emerging pattern that is ominous in its end results. The defense budget is depicted as swollen, when, as a percentage of total federal spending, the FY '74 request is the lowest in twenty-four years, as a fraction of total public spending (federal, state, and local), it is even lower, and, as a percentage of Gross National Product, it is *twenty-five percent* below the level of ten years ago.

But all this is overlooked by the economizers—an uneasy but effective coalition among some fiscal conservatives and those who are either simply antimilitary or find no threat extant in the world. And, with personnel costs now taking up more than half the total defense budget, the target of the economizers becomes the military man himself and not his weapon systems. All ranks, all components, and all services are involved.

Under these attacks, if they are not countered successfully by broad public understanding of the facts, the attractiveness of the military career will dwindle. Resignations and early retirements already are accelerating. Recruiting standards are under severe pressure at this moment. Force levels will begin to go down, a process hastened in all probability by legislation. The ability to field, man, and maintain critical weapon systems will be eroded, and the erosion used to justify reductions in the number and quality of the weapons themselves. Under way, unless the tide is turned, is a downward spiral of military strength.

If this occurs, a reduction of national commitments is inevitable, and the coat of American involvement in world affairs will be cut to fit the cloth of our declining power. World leadership will pass to those who choose to remain strong. And the likelihood that the aims of the strong will coincide with the aims of the weak is small indeed. In the end, it all goes back to people.

Therefore, in this year of 1973, the Air Force Association herewith reaffirms its belief in, its concern for, and its support of the men and women of the Air Force and of all the armed services. They have never needed help more urgently. They will get it from the Air Force Association, to the full extent of our abilities, our resources, and our energies.

This we pledge. ■

AFA's Policy Resolutions for 1973-74

The following resolutions were unanimously adopted by delegates to AFA's twenty-seventh annual National Convention in Washington, D. C., on September 17, 1973.

No. 1

FLIGHT PAY

WHEREAS, retention of qualified, experienced flying personnel continues to be a problem; and

WHEREAS, recent congressional action has created uncertainty and concern as to the stability of the flying pay program among career flying personnel of the military services; and

WHEREAS, if current inequities continue to exist, the possible severe impact of early retirements and increased resignations will create considerable added training and replacement costs and eventually impair mission capability; and

WHEREAS, in response to congressional suggestion and to overcome the inequities created by the Fiscal '73 Appropriations Act, the Department of Defense has submitted a legislative proposal, H.R. 8593, to the Congress which would restructure the present career incentive pay system to make it more responsive to today's defense needs;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association recognizes H.R. 8593 as a step forward in eliminating uncertainty in the minds of military flying personnel, correcting existing inequities in aviation career incentive pay and providing incentives to attract and retain qualified and experienced career aircrews; and,

BE IT FURTHER RESOLVED that the Air Force Association urges the Congress in its deliberations on H.R. 8593 to seek additional insights on the issue from the people affected by it—the aircrews themselves.

No. 2

B-1 ADVANCED BOMBER

WHEREAS, the national strategy of Realistic Deterrence rests upon the maintenance of a blend of land-based missiles, sea-based missiles, and manned bombers—a blend known as the Triad; and

WHEREAS, each element of the Triad is essential to a strong deterrent posture through its ability to compensate for potential vulnerabilities in any one system; and

WHEREAS, the manned bomber component of the Triad requires, for its continued effectiveness, a new aircraft to meet the requirements for higher penetration speeds, reduced radar cross-section, larger payload, improved low-level penetration, dispersal, and quick reaction; and

WHEREAS, the B-1 advanced bomber possesses all these attributes together with a growth potential which ensures its value as a strategic weapon system over many years; and

WHEREAS, the Air Force has requested $473.5 million in FY '74 for the B-1 development program with a view to a first flight of the aircraft in 1974 and a production decision in 1976;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association strongly urges the President, the Secretary of Defense, and the Congress to support the Air Force request for the B-1 development program as a critical and urgent requirement in maintaining the effectiveness and credibility of the strategic deterrent Triad.

No. 3

F-15 ADVANCED FIGHTER

WHEREAS, to ensure that our ground forces and our close-air-support aircraft can survive and operate effectively in tactical combat areas, it is imperative that we control the airspace in such areas; and

WHEREAS, the Soviet armed forces have developed several new tactical aircraft in recent years including supersonic air-to-air fighters and interceptors, while the most effective air-to-air fighter in our armed forces today was developed more than ten years ago; and

WHEREAS, the highest priority program for our tactical forces is the continued development of the F-15 aircraft as a high-performance, highly maneuverable fighter equipped with a balanced mix of air-to-air weapons to provide an outstanding close-in visual and medium-range, all-weather kill capability; and

WHEREAS, the flight-test program which has been ongoing since July 27, 1972, has proved to be the most successful of any fighter program ever conducted by the Air Force; and

WHEREAS, this test program has unequivocally proved that the integrated F-15 airframe and the F100 engine provide the outstanding advanced fighter which the Air Force originally envisioned;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association urges the Congress and the Administration to support full production and deployment of the F-15 as projected by the Air Force.

No. 4

A-10 AIRCRAFT

WHEREAS, the Air Force, after a comprehensive analysis of the close-air-support mission requirements and characteristics, has defined a highly survivable weapon system for maximum target destruction and minimum aircraft attrition, truly specialized for close air support of ground troops, denoted as the A-10; and

WHEREAS, this aircraft will have excellent maneuverability, long loiter time, a large payload, high survivability, low life-cycle costs, and ease of maintenance; and

WHEREAS, the prototype fly-off has been completed and a contractor selected for full-scale development; and

WHEREAS, the Air Force has requested $112.4 million for continued R&D and $30 million for long-lead procurement in FY '74; and

WHEREAS, a production decision will not be made until after the TF34 engine has completed endurance qualification and the 30-mm gun has been flight tested;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association urges the Administration and the Congress to support the Air Force in its efforts to develop and produce the A-10 weapon system at the earliest possible date so as to enable the Air Force to fulfill in the most effective manner possible its assigned role of providing close air support for ground forces.

No. 5

MINUTEMAN III

WHEREAS, the interim SALT agreements limit the US to fewer ICBMs and SLBMs than the Soviet Union; and

WHEREAS, the agreed-upon disparity in launchers and throw weight was acceptable to the US only because of our technological superiority, particularly in the MIRV area; and

WHEREAS, the Minuteman III with MIRV, Command Data Buffer, and the upgraded silo has a far superior capability to previous Minuteman systems; and

WHEREAS, with an ICBM deterrent force made up entirely of Minuteman III, more deliverable warheads would survive a first strike against the United States, thus confronting any potential enemy with a deterrent of enhanced credibility;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association strongly urges the Administration, the Department of Defense, and the Air Force to pursue the goal of replacing all Minuteman II missiles with Minuteman III.

No. 6

AIR DEFENSE

WHEREAS, the Soviet Union has developed, tested, and is well on the way to deployment of a new supersonic intercontinental bomber, the Backfire; and

WHEREAS, the air defenses of North America have been seriously eroded over the past decade through cutbacks in deployment of forces and in the lack of development of new interceptor systems; and

WHEREAS, the ability of a potential aggressor to breach our inadequate detection and interception network has been demonstrated several times in recent years; and

WHEREAS, both qualitative and quantitative improvements in our air defenses are needed if we are to deny an aggressor a virtually free hand in attacking targets in this country;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association calls for reinforcement and modernization of our present air defense structure to cope with the existing threat; and

BE IT FURTHER RESOLVED that current programs designed to modernize and improve our air defenses be accelerated, to include the Airborne Warning and Control System (AWACS), an improved manned interceptor (IMI), and complete over-the-horizon backscatter (OTH-B) radar coverage.

No. 7

ADVANCED AIRBORNE COMMAND POST

WHEREAS, the effectiveness of our deterrent posture is keyed to the survivability of our strategic retaliatory forces and the command control system which directs the employment of these forces; and

WHEREAS, an integral element of a secure command control system is the provision of airborne command posts, both for the National Command Authority and for the strategic forces themselves; and

WHEREAS, a Joint Chiefs of Staff requirement calls for the provision of seven modified 747 aircraft, for the National Command Authority and for the Strategic Air Command, as Advanced Airborne Command Posts; and

WHEREAS, these newer and larger aircraft are necessary to provide space and power for a suitably sized battle staff and required communication equipment demanded in an Advanced Airborne Command Post;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association supports the development program and follow-on procurement of these modified 747 aircraft with a view to achieving an Advanced Airborne Command Post capability at the earliest practicable date.

No. 8

AWACS

WHEREAS, analyses of actual combat results over North Vietnam document the essentiality of providing our tactical air forces with radar coverage in any conflict wherein the enemy forces approach numerical parity; and

WHEREAS, in order to win air superiority against a well-equipped enemy it will be necessary to carry the battle into his territory and beyond the range of friendly, land-based tactical air control radar systems; and

WHEREAS, the operational demonstration of the AWACS in Europe was eminently successful and demonstrated the potential for integration with US Army and Navy theater forces as well as NATO ground command and control systems, thereby supporting all theater elements; and

WHEREAS, the Soviet Union heavy bomber threat has **not** decreased in recent years; and

WHEREAS, the Soviet Union is building a new supersonic bomber designated the Backfire, which has the capability to strike the Continental US on two-way missions with air refueling; and

WHEREAS, the present SAGE system of command and control for air defense cannot survive a missile attack and its current radar system is ineffective against low-flying penetrators due to radar line-of-sight limitations; and

WHEREAS, the Continental Air Defense System has been virtually dismantled since 1967 in anticipation of the modernized program consisting of AWACS, OTH-B radars, and the IMI; and

WHEREAS, the Air Force Association fully recognizes the utility of AWACS as a broad and vital national defense capability, in addition to the strategic defense and tactical roles assigned to this system by the Air Force at present and, therefore, encourages the deployment of 42 AWACS requested by the Air Force;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association urges completion of the AWACS development program and the implementation of AWACS with all deliberate speed.

No. 9

DEFENSE R&D PROGRAM

WHEREAS, the Soviet Union's level of effort in the field of defense-oriented research and development over the past several years has exceeded that of the United States by some fifty percent; and

WHEREAS, the Soviet Union enjoys the additional advantage of being able to conduct major portions of its technological efforts in secret while United States programs generally do not enjoy this advantage; and

WHEREAS, the opportunity for Soviet technological surprise is thereby increased;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association urges the Administration and the Congress of the United States to increase the nation's defense R&D to a level second to none.

No. 10

STRATEGIC PARITY IN ICBMS

WHEREAS, the SALT interim agreement on offensive strategic weapons limits the United States to a substantially smaller number of ICBMs and SLBMs than the USSR; and

WHEREAS, the Soviet Union already has in being a force of 313 gigantic SS-9 ICBMs and is building yet larger, new SS-X-18 missiles, thereby compounding the advantages of greater numbers with a vast lead in throw weight; and

WHEREAS, the Soviet Union was granted the advantage of a larger number of ICBMs and SLBMs because, at the time of the signing of the interim agreement, the USSR did not have MIRV capabilities; and

WHEREAS, the Soviet Union has subsequently flight tested MIRV technology on at least two missile systems, including one involving at least six individually targetable warheads with a yield in the megaton range;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association urges the Administration to vigorously pursue and categorically insist on strategic parity in all future arms accords with the Soviet Union; and

BE IT FURTHER RESOLVED that the Air Force Association urges the Department of Defense and the US Congress to adopt a program to ensure at least strategic parity regardless of the outcome of SALT II, such a program to include options for (1) the deployment of 1,000 Minuteman III missiles, (2) increased accuracy and greater warhead yield, and (3) a follow-on ICBM development program.

No. 11

RECOMPUTATION OF RETIRED PAY

WHEREAS, for a century, until 1958, Congress provided compensation for career personnel of the armed forces who retired by basing their retirement pay upon active-duty pay rates; and

WHEREAS, Congress departed from that system in 1958 and affirmed such departure on a permanent basis in 1963; and

WHEREAS, that action broke faith with those who served their country faithfully and well; and

WHEREAS, that action also created an inequity wherein increasingly different individuals on the retired rolls receive different compensation for equal service; and

WHEREAS, the Air Force Association has long supported legislation to provide equal compensation for equal rank and equal years of service by basing military retired pay upon prevailing active-duty scales; and

WHEREAS, AFA continues to support the principle of full recomputation while, at the same time, fully recognizing that budgetary considerations militate against such an eventuality at this time; and

WHEREAS, legislation has been introduced in the Congress which reaffirms the principle of recomputation;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association urges the Department of Defense to support and the Congress to pass legislation now pending which will authorize recomputation when retirees reach age sixty, with such recomputation to be computed on the basis of military pay scales in effect on January 1, 1972.

No. 12

AMNESTY

WHEREAS, there has been a number of legislative proposals in the Congress seeking to provide general amnesty to those individuals who have unlawfully avoided or escaped military service through desertion, failure to report for induction, or other means; and

WHEREAS, nearly 46,000 American lives were lost in combat in Southeast Asia and more than 300,000 Americans were wounded there; and

WHEREAS, any general amnesty to those who have unlawfully evaded military service would be a rank injustice to those who have suffered in performing their duty to their country;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association opposes any amnesty for those who have unlawfully avoided military service; and,

BE IT FURTHER RESOLVED that each case of potential amnesty should eventually be examined and adjudicated on an individual basis according to presently existing laws and regulations.

No. 13

STATUS OF MISSING IN ACTION AND PRISONERS OF WAR IN SOUTHEAST ASIA

WHEREAS, the North Vietnamese government, as part of the cease-fire arrangement in Southeast Asia, agreed to assume responsibility and accountability for all Allied nationals captured in any country in Southeast Asia; and

WHEREAS, the North Vietnamese government thus far has failed to live up to this agreement and has even refused to return more than fifty bodies of Americans known to be buried in North Vietnam; and

WHEREAS, more than fifty men still carried officially as POWs have not been returned, or declared dead, or otherwise accounted for by the North Vietnamese; and

WHEREAS, no information whatsoever is currently available on more than 1,200 individuals still listed as Missing in Action; and

WHEREAS, the cessation of all US military operations in Southeast Asia has forced recourse to diplomatic and political leverage on the North Vietnamese;

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association call upon the President of the United States to take whatever steps may be necessary to force the North Vietnamese government to account as fully as possible for all Americans identified as Missing in Action or Prisoners of War in Southeast Asia; and

BE IT FURTHER RESOLVED that the Association call upon the Congress of the United States to affirm its support of such an effort, including the passage of appropriate legislation, if required.

Continuing Resolutions

The following continuing resolutions were also adopted unanimously by delegates to the 1973 National Convention:

Advanced Technology for Ballistic Missile and Military Space Systems

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association urge the continuation and expansion of technology programs in the fields of ballistic missile and military space systems.

Space Shuttle

NOW, THEREFORE, BE IT RESOLVED that the Air Force Association endorses and supports the US Space Shuttle program and calls upon the Administration, the Congress, and the American people to provide the authorization and the funds needed to support the technological, operational, and organizational aspects of the Space Shuttle as determined by NASA and the Department of Defense.

Within this simple shape 32 nations found the world's most versatile airlifter.

It carries cattle in Colombia. Bulldozers in Brazil. People in Peru. In other versions it's America's leading tactical transport: troop carrier, tanker, mapper, rescue plane, and an aircraft of many other missions.

Its labors are varied and immense, as befits a plane built in 45 models and named Hercules.

Some use it to hunt icebergs. Or seed clouds. Other models carry the commerce of industry, even pipe 60 feet long. Abroad Hercules serves as a country builder, hauling 45,000 pound loads to remote areas closed to other aircraft, landing on very short rough runways in only 2100 feet. Then trucks and tractors rumble down its low ramp ready to use. Generators and portable hospitals slide out of its huge rear door. In jungle, desert and mountain areas, Hercules helps countries carve out farmlands and build new cities.

Even the Antarctic is home to Hercules. There it changes wheels for skis at the flick of a switch. About the only thing this master of many missions hasn't done is land on water. But it could. The 46th model could be an amphibian.

Because it fills so many needs, other countries have bought more than $1 billion of these workhorses.

Thus far 1200 have been built and new versions of this amazing airlifter continue to roll off Lockheed assembly lines in Georgia.

Hercules, a great American success story from the airlift capital of the world.

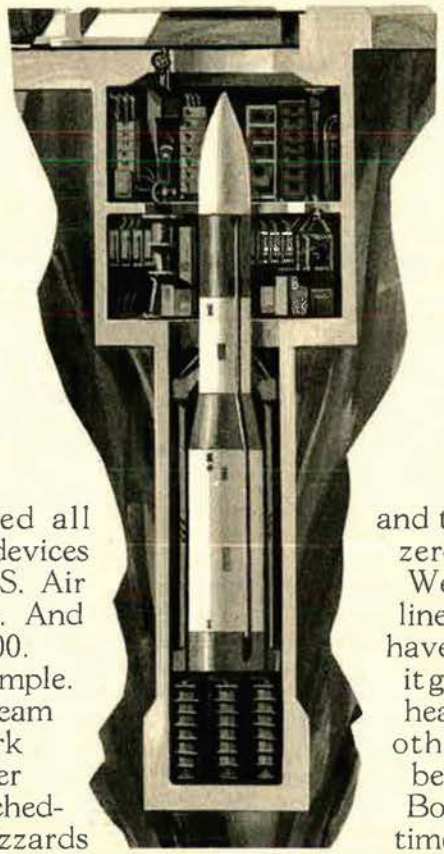
Lockheed-Georgia

A Division of Lockheed Aircraft Corporation
Marietta, Georgia, U.S.A.

"Time is the most valuable thing a man can spend."

Theophrastus.

Minuteman.
On time, every time, for 11 straight years.



Last year, Boeing delivered all Minuteman missiles, training devices and other equipment to the U.S. Air Force on or ahead of schedule. And underran the program $4,515,000.

That's not just one isolated example. In 1971, the Boeing-Air Force team finished its Minuteman III work in North Dakota $7,000,000 under target and 45 days ahead of schedule. This, despite periods of blizzards and temperatures of 45 degrees below zero.

We've been meeting Minuteman deadlines like this for over a decade. Changes have been made to the missile, giving it greater range, improved accuracy and heavier payloads. From time to time, other changes in Minuteman might be necessary. If so, you can count on Boeing being on time, every time.

BOEING

Airmail

Eddie Rickenbacker

Gentlemen: The reference to the death of Eddie Rickenbacker in AIR FORCE Magazine of September '73 contains an error that has been repeated so often it has almost become a legend.

I refer to the statement that Rick was General Pershing's chauffeur. The fact is that he never drove a car for the General.

I was a pilot in the 93d Aero Squadron, 3d Pursuit Group, flying the SPAD XIII at St. Mihiel and in the Argonne—and knew Rick very well and have been close to him down through the years. He told me that he was never the General's chauffer. He did, on occasion, drive a car for Billy Mitchell.

By way of confirmation, you might read p. 88 of Rick's fine autobiography, *Rickenbacker,* published by Prentice-Hall of Englewood Cliffs, N. J.

Charles R. D'Olive
Cedar Falls, Iowa

• *Thanks for the correction. For more about the modest Mr. D'Olive, see "Aerospace World," p. 28.*—THE EDITORS

Setting the Record Straight

Gentlemen: I read your September 1973 Anniversary Issue of . . . AIR FORCE Magazine with great interest. I enjoyed reminiscing a bit with your "A Look Back" article. I was, however, disappointed when I came to the portion covering the senior command structure of the Air Force Communications Service—p. 65 in "The Major Commands" section. Several inaccuracies are apparent and particularly disturbing. I am sure that many people use . . . AIR FORCE Magazine as an important piece of reference material in their normal work, and consequently, I hope you might be able to set the record straight in a future issue.

First, immediately below General Stoney's photograph, you have our AFCS Headquarters at Scott AFB, Ill. This command has been headquartered at Richards-Gebaur AFB, Mo., since July 1970.

Second, the Commander of our Pacific Communications Area is Brig. Gen. George J. Iannacito and not Brig. Gen. Howard E. McCormick, whose name and photograph appeared.

I might also point out that you presented information on only three of our Areas, when, in fact, there are five Areas under Headquarters AFCS, each of which is the equivalent of a Numbered Air Force. The others are Northern Communications Area at Griffiss AFB, N. Y., commanded by Brig. Gen. Kenneth P. Miles, and Tactical Communications Area at Langley AFB, Va., commanded by Col. John M. Bolger. . . .

Lt. Col. R. G. Green, USAF
Dir. of Information, Hq. AFCS
Richards-Gebaur AFB, Mo.

• *AIR FORCE Magazine apologizes to Air Force Communications Service for the inaccuracies in the Photochart in the September "Anniversary Issue." Correct information about AFCS, including the location of its Headquarters and the location and commanders of its five Areas, appeared on p. 67 of the May '73 "Almanac Issue" of AIR FORCE.*—THE EDITORS

A Face From the Past

Gentlemen: Behold, a face from the bittersweet past! The photo (September '73, p. 39) of Brig. Gen. Guy Hairston, Jr., [new Deputy Director of USAF Information], harks me back to my days as a cadet at the USAF Academy. The General was then Major Hairston, Air Officer Commanding the 11th Squadron: our lord, counselor, den mother, and friend. He was truly an outstanding man among outstanding men, and I'm delighted to learn he's done so well these twelve short years.

Capt. Byron M. Travis, USAFR
Tucson, Ariz.

Capturing the Museum

Gentlemen: The Air Force Museum staff was highly appreciative of the efforts of Mr. William Schlitz that resulted in the excellent article on the Air Force Museum in your September issue.

We thought you did a great job of capturing the museum as it stands today . . . two years into the new building. Certainly many of the Air Force personnel worldwide who helped pay for the new facility will appreciate getting a graphic update of their new museum!

Col. Bernie S. Bass, USAF
Director, Air Force Museum
Wright-Patterson AFB, Ohio

Another Norman Rockwell?

Gentlemen: I got quite a kick out of your front cover by Bob Stevens on the Anniversary Issue of 1973.

More covers like that would suit my feelings. Let's have more. Maybe we got another "Norman Rockwell."

Andrew Gruttadauro
Chicago, Ill.

The A-7D in SEA

Gentlemen: We were extremely proud to read Mr. John L. Frisbee's article, "How the A-7D Rewrote the Book in SEA," in your August '73 issue of AIR FORCE Magazine. All of us, presently deployed, believe your account to be tremendously accurate and an excellent depiction of our operations over here, at Korat. It is most rewarding to read journalistic work of such high quality, especially when it concerns the Air Force A-7D.

Although the A-7D was only in combat for ten months, the unparalleled accuracy and versatility demonstrated in high, medium, and low threat environments have given tactical airpower a greatly expanded capability. As of 15 August 1973, the Hummer has flown over 10,000 combat sorties in SEA. AF A-7Ds flew from Hanoi and Thai Nguyen in North Vietnam to the Mekong Delta in the South and from Kampot on the Cambodia coast to the Plain of Jars in Laos. No other aircraft has proven itself capable of such tactical flexibility in such a short time frame.

There is one more chapter we desire to add to the short history of SLUF. That chapter deals with the deep satisfaction we sustained when it was learned the A-7D was the last combat strike sortie to depart the Cambodian airspace on 15 August 1973. "Slam" flight, composed of aircraft 70-930 and 70-345, piloted by Maj. John H. Hos-

kins and Capt. Lonnie O. Ratley, III, will go down in our unit history as marking the end of our involvement in America's longest war.

The Tactical Air Command personnel supporting the 354th TFW deployed are unanimous in their hope that our participation has aided in creating an atmosphere conducive to peace and stability in the decades to come. We stand ready to react any time, anywhere, to threats against the peace and security of the free world.

The Officers, NCOs, and Airmen of the 354th Tactical Fighter Wing; 355th Tactical Fighter Wing; 23d Tactical Fighter Wing; and 3d Tactical Fighter Squadron, 388th Tactical Fighter Wing
APO San Francisco

Kept in the Dark

Gentlemen: . . . [In Mr. Claude Witze's] essay, "Airpower In the News" in the August issue of AIR FORCE Magazine, you have stated ". . . it is hard to believe the end product will be any good." To which I feel compelled to reply that there is no palatable alternative.

Given the "no win" policy followed by a succession of Administrations in the conduct of the Vietnam War, even if the President were allowed to continue the bombing of Cambodian targets, there would be only stalemate—so long as there is not the will to win, no conflict can be carried to a victorious conclusion, which is the only way one should enter conflict in the first place.

Further, that "no win" philosophy has exhausted the American public's tolerance, and, coupled with the unpopularity of the war for various reasons, neither the President, nor Congress, could successfully support a renewal of the fighting in Cambodia.

In sum, the President of the United States should only be given limited power to resist an armed attack on US forces for a very short duration; action beyond that period should be voted by the representatives of the people, the Congress. The exclusion of the President from the term "representative of the people" is deliberate—recent Presidents have demonstrated that the decision to enter war is too great for one man.

And in regard to the secrecy of negotiations surrounding international diplomacy, we, the people, must awaken and make our will known that there should be no such secrecy. The events of this century have proven that the American public is the only group kept in the dark. Our "friends" as well as our enemies always *know*; We the People are always the last to know. No one should think for a minute that the Union of Soviet Socialist Republics does not know exactly what our options are and how effective they will be.

James J. Sloan
Managing Editor
American Aviation Historical Society
Ojai, Calif.

Military Health Care

Gentlemen: You are to be commended for publishing the most timely article, "Holding the Line on USAF Health Care," in your August issue. Major Hunter did a fine job in presenting the overall health picture as it affects the Air Force.

I am a member of the civilian medical profession and have high esteem for military physicians and military medicine. They are second to none. I am concerned that if some action is not taken to maintain viable medical services within the Department of Defense, irreparable harm will be done to our country.

I would hope that Members of Congress are aware of the importance of medical care in military families and that they will take the necessary steps to ensure that the quality and quantity of health care will not be compromised. As is indicated in this article, the shortage of physicians in the military is already evident. Action needs to be taken immediately to stem any further exodus of physicians. Passage of the pay bonus is an immediate and vital step which should be taken in keeping with the Administration's pledge to acquire and maintain an all-volunteer force.

I would urge that all interested citizens strongly support pay legislation which would make military pay for physicians comparable to their civilian colleagues.

Charles B. Wheeler, Jr., M.D., J.D.
Mayor of Kansas City, Mo.

Quite a Stack

Gentlemen: Thank you very much for the hard-bound issue of the AIR FORCE Magazine. I have enjoyed the publication for years, especially the Almanac Issue.

My wife kept all the magazines that came out during my seven and a half years in the North (quite a stack!) and marked the issues that contained articles about the POW/MIA situation. I deeply appreciate your concern, time, and effort on behalf of the POWs. I firmly believe all the publicity helped improve our conditions and lessened pressure on us.

Again—thank you for everything.
Lt. Col. Bruce G. Seeber, USAF
Former POW
Langley AFB, Va.

• *Bound copies of the May '73 "Air Force Almanac" issue of AIR FORCE Magazine were sent to all USAF returned POWs, as part of AFA's continuing effort in behalf of these men and those still listed as missing. See also p. 65.*—THE EDITORS

Attacks on the Military

Gentlemen: Reference "The Wayward Press" feature in the July '73 Issue:

After quoting distortions and untruths written by a Ray Howard and published in the Chicago *Sun-Times* (perhaps "Some-Times" would be more appropriate with regard to truth) on April 17 last, you mildly state: "He is simply wrong." Wrong he is, as you so ably proved. But as to being simple, I have doubts. Devious would better describe his essay. But here I am being as mild as you in my disapproval, when I would rather say that he wrote a bunch of damned lies.

Mr. Howard's attack on the military was aimed toward those who believe anything printed in the newspapers. It is a follow-on derived from the open season declared by the press on the military during the sixties. . . .

Lt. Col. Joseph W. Knight, USAF
Miami, Fla.

Military Pay

Gentlemen: I am writing in response to Rep. Les Aspin's shock that the average military pay is above the average civilian pay. The Library of Congress talks in terms of "averages." As a member of the US Air Force, I am faced with a one-year remote tour of duty (completely separated from my family) *every five years.* Is this "average" for the civilian community?

Many of us are given long (up to 179 days) tours of temporary duty (TDY), again separating us from our families. Many of the aircrews who fought in SEA were here on TDY. This TDY time does not count toward the aforementioned remote

Airmail

tour. Again, is this "average" for the civilian?

I have been in the Air Force for only five years and yet, in that time, I've had to move my family *seven* times. Is that "average" for the civilian?

The days I've worked overtime are too numerous to count, and yet I've never received one penny of overtime pay. Is that "average" for a civilian?

I challenge anyone to find *any* job in the civilian environment that compares to what many US military pilots have had to face here in SEA. Flying daily through the heaviest air defenses in history, being confronted by three very real and very grim possibilities: death, wounding or maiming, or internment (for up to eight years) in an inhumane, barbaric POW camp. All the while being disparaged and condemned by the very people they're sworn to defend.

The only job that I have ever heard of that even begins to compare to the US combat pilot's is the Air America operation in SEA. And while we're comparing, let's look at an Air America pilot's salary—$40,000.00 per year and up with significant tax breaks. Oil companies require their employees to travel extensively both at home and abroad, but again their pay is much more lucrative than a military salary.

Since the basic mission of the military is to fight, *everyone* who wears a uniform faces the possibility of combat. Surely an extra $65 per month and a tax break are not an overpayment for flying over Hanoi, crawling through a booby-trap-filled swamp, or sailing down a contested jungle waterway.

America, wake up! Your military is not a cheap "finishing school" where you can send your sons to build some "good military character" and then see them get "a real job" after their hitch is up. Your military is a group of dedicated professionals doing a demanding and oftentimes dirty job in hard times.

To make military pay less than civilian pay is criminal. To make military pay comparable to the "average" civilian pay is unjust.

I find it rather ironic that this Congress that is so concerned with "excessive" military pay is all set to vote itself a whopping twenty-five percent pay increase.

Capt. Michael J. Karaffa, USAF
APO San Francisco

Too Close to the Trees?

Gentlemen: We are a group of NCOs and officers of the 3d Marine Division awaiting space-A travel in the MAC passenger waiting area. Your August issue here was read by everyone down this row of seats. It was found to be a highly professional magazine and excellent reading for a career military man. Your letter from Captain Harrell really drew a lot of remarks. We wonder if he means that a separate "officer-enlisted" retirement proposal is what he is talking about? Perhaps he is standing "too close to the trees."

With the constant losing of benefits, privileges, etc., what does the service have to really offer the man who will do the hand combat on the ground other than early retirement? Lifelong careers at desk-bound, Air Force-type, higher command management could be hacked by many. But, what about the career of those staying combat ready through trips to the range and field exercises?

I speak for myself: I love my country, I love the Marine Corps, and my combat record in Korea and Vietnam will speak for itself, but I say twenty years is long enough for this type of life, Captain Harrell.

MGySgt. C. H. Williams, USMC
3d Btn., 12th Marine Regiment
Kadena AB, Okinawa

Military History Symposium

Gentlemen: The sixth annual Military History Symposium will be held at the Air Force Academy October 9–11, 1974. Theme of the event is to be "The Military History of the American Revolution."

In addition to a banquet address and the Harmon Memorial Lecture, three working sessions are planned and will deal with such topics as strategy and policy, worldwide impact, and the contribution to the American military tradition.

Purpose of this advance notice is to allow supporters and prospective participants to schedule the date on their planning calendars. Additional details on the theme, program, and participants will be published in a later issue. For further information, write:

Maj. Gary Anderson
Department of History
USAF Academy, Colo.

Conversation Pieces

Technically intriguing items from TRW, guaranteed to add luster to your conversation and amaze your friends.

Tornadoes, Rockets and Sonja Heine

So far, 1973 has been a banner year for tornadoes. By mid-year, more than 750 of these violent storms had swept down on the United States, killing 59 people and causing millions of dollars in property damage. Scientists expect the existing tornado record of 928 (set in 1967) to be easily shattered before the year is over.

Recently, tornado research has received help from an unexpected source — namely, studies made by TRW scientists of flow patterns in the propellant tanks in ICBM missiles. When you pump fuel out of a liquid rocket tank, much the same thing happens as when you pull the stopper out of your bathtub — a radial flow pattern develops (the particles move in spiral paths toward the center) and a vortex appears. To find out how swirling fluids behaved in propellant tanks, TRW scientists made some fundamental studies of the formation and behavior of vortexes. Further research has extended their analyses to the behavior of the large vortical patterns in the atmosphere we know as tornadoes, waterspouts, dust devils, and fire whirls.

A tornado begins with a thermal instability in the atmosphere, e.g., large mass of warm moist air under a layer of cold dry air. Under such conditions, violent updrafts may begin, around which the surrounding air begins to flow radially inward, in a swirling, spiral pattern. As particles get closer to the center of the flow pattern, their velocity increases. Some readers will recall the startling rotational speeds Sonja Heine achieved as she drew her extended arms closer to her body. Particles of air experience this same increase in rotational velocity as they get closer to the center of the system.

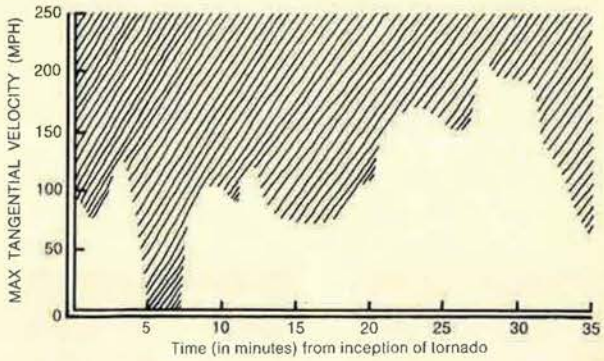
Ordinarily, turbulent diffusion opposes the swirling, and relaxes the disturbance — i.e., friction prevents Sonja from bringing her arms inward. However, in rare circumstances the radial inflow overwhelms turbulent diffusion, and a tornado develops. Actually, in a killer tornado much of the radial inflow is eventually confined to a layer near the ground, because at greater heights the increase of swirling ultimately creates a large centrifugal force that counteracts further radial inflow.

While dust and debris are being swept upward, the funnel of the tornado appears to descend. The latter occurs because the faster the air swirls, the more its temperature drops and the less moisture the air can contain. The resulting condensation of water vapor is seen as the funnel of the tornado, snaking down from the ominous cloud deck. Using these facts, TRW scientists have developed a formula which enables them to calculate the maximum velocity of winds in a tornado.*

TRW scientists have estimated the maximum wind speed in the funnel of a major tornado at around 225 m.p.h. Much of a tornado's destructiveness, however, stems not from the speed of the swirling wind, but from the radically low pressures inside the funnel. As a tornado engulfs a building, air trapped inside the building causes it to explode.

While much remains to be learned about large vortical storms, TRW's work with swirling liquid rocket propellants has lead to an important meteorological understanding of the behavior of destructive rotational storms.

**Maximum velocity, $V = (kgh)^{1/2}$, where h is the altitude of the cloud deck, k the fraction of the distance between cloud and ground the funnel cloud tip has descended, and g the acceleration of gravity.*



Using Weather Bureau data from the tornado of April 2, 1957, TRW scientists calculated the above time-history of estimated maximum wind speeds.

For further information, write on your company letterhead to:

TRW
SYSTEMS GROUP

Attention: Marketing Communications, E2/9043
One Space Park Redondo Beach, California 90278

MIA/POW Action Report

By William P. Schlitz

ASSISTANT MANAGING EDITOR, AIR FORCE MAGAZINE

Interest on AFA Insurance

AFA's Board of Directors has voted to pay interest on the face value of AFA life-insurance policies held by men missing in action in Southeast Asia. *(See also p. 65.)*

If, or when, an MIA is declared to have been killed in action, the interest will be compounded back to the officially established date of death.

The payment of interest—at five percent—would be in addition to a refund of premiums paid into the group insurance program from the time of the man's death.

"AFA's service to Air Force people spans more than twenty-five years," said Martin M. Ostrow, immediate Past President of AFA, "and we felt that payment of interest was the right thing to do for beneficiaries of our members who have lived under a cloud of personal and financial uncertainty for years, even though this is not a legal obligation under the policies."

The total interest payment to beneficiaries of the 106 MIAs carrying AFA insurance—many of whom have been in missing status for years—could amount to several hundred thousand dollars beyond the principal amount of policies and premium refunds.

The decision on interest payments was announced in September at AFA's National Convention, during which AFA officials presented a Certificate of Honor to Frank A. Sieverts, Special Assistant to the Deputy Secretary of State for MIA/POW Matters.

Mr. Sieverts, long involved in MIA/POW activities and State Department liaison with the League of Families, remarked on the continuing commitment to "do all we can to obtain information on our missing personnel." He noted the extreme dissatisfaction expressed by now Secretary of State Dr. Henry Kissinger at recent Senate Foreign Relations Committee hearings. This dissatisfaction centered on North Vietnam's failure to implement the missing-in-action provisions of the Paris accords.

(Dr. Kissinger, during the Senate Committee hearings on his nomination to become Secretary of State, acknowledged that there had been virtually no accounting by the North Vietnamese for the 1,300 MIAs. He said that this failure constitutes the single most disappointing aspect of the cease-fire agreement. The Soviet Union and China have been asked to assist in the accounting effort by pressing North Vietnam, and Dr. Kissinger promised that he will again bring the subject to China's attention at a forthcoming meeting.

(Dr. Kissinger reported to the Committee that he has met regularly with the League of Families' Board of Directors and promised that he will continue to do so.)

"Our delegation to the Four-Party Military Talks in Saigon is now in the forefront of the continuing effort to bring North Vietnam into compliance with this part of the agreement," Mr. Sieverts said. "In addition, search teams from our Joint Casualty Resolution Center in Thailand are in the process of carrying out their humanitarian mission. Their operations have been limited thus far to government-held areas of South Vietnam. We are continuing to press for access to all parts of Indochina where our men were lost. These teams also deserve our recognition and support as they go forward with a tough, frustrating task of searching for information on our men," he said.

Mr. Sieverts spoke encouragingly of the new protocol recently signed in Laos, which contains "specific new language on accounting for our MIAs. Our senior diplomats in Laos have made it clear to the Pathet-Lao leaders the importance we attach to obtaining the fullest possible information on our missing men as soon as possible." Some 350 Americans are listed MIA in Laos.

The protocol provides for an end to hostilities and a governing coalition made up of the present government and the Communist Pathet-Lao. In the interest of accounting

Lt. Gen. Daniel "Chappie" James, Jr., receives AFA's Certificate of Honor for his MIA/POW work from AFA President Martin M. Ostrow.

Also at AFA's annual Convention, President Ostrow presents an AFA Certificate of Honor to Frank A. Sieverts of the State Department for his MIA/POW efforts.

Nine Receive MIA/POW Awards

At AFA's National Convention in September, the following individuals received Certificates of Honor "for outstanding service to the cause of human rights by virtue of taking positive action in behalf of Americans who are missing in action or held prisoner of war in Southeast Asia":

John A. Foster
California AFA Historian
Anaheim, Calif.

Margaret M. "Dolly" Foster
President, Gen. Jimmy Doolittle Chapter, AFA
Anaheim, Calif.

Col. Archie W. Gratch, USAF
Chief, Missing Persons Branch
Hq. Air Force Military Personnel Center
Randolph AFB, Tex.

Lt. Gen. Daniel James, Jr., USAF
Principal Deputy Assistant Secretary for Public Affairs
Department of Defense
Washington, D. C.

Lt. Col. James B. Jones, USAF
Director of Information
US Air Force Academy, Colo.

Dr. Jess Nathan
Past President, Santa Monica Chapter, AFA
North Hollywood, Calif.

Brig. Gen. Russell G. Ogan, USAF
US Deputy Chief of Staff/Live Oak
Hq. US European Command
Vaihingen, Germany

Dr. Roger Shields
Assistant to the Assistant Secretary (International Security Affairs)
Department of Defense
Washington, D. C.

Frank A. Sieverts
Special Assistant to the Deputy Secretary for POW Matters
Department of State
Washington, D. C.

for our men missing there and of other factors, US Embassy officials announced America's readiness for "cooperation and assistance."

An Ex-POW's Language Skills

For at least one former POW, the years spent in enemy hands weren't a complete loss.

Air Force Maj. Robert Jeffrey was shot down near the Chinese border in December 1965. During his seven years in captivity, Major Jeffrey spent time in eight North Vietnamese prison camps.

He and other strong-minded POWs made the best possible use of the time. So much so, in the case of Major Jeffrey, that he was granted twenty-one semester hours of credit in languages when he entered Southern Methodist University this fall.

The Major, whose only previous language training was high school Latin, earned credit for nine hours of French, six hours of German, and six hours of Spanish in standardized placement tests covering both listening and reading skills. This is a record at SMU in language placement hours and number of languages.

Ex-POW Maj. Robert Jeffrey taking language tests at Southern Methodist University.

Major Jeffrey, among the first group of POWs to be released last February, has good reason to be proud of the progress he and other captives made during their confinement. "At first, I had to learn strictly by memory, because we were not allowed any writing materials," he remembers. His linguistic education began when he asked a prison roommate who had studied Spanish to teach him the language.

In 1969, when many prisoners were moved into large rooms in Hanoi, a major language program was begun. A staff was organized to teach French, German, Spanish, and Russian. Not allowed any teaching materials, the POWs made their own. These had to be carefully guarded against seizure by the North Vietnamese guards.

Major Jeffrey is pursuing his degree under the Air Force Institute of Technology education program, which allows active-duty personnel thirty-six months of full-time study to complete a bachelor's degree. As a career officer, he is hoping for an attaché post later, perhaps in Europe.

Major Jeffrey is married and has an eight-year-old son, who was ten months old when his father was shot down.

Returnee's New Assignments

NORAD reports that five ex-POWs have chosen to continue their Air Force careers with the Aerospace Defense Command.

They are:

Capt. Gary R. Sigler, nearly six years a POW, assigned to the 4600th Operations Squadron, Ent AFB, Colo., for T-39 jet trainer flying duty.

Capts. William A. Gauntt and Michael S. Kerr, assigned to the 84th Fighter Interceptor Squadron, Castle AFB, Calif., as F-106 pilots.

Lt. Col. William J. Breckner, Jr., will command the 4757th Air Defense Squadron, Tyndall AFB, Fla.

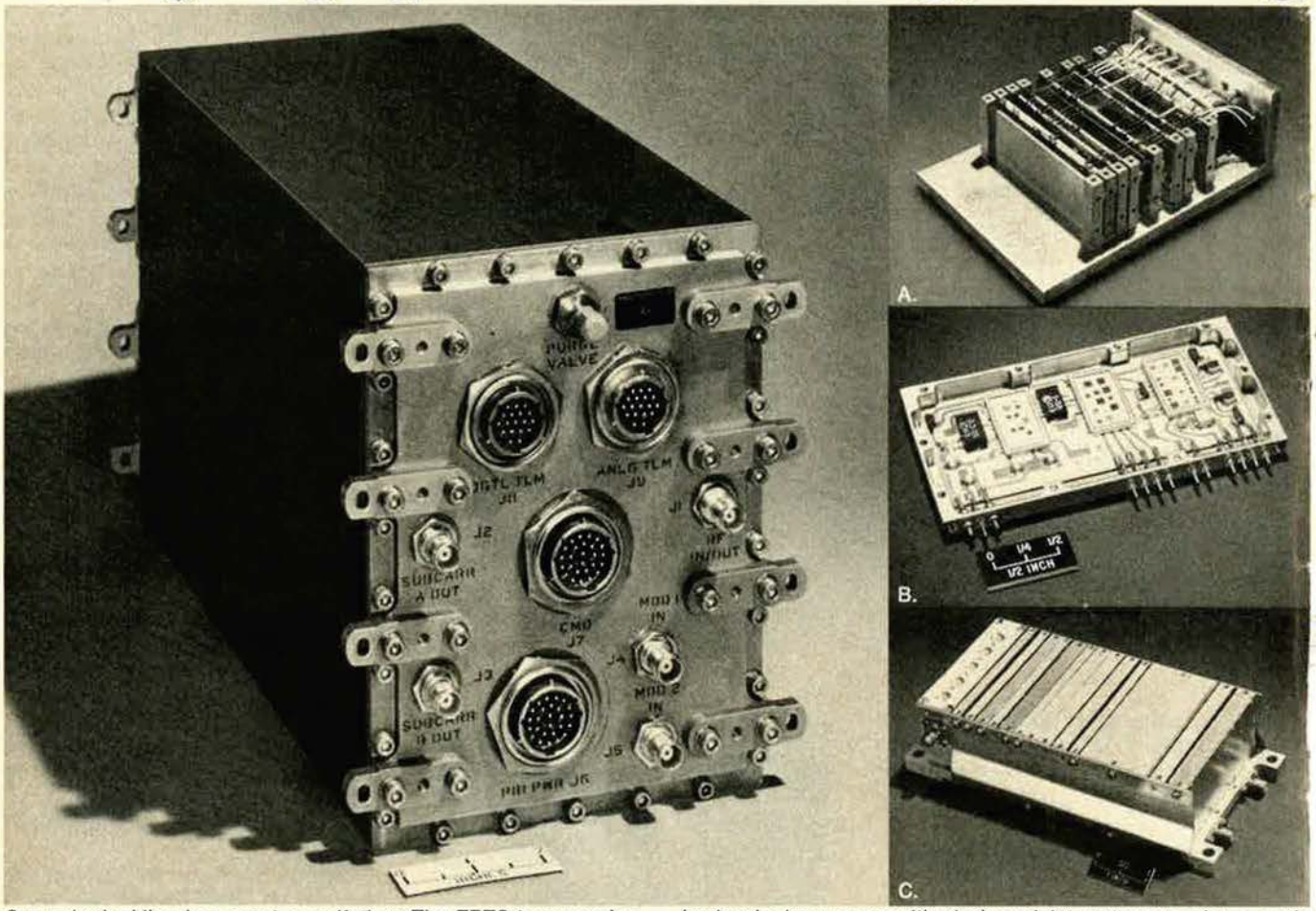
Capt. Jack M. Butcher has not yet been assigned but has chosen, under the Project Homecoming Program, to fly the F-106.

League Activities

For its part, the League of Families is persisting in its effort to keep the accountability issue in the public eye.

It plans a "symbolic cross-country run" by teams of prominent persons into all state capitals, major cities and towns, and the nation's capital. American and MIA flags and MIA bracelets are to be presented to presiding officials. The run is to take place on November 15, one week before Thanksgiving. ■

CHALLENGE:
Keeping space technology moving



Our ugly-duckling is a great-grandfather. The ERTS transponder, the son of Apollo, has provided the genes for a number of transponders being used on current space programs. And, Motorola is providing the creative power to keep space technology moving by developing a new multi-mission miniature transponder. a. early breadboard, b. typical module illustrating technological innovations, c. receiver portion which is currently undergoing rigid space qualification testing.

Many new missions demand new thinking.

A lot of people seem to think that since space program funding has dropped off, technology will slow down to the point where a standard line of products can be cranked out for years to come.

They're right... They're wrong.

It depends on your requirements. And the company you're talking to.

We look at it both ways. Some of our products are dandy for new programs even though they were designed some years ago. For example, the unified S-band transponders we supplied to the Apollo program evolved into the ERTS transponder which is the industry standard. It's size and weight-effective for several programs now in the works. But for the far reaches of the solar system and new near-Earth missions, new techniques are needed. So we've developed them. We've completed a miniature transponder that's now in testing. And we've begun development work on a micro-miniature space transponder barely bigger than a pack of cigarettes designed to increase reliability through new techniques including beam lead technology. Which approach makes sense depends on your mission requirements and a variety of other factors.

Because we have a variety of solutions (to a variety of problems, not just transponders), instead of one item to push as a panacea, we'll recommend what's right for your requirements, after checking over the long line developed for programs ranging from Jupiter, back in 1954, to Viking Orbiter 75.

The range of products we've provided and our history of pushing the state of the art to its limits are two of the reasons we've outlasted a lot of competition. We intend to outlast a lot more. We keep moving ahead as fast as possible, under contract, with Independent Development Program funds and with Motorola-sponsored R&D so we can make leaps instead of small incremental steps. But we aren't out to make changes just for the sake of change. Our interest is meeting mission require-

when money's tight.

ments at the lowest possible cost with assured reliability, whether what we sell is old or new.

Why we daily can change our answers to a single question without lying.

Component technology is still boiling, almost as fast as it was when "space" was a big enough word to send any stock skyrocketing. As a result, when you call to discuss a program you're planning, we'll give you several answers. We'll tell you what we've already done that can do the job. We'll tell you what we now can do. We'll tell you what we'll be able to do by the time your job needs doing...even if we run into a snag or two along the way. We'll tell you what we expect to be able to do. And we'll tell you where we think the technology you're interested in is heading.

This won't be done as double-talk to confuse you. It is the only way to evaluate what you can reasonably expect to get. Without paying development costs beyond your budget. It's the best way to learn how to get a better system (in at least some aspects) than you expected to be able to afford.

We're out to move up in the systems business.

A lot of people think of us as "nice, solid, reliable Motorola."

It's the old story. You don't get a reputation for being conservative in a business like ours by accident. But if you "happen" to have years of high-technology experience, you end up looking conservative, with equipment that works every time you press the button.

And we're out to build larger and larger subsystems and complete systems. We have experience, facilities including a unique inhouse IC shop, technology

In-house IC shop (above) and our close working relationship with our Semiconductor Products Division permits speedy implementation of paper designs into custom IC's.

and everything else needed...except for one thing. A lot of people still think of us as an exclusively black box house. We left that stage long ago when we began tying black boxes together to perform system functions. Then we began putting several boxes in one box. Each one smaller, more reliable, more sophisticated than the one before. We've built complete tracking systems and satellite communications systems. So the next time a requirement comes up, think of us as what we are: the people that are here to stay, making their living by solving your system and subsystem problems in space. Whether RF, digital, or an integrated system.

Deep space would be a lot quieter if we shut up.

It's easier to count space programs we weren't on than those we've been involved with by supplying tracking, telemetry and command, ground communica-

Moving digital data at a gigabit rate is not a challenge anymore at Motorola, it's a common day-to-day reality, but our engineers are tackling the challenge of handling 2 and 3 gigabits of digital data.

tions, spacecraft communications, checkout equipment, and payload electronics including memory systems, secure communications and signal processing, plus special test equipment.

Just in case you're keeping score, a few of our latest programs include Skylab, Viking Orbiter, Mariner Venus Mercury, FleetSatCom, HELIOS, ERTS, GEOS Atmospheric Explorer, various military satellites. Along with the latest in space communications we've added some new wrinkles from radiation hardening to new levels of integrated packaging.

If some of the things we've been doing look even remotely like something you need, drop us a line at Aerospace Communications, Motorola Government Electronics Division, 8201 E. McDowell Rd., Scottsdale, AZ 85257 or call (602) 949-2277 and we'll kick it around with you. We'll give you data on the systems we've produced that might meet your need, or what it's likely to take in the way of new development to meet your requirement. Or contact one of our international offices.

MOTOROLA

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Airpower in the News

By Claude Witze
SENIOR EDITOR, AIR FORCE MAGAZINE

The Realism of Détente

WASHINGTON, D. C., OCTOBER 8

The US Senate has concluded its debate on the Fiscal 1974 authorization bill for military weapons procurement and research and development. It voted a $20.9 billion program by a vote of ninety-one to seven. The figure is about $1 billion less than requested by the Nixon Administration and about $500 million more than approved last month by the House (*see table*).

That alone is a reversal in pattern. Usually the Senate is less generous. There were other reversals, although the manner in which proposed amendments were swept aside is familiar. The defense critics did not do well. One new wrinkle came out of the fact that Sen. Stuart Symington of Missouri was acting chairman of the Senate Armed Services Committee and did not fully support his own committee report. The accepted procedure is that the chairman presents the report on the floor and then stands in the debate to defend it. In the absence of Sen. John Stennis, who has only just returned to the floor, frail and still recovering from wounds received in a holdup, this job fell to Mr. Symington, who had presided at the Armed Services hearings. He carried out the mission and received credit for it when the ten-day debate ended. But his performance was flawed, in the opinion of many observers, by his appearance, on the eve of the argument, as a witness before the Senate Defense Appropriations Subcommittee. There he was critical of his own report, and pleaded for a further cut of $2 billion. It may be that, when the appropriations bill comes along, he will have prevailed. But his idea held no attraction for the Senate in passing on the authorizations.

How the FY '74 Defense Authorization Bill Looks

	House-Passed Authorization	Senate-Passed Authorization
Procurement: *(in thousands of dollars)*		
Aircraft:		
Army	$ 181,000	$ 168,000
Navy and Marine Corps	2,958,300	2,886,500
Air Force	2,739,100	2,964,635
Subtotal	$ 5,878,400	$ 6,019,135
Missiles:		
Army	574,200	560,700
Navy	680,200	650,700
Marine Corps	32,300	32,300
Air Force	1,573,200	1,509,700
Subtotal	$ 2,859,900	$ 2,753,400
Naval vessels: Navy	$ 3,788,200	$ 3,628,700
Tracked combat vehicles:		
Army	193,300	160,300
Marine Corps	46,200	46,200
Subtotal	$ 239,500	$ 206,500
Torpedoes: Navy	$ 219,900	$ 203,300
Other weapons:		
Army	44,700	43,085
Navy	41,900	33,100
Marine Corps	700	700
Subtotal	$ 87,300	$ 76,885
Total, procurement	**$13,073,200**	**$12,887,920**
Research, development, test and evaluation:		
Army	2,031,686	1,935,933
Navy (including Marine Corps)	2,675,300	2,656,200
Air Force	3,110,811	2,958,200
Defense agencies	479,400	484,800
Test and evaluation, Defense Dept.	24,600	24,600
Emergency fund	0	0
Total, RDT & E	$ 8,321,797	$ 8,059,733
Undistributed reduction	−949,742	0
GRAND TOTAL, procurement and RDT & E	$20,445,255	$20,947,653

—Data from Congressional Quarterly, Inc.

The US Senate concluded its Fiscal '74 authorization bill for military weapons procurement and R&D by voting a $20.9 billion program—about $500 million more than the House approved last month but about $1 billion less than the Administration requested.

So far, there has been no meat axe swung at the Administration's defense program. It has suffered only one significant defeat, which came with the approval, forty-eight to thirty-six, of a requirement that our overseas land-based troops be reduced by 110,000 men by the end of calendar 1975. The amendment was offered by Senators Robert S. Byrd of West Virginia and Hubert H. Humphrey of Minnesota. It actually was a compromise, replacing an earlier proposal by Majority Leader Mike Mansfield of Montana, that would have imposed a slash of forty percent in the 500,000 overseas land-based troops.

The Senate this year was forced to make some tough choices. The interesting thing is that the efforts of the unilateral disarmament camp had almost nothing to do with the outcome. There was a scare about the Navy's Trident submarine program, but the Administration put a special effort into rounding up support, and it won.

The truth of the matter seems to be that the liberal faction in Congress, which normally takes the simplistic view that if we buy fewer guns, we will buy more butter and the guns are not needed anyhow, is growing uneasy. They have sensed a swing toward détente with Communist Russia and suddenly have discovered that the Russians are not liberals. *(See also p. 6, Oct. '73 issue.)*

"Liberals are reluctant to concede that their interest in human rights is grist for the mill of the cold war and the arms race, but it is plainly so, to a degree which no one can be sure will be kept within acceptable bounds," wrote Stephen S. Rosenfeld in the Washington *Post*.

"The Soviet harshness to which some Americans point to help beleaguered Soviet intellectuals or Jews is picked up and used by others to swing votes for a speedup of a new submarine. And, no doubt, vice versa, Sovietologist Victor Zorza has noted how American and

Soviet hardliners reinforce each other's views. American liberals demanding satisfaction on human rights may reinforce Soviet hardliners, too."

We suspect Mr. Rosenfeld, a highly competent journalist, of here underestimating the Soviet hardliners. American liberals, surely, can see beyond the nearby horizon of the plight of men like Alexander Solzhenitsyn and Andrei Sakharov. As of this deadline, they can read of new violence in the Middle East, where the Russian presence has been made more potent by the visitation of supersonic bombers, sent there by Moscow. The liberal sympathies are with Israel. There is no evidence that the flow of Russian aid to North Vietnam has been curtailed either, as that nation continues to violate the terms of the truce. It was the liberals who screamed loudest for a withdrawal that would open up South Vietnam for new waves of invaders, already on their way. There is no relaxation of tension on the Soviet-Chinese border, Russian missile technology marches on, and Moscow's navy, we are told by *Jane's Fighting Ships*, is just about the strongest in the world.

Of almost equal interest is the publication in this country of pictures of Premier Alexsei N. Kosygin in conference with Treasury Secretary George P. Shultz. He also is entertaining the boss from Pepsi-Cola and representatives of the National Association of Manufacturers. Somehow, it is hard to escape the impression that Mr. Kosygin grasps his détente with Big Business more eagerly than he would the support of the Federation of American Scientists. He would feel more at home with the president of US Steel than with Senators Hughes or Fulbright or McGovern.

Nobody, in the Senate gallery or outside, can prove that this liberal dilemma had an effect on the authorization debate. But the debate was not heated. The critics walked softly in the chamber, and, when they spoke, it was to restate old arguments on the big issues or to launch into new trivia.

There was an amendment adopted that requires a study by the National Academy of Sciences of the possible ways of disposing of existing stockpiles of chemical warfare supplies. Another waives the tenure laws for some military personnel so as to reduce the number of officers. The USAF Thunderbirds and the Navy Blue Angels, another amendment says, can put on their acrobatic shows only in the United States. The Defense Department was ordered to conserve petroleum. It also was directed to provide escort and security personnel for the Senate youth program each year and conduct a study of its own manpower requirements.

But, when Sen. William Proxmire of Wisconsin offered an amendment that would set the Fiscal 1973 level as a ceiling on defense spending, it was defeated, sixty-four to thirty. That would have cut $4 billion from the authorization, and it was supported, of course, by Senator Symington. It was opposed by Sen. John L. McClellan of Arkansas. Mr. McClellan happens to be chairman of the Defense Appropriations Subcommittee, where Mr. Symington had argued for a $4 billion cut. Mr. McClellan said on the floor that he favors reductions, "but I am going to undertake to do it with some judiciousness, with some sense of responsibility."

On October 1, the day of the vote, Senators Byrd and Humphrey made another effort. They started with a proposal to cut $750 million off the total, then accepted a vote on a proposed $500 million cut. It was defeated, again with Senator McClellan in opposition. The amendment was similar to one approved by the House at the end of July.

Some other actions worth note:

- $500 million, requested by the Pentagon, was added for the Navy's F-14 fighter and the Army's M-1 rifle.
- The Trident submarine program was approved for the full amount requested, $1.5 billion. An amendment offered by Sen. Thomas J. McIntyre of New Hampshire, which would have cut this by $885 million and delayed the program, was turned down.
- The recommendation of the Armed Services Committee that the USAF B-1 bomber allocation be cut from $473.5 million to $373.5 million was accepted. When the bill goes to conference, it is anticipated that some or all of this will be restored. The House voted no cut.
- A freshman Senator, Dick Clark of Iowa proposed deletion of the entire $657 million sought by the Navy for a fourth nuclear-powered aircraft carrier. He argued that it was too costly and "grounded more on naval tradition and nostalgia than on common sense." He was turned down, fifty-five to thirty.
- Sen. J. W. Fulbright of Arkansas, chairman of the Foreign Relations Committee, led an effort to take over from the Armed Services Committee responsibility for authorizing military assistance to South Vietnam and Laos. It is a procedure that is seven years old, the funding having been transferred from the State to Defense Department budgets early in the Vietnam War. The proposal was defeated, fifty-one to forty-three.
- USAF came out on top when an effort was made to delete all funding for the A-10 close-support aircraft. The Administration requested $142.4 million. The House approved it. The Senate committee recommended only $92.4 million. Senator Hughes offered an amendment that would kill the project, arguing that the aircraft is not significantly better than the A-7. The Hughes proposal was defeated, sixty-four to twenty.
- Of top interest to military personnel was the easy passage, seventy-one to fourteen, of an amendment to allow recomputation of retirement benefits based on active-duty pay scales as of January 1, 1972. In the debate, there was major concern about the cost of this idea. Senator Symington said it will run up a bill, in the long run, of almost $16 billion.

The bill now goes to conference, where the arguments will continue between House and Senate conferees. The pattern reversal, with the Senate authorization bill more generous than the House version, makes it perilous to forecast the result. But it is hard to believe there can be any great change in compromising two bills that are only $500 million apart. Meetings are scheduled to begin as we go to press this week.

In the background, there remains the disenchantment of the liberals with détente, now that the Russians portray themselves as economic, social, and military reactionaries.

On top of this there is the world situation, enough to make left-wingers and right-wingers equally nauseated. In addition to the disturbing news from the Middle East, there now is current a report that Russian spending on its military forces in Central Europe has gone up by $10 billion a year. Prof. John Erickson of

Airpower in the News

Edinburgh University, writing in the summer issue of *Strategic Review,* published by the US Strategic Institute, says the increase in Soviet tank strength has been "spectacular." Five airborne divisions have been added. Tactical airpower in Central Europe has been increased fifty percent by the Soviet Union. Dr. Erickson says the Communist bloc has 4,180 tactical aircraft in the theater, as opposed to 2,050 on the NATO side.

"It does appear," the author says, "that the Soviet leadership is unwilling at this juncture to discontinue its reliance on sheer military weight as a guarantee of Soviet security, as well as providing that essential backup for its superpower role and status."

These are facts with which our congressional conferees are familiar. They also are meeting as the roar of war grows louder in the Middle East. So far, no Ramsey Clarks or Jane Fondas have gone to Cairo or Damascus to check on bomb damage. The New York *Times* has not assigned Harrison Salisbury to visit the capitals of Egypt or Syria, as he visited Hanoi. For our security, that is good. ■

The Wayward Press

There is nothing complicated about the facts, and it should not be difficult for a newspaperman to get them straight.

Adm. Thomas H. Moorer, Chairman of the Joint Chiefs of Staff, is a veteran Navy aviator and strong believer in the potency of airpower. Like all airmen, he is distressd by those "less than expert," who have continued to issue deprecatory judgments about the performance of airpower in Vietnam. It was highly effective when measured in the context of the way it was used, and, the Admiral says, our pilots gave "a professional performance without equal."

The Chairman made all this clear, in blunt language, on September 8 in a speech before the Tail Hook Reunion, a conclave of Navy carrier pilots held in Las Vegas. *(See excerpts below.)*

The Admiral said the Navy and USAF were handicapped by President Johnson's policy of restricting the bombing of North Vietnam to certain targets. It is a complaint voiced for years by USAF pilots as well, and examined repeatedly by the editors of AIR FORCE Magazine. Gradualism, Admiral Moorer contends, actually gave the enemy time to bolster defenses, disperse targets, and mobilize for logistical repair and movement. Airpower was forced into an expanded and inconclusive war of attrition.

The Chairman of the Joint Chiefs cited three exceptions. Airpower, he said, achieved dramatic results in the secret bombing of Cambodia, loudly denounced by liberals and advocates of unilateral disarmament. Also, there were the two periods of heavy bombing in North and South Vietnam in 1972.

WHAT ADMIRAL MOORER REALLY SAI

Chairman of the Joint Chiefs of Staff, Adm. Thomas H. Moorer, USN, rebutted charges that airpower was ineffective in Southeast Asia, before the Tail Hook Reunion, Las Vegas, Nev., September 8, 1973. Following are excerpts:

The American experience in Vietnam was earmarked by a strategy of gradualism decided upon at the highest levels—committing our forces piecemeal with initial employment at low intensity and subsequently increasing the tempo in a slow and deliberate fashion. . . . From a military point of view, gradualism violated the principles of mass and surprise which airpower has employed historically to attain its maximum effectiveness. Gradualism forced airpower into an expanded and inconclusive war of attrition. It is only in this context—in recognition of the political and military constraints imposed—that the performance of airpower in this war should be judged. . . .

One of the truly significant contributions of airpower in this war of gradualism is one frequently ignored—the contribution of airpower in the protection and saving of our fighting men's lives. It is ignored because there is no precise means of assessment. . . .

Only recently there was considerable furor raised in the Congress and elsewhere in the country over US air operations in Cambodia during the period March 1969 through June 1970. The military significance of these air strikes against North Vietnamese sanctuaries has been far overshadowed by the overriding concern about the necessarily secret nature of those operations. Yet it is indisputable fact that during the conduct of the Menu Operations—as these air operations were called—US casualties (KIA) were reduced by about two-thirds from previous levels. . . .

Subsequent to the Menu Operations and the Cambodian cross-border operations that same spring, the US began the withdrawal of force from South Vietnam in conjunction with the Vietnamization Program. The war settled back to one of generally indecisive military action as we concentrated on bolstering the South Vietnamese forces.

Airpower was faced with the difficult task of conducting an interdiction campaign against a spider-web target system hidden by jungle. . . .

By the spring of 1972, we had reduced our combat forces from more than half a million to less than 100,000 and the withdrawals were continuing. The

In Most of Viet War

Moorer: Air Power Failed

LAS VEGAS, Nev. (UPI) — Adm. Thomas H. Moorer, the nation's top ranking officer, said that U.S. air failed to

This headline appeared on the September 10 edition of Pacific Stars and Stripes.

Three days later, Stars and Stripes *ran this headline and the full text of Admiral Moorer's speech.*

On Air Power Story

'Stripes' in Error: Moorer

PACIFIC STARS AND STRIPES

15c

The following statement has been received from Adm. Thomas H. Moorer, chairman of the U.S. Joint Chiefs of Staff:

"The headline in the Monday issue of Pacific Stars & Stripes which quoted me as saying air power failed is in gross error and does not reflect in any way my assessment of the contributions of our nation's airmen in the Indochina conflict."

Then, there was the simple fact that airpower protected American lives and reduced casualties in the conflict.

Admiral Moorer made all of this clear in his address to the Tail Hook Reunion. Out of it, a reporter for United Press International churned a lead that said:

"Admiral Thomas H. Moorer, the nation's top ranking military officer, said Saturday that US airpower failed to achieve its goal during most of the Vietnam War, needlessly extending the conflict's scope and duration."

Going through the hands of careless or ill-informed copy editors, this resulted in equally distorted headlines. "Moorer Says U.S. Air Power Failed," proclaimed the San Francisco *Examiner*. Moorer, of course, said no such thing.

The UPI story was used by the Pacific Edition of *Stars and Stripes,* the authorized, unofficial publication for American forces in the Pacific Command. That headline said: "Moorer: Air Power Failed." The Admiral, who had flown from Las Vegas to South Korea while the paper was printed and circulated, had the power to do something about it, and he did.

Within hours, it was reported, at least four top staff members of the Pacific *Stars and Stripes,* headed by the editor, Col. P. Lee Mason, were ordered into airplanes and flown to Seoul for a confrontation with the nation's top-ranking military officer. There is no account available of the exchange when the newsmen faced their enraged boss. Three days after the original offense, *Stars and Stripes* carried another headline, in the identical type and in the identical place on page one: " 'Stripes' in Error: Moorer." There was no news lead, but the text of a statement by Admiral Moorer:

"The headline in the Monday issue of Pacific *Stars and Stripes* which quoted me as saying air power failed is in gross error and does not reflect in any way my assessment of the contributions of our nation's airmen in the Indochina conflict."

Following was the full text of the chairman's Las Vegas address. It was printed because Admiral Moorer gave an order to that effect.

We have a free press in this country, for which we are thankful. That freedom is extended to all newspaper publishers, who have the same power as Admiral Moorer to enforce standards of excellence, and accuracy, in journalism. If his example was followed in any other newspaper, it has not come to our attention.

ABOUT AIRPOWER'S EFFECTIVENESS IN SEA

North Vietnamese then launched their all-out offensive on Easter weekend. . . . That invasion was a costly failure, and airpower [Linebacker I] was a major factor in that failure. Airpower didn't do it alone—it took also the supreme effort of the Army of South Vietnam. But airpower made the difference. . . .

The North Vietnamese turned to the negotiating avenue, and the bombing was halted as part of an over-all diplomatic/military effort designed to achieve the cease-fire that was thought to be imminent. Immediately, the North Vietnamese set out in earnest . . . to revive their capability to carry on the war.

By mid-December, the situation in North Vietnam had changed appreciably since the October bombing halt; negotiations were at an impasse, the North Vietnamese revolutionaries assumed a posture of total arrogance, and the decision was made to resume the bombing to deny the North Vietnamese a sanctuary in which they could rebuild their war-making potential and continue their aggression.

The eleven-day air campaign of December 1972 [Linebacker II] will, I am certain, go down in history as a testimonial to the efficacy of airpower. Linebacker II constituted the use of airpower the way it should be used—it constituted the use of joint forces in a skillfully coordinated effort the way they should be used. Its success was due to our airmen's qualities of professionalism, skill, dedication, and raw courage in their highest tradition.

I am convinced that Linebacker II served as a catalyst for the negotiations which resulted in the cease-fire, the return of our POWs, and the complete withdrawal of our forces from Vietnam. Airpower, given its day in court after almost a decade of frustration, confirmed its effectiveness as an instrument of national power—in just nine and a half flying days.

* * *

At the entrance to my office in the Pentagon, three awards are displayed. . . . I am rightfully proud of all. The first is the Air Force Association's H. H. Arnold Award, which I accepted one year ago on behalf of the Air Units of the Allied Forces in Southeast Asia for effectively applying airpower to repel a North Vietnamese invasion during the spring and summer of 1972.

The second is the Collier Trophy, which I accepted in June on behalf of the officers and men of the US Navy, US Air Force, and US Marine Corps who participated in Linebacker II.

The last, but not least, is the Grey Eagle Award, which signifies that I am the most ancient of naval aviators on active duty. . . . I am immensely proud to be part of [the] history [of naval aviation], and I am equally proud to be among you tonight. ■

Aerospace World

News, Views & Comments

By William P. Schlitz
ASSISTANT MANAGING EDITOR, AIR FORCE MAGAZINE

WASHINGTON, D. C., OCT. 8

No sooner had the second Skylab manned mission ended with a successful splashdown in the Pacific late in September than the Russians orbited two cosmonauts aboard an improved Soyez spacecraft for a two-day jaunt.

It was the first Soviet manned mission since the returning Soyez-11 crew of three died tragically during reentry in June 1971.

Speculation among US space officials was that this latest shot demonstrated that the Soviet manned space program was in gear for the joint Apollo/Soyez mission scheduled for 1975.

An interesting aspect of the Soviet mission was that both cosmonauts kept their spacesuits on throughout launch and recovery, thus assuring protection against accidental decompression of the spacecraft—the manner in which their Soyez-11 associates had been killed.

As usual, details of the mission were at a minimum. The Russians, however, did release biographical material on the two crewmen. Lt. Col. Vasily G. Lazarev was identified as a Soviet Air Force test pilot/physician, and Oleg G. Makarov as a spacecraft design engineer and a graduate of the USSR's top engineering school. These men might be key figures in 1975's joint undertaking.

For its part, NASA, which celebrated its fifteenth anniversary on October 1, was gratified by the excellent physical condition of its three astronauts following their record fifty-nine-day sojourn in space.

The third manned Skylab launch is scheduled for mid-November, and, if all goes well, the crew may be programmed to remain in orbit until as late as January 19, for a mission of about sixty days. This would enable Skylab equipment to take a careful reading of the comet Kohoutek, which, with its million-mile tail, should be visible from earth's northern hemisphere in mid-January each evening before moonrise.

As of now, the third Skylab crew will consist of Marine Corps Lt. Col. Gerald P. Carr, USAF Lt. Col. William R. Pogue, and physicist Astronaut Dr. Edward G. Gibson. All three are spaceflight freshmen.

USAF navigator training received a long-needed increment of modernization with the delivery of the first new T-43 navigator/trainer at Mather AFB, Calif., on September 28. Ultimately, the Air Training Command will have nineteen Boeing T-43s at Mather, replacing the fifty-six Convair T-29s that have been in use since the early 1950s. For a complete description of the T-43, see the August issue, p. 56.

☆

On Christmas Day in 1944, a light C-64 Norseman aircraft carrying a famous American bandleader disappeared on a flight from England to France.

The popular musician, then head of the Army Air Forces Band, was en route to the Continent to play for Allied forces there. The nation mourned the apparent loss of Glenn Miller, the bespectacled entertainer whose celebrated music provided a welcome relief for Americans fighting a savage war around the globe. At the time, most headlines were devoted to the Battle of the Bulge, then in its final throes.

The fighting in Europe drew to a close some five months later, but the mystery of Glenn Miller's disappearance remained unsolved through the years that followed.

Now we have a report from France that the aircraft has been found, in thirty feet of water off the coast of France somewhere between Boulogne and Calais. A retired deep-sea diver is reputed to have received confirmation that the aircraft identification plates he recovered are those of Miller's plane.

☆

The Air Force has named CMSgt. Thomas N. Barnes as the new Chief Master Sergeant of the Air Force. He is the first black airman to hold the post.

Sergeant Barnes was selected from twenty-two outstanding air-

On September 17, Air Force Chief of Staff Gen. George S. Brown announced the selection of Chief Master Sergeant Thomas N. Barnes as the Chief Master Sergeant of the Air Force. Sergeant Barnes attended the annual AFA Convention, where he is shown talking with Lt. Gen. Robert J. Dixon, who now wears four stars as Commander of the Tactical Air Command.

men representing the major air commands and separate operating agencies. As the Air Force's top enlisted man, the Sergeant will "advise and assist the Chief of Staff and the Secretary of the Air Force on matters concerning enlisted members of the Air Force," USAF said.

Sergeant Barnes replaces CMSgt. Richard D. Kisling, who was to retire on October 1.

Previously, Sergeant Barnes served as Senior Enlisted Advisor at Hq. Air Training Command, Randolph AFB, Tex. He is a graduate of the 8th Air Force Noncommissioned Officers Academy and the USAF Senior NCO Academy. Married and the father of six children, Sergeant Barnes hails from Chester, Pa.

☆

With severe power shortages threatening the nation's future, any step toward conservation of what power sources we have is welcome.

In league with the Canadian Defence Research Board, USAF has developed a lightweight, superconducting magnet, with a strength twice that of conventional iron-core magnets.

According to Air Force Systems Command's Aero Propulsion Lab, Wright-Patterson AFB, Ohio, the magnet will form a basic element of a new magnetohydrodynamic (MHD) generator that shows great promise.

Viewed primarily for initial use aboard aircraft, the MHD generator, according to USAF, may later find outstanding use in the commercial systems that power your homes and factories.

"MHD commercial power systems have the capability to increase power output by fifty percent, reduce pollution fifty percent, and increase plant efficiency by twenty percent, using the same amount of fuel as a conventional generator," the Air Force said.

The magnet is due for installation in the MHD generator next June, following a lengthy test program.

☆

In other action on the pollution front, NASA has under experimentation, and has gone as far as demonstrating to automobile manufacturers, an internal-combustion engine concept that may significantly reduce harmful emissions while boosting efficiency.

Stressing that the program was still in early stages, the space agency said that its "hydrogen injection system, using a mixture of hydrogen gas, air, and gasoline vapor to power internal-combustion engines, could eliminate the need for treating exhausts with catalytic mufflers."

Tests have indicated that the system will produce a fuel that burns so completely "that the exhaust product is nearly all water vapor and other inert components." Experiments also show, NASA said, that gasoline consumption would be cut sharply as the engines' thermal efficiency increases.

NASA plans to modify standard

One of six UH-1D helicopters flown into Karachi aboard an Air Force C-5 to aid in Pakistan flood relief. Military Airlift Command C-141s also flew in nearly 2,500 tons of rescue equipment and supplies during the September floods. Most of this humanitarian airlift was provided by aircraft and crews of the 437th MAW, Charleston AFB, S. C.

Aerospace World

cars and later aircraft to test the system.

It cited other benefits for the system:

- It will be usable with current engines and fuels.
- It will be inexpensive in high-volume output.
- It possesses potential for use with nonpetroleum fuels, NASA said.

Maybe a partial solution to our growing air-pollution problem?

☆

Due to the efforts of a determined Air Force history buff, an American World War I pilot has now officially been declared an ace—after a delay of fifty-four years.

It began when MSgt. Robert Strobel of the Career Control Branch, 514th MAW, was researching the Great War achievements of the 141st Tactical Fighter Squadron of the 108th TFW (New Jersey ANG), located at McGuire AFB, N. J. Among his records he came across the name of 1st Lt. Charles D'Olive of Cedar Rapids, Iowa.

After some correspondence with D'Olive and with the Air Force Historical Office at Maxwell AFB, Ala., the records were brought up to date, and the World War I pilot's name has now been added to the select club of aces. *(See "Airmail," p. 14, for a letter from Mr. D'Olive, commenting on the recent death of Eddie Rickenbacker.)*

For this and other deeds, Sergeant Strobel has earned his certification as a member in good standing of the Cross and Cockade Society of the American Aviation Historical Association.

☆

Sen. Barry M. Goldwater has been named to receive the Wright Brothers Memorial Trophy for 1973 "in recognition of his lifelong interest and dedication to the advancement of aeronautics and astronautics in the United States," the sponsoring National Aeronautic Association announced.

A military pilot during World War II, Senator Goldwater has logged more than 10,000 hours in ninety-six types of military and civil aircraft, including first-line jet fighters. He has long been an outspoken advocate of US predominance in all phases of aviation. The award will be presented in December in Washington, D. C.

In another matter, the Harmon International Aviation Awards were presented by President Nixon in mid-September:

- Geraldine Cobb received the 1972 Aviatrix Trophy for her humanitarian flights into the Amazon River Basin in 1971.

Dr. John S. Foster, former DoD Director of Research and Engineering, has joined TRW, Inc. as Vice President for Energy Research and Engineering.

- Concorde chief test pilots Brian Trubshaw and André Turcat took the 1971 Aviator's Trophy.
- USAF Lt. Cols. Dewain Bick and Thomas B. Estes were awarded the 1972 Aviator's Trophy for their record-breaking SR-71 flight in 1971.

Four USAF officers have been presented Air Force Research and

MSgt. Robert Strobel (above), a member of the 514th Military Airlift Wing (Associate) at McGuire AFB, N. J., and an aviation history enthusiast for many years, has established the fact that Charles R. D'Olive (left) earned the designation of Ace during World War I. By coincidence, AIR FORCE Magazine received a letter (see p. 14) from Mr. D'Olive the same day that we learned of Sergeant Strobel's fruitful research.

Fearless

The U.S. Air Force calls this recoverable RPV the BGM-34A, toughest member of our family of Remotely Piloted Vehicles. The guys who fly it call it a strike drone.
A Maverick missile tucked under its wing makes it tough.
Teledyne Ryan makes it fearless.

RPV

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the first family

Aerospace World

Development Awards for outstanding achievements in 1972:

- Col. Haskel Gruber, Wilford Hall USAF Medical Center, Lackland AFB, Tex., for significant contributions in orthodontic surgery.
- Maj. Paul T. Kemmerling, Aeronautical Systems Division, Wright-Patterson AFB, Ohio, for contributions in the development of the remotely piloted vehicle weapon system.
- Capt. Daniel R. Seger, Air Force Flight Dynamics Laboratory, Wright-Patterson AFB, Ohio, for his exploratory and advanced development efforts to enhance the overall maneuvering performance of close-support aircraft.
- 1st Lt. Howard L. Arnson, Air Force Materials Laboratory, Wright-Patterson AFB, Ohio, for his contribution to the development and characterization of a series of alloys vital to the success of advanced, gas turbine engine concepts.

George D. Hardy, Chairman of AFA's Aerospace Education Foundation, congratulates Lt. Col. Bryan J. Sifford, USAF (Ret.), Aerospace Education Instructor at the Harrison County High School, Cynthiana, Ky. The school's AFJROTC unit was the winner of the B-1 Bomber Presentation contest, sponsored recently by the Foundation. At left is Jack Keith, Legislative Assistant to Congressman John B. Breckenridge (D-Ky.); at right, Dr. Martin L. Carr, Harrison County School Superintendent.

☆

We have in hand some figures that reflect the devotion to duty of a handful of hard-traveling men of both the Alaskan Air Command and the Aerospace Defense Command.

These men of USAF's corps of chaplains have the task of bringing comfort, counsel, and the word of God to Air Force personnel stationed at remote sites.

In Alaska, the circuit riders (as they have been dubbed by their peers, in the tradition of the ministry and law courts during the winning of the sparsely settled West) average twenty-one days of travel per man per month. In terms of air miles, the eight Alaskan chaplains annually log some 22,000 air miles per man. They use whatever means of transport is available—from military airlift to single-engine bush planes.

In mere numbers, the seventeen ADC chaplains of the forty-eight contiguous states are not far behind. Mostly by car, these circuit riders chalk up 18,000 miles per man each year.

Each of the circuit-riding chaplains travels alone, and through a hoped-for person-to-person ministry, brings with him a special understanding of the problems and requirements of those USAF members assigned to "way-out" places.

☆

In another matter related to the spiritual needs of USAF people, the Air Force inducted its first woman chaplain in ceremonies at Bolling AFB, D. C., in late September.

Of the American Baptist Church, Lt. Lorraine K. Potter is the second woman in history to become a chaplain in the US military. The first is Navy Chaplain Diana Pohlman, sworn in July 1. *(For the story of how another heretofore all-male military job is now being handled by a woman, see facing page.)*

☆

And have you got a phrase to substitute for "manned" spaceflight? NASA now tells us that it is conducting clinical research in female physiology as a selection basis for women passengers aboard space-shuttle missions.

The tests, to take place at the space agency's Ames Research Center, Mountain View, Calif., involve twelve USAF nurse volunteers in a five-week experiment to discover how weightlessness and reentry G forces may affect their bodies.

Much of the data derived from the tests on the twelve—ten flight nurses from Reserve units and two

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active-duty nurses—will be compared to similar data on men to establish reaction differences.

Any word on this from Bobby Riggs?

☆

The Navy has under development promising new synthetic materials that may serve as "skin" in the treatment of severe burns.

As of now, serious burn cases are treated by placing donated human skin and/or specially prepared pigskin over the wound to stave off infection and reduce the evaporation of vital body fluids from the affected area. "The loss of body fluids seriously contributes to the debility of the patient, delays healing, and increases the susceptibility of respiratory diseases," a major cause of fatality in burn victims, the Navy explained.

However, human skin and the special pigskin are expensive and hard to obtain, and must be changed every few days. Moreover, stocks of such materials are quickly exhausted following major mishaps where casualties are heavy, such as shipboard fires.

The new material is a thin, cellophane-like polyester film produced by the polymerization of such organic compounds as lactic acid and glycolic acids. Lactic acid is derived from a wide range of substances, while glycolic acid can be obtained from sugar cane.

"Since both acids occur naturally in the body," burn coverings made of them "can be absorbed and metabolized by the patient without" tissue rejection, the Navy said.

Other beneficial factors are the materials' low cost and ease of manufacture in quantity.

Dynatech Co., Cambridge, Mass., is studying the new materials for the Navy, and hopes to develop film of uniform thickness and acceptable elasticity. Under review also is the control of bacterial infection and the formation of scar tissue.

Needless to say, applications of such materials in the military and civilian communities would be extensive.

☆

The Navy also has under consideration the feasibility of shipboard launch and recovery of remotely piloted vehicles (RPVs). *(For USAF developments in this area of research, see October '73 issue, p. 24.)*

USAF's first woman aircraft mechanic, A1C Mary Kathryn McCraw, of Norman, Okla., now crews a T-33 at Peterson Field, Colo. Environmental improvement extends even to the flight line these days.

Lady With a Wrench

Being the pioneer she is, it might have been fitting for A1C Mary Kathryn McCraw to have worn a gingham dress and sunbonnet when she migrated West from jet aircraft maintenance school to become the first woman aircraft mechanic in the Air Force. Instead, she arrived at Peterson Field, near Colorado Springs, Colo., last June 30 in conventional uniform, but with an unconventional determination to make good on the job.

Less than six weeks later, she had been promoted from apprentice to full-fledged crew chief in the 4600th Operational Maintenance Squadron and had her very own T-33 to manage. For the twenty-year-old Norman, Okla., high school graduate, that was real progress.

"I'm no women's libber," she said. "I just wanted to show myself I could do it. Someday I would like to learn to fly. If I could learn to be a mechanic, I don't see why I couldn't learn to fly." *(For items on USAF's first lady sky pilot, and twelve Air Force nurses being tested for the effects of spaceflight on females, see the facing page.)*

A pert blonde with a saucy smile, Airman McCraw has not found the Air Force to be completely a young girl's delight. Well, there are the duty hours for one thing. On the flight line by 7:30 a.m. Earlier when her airplane is flying. So, while living in a WAF barracks in town at Ent AFB, this calls for some early rising. Then the sun and wind on the flight line makes a mess of your hair. And your nails. All you can do is file them short.

But it's a great job keeping 'em flying!

—By James R. Patterson

Lorraine Kay Potter, holder of a master's degree in Divinity, becomes USAF's first lady chaplain, as her mother and Chief of Air Force Chaplains Maj. Gen. Roy M. Terry pin on her first lieutenant's bars. Chaplain Potter will be assigned to Wilford Hall USAF Medical Center, Lackland AFB, Tex.

The problem, as the Navy sees it, is that, while ground operation of RPVs is highly practical, shipboard factors entail a moving ship, limited space, crosswinds, currents, sea state, and perhaps poor visibility—among other significant drawbacks.

"Recent technological advances in the area of automatic flight-control avionics, navigation systems, and various VTOL and other systems now permit several possible solutions" to these problems, the Navy said.

If indeed this is the case, Navy visualizes for its RPVs such roles as reconnaissance, search, radio relay, and antisubmarine patrol. "These aircraft could fly potentially hazardous or monotonous missions and contribute considerable savings in staffing requirements and training of pilots," Navy said.

This last is no small consideration, since Navy officials are reportedly concerned with the sharp upturn in pilot resignations, brought about to a sizable extent by Congress' recent passage of a bill denying flight pay to senior military officers. *(For an AIR FORCE Magazine editorial on the flight-pay controversy, see September '73 issue, p. 4.)*

☆

NEWS NOTES—In mid-September, the new huge **Dallas-Fort Worth Regional Airport,** billed as the biggest jetport ever, was dedicated. Flown in especially for the occasion—the Anglo-French **Concorde SST.**

NASA is seeking qualified persons on one- to three-year contracts to **research and write** book-length historical manuscripts on such topics as the history of Skylab. Write **Monte D. Wright,** NASA (AAH), Washington, D. C. 20546.

Hugh E. Witt, an old friend of AFA, has been designated Principal Deputy Assistant Secretary of Defense (Installations & Logistics). He previously served as Special Assistant to the Assistant Secretary of Navy (Installations & Logistics) and as Director of Programs and Systems. Prior to his Navy Department appointment in 1970, he was Deputy Assistant Secretary for Supply and Maintenance, Department of the Air Force.

A **monument** has been dedicated at the **Air Academy's Monument Park** honoring Academy cadets and personnel who died in the service of their country.

The UN's **International Civil Aviation Organization** ended a twenty-five-day session in Rome late in September without agreeing on a single step to counter skyjacking of aircraft. ■

Robert Warren Smart 1907-1973

Brig. Gen. Robert Warren Smart, USAFR (Ret.), who served as President of the Air Force Association from March 1967 to March 1969, died on September 15 at the age of sixty-six, in West Palm Beach, Fla. He was a victim of cancer.

A former vice president of North American-Rockwell (now Rockwell International) Corp., General Smart was best known for his more than a dozen years' service as chief counsel of the House Armed Services Committee. He served in that capacity under four chairmen: Walter G. Andrews (R-N.Y.), Carl Vinson (D-Ga.), Dewey Short (R-N.Y.), and L. Mendel Rivers (D-S.C.). He was a permanent member of the AFA Board of Directors at the time of his death.

General Smart headed AFA at a time when the war in Southeast Asia was an overriding concern of the entire nation. He started his term of office as the crescendo of protest against the war neared its peak, and led AFA in its support of national security policy. At the same time, it was during his term of office that the organization became a vigorous critic of the way airpower was being used, piecemeal, in Indochina.

From his own military experience, as well as his authorship of landmark legislation, including parts of the Articles of War and the Uniform Code of Military Justice, General Smart contributed heavily during his AFA presidency to the organization's increasing effort to improve the lot of men and women in the service. AFA's Junior Officer Advisory Council was organized during his tenure. During Bob Smart's administration, AFA first topped 100,000 membership.

General Smart was born in Crane, Mo., on May 20, 1907. He was a graduate of the University of Missouri and earned a law degree in 1933 from Cumberland University in Tennessee. After a brief career in politics—he was elected prosecuting attorney of Lawrence County, Mo.—he enlisted in the Army in 1942 and was discharged a captain in 1946. He was active in the Army Reserve until 1949, when he transferred to the Air Force Reserve. He was promoted to brigadier general in 1961 and retired in 1967.

General Smart's awards and decorations included the Legion of Merit, the Air Force Association's Citation of Honor, and the Reserve Officer Association's distinguished service citation.

On Capitol Hill, where he was known as one of the most respected and effective staff members ever to have served Congress, he made lasting friends, just as he did in the Air Force Association and later in industry. Combining a cordial disposition with rigid integrity, Bob Smart knew how to get things done. His service to AFA and the country will be long remembered.

—C. W.

HIGHLIGHTS

1974

MAY AIR FORCE MAGAZINE

Annual Air Force Almanac issue exclusive articles by the Secretary and Chief of Staff, USAF . in-depth reports on all major Commands . . . complete Gallery of USAF Weapon Systems. Must reading . . . important reference issue throughout the year.

JULY AIR FORCE MAGAZINE

"The Electronic Air Force"—special editorial coverage on what is happening now and plans for the future. Must reading throughout the Air Force, particularly in AFSD, ASD, and the Labs, as well as all user Commands.

SEPTEMBER AIR FORCE MAGAZINE

Annual Convention, Fall Briefings and Display issue. Bonus distribution at event, including all military and civilian executives attending by special invitation for briefings. Marketing plus . . . inclusion of advertisement in "Industry Salutes the Air Force" display at show.

NOVEMBER AIR FORCE MAGAZINE

Convention Briefings and Displays Report issue. (Widely read for its comprehensive reports on seminars, industry briefings on latest technical developments, and addresses by key USAF leaders.)

DECEMBER AIR FORCE MAGAZINE

"The Military Balance"—The major report from the International Institute for Strategic Studies, London, England, which documents, country by country, the world's military forces and equipment. A desk-top reference sought after and referred to by military decision-makers in the U.S. Air Force, DoD, NASA, the Congress, and other military services.

AIR FORCE MAGAZINE

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Détente apparently does not mean the same thing to the USSR that it means to the US: The Soviet Union's military technology effort, especially the development of sophisticated strategic weapons, is at an all-time high, and continues to increase. New Soviet R&D programs range from ballistic missiles to strategic bombers and include such ominous elements as new launch techniques and MIRVing . . .

THE SOVIET ICBM THREAT IS MOUNTING

By Edgar Ulsamer
SENIOR EDITOR, AIR FORCE MAGAZINE

AT A Pentagon press conference in August of this year, Defense Secretary James R. Schlesinger revealed surprising and alarming details about the Soviet ballistic missile program, which he described as "aggressive" and "very adventuresome." The Secretary disclosed that the Soviets, in recent weeks, had successfully flight-tested "MIRV capability on at least two of their missiles." These conclusions, he said, were based on hard evidence; there was "flimsy evidence" about the MIRVing of two other missiles.

The four new ICBM systems have been designated SS-X-16, -17, -18, and -19. Three of these systems are small missiles, somewhat larger than Minuteman, while one—the SS-X-18—is a very large follow-on to the SS-9, a somewhat larger missile than USAF's Titan II. A fifth new missile—submarine launched—has a range of more than 4,000 miles, making it the world's longest-range SLBM.

. . . there is evidence that the Soviets have started tests of a new technique for launching ballistic missiles . . .

At the same time, there is evidence that the Soviets have started tests involving a new technique for launching ballistic missiles that is similar to that used by the US Polaris submarines. It is known as "cold launch" because the missile is popped out of its silo, or launch tube, by compressed gas, and the rocket motor is not ignited until the missile is well above ground level. This technique does away with the need for much of the heavy shielding of the missile's underside otherwise required to protect it from its own fiery exhaust. Perhaps more importantly, cold launch prevents damage to the silo itself, so that each silo can be used for more than one missile launch.

Two objectives may underlie Soviet cold-launch tests. One might be the desire to acquire a relatively rapid reload and refire capability, thus covertly increasing the ICBM force level set by the SALT I interim accord since silos—

but not reserve missiles—can be detected by satellite observation. The other might be the idea of using the largest possible missile in silos whose dimensions are limited by SALT I. In this regard, cold launch makes possible removal from the silo of a great deal of equipment that is needed for a hot launch, as well as the missile shielding mentioned above.

In tests of the new SS-X-17 missile, the US counted four individual reentry vehicles (RVs) of a size "much, much smaller" than the megaton range, according to Dr. Schlesinger. But tests of another new missile, the SS-X-18, involved "at least six warheads, each of them appearing to be in the megaton range," he said. In the Secretary's opinion, it is likely that the Soviet Union will eventually MIRV both its ICBMs and SLBMs.

Secretary Schlesinger said the US did not yet have sufficient information to determine the accuracy of the new MIRVed missiles. Yet, US experts believe the accuracy of these missiles will probably not be sufficient to prevent a decline in Soviet hard-target capability. (MIRVing exacts a severe penalty in available warhead weight, because MIRV control and release systems take up about half the missile's throw weight. The resulting low warhead yields require greatly improved missile accuracy, if the equivalent hard-target capability of the same missile equipped with a single RV is to be retained.)

. . . tests of . . . the SS-X-18 involved "at least six warheads . . . appearing to be in the megaton range . . ."

This initial Soviet entry into ICBM MIRV systems development—a technology area the US has pioneered and diligently pursued for some eight years—will undoubtedly result in a protracted "catch-up" period for the Soviets. In addition, Soviet status in accuracy-related technologies—inertial guidance component quality, missile-borne computers, and experience with high ballistic coefficient RVs—has been considerably lower than that of the US.

Four New ICBMs

"Although MIRV flight testing came no sooner than should be expected," according to the Secretary, "the Soviets do have a very adventuresome missiles development program, and one may have been surprised that they have all these missiles under development at the same time." He said there was no evidence that all four ICBMs now being tested would enter production, but suggested that two of the new missiles—the SS-X-17 and the SS-X-19—appeared to be follow-ons to the SS-11. He added that "if that inference is correct, they would presumably not deploy both [but] would choose between those two."

The SS-X-18 is "obviously the follow-on" to the Soviet Union's largest missile, the SS-9, of which there are 313 launchers permitted under SALT I. He added, however, that "the SS-X-18 does not appear conveniently to fit into the existing SS-9 silos. Consequently, unless they can perform some adaptation, they may have a new hole for the SS-X-18. Any adaptation, however, would have to be within the strict limits with regard to the 313 large ballistic missiles," stipulated by the five-year interim agreement signed last year.

"We would say that 1975 is a reasonable approximation for them to begin to deploy [MIRV] forces . . ."

The purposes of the fourth new Soviet ICBM, Secretary Schlesinger said, "are not clear to us. The SS-X-16 could be the basis for a deployment of mobile missiles, but we do not precisely know what the purpose is."

A Totally MIRVed Force by 1979?

The decisive question associated with both Soviet MIRVing and the development of several new ICBMs is: When will the USSR outstrip the US in the number of warheads? "We would say that 1975 is a reasonable approximation for them to begin to deploy [MIRV] forces, but those would be ICBMs," Dr. Schlesinger said. "They would by 1979, perhaps, have an equal [to the US] number of RVs on the ICBMs. At this point, I cannot predict how rapidly they would MIRV their SLBMs, and, therefore, their total number of warheads is unpredictable. But by the early '80s or mid '80s, they will have, if they continue the present program, a formidable force structure."

In analyzing the meaning to the United States of the "adventuresome" Soviet missile program, Secretary Schlesinger made these points: "I think," he said, "the Soviets are seeking a strategic advantage; whether or not they would ever achieve a strategic advantage depends on whether the United States responds to changes in the Soviet military posture or fails to respond to them."

The Secretary expressed doubt that a first-strike capability, in the sense of fully disarming an adversary, is obtainable by either side, but suggested that the Soviets were, nevertheless, interested in obtaining counterforce capa-

The Soviet ICBM Threat

bilities, "because the decision to strike cities—a massive strike at cities—is a decision that will not be readily taken by either side." They, therefore, might want to be in a position to "first possess an invulnerable deterrent, and, secondly, to destroy piecemeal American or allied military concentrations. This would result in an overall imbalance. . . ."

What concerns the United States most, he said, is that the Soviets "have a disproportionate amount of throw weight—their throw weight [advantage] is in the order of four to one. They have something on the order of fifty percent more ICBMs. If they marry the technologies that they are now acquiring to the throw weight they possess under the interim—and let me underscore that—interim agreement, then they would develop a clear preponderance of counterforce capabilities as distinguished from the United States."

Two conditions obtain as a result of the recent Soviet advances, according to Dr. Schlesinger: The US ability to verify controls associated with SALT are "very rapidly eroding." (The Soviet Union, during SALT I and in the subsequent Nixon-Brezhnev talks, avoided limitations on MIRVing, while the US sought a freeze before the Soviets began flight-testing such systems. President Nixon is nevertheless determined to press for limitations —presumably in terms of flight test as well as deployment—in MIRVs at the next summit meeting.) The other factor is that "as the Soviets close the technological gap and acquire MIRV capabilities, improved warheads, and guidance, the United States is not in a position to tolerate the numerical and quantitative [throw weight] advantages presently possessed by the Soviet Union," according to Dr. Schlesinger.

Potential US Responses

While the information the US gleaned from the limited number of Soviet MIRV tests leaves many questions unanswered, some assumptions are both safe and obvious. Even when MIRV technology has been translated into an initial operational capability by the Soviets, three to five years from now, the survivability and efficacy of the US ICBM force will not be negated, although some degradation would seem unavoidable.

President Nixon, in his foreign-policy report to the Congress on May 3, 1973, stated that "we have a major advantage in nuclear weapons technology and in warhead accuracy," adding that "because of our continuing programs, we will maintain this lead during the period of the agreement [of 1972], even if the Soviets develop and deploy MIRVs of their own."

A key element in assuring continued survivability of the US ICBMs is the Minuteman Improvement Program, initiated by the Air Force several years ago in anticipation of Soviet MIRVing. SAC spokesmen predict that the improved Minuteman silos will be able to survive "a near-miss from a large-yield weapon." The immediate result of Soviet MIRVing may well turn out to be more political than strategic: On first blush, it appears to have given the Soviets considerably more political leverage in Europe while reducing the believability of US extended deterrence, *i.e.*, deterrence of a Soviet strike against our NATO partners.

. . . four specific actions must be considered in order to maintain the credibility of the US deterrent . . .

In the opinion of US defense planners, four specific actions must be considered in order to maintain the credibility of the US deterrent, although not all of them might be required at once. One principal countermove is to increase the presently programmed Minuteman III (MIRVed) force level of 550 to 1,000 by replacing all Minuteman II missiles with Minuteman III. This step has been advocated by SAC for some time and would boost the deterrent capability of the residual force—the missiles that would survive a Soviet preemptive strike. For example, if only 300 Minuteman IIIs were to survive a surprise attack, this residual force would roughly equal in deterrent capability the 1,000 Minuteman I and II missiles that made up the ICBM inventory in 1970.

Guidance and Warhead Options

Another and perhaps more important move would be to provide the Minuteman force with an unambiguous counterforce capability, readily attainable by increasing both accuracy and warhead yield. (Dr. Schlesinger stated that, although the US does not seek a disarming capability, this should not be misconstrued as evidence "that we are in a position not to have certain precision instruments that would be used in a limited counterforce role.")

Two fundamental and dramatic improvements in accuracy and warhead yield could be made on all Minuteman IIIs, although it would seem logical and more economical to initially confine these to new missiles entering the in-

ventory rather than to retrofit at once. One of these improvements is known as AIRS, for Advanced Inertial Reference Sphere. It replaces the individual gyros and gimbals, all subject to gyroscope drift, with one sphere that keeps track of the trajectory of the missile's upper stage (the so-called bus and the multiple independently targeted reentry vehicles) along the pitch, roll, and yaw axes, as well as in terms of speed. The cumulative error of the presently used individual gyros and accelerometers is substantially greater than that of the single reference sphere system, with the result that AIRS has a very real potential to cut CEP roughly in half. In terms of missile effectiveness, the result is dramatic.

Accuracy is obviously crucial in the case of hardened targets. More accurate missiles, therefore, provide for a more reliable and effective counterforce capability. But accuracy is equally important to the efficacy of those elements of a second-strike force assigned against nonmilitary targets. While neither the general principles nor the specifics of the US targeting philosophy are known, it is generally assumed that the objective is not to kill people, but rather to take out industrial targets, transportation centers, power plants, and similar installations.

Given that proposition, it follows that many industrial targets will be off limits under conditions of relatively lower accuracy because of their proximity to densely populated areas; in case of higher accuracy, it might be possible to attack with less fear that the warhead would miss the target and strike the population center. Also, two nearby targets could be destroyed with one warhead, if that warhead could be delivered reasonably precisely between them. The AIRS technology has progressed well beyond the "paper stage" and could become operational before the Soviet MIRVs.

By packing several thermonuclear stages into one weapon, its yield can be increased by 100% or more.

Equally important and equally available for use by the Minuteman III force is a new warhead technology. By packing several thermonuclear stages into one weapon, its yield can be increased by one hundred percent or more. AIRS, combined with the new warhead technology, could roughly double the counterforce effectiveness of the US ICBM force.

The third step to counter Soviet advances involves intensified R&D on the M-X project, leading to the development of an entirely new ballistic missile system, probably airborne, which could augment or eventually replace the current ICBMs. (*See March '73 issue, p. 38, "M-X: Missile System for the Year 2000."*) DoD has requested $6 million for M-X research in FY '74.

The B-1 as a Balance

The fourth step the United States can take to assure that Soviet MIRVs do not cause a perilous imbalance is to press on as rapidly as possible with the development and deployment of the B-1 strategic bomber. The more rapid takeoff capability of the B-1, compared to the B-52, could prove crucial if the Soviets MIRV their sea-launched ballistic missiles and, thereby, increase the ability to mount a surprise attack on US strategic bomber bases. In his foreign policy report to the Congress, President Nixon pointed out that the overall balance between the strategic forces of the US and the USSR is determined in part by forces outside of the SALT I agreement: "Our bomber force, for instance, is substantially larger and more effective than the Soviet bomber force."

The President made no claim regarding the permanence of this condition. At last count, the Soviets had at least twenty supersonic, long-range Backfire bombers, suggesting that this aircraft is in series production, and deployment to operational units is just a matter of time.

At last count, the Soviets had at least twenty supersonic, long-range Backfire bombers. . . .

The range of the Backfire is roughly the same as that of the Soviet Bison strategic bomber. There is hard evidence that the Backfire is fully air refuelable and that the Soviets are developing a new jet tanker. The latter could be a completely new design or a variation of the Il-76, a cargo aircraft first shown in 1971.

Also, the Soviets continue to flight-test a high-altitude supersonic bomber, presumably a prototype, which appears to have a range of about 3,000 miles and cruises at about Mach 3. Only one such aircraft is believed to be in existence. Nevertheless, it cannot be taken for granted that our bomber force as now constituted will continue to offset a Soviet numerical superiority in missiles, let alone deliverable warheads.

The surprisingly high level of Soviet activity in strategic-weapon development and deployment casts an ominous cloud over current and future arms-limitation talks between the US and the USSR. It would seem to require an energetic US program to assure that strategic parity is maintained in the years to come. ■

A PILOT'S REPORT

It's the spring of 1972, and the war is still raging in Southeast Asia. The giant C-5 has just landed with a huge load of tank ammo and support equipment. Now the C-5 sits at the unloading dock, well within range of enemy rockets—one big, tempting target. The Loadmaster's welcome words: "That's it, Sir! Let's get out of here!" can't come too soon. Like everything else about the C-5, the big transport's turnaround time is impressive . . .

C-5: In and Out in Thirty Minutes

By Maj. Donald J. Fremming, USAF

As we circled above the airfield waiting for final landing clearance from the tower, my thoughts wandered a little.

It was the spring of 1972, and we were in the middle of the Southeast Asian war. Rumor had it that the South Vietnamese had lost an entire battalion of tanks. True or not, they needed more in one helluva hurry.

And that's why we were here.

This was not the first time the C-5 had been flown into Vietnam, but the tanks were the heaviest single payload ever carried into combat—196,000 pounds—two M-48 battle tanks on each C-5. There were other C-5s in the mission. My plane was carrying pallets of ammunition and support equipment for the tanks.

Timing was critical. Not only were these tanks and supplies needed in a hurry, but the longer we stayed on the ground the more vul-

The C-5 carries outsize cargo at intercontinental range and jet speeds.

nerable we were to enemy rockets. And I knew that our Galaxy made a damn big target.

The approach controller interrupted my thoughts:

"MAC 70458, you are cleared for approach, landing runway two-zero."

I glanced at my watch, and we began our approach. It was a rainy, hazy, even steamy day, and a squall had just passed over the airfield. It probably was pretty miserable down there.

As the runway rushed toward our landing gear, I knew it was a lot more comfortable in that plane than it was outside.

When we touched down, I applied pressure to the brakes and reverse thrust while the copilot deployed the spoilers.

When the aircraft slowed to a safe taxi speed, I cut the engines back and retracted the spoilers. Ahead of us was the "Follow Me" truck. We chased him right up to the loading dock and blocked in.

I glanced at my watch again. It was 9:30 a.m. I looked around and could see one other C-5 and two or three C-141s, all loading or unloading their cargo.

The loadmasters and the ground crews were working feverishly. It was like a sauna bath. The morning heat was evaporating the early morning rain, and the steam was rising to the clouds above. I was glad I didn't have to leave the flight deck.

We blocked with our nose right up to the front of the massive loading dock. Our crew quickly kneeled the plane (adjusted the cargo floor to the level of the dock), raised the visor covering the forward entrance to the cargo compartment, and the loadmaster hooked us up to the dock.

The loading dock, which itself had been brought in by C-5s for surges like this, has a giant hydraulic winch and cable that hooked right on the cargo pallets and pulled them off the cargo deck. Since the entire length of the cargo floor is equipped with a roller system, the pallets were moving off in a hurry.

We needed a system like that; a plane that can carry 28,000 cubic feet of cargo—175,000 pounds on thirty-six pallets—needs some extra help. Hopefully, we wouldn't be on the ground too long.

Navaids: Easy Come, Easy Go

Another two minutes had ticked off.

The clock on the instrument panel now read 9:38. I looked around the flight deck and then back at my panel. Everything in the cabin, including the flight-control panels, is impressive.

Where most panels are completely congested with round dials and gauges, the C-5 panel is neat and compact. There are only five engine instruments—and they replace twenty of the older-type round dials. They're a lot easier to read, too—they're electrically operated vertical tapes.

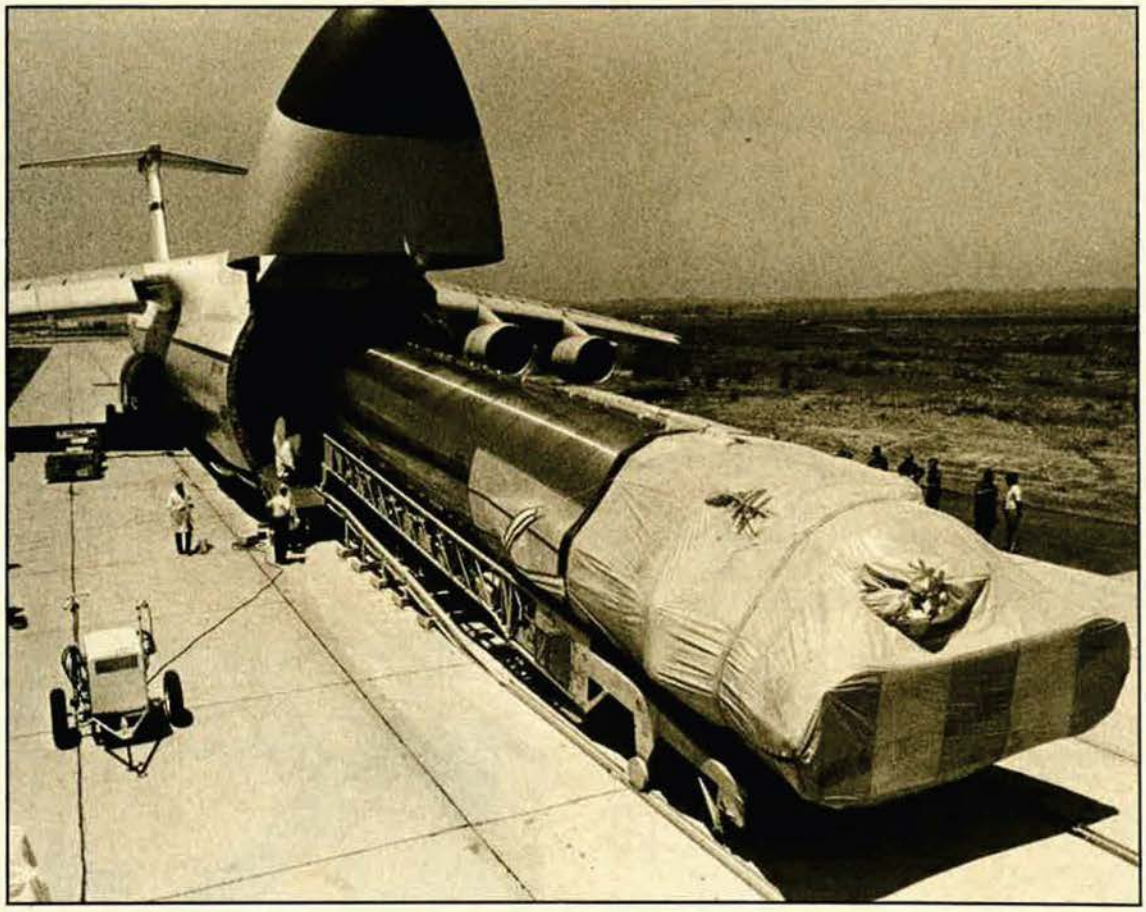
All the primary flight instruments are incorporated into two independent flight director systems. This allows me or my copilot to select any one of several navigational aids or one of two nav computers.

And those navaids—they're something else.

In the center of the navigator's instruments is the Inertial Doppler Navigation Equipment panel—a self-contained aid that provides accurate navigation and position determination anywhere on earth, in any weather, and with-

The author, Maj. Donald J. Fremming, was born in Fairmont, Minn., but now calls Dixon, Calif., home. When he wrote this article, he was a C-5 standardization pilot at Travis AFB's 75th Military Airlift Squadron. He's been in the Military Airlift Command (MAC) for ten years, flying C-124s, C-141s, and was part of the initial cadre of the C-5 test program at Edwards AFB, Calif. He has a total of 1,500 hours in the C-5 and 9,000 total flying hours. Prior to his airlift experience, he flew KC-97s for the Strategic Air Command. He was assigned to the 374th Tactical Airlift Wing at Ching Chuan Kang AB, Taiwan, in mid-August of this year.

A PILOT'S REPORT



This C-5 carried a 62,000-pound Atlas/Centaur launch vehicle from Miramar NAS, Calif., to Cape Kennedy, Fla., in a remarkable demonstration of airlift capability.

C-5: WORLD'S LARGEST

The Lockheed C-5 Galaxy is the world's largest aircraft, almost as long as a football field and standing as high as a six-story building. The cargo compartment is 121 feet long, nineteen feet wide, and thirteen and a half feet high—an area equivalent to an eight-lane bowling alley. Except for emergencies or unusual circumstances, the C-5 does not carry troops. However, the "second story" or upper deck compartment has seventy-three seats for the drivers and operators of the equipment being airlifted.

The Galaxy has twelve integral wing tanks with a total capacity of 49,000 gallons of fuel, enough to fill six and a half regular-size railroad tank cars. The fuel load weighs 318,500 pounds.

The first C-5 was accepted by the Military Airlift Command's Transitional Training Unit at Altus AFB, Okla., for aircrew training on December 17, 1969. The first operational Galaxy was delivered to the 437th MAW, Charleston AFB, S. C., in June 1970, followed by deliveries to the 60th MAW, Travis AFB, Calif., in October 1970, and the 436th MAW, Dover AFB, Del., in April 1971.

out the aid of ground equipment. For operations like this, in a hostile area where radio aids are not available or sometimes are unreliable, we can select a visual presentation from the radar system to make a landing approach in bad weather. It really lets us go anywhere.

The system can compute the air release point for air-drop operations and displays LORAN coordinate conversion and computations for celestial navigation fixing. The inertial portion cannot be jammed by known electronic countermeasures. The navigation system is so accurate that the normal error is less than one mile per every hour of flying time. The system senses earth rate movement as well as aircraft movement.

Let's see, the error from our parking spot this morning until right now—five hours later—is less than 1,000 feet. With accuracy like that, the navigator can actually take his fixes after landing. I heard him say once that he

can determine ground speed while we're taxiing as slow as one-half knot.

And, if this system fails, there's a backup—two attitude reference units. Each system provides accurate heading information for grid navigation over the poles.

And there's a backup to that system too—the Heading Attitude Monitoring System. It's continually telling us just exactly how accurate our heading and attitude information really is. An undetected failure of an instrument, even slight, can make a major difference in the success or failure of a mission.

I like that redundancy. With such a complex airplane and such an important mission, we have to ensure reliability. I've never gotten myself into a situation where all the basic and backup systems have failed. No matter where I've gone, and no matter what the conditions, I've been able to accomplish the mission.

9:40. We've only been here ten minutes and already I'm getting fidgety. When we had to divert around that storm to get here, I couldn't wait until we landed. Now that I'm here, I can't wait until we get out.

That storm reminds me of another system on this bird that I'd like to thank somebody for—the Multi-Mode Radar. It's really two separate and distinct radar sets working together. The information they record is displayed on my scope and on two other scopes, in front of the copilot and the navigator.

We'd have been in trouble without the radar. It pinpointed that tropical storm and let us fly around it. There's a lot of other things it can do that may be used in the future. Things like ground mapping, terrain following, terrain avoidance, and identification and tracking. There's even a rendezvous capability for in-flight refueling.

I can remember the first time I used the radar system. I couldn't believe it. We could actually pick up cars along the side of the road, fence posts—even the runway lights.

MADAR—Instant Troubleshooter

9:45. Only five minutes since the last time I looked.

Well, I'm glad I've got a good crew and a good bird. When we're unloaded we'll be ready to roll. And I'm doubly glad we've got MADAR working for us. Even right now, it's troubleshooting this entire aircraft—more than 800 test points—looking for problems.

MADAR—Malfunction Detection, Analysis, and Recording System. An important-sounding name and an important piece of equipment. It's sort of like an electrocardiograph, analyzing the very heart of our equipment. From its test points, it samples specific signals and identifies out-of-tolerance readings, which are transmitted to the flight engineer through an automatic printer and oscilloscope. It also monitors system values that may indicate a pending failure in a particular system. This provides an outstanding capability for avoiding potential trouble through preventive maintenance.

Like last week. I was on a training flight, and we had a problem with a hydraulic pump —excessive case drain flow—an internal leakage. but MADAR picked it up right away and told the engineer. He put it into his computer, and we had the exact location and the exact

C-5 GALAXY—FACTS AND FIGURES

Designer and Manufacturer	Lockheed-Georgia Co., Marietta, Ga.
Length	247.9 feet.
Height	65.1 feet.
Wingspan	222.7 feet.
Wingsweep	25 degrees.
Landing gear	High flotation, with 28 wheels and "kneeling" capability.
Powerplant	Four General Electric TF39-GE-1 turbofan engines, each rated at 41,100 pounds of thrust.
Maximum takeoff weight	712,500 pounds (interim design limitations).
Maximum payload weight	174,000 pounds (interim design limitations).
Range, empty, no reserves	7,320 statute miles.
Range, 100,000-pound load, no reserves	5,500 statute miles.
Range, 186,000-pound load, no reserves	2,700 statute miles.
Crew, normal	8.
Takeoff distance at 712,000 pounds	7,700 feet.
Landing distance, with 50-ton load	2,800 feet.
Average cruise speed	440 knots (506 mph).

problem in a matter of seconds. It was a minor problem, but the computer let us know so that we could make a detailed write-up for the maintenance people when we got back. It eliminated a lot of their valuable time and got the bird back up to operational status a lot faster.

All the information that MADAR picks up goes onto magnetic tapes and is put into a computer on the ground. It gives the maintenance people an instantaneous capability to determine the status, number of failed items, expected life of a particular component, and, in the future, will provide some idea of the expected life of any plane in the fleet.

With MADAR and the other devices the flight engineer monitors, we should call him the flight-systems manager. At his panel, he's in full charge of the fuel, hydraulic, electrical, pressurization, and environmental systems. He also controls the auxiliary power units that allow all the systems of the aircraft to be used without the engines running, or without being tied to a ground-based power supply: once again, a self-contained capability necessary for operations like this. At his command are the systems that make the performance and reliability of the Galaxy surpass nearly every other aircraft in the Air Force today.

Go-Anywhere Gear

9:55. Look at that runway. Not many planes this big—700,000 pounds—could land on a runway like this. But with that twenty-eight-wheeled landing gear, the beryllium brake drums, and those giant "top-of-the-wing" spoilers, we can go just about anywhere.

The books say that the footprint pressure—the pounds per square inch exerted on the runway by the tires—is less than the majority of today's modern aircraft. It saves a lot of stress on airfields.

That main landing gear bogey assembly is something to see. Not only does it raise and lower to truck-bed height for easier loading and unloading while we're on the ground, but we can raise any one gear to perform maintenance. Depending on the texture of the runway, we can decrease tire pressure right here from the flight deck to provide more stability on unimproved surfaces.

And those wing spoilers. They look like giant boards sticking straight up into the airstream. They provide some aerodynamic braking and actually eliminate most of the lift of the wings, putting more weight on the landing gear and giving us better braking potential.

On the ground, she handles just as well as in the air. I must admit, though, I thought I'd never make that last turn over there on the ramp. But, with the steerable nosewheel and a caster system that allows the rear set of landing gears to seek their own turn radius, there's nothing to it.

On long hauls, it's nice to know that behind the flight deck is a relief-crew compartment, with enough room for two complete crews. We've got six bunks and fifteen reclining airline-type seats. There's even hot and cold running water and kitchen facilities for preparing meals. It's amazing what it does to your mental outlook when you can get out of this seat, have a good hot meal, and crawl between the sheets. It increases the capability of the airplane by increasing the capability of the crew.

Self-Sufficient Giant

I guess the only thing this plane doesn't do is land by itself. And even that's now in testing stages.

Taking off is easy. The leading-edge slat and the trailing-edge flap system on the wings provide approximately twenty-three percent additional lift, letting us take off at slower speeds. This plane, fully loaded, weighing 356 tons, can take off in less than 7,500 feet.

And I wish that's what we were doing now.

"Sir."

I looked back at the door. There was my loadmaster, a little sweaty, but with a somewhat relieved look on his face.

"That's it, Sir! Let's get out of here!"

Those words were like music. We were going home.

I looked at my watch for the last time. 10:00. Thirty minutes. That must be some kind of record. In and out in thirty minutes! But rolling stock—tanks and trucks—moves off even faster. Yesterday, a guy told me he was in and out in sixteen minutes.

I radioed the tower, and in another few minutes we were "gear up."

I just couldn't get that thirty minutes out of my mind. I guess I shouldn't have been so surprised. After all, that's what this plane is all about—carrying heavy loads long distances and into not-so-convenient places.

When the designers of the C-5 were at the drawing board, they knew that global mobility meant we needed to cover the broadest spectrum of difficulty—enemy action, geography, terrain, weather, and darkness. So they made the Galaxy self-sufficient.

She's a pilot's plane! ■

"Today's veteran has more going for him than ever before" so far as his return to civilian life is concerned. Here is a report on the many training and employment programs available to veterans, and on the dedicated key men—from the White House staff to industry, labor, and government agencies at every level—who are making veterans' programs work. Together, they have made . . .

Jobs For Vets: A National Effort

by Maj. Robert W. Hunter, USAF

NO NATION can make a claim to greatness if it does not help its young service veterans in their transition to civilian life. That's the judgment of James F. Oates, Jr., appointed by President Nixon in October 1970 to head up the newly formed National Committee, Jobs for Veterans (JFV).

Before JFV was established, a lot of jobless veterans had reason to believe that the United States hadn't measured up to Jim Oates's criterion of national greatness. By the end of 1970, seasonally adjusted unemployment rates for vets were at a 9.2 percent high, while the unemployment rate for the general population was three percent lower. Some 318,000 veterans were out of work.

Most of the unemployed former servicemen were young and had served only a single tour of military duty. Nearly eighty-five percent were enlisted people; almost half were under

twenty-five years of age. About thirty percent were married, and many had children. Nearly twenty percent had less than a high school education, ten percent belonged to disadvantaged minority groups, and some 300,000 were disabled.

Then the JFV set up shop with the task of improving training and employment opportunities for former servicemen—especially Vietnam veterans in the twenty to twenty-nine age group. Except for one peak period in September 1971, there has been a downward trend in veterans' unemployment. By June 30, 1973, the seasonally adjusted rate for vets was neck and neck with nonveterans at 5.6 percent.

The work of JFV and many other cooperating organizations isn't finished by any means. The last Vietnam-era draftee won't be separated from the service until December 1974. It probably won't be finished even then. Mr. Oates points out that the success of DoD's all-volunteer force is dependent in a major way on giving young volunteers a chance to learn a transferable civilian-related skill, and assistance in job counseling and placement when they leave the service. So this is a continuing problem—a vital concern to everyone in uniform, and a significant issue in the arena of defense policy.

AIR FORCE Magazine has explored, with several leaders who are working for the veteran in government, labor, industry, and business, the issues and ideas central to the problem of the veteran's return to civilian life. We'll report first on the philosophy underlying existing and proposed programs and then take a look at some ideas that already have been put to work with conspicuous success.

A good place to start is with the Administration's top man in the field—Jim Oates, whose official title is National Chairman, Jobs for Veterans.

Philosophy: Practical Idealism

Mr. Oates, retired Chairman of the Board and Chief Executive Officer of the Equitable Life Assurance Society of the United States, holds both DoD's and the VA's Distinguished Public Service Award. His commitment is to the task of assuring full employment for vets, and he believes that in the job market, veterans deserve the "edge." He recently told a DoD audience that the "only long-term solution is adoption of a policy whereby no man will be discharged until he is trained in a civilian skill." That policy raises many controversial questions for him and for his principal assistants—Air Force Lt. Col. H. S. Faircloth, Executive Director, Jobs for Veterans; and former Rep. Bill Ayres (R-Ohio), who is Mr. Oates's special assistant. Significantly, since JFV's birth, 2,700,000 veterans have found work, and the pool of those unemployed is smaller by 75,000 than it was a year ago.

Another of the people working on behalf of the veteran—James Cavanaugh, Staff Assistant to the President—had this to say in an exclusive interview with this magazine.

"You have to begin by taking a look at what the Department of Defense's primary responsibility is in the whole scheme of national affairs, and it begins with providing a strong national defense. One prime requirement of that defense is to assure an adequate supply of people coming into the military departments. The last thing we need is to have people who have left the military standing on street corners unemployed, while their peers, people they went to high school or college with, are out there employed.

"The second reason we are in this business is that the nation does owe people who have served their country gratitude, and that's a term that has been used ever since President Hoover first established the Veterans Administration by executive order. That is why we have the Veterans Pension System, that is why we have the Veterans Education Program, and the home mortgage for veterans."

Is a favorable reaction by the business community toward the veteran something new? Dr. Cavanaugh doesn't think so. "There has always been a consciousness, if you will, within industry to lean toward the veteran when filling a position. I think this is true because of their wanting to help a person who has helped the country. I think, quite candidly, they have also seen that the veteran might do a little better job as a new employee. The Jobs for Veterans Committee has made business and industry aware of the fact that anything they could do to help a veteran find a job would be in the best interest of the country."

Convertible Assets

Dr. M. Richard Rose, Deputy Assistant Secretary of Defense for Education, is another official committed to exploring new paths to benefit the veteran. Speaking unofficially, he cited three reasons for concern. The first he shares with Mr. Oates and Dr. Cavanaugh—it is a national obligation and a moral responsibility.

Secondly, he believes DoD must find secondary and tertiary roles for its training costs of $6.7 billion per year, or about $25 million per day. He is looking for the spin-off values

of military skills. He would like to see men who have been trained by the military as mechanics, plumbers, sheet-metal workers, or carpenters, for example, licensed like their civilian counterparts, but by the industry's own licensing institutions—not by DoD's.

Dr. Rose cited the Community College of the Air Force as being "a light-year" ahead of its time in moving toward this goal of capturing service training and translating it into a credential meaningful to an employer. And he has strong feelings about what motivates men and women to serve in the all-volunteer force. "Bonuses and pay won't do the job alone. No nation ever defended itself with a mercenary army," he said. "Men and women must see themselves as part of an education/career process." In short, the youth of this country must look upon the military as part of the process by which they can ready themselves for a total career pattern.

He believes that this must be a joint endeavor of the VA, Labor, DoD, and the US Office of Education. These agencies must pool their training concepts. In the final analysis, he says, it might even mean that Defense would have to guarantee cross-training to an employable skill for an infantryman, for example, as part of his enlistment contract.

The third reason why Dr. Rose believes DoD should concern itself with these matters relates to what he sees as the base of our military strength—our ability to mobilize. If a reconceptualization took place, if DoD's training costs were viewed in civilian roles as well as military, if the youth of this country saw military service as part of a process, not as service in which men were separated from society, then he thinks the Reserve Forces could recruit directly from the active force. This country's mobilization base would be strengthened accordingly.

Labor and Industry Lend a Hand

The National Alliance of Businessmen (NAB) is another organization helping with veterans employment. NAB, through its JOBS (Job Opportunities in the Business Sector) program, has already placed nearly 250,000 veterans in jobs, many of them in the vocational skills area. It has a goal this year of 100,000 more.

Tom Brown, of the National Association of Home Builders, and Warren Troutman, of the US Office of Education, reflect a growing concern over the traditional employment market preoccupation with diplomas and degrees. Mr. Brown: "We've got to get away from the white-collar syndrome; stop talking about vocational education and start talking about *career* education. Our vets have to learn what the real world of work is all about. We have to offer pride in achievement and make the best use of their talents. No one should have to apologize for wanting to be an auto

James F. Oates, Jr., presents National Committee, Jobs for Veterans' Annual Report to the President in the Oval Office February 23, 1973. Seated left to right: Lt. Col. Henry S. Faircloth, USAF, Executive Director, National Committee, Jobs for Veterans; Larry O'Connor, Vice President, General Counsel, and Secretary, Sears Roebuck & Co., and former President of the National Alliance of Businessmen; Richard Gerstenberg, Chairman of the Board, General Motors Corp., and Chairman, National Alliance of Businessmen; Secretary of Labor Peter Brennan; President Nixon; James F. Oates, Jr., Chairman, National Committee, Jobs for Veterans, and former Chairman of the Board and Chief Executive Officer of The Equitable Life Assurance Society of the United States; William Ayres, former congressman who is Special Assistant to Mr. Oates.

The author, right, with Secretary of Labor Peter Brennan, center, and James Oates, National Chairman, Jobs for Veterans.

mechanic." Mr. Troutman: "We must find ways for industry and education to work together to get at what industry needs from our educational systems. We are acutely aware of a work concept returning to the American scene. A four-year college is not the answer for all."

Mr. Brown considers it his job to get out and make eyeball-to-eyeball contact with the vet, to sit down and help him get a feel for what our economy is all about. His 70,000-member association looks to DoD as the largest and best training ground for his building industry.

The Veterans Construction Job Clearinghouse, a cooperative effort between the National Association of Home Builders, Associated General Contractors of America, and the US Departments of Labor and Defense, with which Mr. Brown is deeply involved, is one avenue for the veteran to check out his interests and qualifications in the construction industry.

Things seem to be moving in that direction. According to the VA, the number of veterans in training programs—vocational rehabilitation, on-the-job training, and in school—stood in recent months at more than one and a half million. That's up twelve percent from a year ago.

Secretary of Labor Peter J. Brennan is another who gets out and meets the veteran. His philosophy? "We shouldn't let our servicemen feel they are being sold out by labor and business. Let us tell them, 'Come on back, we are going to work with you to make this country better.' Let's not apologize for America. Let us all together move it on to bigger and better things for all of our people."

These are but a handful of the people working for the veteran. This is but a sample of their feelings, their ideas, their direction. If their semantics differ, their concern is basic nonetheless.

Putting Ideas to Work

But if the people are there, so too must be the mechanisms for help. They are.

Jobs for Veterans has set up 478 local task forces and consulted on almost 400 job fairs. NAB has more than 160 metro offices to furnish full employment services to veterans. DoD has its Project Transition, training men for particular jobs while still in service. Two hundred and five bases across the country have the cooperation of business, trade associations, and labor organizations to train servicemen for civilian jobs.

There are programs involving reemployment rights, small business loans, apprenticeship training, public service careers, rehabilitation loans, scholarships, vocational education, tutorial service at government expense, and college work/study programs in which eighty percent of the salary is paid by federal grants.

There is the "Upward-Bound Program" by which a high school nongraduate spends some time in a collegiate atmosphere. There are the Servicemen's Opportunity Colleges—some 200 two-year colleges—that seek to give the veteran an "edge" by easing traditional barriers of admissions requirements, residency, and credit transfer. And there are 2,000 or so other two-year colleges receiving federal assistance in tailoring programs for veterans.

There are 2,200 state employment service local offices tied into computerized job banks; VA representatives assigned to 300 military separation points and 184 military hospitals as well as seventy-one US Veterans Assistance Centers (USVACs). There is the AFL-CIO Human Resources Development Institute (HRDI) with fifty local and area offices. There is the Office of Minority Business Enterprise to foster and promote minority business, and the Manpower Development and Training Act (MDTA) to help the unemployed or underemployed. Opportunities Industrialization Centers (OCAs) in sixteen cities provide motivational and basic work orientation as well as occupational training.

Perhaps one of the more effective mechanisms, and certainly one of the most visible, is the Job Fair. The Job Fair has also been known by other names—Job Opportunity Fair, Job Information Fair, Veterans Assistance Day, or Opportunity Day. Some have received a bad press, but only when improperly planned and advertised and when, because of poor pre-fair information, some veterans simply expected to walk in and get a job.

The purpose of these events is to allow personal contact between employers and veterans while giving access to job-related programs and services—counseling, for one. Job Fairs often include vocational counselors, on-the-job training information, and vocational and technical schools. So even if a veteran doesn't get a specific job offer, he does get to talk with employers and see, perhaps for the first time, just where he stands in the job marketplace.

The local Jobs for Veterans task force, with assistance from the State Veterans Employment Representative and the State Employment Service, has been the focus for the leadership in initiating job fairs. NAB, the VA, American Legion, and Chambers of Commerce also have been driving forces.

Results have been good. AIR FORCE Maga-

zine recently attended the largest fair ever held. A lot of planning went into this one, held at the brand new multimillion dollar Los Angeles Marriott Hotel. Résumé extracts were given participating employers and educators. Where current, recurring, or projected vacancies existed, employers contacted the veterans ahead of time and invited them to come in and talk.

How Job Fairs Work

From an assembly area where introductory briefings were held every thirty minutes to guide the veteran through the fair and help optimize his experiences, the job seeker went into a large hall where employers had "call boards" with notices for the visitors. There was also a government assistance area where counselors were available to discuss reemployment rights, training opportunities, Civil Service registration procedures, and the like. Finally, each employer had a hotel suite where the veteran could get down to the nitty-gritty—eyeball to eyeball.

Many of the veterans had never talked with an employer, and didn't really know how to market themselves. Even if a job didn't result immediately, a valuable learning experience was going on.

Jobs *were* available. Rockwell International, for example, was looking for journeyman machinists, apprentice carpenters, and electricians. Most companies listed on their call boards both jobs and the names of people whose résumé extracts had interested them.

Xerox was looking for computer maintenance and test people, as well as systems analysts and technical representatives, but most required *some* level of electronics training. As one businessman told us, "A real problem for the veteran is being realistic about his desires and qualifications. He may want to be a computer maintenance man, but has no background. So, if he doesn't get a job in computers, he may think it's been a 'rip-off.' Yet, realistically, an infantry soldier and a liberal-arts college graduate are in the same boat: they have to face up to the trade-off between their desires and qualifications."

This, again, is where counseling can help, and Jobs for Veterans is vitally interested in giving veterans exposure to employers *before* they are discharged so they *can* be realistic. When they hit the civilian streets, they can confidently walk up to an employment interview knowing "where they're coming from."

Overseas Job Information Fairs, in cooperation with DoD, have been most helpful in this regard. Last year, twenty national firms and

Jobs for Veterans' European Job Fairs have drawn high praise from those they intend to help the most—the ex-serviceman.

associations were represented in each of two European and one Asian fair. More than 18,000 servicemen met with industry representatives. This year, another European and an Asian fair were to be held as of this writing.

Perhaps the best testimony of how successful a fair can be was a story reported recently in the Pittsburgh *Post-Gazette.*

That paper reported that a fair in Oakland, Pa., brought in 2,000 vets. The VA, it was reported, said that for every two vets showing up, one got a job commitment. They were still tabulating.

Veterans were impressed. One, it was reported, said, "Where else could I have gotten to talk to US Steel, Alcoa, Westinghouse, and all the other big ones in one afternoon? I never even got past the personnel receptionist in those companies before. But at the fair, they gave me personal interviews."

Business was impressed, too. The paper reported that Westinghouse Electric Corp., committed to filling sixty jobs, had expanded that to 135 at the fair's end.

Improving the Process

Obviously, not all is coming up roses. Criticisms and issues remain to be dealt with.

Jobs for Veterans told AIR FORCE Magazine that criticisms have been leveled at both DoD's Transition Program and the Department of Labor's Employment Service placement. Critics say that too few servicemen who trained under the Transition Program have been placed in jobs consistent with their transition training.

JFV's view is that a program that will guarantee greater training payoffs must ensure that the soon-to-be discharged serviceman is counseled about the job needs of the area where he plans to live. Then he must be given training compatible with his desires and aptitudes as well as the job needs of the area. Finally, in order to make a good man/job match, the Employment Service Office in the area must be advised when the service member starts his transition training so they can identify a requirement for his skill and have a job for him when he arrives. That, of course, would be the ideal.

A dynamic innovator is the young Commissioner of Veterans Affairs for the city of New York, Carl McCarden. Mr. McCarden is a hard-driving, apolitical, Army major who was tapped for his present position while on the faculty at West Point. His concern is for the urban unemployed—the vet from the inner city.

In an exclusive interview for AIR FORCE Magazine, he defined his position: "That dude out there coming into the service *believes* the ads he sees. They say education and training. In the eyes of an inner-city youth, the military provides legitimization. A lot of guys strut down inner-city streets with respect—'Hey man, that cat's back from Nam!' But that legitimizing function doesn't work as *access.* It doesn't get him off those streets."

Commissioner McCarden believes that the solution doesn't lie in picking up a man in his last six months of active duty through Transition training. He also feels that a veteran can't live in an urban area like New York City on work and schooling benefits. "What can a man take home, net—$90 a week? The welfare system with food stamps gives more."

The need he sees is for a sort of second-generation CCC (Civilian Conservation Corps). He believes that no agency has training facilities like Defense, but that the problem of training and jobs can't be looked at institutionally. He wants a cross-agency infusion of money and planning.

"Suppose by some form of cooperative federal executive agreement we could make a lateral transfer of funds—get welfare funds and supplement with VA benefits, for example. Lump those together, and we've got a livable wage while the veteran is being trained for a job." He would like to see that idea coupled with some federal and state tax incentives for an employer to keep a veteran on board after on-the-job training—something not all do now.

McCarden believes, "We need a regional assessment of job vacancies by industry that includes the rate of job attrition as well as the incidence of new jobs over a five-year period. If we can program out manpower needs in DoD and other federal agencies, why not in the private sector?" As proof that his idea is at least feasible, he pointed to a test model. In Columbia, S. C., an attempt to match industry needs with a comprehensive program of technical instruction is under way. He also talked about Jacobs Creek, Tenn., where about 300 youths—largely black—are being trained by craftsmen in the building trades and then placed in union jobs.

In the final analysis, today's veteran has more going for him than ever before. He has people who care—influential, top-level people. He has mechanisms for getting into training and a job, a whole host of them. And he has the assurance—although he may not always be aware of it—that the criticisms and the issues that are unresolved or in contention are being worked on.

The veteran can still get ripped off, and he can still be unemployed, but the chances are getting slimmer and slimmer. ■

The author, Maj. Robert W. Hunter, is now serving as Deputy Assistant for Policy and Programs in the Internal Information Division, at Hq. USAF. Before undertaking his new duties this summer, he had been assigned for one year to the staff of AIR FORCE *Magazine under the Air Force Education With Industry (EWI) program. Major Hunter is a Distinguished AFROTC Graduate of Holy Cross College and of the Air Command and Staff College. He holds a master's degree in sociology from the University of Denver and has graduated from DoD's Information School.*

The recently retired Director of the Office of Emergency Preparedness believes "we have now passed over a divide to a situation where absolute energy security has been lost and is unlikely to be recovered . . . in the foreseeable future." How we got there, the sobering foreign policy and national security implications of the crisis, and some alternatives for the critical next fifteen years are examined in this discussion of . . .

ENERGY SECURITY— New Dimension for US Policy

By Brig. Gen. George A. Lincoln, USA (Ret.)

FORMER DIRECTOR, OFFICE OF EMERGENCY PREPAREDNESS

ENERGY problems, sometimes called the "energy crisis," have been in the news for a year or more. That news has usually been about fears of shortages—or actual shortages—of natural gas, fuel oil, or gasoline, rising prices, and now and then an allegation of monopolistic manipulation or even conspiracy.

There had been, however, little high-level mention of the sobering foreign policy/national security aspects of the developing energy situation until President Nixon's September 8, 1973, statement that the United States cannot be at the mercy of Mid-East oil producers. (There is a September report, before the recent outbreak of Arab-Israeli hostilities, that Saudi Arabia may be considering a reduction in exports of a million barrels a day until the US modifies its Middle East policies. In fact, Saudi Arabia does not need to reduce current exports to create grave problems. Simply not increasing exports by between one and two million barrels a day each year until 1980 may give the world an incipient energy crisis.)

In the Legislative Branch, the Senate Committee on Interior and Insular Affairs, chaired by Sen. Henry Jackson (D-Wash.) has paid some attention to energy security matters. True, James Akins, the State Department's energy expert and new Ambassador to Saudi Arabia, did write in *Foreign Affairs* last March, with the title "This Time the Wolf Is Here," that, before 1980 (he might have been even more realistic and chosen 1975), our energy situation could be gravely restricting the freedom of our foreign policy. And foreign policy, which has national security as its primary objective, is the first line of our security program.

The United States is going to have an increasing foreign energy dependency, principally in the form of oil, for the foreseeable future of ten, maybe fifteen, years or so. The increases in imports will have to come primarily from the Middle East, which is an area of political and potential military tension. Neither the sources of supply nor the transport lines are under our control.

US foreign oil dependency may reach fifty percent by 1980, which means approximately twenty-five percent of the heat, light, and power that drive our economy and make possible our affluent way of life. Furthermore, our allies are now, and will be even more, oil dependent on the Middle East. They may compete for oil, even to cutthroat competition, with divisive effects on our alliances.

The ever-expanding consumption ethic of our society has been premised on an assumption of an abundance of cheap energy. The types of energy now most desired—oil and natural gas—are no longer abundant domestically. The price of foreign oil is rising rapidly, as is the price of domestic oil and gas. The US import bill for energy, principally oil, can create a severe balance of payments problem before 1980 with consequent effects on our foreign policy and domestic economic policy.

Beginning shortly after World War I, our national security analyses have included a concern about "strategic and critical materials." Now national security concern over these materials is decreasing, among other reasons, because of recent improvements in mineral extraction, substitution techniques, and expanded discoveries.

That one-time significant concern over strategic and critical materials (which has never included energy fuels in their normal definition) should now be replaced by a much greater concern over "energy security"—adequacy of energy fuels under acceptable arrangements for the present and prospects for the future.

We are not greatly concerned with strictly military consumption in any likely crisis. The estimates of military requirements are considerably less than ten percent of normal US oil consumption, which could be allocated if the national leadership so willed and had reasonable public support. Rather, energy security is a problem area of the heat and light and power for our total economy, together with assurance against coercion by the possessors of those energy resources that make possible our American way of life.

Energy security, being a problem area of our total

economy, is in sharp contrast to problems of nuclear security. But, like nuclear security, we have now passed over a divide to a situation where absolute energy security has been lost and is unlikely to be recovered soon, if ever, in the foreseeable future.

The Outlook for Domestic Energy Supply and Demand

In the longer term beyond 1990 and certainly by 2000, we can arrange a considerable part of our energy from sources such as geothermal heat, sun power, synthetic oil, and gas from coal and shale and other exotic sources. Certainly, research and development must be pressed to these ends, helping to decrease foreign dependency in the long run. Also, the fossil fuel age (except for coal) may wane in the lifetime of some readers, and substitute means must be sought. The President's proposed $10 billion energy R&D program in the next five years is a measure directed to those ends. This discussion therefore is focused primarily on the period until 1985–90.

Under the heading of "energy," we are currently dealing principally with oil, gas, and coal, which will provide most of our energy for a decade or more. Hydropower supplies a small proportion; nuclear power, while expanding, will not provide a very significant proportion for a decade or more. Oil now provides about forty-five percent of our energy, and natural gas about thirty percent.

On the demand side, about forty percent of energy is used by industry, twenty-five percent by transportation, twenty percent by residences, and fifteen percent by commercial establishments. Electricity is intermediate energy, using a significant quantity of the energy fuels (more than half is derived from coal) and distributed principally to industry and the residential/commercial sector.

Any shortfall in supply of an energy fuel—a slippage in completion of a nuclear power plant or shortfall in natural gas—tends to be made up by expanded imports of oil, henceforth from the Middle East. Therefore, our energy security problem really is "oil security." Energy security can, however, be sought by such measures as increased efficiency in the production and use of energy, substitution of more available fuels such as coal, and by controlling the oil we use. As an example of potentials for improvement, the efficiency of electric power plants averages less than forty percent. Extraction of oil from known US oil fields also averages less than forty percent of their potential.

What is the outlook for expansion of other energy sources between now and about 1985, or over the period before R&D can help very much?

Hydroelectric power generation is unlikely to increase significantly because of limited site availability, cost, and environmental opposition.

Slippage in nuclear power construction due to technological difficulties and siting and licensing delays indicates that nuclear power, while contributing to our energy needs, is not going to make a major contribution before about 1985.

Natural gas production has peaked in the US for the time being at least. There is significant unsupplied demand, since gas is the preferred clean fuel and has been kept cheap by policy regulation. Over half of natural gas consumption has been industrial, so we are in for a doubly painful transition as gas-supplied industry shifts to other fuels—probably principally oil from the Middle East—while new residential gas demand painfully seeks a supply.

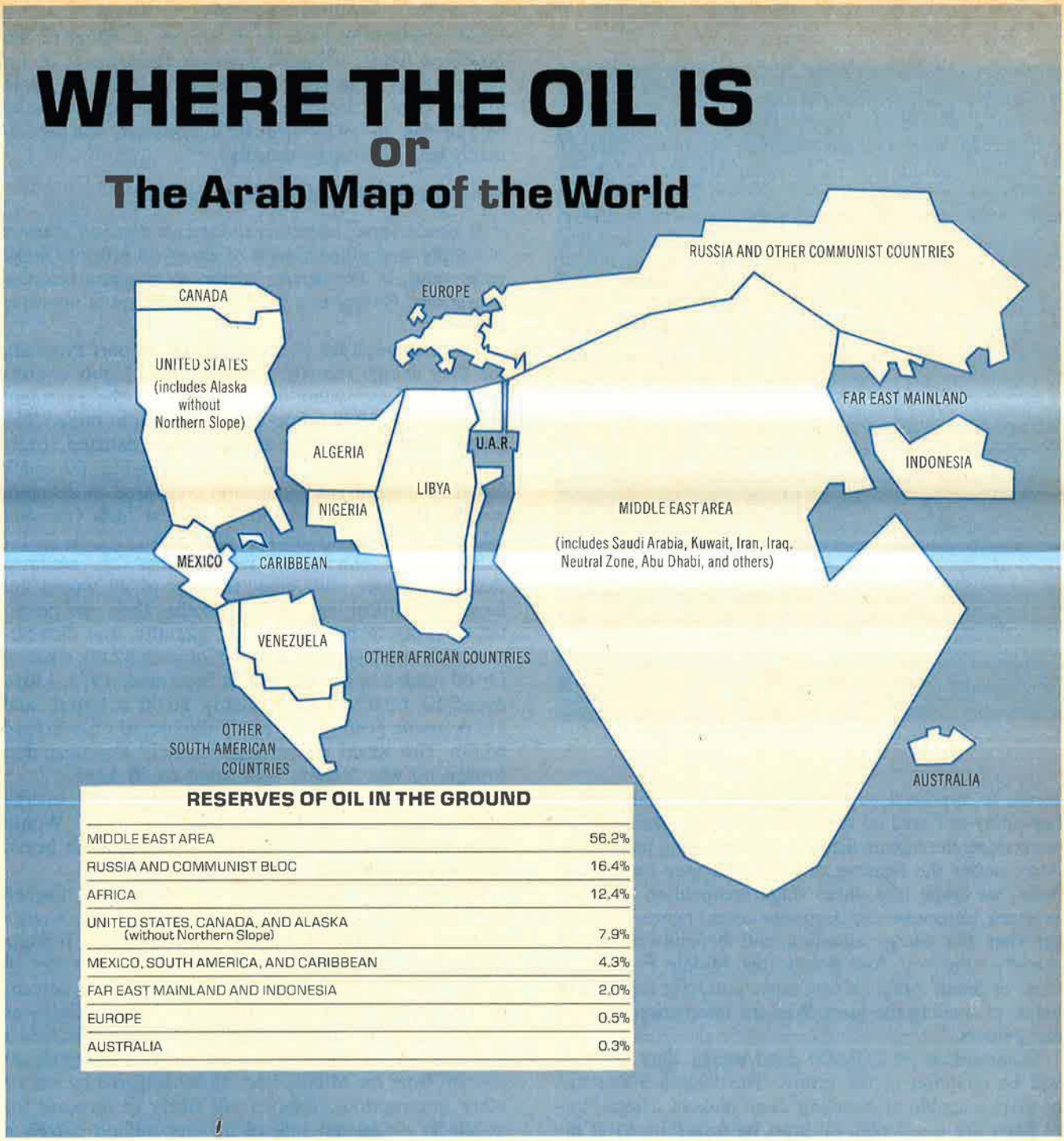
There is a belated move to loosen strictures on wellhead prices of gas to encourage exploration and also to make the customers consider alternate fuels, preferably coal, which may, after 1985, be the source of significant synthetic gas.

Import of liquid natural gas (LNG) and perhaps domestically manufactured synthetic gas (still from imported petroleum) may be a useful but small and high cost contribution. Each foreign energy source and type has its special characteristics and security hazards. Siberian LNG is sometimes suggested as more secure because the USSR has a more assuredly stable government and consistency of foreign policy than Middle East/African sources of oil. But portions of the US —New England, for example—becoming dependent on imported LNG may be captive to one specialized supply line (cryogenic tankers) and one far distant source of supply, without likely options. That seems insecurity squared.

The principal prospect and problem area for domestic energy in the nearer term is coal, with a current consumption of around 600,000,000 tons a year, which might rise to a billion and a half tons by 1985. Such an increase may not occur due to environmental restrictions on mining and on burning because of sulphur content, and delays in installation of gasification and liquefaction facilities. The difference between the suggested maximum and minimum coal usage in 1985 is equivalent to about 10,000,000 barrels of oil per day, mostly from the Middle East, and also equivalent to an annual outflow in balance of payments on the order of $20 billion. Certainly, both the national security policy-makers and the economists who are charged with our national interests, should press to maximize the use of coal and should support the effort of John Love, the President's Assistant for energy matters, to slow, and—better still—reverse, conversion of industry from coal to oil. They should also support a pragmatic strip-mining policy.

Oil is obviously the swing fuel filling the shortfalls in what might be done with coal and other fuels. The current forty-five percent of our energy provided by oil is likely to rise in the midterm to perhaps fifty percent, with half of that oil, or more—a quarter of our energy—coming from imports. Furthermore there may be an increasing oil quality problem. Most US oil has a low sulphur content, as does African oil. The Persian Gulf oil is generally high sulphur, as is Venezuelan oil.

US oil production has probably peaked until Alaskan oil is available. Foreign oil is now being unloaded at Texas refineries, and at a higher delivered cost than domestic crude oil, now price-controlled by the President's Economic Stabilization Program. This situation may be thought both paradoxical and ironic. It cer-



The Middle East takes on dramatic new significance when seen in terms of its oil resources, and makes the rest of the world look puny by comparison.

tainly was not foreseen, even a few years ago, and merits comment on the hazards of forecasting.

Other Hazards on the Horizon

But first a brief comment on three other hazard areas—balance of payments, tankers, and foreign processing capacity.

Any attempt to appraise the balance of payments effects requires forecasts, not only on quantity of imports, but also on price per barrel (now going up faster than once forecast), disposition of foreign oil profits (tending to move from big companies to oil-producing nations), export of capital to develop more oil, exchange value of the dollar, US trade flow generated by dollars paid for oil, and other items.

A balance of payments cost of $15 billion to $20 billion a year for oil is not unlikely by 1980. If the price per barrel is $10 rather than a hoped for $5 (already exceeded for some low-sulphur imports), the total cost may be much more. There is hope that US trade (about $47 billion in merchandise exports last year) can in-

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crease to approach paying the import cost. But such a hope may be based on somewhat optimistic assumptions concerning the factors listed in the preceding paragraph. Also, under the heading of exports to pay for oil imports, we come into direct trade competition with our Western European and Japanese allies; hence the danger that the energy situation will be divisive to our security alliances. And finally, the Middle East countries, or Saudi Arabia alone, may soon have liquid cash balances rivaling the great Western international financial centers.

Supertankers of 250,000 dead-weight tons or more will be common in the future. The United States has no ports capable of handling these tankers. Hence, until ports are developed, oil must be transshipped at increased cost or—more likely—processed in foreign "offshore" refineries and the products shipped in smaller tankers.

The offshore refinery, which might be in the producing country, is both a balance of payments and a national security problem. Closer offshore locations include eastern Canada, the Bahamas, and the Caribbean. Exported capital and the higher costs of foreign-refined products contribute to balance of payments problems. But, more important, the dependence on foreign refining, coupled with a dependence on foreign sources for crude oil, is a double security jeopardy. US refining capacity has lagged because of low economic attractiveness as well as uncertainty over crude oil supplies. Presently, twenty to twenty-five percent of our refinery capacity is offshore. The domestic industry, while accelerating recently, is not yet building to our projected needs, although a recent Department of Interior survey does show that industry plans for about a forty percent increase in domestic refinery capacity by the end of 1977—which, if achieved, will significantly help our energy security.

The Hazards and Pitfalls of Forecasting

It is, of course, necessary to forecast demand, sources of supply, and other aspects of energy in order to make policy and, in the private sector, to program business operations. Energy is a long lead time, capital intensive activity.

The Cabinet Task Force on the Oil Import Program, the only energy security program and a highly controversial and unpopular one, reported to the President in February 1970 after nearly a year's study. The report consistently underestimated oil demand, overestimated oil supplies, and did not recognize the quick falloff in natural gas production compared to demand, nor the increase in demand for scarcer fuels (gas and oil) due to the environmental programs.

The study—the best of its kind thus far—assumed that the nations with great reserves of oil would not have the political ingenuity to cartelize their vast potential in order to influence price, quantity, and distribution. The study suggested $2.50, or even $2.00, a barrel for oil landed in the US. But in September 1973, Libya raised its f.o.b. prices to nearly $6.00 a barrel, and US domestic postings for newly discovered oil averaged $5.00. The world oil pricing, formerly assuming that foreign oil was "cheap," got stood on its head.

The study concluded that all should be well, energy security-wise for the US, until at least 1980. Within three months, the major tenets of the analysis began generally shown to be seriously in error.

By late 1973, petroleum consumption had reached over 17,000,000 barrels a day, compared to the study's estimate of 16,700,000 barrels a day for 1975. Imports in late 1972 were well over 6,000,000 barrels a day, of which around a third to a half—or ten to fifteen percent of US consumption—was from the Middle East—as compared to the study's estimate of 1,700,000 barrels a day of imports for 1975, with only an insignificant amount from the Middle East. If unhampered by war or other interruptions, imports are likely to increase for awhile at an annual rate of another million barrels a day, mostly from the Middle East.

Industry, government, and most private experts all shared in the miscalculations. Yet the misconceptions still linger. The estimating precedent just described should generate restraint in being overly precise and sure about forecasts.

Energy Conservation and Environmental Programs

Two important factors related to the energy supply and demand equation should be continually kept in mind—energy conservation or efficiency, and our environmental programs. These are factors new to the energy equation.

Energy conservation runs counter to our country's ever-expanding consumption ethic. Yet a study of a

year ago by the President's Office of Emergency Preparedness showed that, by conservation measures, the estimated demand for energy in 1980 could be reduced by the equivalent of about 7,000,000 barrels of oil a day. Some of the suggested measures, such as improved insulation for buildings, are relatively easy to achieve; some, such as a major switch from individual vehicles to mass transit, would mean a considerable change in life-style. A companion study estimated that maximizing the use of coal, a domestically abundant fuel, for production of electricity would mean a lessening of currently projected oil demand by some 2,000,000 barrels a day by the early 1980s.

In summary, energy conservation (efficiency) provides the best potential, and a large one, of any single energy program for the short- and mid-term future.

Environmental policies and programs were generally initiated without scientific analyses of their energy impact. Yet the greater proportion of the pollution against which environmental programs are directed does come from extraction, processing, distribution, and consumption of energy fuels. Hence, some of the energy and environmental programs are bound to be on opposed, sometimes collision, courses, requiring close monitoring and difficult compromises. One major exception to this last generalization is energy conservation, which obviously furthers both energy and environmental objectives, and, by reducing dependence on foreign sources, certainly should be categorized as an energy security program.

Except for energy conservation, energy programs that are strongly guided by environmental considerations (the troubles over the Alaskan pipeline are an example) tend in the short and midterm (until about 1985) to be counterproductive to energy security, since they tend to increase dependence on foreign resources. In the longer term, programs such as sun and geothermal power, born of today's R&D, are likely to have less conflict between environmental and security considerations. Support of environmental programs and opposition to pollution is generally equivalent in the public mind to being on the side of the angels—at least until the lights dim, the heat is deficient, and the costs leap. Hence, the rough road to energy security is rougher and inevitably fraught with more compromises because of our environmental aspirations, and vice versa.

The Situation of Our Allies

Our NATO allies, except Canada, are going to be somewhere between eighty-five and ninety-five percent dependent on the Middle East and Africa for energy supplies despite the recent windfall of the North Sea discoveries. Japan is, in effect, 100 percent dependent on energy imports.

If Canada chooses to extend to eastern Canada the present pipeline from Alberta through the US and now ending in Ontario, and thereby replaces currently imported oil with west Canadian oil, the increased Canadian energy security becomes increased US *insecurity,* since the oil that would be used is now supplying refineries in the northern US.

The fossil fuel age is a finite age, possibly tapering off (except for coal) in the lives of some reading this article. There is, however, no current or midterm problem of overall adequacy of fossil fuel resources. The problem is one of distribution, illustrated by the estimate that, by 1980, the major non-Communist consuming states will be using sixty percent of crude oil production but providing only about twenty percent of that production. The problem is also one of persuading the producing countries to provide the oil needed. The US situation will be bleak enough, but the situation of Japan and Western Europe will be worse.

The Oil-Producing Countries

The eleven principal oil surplus countries (Iran, Iraq, Kuwait, Saudi Arabia, Venezuela, Libya, Algeria, Abu Dhabi, Qatar, Nigeria, and Indonesia) are organized as the Oil Producing and Exporting Countries (OPEC). They now operate as an effective cartel to raise oil prices, expand state ownership of their oil resources, and increase the proportion of their take per barrel. Seven are Arab countries involved in varying degrees with the Arab-Israeli issue. Of the other four, Iran is the most important, with an estimated production of around 8,000,000 barrels a day by 1980. Among the Arab countries, Saudi Arabia is by far the most important, with a current production of about 9,000,000 barrels a day and a need for a 1980 production of around 20,000,000 barrels a day (perhaps twice that of the US) if world requirements are to be met.

Oil Power Is Power Indeed

The President stated on September 8 that "the United States would prefer to continue to import oil, petroleum products, from the Mideast, from Venezuela, from Canada, and from other countries, but also we are keenly aware of the fact that no nation, and particularly no industrial nation, must be in a position of being at the mercy of any other nation by having its energy supplies suddenly cut off."

The OPEC countries have varying degrees of freedom to manage their oil for political objectives. Any two of them could create a significant short-term disruption. Saudi Arabia alone, and also probably Iran alone, could change the long-term world energy situation.

The oil management of the oil-producing countries is now generally in the hands of competent officials, many of them graduates of US and British universities. As these countries now move to various degrees of nationalization, it would be naïve to suggest that they would not try to use their one principal resource to further the sum total of their objectives—social, political, military, and economic. Furthermore, they know that even their oil resource is finite. To conserve their

oil reserves, and still increase income, they can raise prices, rather than produce more oil.

Our energy security problems may relate increasingly to the good will of states with a questionable record for political stability and obvious hazards of transferring power as present rulers pass on, located in a region of substantial penetration by the USSR that also is heavily conditioned by the Arab-Israeli situation.

The increasing US vulnerability—brought jarringly to the front rank of our security problems by the outbreak of Arab-Israeli fighting in October of this year—together with the Arab hostility to past and continued US support of Israel, now begins to generate a new dimension for US policy. While, as of this writing in early October, several of the major producing states have remained moderate in their attitudes, we have to heed the example of the overnight transition of Libya from a conservative to a radical state.

Probably only the conservative oil states heed the precept that he who presses his opponent against a closed door must be prepared for a death struggle.

Our heavy dependency extends through at least the 1980s, which means we have to live for a long while under the hazard of radical political changes threatening our energy security.

But, even without radical political change, the oil providers can be expected to exert a continual and increasing leverage toward their objectives, one being termed by an Arab petroleum minister as a more "even-handed" US policy toward Arab-Israeli matters.

This leverage will increasingly include international financial resources. The payments received from the oil-deficient countries could be vast if, by 1980, the world price of oil rises as suggested by some observers to double, or even triple, the current price. By that time, the US energy trade deficit is likely to be somewhere around $20 billion to $30 billion a year, raising a question as to whether the importation cost of this essential resource may become so high as to be a national security issue as well as a grievous economic issue.

In fact the oil-exporting countries may not want all that foreign exchange unless it buys something they want. They want things more worthwhile to them than keeping the oil in the ground for future generations to sell at a higher price. Put another way, the worth of the dollar may be important.

In summary, the sober requirements placed on our diplomats and policy-makers for future "oil diplomacy" will be demanding indeed, particularly when relations with allies are taken into account.

Some Energy Security Measures

This article can attempt only a partial listing and a very limited discussion of energy security measures that have been suggested, are under consideration, or under way.

Some of these measures involve foreign policy. For example, a "consumer cartel" of oil-buying nations has been suggested. Both NATO and the Organization for Economic Cooperation and Development (OECD) already provide opportunities for consultation and joint action. One of the problems would be determining what constitutes equitable sharing of costs and hazards, when the United States is so much less dependent than our allies on the Middle East. And the leadership of OPEC has stated that formation of such a cartel would be considered "an unfriendly act." Our allies are less likely than we to join in actions that risk confrontation with the oil providers. Also, the US and its allies are competing for the same sales markets in order to pay for oil. There is a danger of damaging competition among the oil "have-nots" to get oil supplies firmly committed.

One traditional policy in our energy security platform has been to give priority to procurement and development in the Western Hemisphere. While, thus far, this policy has had only limited success, there is a vast energy potential in Canada's Athabasca sands and Venezuela's heavy oils—at a high capital cost and possible high political costs. But there is still a good case for giving priority to the Western Hemisphere, particularly now that Middle East pricing and price forecasts begin to make the cost of Canadian, Arctic, and Venezuelan oil, and United States shale oil look more acceptable. That may also apply to more than 300,000 US stripper wells (wells that produce less than ten barrels a day) and other wells that have been abandoned as uneconomical producers.

As to policies and programs toward the oil-producing nations, even the conservative Arab states have stressed their strong desire for a "more even-handed policy" in dealing with Arab-Israeli matters. Some oil-producing states have their oil income committed to development. Several are already restricting production to conserve their reserves for their future. The US should help these countries further their development.

A Middle East disruption, either war such as the October Arab-Israeli outbreak or major guerrilla activity, is certain to have a severe effect on our energy security. Seeking stability through the sale of arms may seem contradictory. But, having plenty of oil funds, the oil producers are going to buy arms, and the wise pragmatic approach seems to be to provide them from the US—which we are doing for Iran and in part for Saudi Arabia.

Those who fancy themselves as geopoliticians might muse over the situation wherein the Strait of Hormuz at the entrance of the Persian Gulf—not Gibraltar or Singapore or Panama—may soon, if not now, be the world's most sensitive and strategic waterway.

Turning to US domestic measures, the listing of things being done and which might be done is long indeed. In the longer term, our dependency and hence our security hazards can be decreased and hopefully made manageable. But doing so requires vigorous research and development, plus an investment on the order of a half trillion dollars by 1985 in both conventional energy supplies, such as offshore drilling, and the more exotic sources, such as coal gasification.

Both for the shorter term and the long term, we need to stress development of domestic refining capacity and to place heavy emphasis on limiting the rate

of increase in demand through energy-conservation programs. We must develop the oil and gas resources we have, including raising the recovery rate well above the current less than forty percent of potential production. We need to find ways to orchestrate our environmental and energy programs to maximize the use of coal and nuclear power while using the potential fuel resources we have, such as shale oil. If the principal oil producers choose to sell the extra increments of oil only at exorbitant prices or not at all, our principal long-run fall-backs are conservation, coal, and the fruits of R&D. The President's energy message of June 1973 stressed these measures and encouraged refinery construction, to help in the longer term.

For clear-cut energy crisis situations, there is a need for a priority and allocations program extending to rationing. Such a plan exists. With public support, we can probably count on handling up to a ten percent shortfall in oil for a while by voluntary measures. There are capabilities for some emergency increase in production of oil and gas at greater than efficient rates. One naval petroleum reserve—Elk Hills in California—has some production capability. But the reserve with the greatest prospects, Naval Petroleum Reserve No. 4 on Alaska's north slope, is doubly locked up until a pipeline across Alaska is available.

Emergency storage is a consideration. This is a measure we have long urged on our allies who are generally embarked on programs of storing oil to meet their need for from forty-five to ninety days. A recent study given the Secretary of Interior by his advisory National Petroleum Council suggested consideration of storing, by 1980, the equivalent of 3,000,000 barrels per day for 180 days, or a quarter of estimated imports for that period. Taking into account our serious dependence on foreign refineries, this proposal is not very comforting, though better than nothing. But the cost would be from $2.5 billion to $5 billion, plus a possible disruption of already tight world oil markets as well as sheet steel markets if that type of storage facility were used.

As to force and threat of force ranging from general war to covert action, the range of possibilities is high indeed. Mention of general war brings up thoughts of protecting transport lines, and the sobering possibility that within a decade or so the foreign supply line for oil would require the equivalent of a super tanker every fifty miles from the Strait of Hormuz to the coast of the US. But equal or greater problems may be the protection of sources and the military/political problems of continued access to foreign energy sources in any world or local crisis situation. Oil infrastructure—for instance, pipelines—is difficult or impossible to protect in a situation of open, or even covert, violence. Even a local disturbance could generate significant oil disruption. Put succinctly, we have needed a sense of urgency and have needed to surmount our crisis of decision-making.

The Military and Energy Security

The energy security problem is a clear example of the mutual interpenetration of our domestic and international environments. Effective actions require policy and programs cutting across the traditional boundaries of economic, national security, and foreign and domestic policy.

Our energy security problems exist because, in twenty-twenty hindsight, we have not been forehanded and farsighted and hence have run out of time. Things that we should have started doing (or ceased doing) five to ten years ago are only coming about now. We need a speeded-up program, stripped of both government and private enterprise bureaucracy and red tape—a sort of energy Manhattan Project (which made the first atomic bombs) and domestic Marshall Plan combined. Gasoline and heating fuel shortages are likely to provide as much of a spur to the needed actions as the security threat of being at the mercy of Middle East oil producers.

Energy security has not been, for many reasons, a priority consideration in security policy discussions. True, from 1959 there was an Oil Import Program with a security base. But, as should be apparent from the foregoing discussion, a focus exclusively on oil imports has been completely inadequate to the security situation. There has been a need, only recently and belatedly recognized, to focus across the entire range of energy resources and related problems.

Although the State Department, conscious of the threat to its management of foreign policy, has been concerned over the deteriorating energy security situation, there has been no real energy security emphasis on the part of any great government agency. The Department of Defense has tended to emphasize a logistical rather than a strategic approach. The one security agency, the Office of Emergency Preparedness, which dealt with oil imports and emergency resource matters, was recently dismantled by the Administration.

Fortunately, the National Security Council Staff and the organization of the Joint Chiefs of Staff now seem to be turning their considerable thinking resources to the prickly energy security problem. The President's statement of September 8 about not being at the mercy of the Mid-East oil producers should spur this new effort.

In the current threatening energy situation, there is an obvious need for a strong national security input. While energy policy, like war, to borrow Clemenceau's phrase, is "too important to leave to generals," the professional military should now have something to contribute. While their voice should be a quiet voice, it should be heard.

The first step, however, is to get forward with thinking in order to have something useful to say. In the view of this author, energy issues and policy are likely to replace the now waning cold war as a central policy concern, both domestic and foreign. Hopefully, this article is a contribution toward helping our military profession to have something useful to say on the problem. ■

People, the men and women of the Air Force as well as the other military services, were the key issue of the 1973 National Convention of the Air Force Association. From the critically important flight-pay question to retention in the all-volunteer force era, the Convention speakers and delegates zeroed in on the range of problems that confront Air Force people in the 1970s . . .

THE 1973 AFA NATIONAL CONVENTION... A PRODUCTIVE LOOK AT USAF'S PLANS AND PEOPLE

AFA's Aerospace Development Briefings and Displays were a pivotal feature of the 1973 National Convention. Martin Marietta's ramjet-powered Multipurpose Missile was publicly unveiled at the AFA Convention.

By **Edgar Ulsamer,**
SENIOR EDITOR, AIR FORCE MAGAZINE

FROM the question of how the US should counter the new Soviet capability to MIRV its ballistic missiles to the difficult problem of broad force modernization with shrinking budgets, the 1973 National Convention of the Air Force Association turned the spotlight on the issues that will decide future US aerospace strength. But what stood out, and became the Association's principal mandate for the coming year, was captured by the unanimously adopted Statement of Policy: "The central defense issue of the day is people." This theme was reflected by Air Force leaders who addressed more than 5,000 attendees at AFA's Twenty-seventh National Convention, held in Washington, D. C., September 16–20.

Air Force Secretary John L. McLucas pointed out at a luncheon in his honor that "very imaginative actions are required to continue to recruit and retain the quality people we need." Air Force Chief of Staff Gen. George S. Brown stressed that "of all the variables—force size, mix, deployment, concepts, budget levels, and so on—with which the Air Force must meet future challenges, the most important is the quality of our people."

In order to maintain the Air Force's present high personnel standards, General Brown explained, "military salaries and benefits must be competitive with pay in civilian occupations and progressions, and compatible with the risks and hardships that are inherent, and, in some cases unique, to service in the armed forces."

At the Convention's Chief of Staff luncheon,

Air Force Chief of Staff Gen. George S. Brown spoke at the luncheon in his honor.

THE WHITE HOUSE

WASHINGTON

September 12, 1973

I welcome this opportunity to extend my sincere thanks to all members of the Air Force Association for the significant contributions you have made to the attainment of peace and the preservation of our national security.

You can take great pride and satisfaction in your vital role in the return of our American prisoners of war from Southeast Asia. Your effective and far-reaching endeavors in focusing public attention and world opinion on the plight of these prisoners proved to be an essential element in the eventual resolution of their cruel dilemma.

Your continuing and faithful support of the United States Air Force at a time when there was wide misunderstanding of the aims and achievements of the military effort in Southeast Asia had an especially positive effect in realizing our goals of a peace from which all might benefit.

May you have a most successful and productive meeting.

Richard Nixon

General Brown pointed out that "the Congress is now considering legislation in this area that is terribly important to the future of the Air Force—legislation that will permit the services to overhaul the career incentive system for its aviators and remove the inequities imposed under the law that denied entitlement to most of our senior aviators last June.

"In order for the Air Force to continue to be manned by an adequate number of top-quality aviators who are willing to make a total, career-length commitment to military aviation, the compensation and incentive for that commitment must also be on the same basis—for a total career and not piecemeal. This is the essence of the entire aviation career-incentive pay issue . . . ," General Brown said.

(General Brown's comment on flight pay coincided with an appearance by AFA's newly elected President, Joe L. Shosid, before the Stratton Subcommittee of the US House of Representatives. President Shosid presented AFA's statement on flight pay, which appears in full on p. 66. This statement incorporated AFA's policy resolution on the same subject approved unanimously by the Convention delegates and designated by them as "Policy Resolution No. 1.")

The importance of the "people issue" was underscored also at the Outstanding Airmen Dinner by the Vice Chief of Staff, Gen. Horace Wade, who stressed that "in the United States Air Force, people must be our paramount concern," and added that "we are not completely

certain yet what problems we will have in acquiring young men and women in the all-volunteer era. We do know that up to fifty percent of our enlistees in the late sixties and early seventies may have been draft motivated."

AFA's Statement of Policy, for the first time in many years devoted exclusively to the manpower issue and the effects of the all-volunteer concept, pointed out that the "surest way to make the volunteer force work is by enhancing the values of the professional military career. And the quickest way to make sure the volunteer force will not work is by degrading, eroding, and mocking these values. Ironically, there is a concerted, and growing, effort to do just that.

OUTSTANDING AIRMEN FOR 1973

SMSgt. John G. Canavan
95th Strategic Wing
APO New York

Sgt. Larry L. Corbin
3800th Air Base Wing
Maxwell AFB, Ala.

CMSgt. Richard P. Gregory
Hq., 56th Special Operations Wing
APO San Francisco

TSgt. Robert S. Max
66th Combat Support Group
RAF Weathersfield
APO New York

TSgt. Lynne R. Packer
3d Mobile Communications Group
Tinker AFB, Okla.

MSgt. John E. Peterson
552d Avionics Maintenance Squadron
McClellan AFB, Calif.

CMSgt. Herman Roberts
38th Field Maintenance Squadron
Laredo AFB, Tex.

TSgt. Eudelia Serna
35th Supply Squadron
George AFB, Calif.

SMSgt. James A. Swoopes
91st Combat Support Group
Minot AFB, N. D.

MSgt. Joe F. Todd
280th Communications Squadron (Special)
Maxwell AFB, Ala.

SMSgt. Joe W. Ward
Hq., Aerospace Rescue & Recovery Service
Scott AFB, Ill.

MSgt. Leaman L. Wilkes
6595th Space Test Group
Vandenberg AFB, Calif.

"Therefore," the Statement of Policy concludes, "in this year of 1973, the Air Force Association herewith reaffirms its belief in, its concern for, and its support of the men and women of the Air Force and of all armed services. They have never needed help more urgently. They will get it from the Air Force Association, to the full extent of our abilities, our resources, and our energies." *(The full text of the Statement of Policy appears on pp. 6 and 7.)*

The "people issue" was also the focus of the Convention's Aerospace Workshop on September 18, involving a detailed presentation by Maj. Gen. Oliver W. Lewis, Director of Personnel Programs in the Office of the Deputy Chief of Staff for Personnel, Hq. USAF. Pointing out that the Air Force's FY '74 budget request includes about $7.3 billion, or about thirty percent of the total request, for military manpower, General Lewis explained that ninety-three percent of the total military manpower request is based on statutory obligations. The remaining seven percent covers permanent changes of station that are considered necessary by the Air Force. In discussing the flight-pay issue, General Lewis said that even under the more favorable incentive schedule in effect until mid-1973, "attracting and retaining enough qualified aviators . . . has been difficult," adding that in 1973 the Air Force's pilot loss rate increased forty-five percent over 1972.

The Secretary and the Chief Speak Out

Secretary McLucas and General Brown, in their first appearance before a national AFA meeting as the top Air Force leaders, provided the Convention with comprehensive status reports on national and Air Force policy.

Despite progress toward détente, Dr. McLucas explained, "there are some disturbing increases in Soviet and Chinese capabilities, both strategic and tactical."

In the strategic arena, he said, "the missile forces of both the Soviet Union and the United States are numerically limited by the SALT agreement. But the Soviets continue to expand their strategic research and development base. The Soviets have flight-tested three new missiles, each with multiple independently targeted reentry vehicles (MIRVs), and there is evidence that they intend to do so on a fourth missile. One of these new missiles, the very large SS-X-18, is estimated to be capable of carrying at least six warheads of about one megaton each.

"The SALT agreements take account of certain advantages on both sides. The Soviets already have the advantages of more and larger missiles. Our present advantages in numbers of warheads and missile technology could be overcome in the future by further Soviet MIRV developments unless we remain alert."

Secretary McLucas went on to explain that "the new Soviet swingwing strategic bomber, the Backfire, is probably now in series production, and assignment to operational units could begin later this year. There is still uncertainty about the Backfire's primary mission, but an intercontinental capability cannot be ruled out."

In the tactical air mission, the Secretary explained, "the Soviets are also increasing their capabilities. Their current tactical air force

Air Force Secretary John L. McLucas, at a luncheon in his honor, gave a sweeping report on Air Force programs and changing policies.

numbers over 4,000 aircraft, including new models of the MiG-21 Fishbed, the new variable geometry wing Flogger, and the Mach 3 Foxbat. In the near future, we expect even more advanced aircraft to enter their tactical inventory."

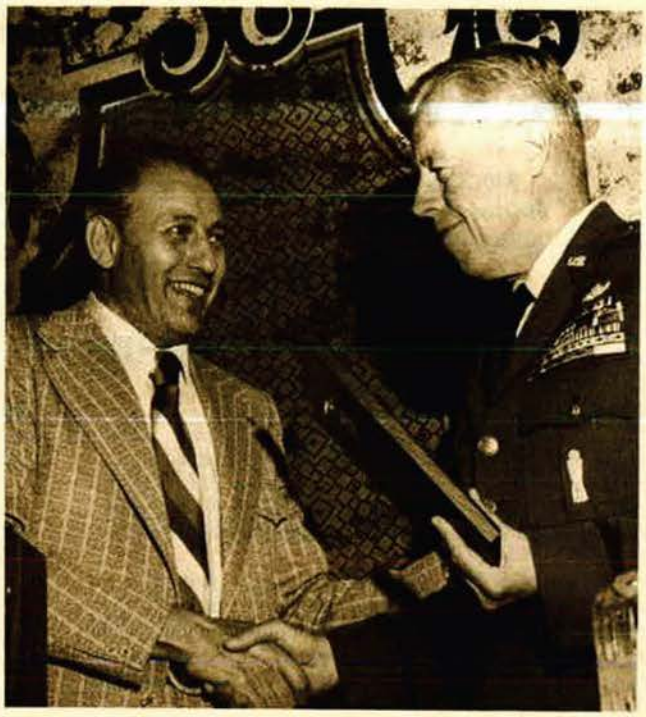
The Chinese, too, he said, are boosting their strategic and tactical forces by extending the range of their missiles to intercontinental levels and by modernizing their aircraft inventory, including, for the first time, production of a fighter of purely Chinese design, the F-9.

Following an enumeration of key weapon systems, such as the B-1, Minuteman modernization, F-15, and A-10, which he described as crucial to the Air Force's ability to meet its assigned defense role, Secretary McLucas stated that "we must incorporate new technology into our overall force structure in three key areas: guided weapons, electronic warfare, and command and control." The Air Force, he said, is introducing the Maverick electro-optically guided, air-to-surface missile into the inventory in quantity. "We believe the Maverick would be a major deterrent factor against a tank attack on NATO. At the same time, we must improve our air-to-air missile capability to shoot down maneuvering enemy fighters. And, lastly, we must fully exploit the advantages offered us by Remotely Piloted Vehicles."

Calling attention to the command-and-control lessons learned in the Southeast Asian air war, Dr. McLucas said that "we have [as a result] developed new communications vehicles, both airborne and satellite. AWACS, the Airborne Warning and Control System, shows great promise for tactical air battles. Modern command and control, well integrated into our forces and doctrine, can permit the air commander to get the maximum effectiveness out of the leaner forces that we can expect in the years ahead."

Besides the exploitation of new technology, another way of getting the most out of "what we have," the Secretary said, "is to utilize our existing forces to maximize all of their capabilities." The Air Force, he explained, "has done well in this area—adapting transport aircraft into gunships, utilizing strategic aircraft for tactical warfare, and building up our Air National Guard and Air Reserve.

"We must continue to exploit innovatively the flexibility of our system. For example, we might consider how to apply our conventional tactical aircraft directly against enemy ground forces beyond the reach of friendly ground forces before they have a chance to engage in battle; or how strategic bombers might be



SAC's Commander in Chief, Gen. John C. Meyer, accepted AFA's Citation of Honor from President Martin M. Ostrow on behalf of the Command's tanker forces.

Air Force Vice Chief of Staff, Gen. Horace M. Wade, served as the keynote speaker at the Outstanding Airmen Dinner.

employed in a conventional war in Europe; or how best to use land-based air against ships."

One of the key factors that challenges the Air Force and the Air Force Association, Dr. McLucas said, is the present public attitude toward defense spending and planning. "Many Americans are disenchanted with government in general. After the arduous war in Southeast Asia, many are also dissatisfied with the military in particular. Congress reflects these attitudes through an increasingly critical review of defense-appropriation requests. Besides the more direct impact on our force programs, this congressional attitude affects our people on many related subjects such as flight pay and grade structure."

In paying tribute to the work of the Air Force Association, Secretary McLucas commended AFA "for exceptional leadership in calling world attention to our POWs and their families and to the need for getting a full accounting of those who are still missing."

Reduction in Force

General Brown talked about basic trends affecting the size and mission of the United States Air Force, stating that, "while the exact dimensions of the future Air Force are yet to be determined, several significant trends are clearly indicated.

"The number of military personnel in the Air Force, as in all the services, has been steadily decreasing—from more than 905,000 in the late sixties at the peak of our involvement in Southeast Asia to just over 692,000 last June. Within a year, that number will probably be further reduced to 666,000—more than a twenty-six percent decrease Air Force-wide, in the relatively short period of six years."

The reduction in people, General Brown said, is coupled to a number of recent base closures, mainly overseas, as well as a reduction in the number of aircraft in the Air Force's active inventory. That inventory, he said, is less than one-half as large as it was fifteen years ago, adding: "Obviously, many of these reductions are the direct result of a decreased

AWARDS AT THE 1973 AIR FORCE ASSOCIATION

AFA'S AEROSPACE AWARDS

The H. H. Arnold Award ("Aerospace Man of the Year")—To Gen. John D. Ryan (Ret.), former Chief of Staff, USAF, for brilliant leadership of the United States Air Force in achieving national objectives in Southeast Asia, including the release of our POWs.

The David C. Schilling Award ("The most outstanding contribution in the field of Flight")—To the 17th Air Division, APO San Francisco, Calif., for masterful execution of missions in Operation Linebacker II against heavily defended military targets in North Vietnam (accepted by Brig. Gen. Billy J. Ellis, Commander).

The Theodore von Kármán Award ("The most outstanding contribution in the field of Science and Engineering")—To Lt. Col. Roy C. Robinette, Jr., USAF (Ret.), Cupertino, Calif., for contributions to a new satellite system that has provided important improvements in national defense.

The Gill Robb Wilson Award ("The most outstanding contribution in the field of Arts and Letters")—To Capt. Robert J. Hoag, Editor, *USAF Fighter Weapons Review*, Nellis AFB, Tex., for editorial leadership that made the *USAF Fighter Weapons Review* the prime forum for fighter pilots.

The Hoyt S. Vandenberg Award ("The most outstanding contribution in the field of Aerospace Education")—To the Community College of the Air Force, Randolph AFB, Tex., for gaining civilian acceptance of USAF training and educational methods, thereby providing an invaluable career incentive (accepted by Lt. Gen. William V. McBride, Commander, Air Training Command).

The Thomas P. Gerrity Award ("The most outstanding contribution in the field of Systems and Logistics")—To Col. Allen R. Rodgers, DCS/Logistics, Hq. 8th AF, APO San Francisco, Calif., for logistics management involving the largest combat force ever assembled by the Strategic Air Command.

AIR FORCE ASSOCIATION CITATIONS OF HONOR

Capt. Steven L. Bennett (posthumously), for exceptional heroism as a Forward Air Controller in Southeast Asia (accepted by Mrs. Linda V. Bennett).

Maj. Gen. I. G. Brown, Director, Air National Guard, Washington, D. C., for outstanding performance as Director of the Air National Guard.

TSgt. William D. Cauthen, Directorate of Personnel, 6981st Security Group, APO Seattle, Wash., for performance as Base Career Advisor of the 6940th ABG, Goodfellow AFB, Tex., honoring him as "Air Force Personnel Manager of the Year."

Capt. Terence F. Courtney (posthumously), for deliberately sacrificing his own life to save the crew of his AC-119K.

William T. Haneline, Hq. SAC, Offutt AFB, Neb., for service as Director of Procurement, Hq. Strategic Air Command, and for selection as "Air Force Civilian of the Year."

Gerald V. Hasler, Johnson City, N. Y., for developing support for legislation authorizing the Air Force Junior ROTC Program in the state of New York.

Maj. Ernest W. Lueders, Executive Officer, 27th Tac Fighter Squadron, MacDill AFB, Fla., for inflicting heavy damage on twelve parked MiG aircraft in North Vietnam.

Col. Milton E. Mitler, Employers Support for Guard & Reserve, Arlington, Va., for an outstanding public information program on the President's National Committee for Employer Support of the Guard and Reserve.

Maj. Gen. Kendall Russell, Director, Development and Acquisition, DCS/R&D, Washington, D. C., for management of the Airborne Warning and Control System (AWACS) program.

Col. Lawrence A. Skantze, Deputy Commander/AWACS, ESD, L. G. Hanscom Field, Mass., for management of the AGM-69 Short Range Attack Missile (SRAM) program.

Maj. Richard M. Suter, XOOSLC, Hq. USAF, Washington, D. C., for leadership in tactical fighter air-to-air training.

American role in Southeast Asia. We have also taken steps to increase the capabilities of our allies as reflected in the Nixon Doctrine and to improve, substantially, our Air National Guard and Air Force Reserve in keeping with Total Force Policy. While these are wise and necessary actions, they have also served to further reduce the active-force inventory."

The Air Force, and indeed the entire American defense structure, General Brown cautioned, "has now closely approached force levels below which it must not go, considering current world conditions. Despite this fact, or rather because of it, the basic question before us is not, 'Can we provide the airpower required to meet this nation's security needs?' but, 'How will we best provide it with the resources that are available?' For provide it we must."

While the protracted US involvement in Southeast Asia has significantly curtailed force modernization, General Brown said that "we are now on the verge of realizing the full, revitalizing impact "of a recent, concerted effort to modernize Air Force weapon systems.

"The modernization of our strategic missile force with Minuteman III has been in progress for several years and will continue—as will, of course, the modernization of our B-52 and FB-111 bomber force.

"Consider what else will be occurring in the Air Force within the next few years.

"By the middle of next year, the B-1 should be making its first flight. Next fall, the first F-15 is scheduled for delivery to TAC. The following fall, by the time the first training squadron of the F-15 is operational, TAC will also be test-flying the A-10. Meanwhile, the AWACS development articles [aircraft] will have been flying for several years.

"One of the primary challenges before us is to make sure that the events indicated on the current modernization timetable do, in fact, occur. Our air superiority in the 1980s will depend principally on the F-15. No flying machine, in operation or on the drawing board, is capable of delivering the close air support the A-10 is able to provide. Finally, there is no strategic weapon—aircraft or land- or sea-

NATIONAL CONVENTION, WASHINGTON, D. C.

Tanker Force, Hq. SAC, Offutt AFB, Neb., for dedication and professionalism of flight, ground, and maintenance crews in Southeast Asia (accepted by Gen. John C. Meyer, Commander in Chief, SAC).

Capt. George D. Westover, 3418th Instruction Squadron, Lowry AFB, Colo., for management of the Yokota Officers' Open Mess Complex, Yokota AB, Japan, honoring him as the "Air Force Club Manager of the Year."

22d Bombardment Wing, March AFB, Calif., for achieving a standard of excellence unsurpassed in the history of the Strategic Air Command (accepted by Col. Jerome O'Malley, Commander).

61st Tactical Airlift Squadron, Little Rock AFB, Ark., for pioneering and refining the Adverse Weather Aerial Delivery System (AWADS) in combat in Southeast Asia (accepted by Lt. Col. Richard Peskin, Commander).

100th Strategic Reconnaissance Wing, Davis-Monthan AFB, Ariz., for reconnaissance operations on a worldwide basis (accepted by Col. Donald S. White, Commander).

AIR NATIONAL GUARD AND AIR FORCE RESERVE AWARDS

The Earl T. Ricks Memorial Award for 1973—To **Capt. Angelo Perfetti,** 131st Tactical Fighter Group, Missouri ANG, St. Louis, Mo., for his outstanding airmanship during an in-flight emergency while flying an F-100 on November 29, 1973.

The Air National Guard Outstanding Unit Award for 1973—To the **115th Fighter Interceptor Group,** Wisconsin ANG, Madison, Wis., as the "Outstanding Air National Guard Unit of the Year" (accepted by Col. James Dawson, Commander).

The Air Force Reserve Outstanding Unit Award for 1973—To the **94th Tactical Airlift Wing,** Dobbins AFB, Ga., as the "Outstanding Air Force Reserve Unit of the Year" (accepted by Brig. Gen. Cecil T. Jenkins, Commander).

The President's Award for the Air Force Reserve—To the **913th Tactical Airlift Group,** Willow Grove, Pa., for the "Outstanding Air Reserve Flight Crew of the Year" (accepted by Maj. Edward J. McNulty, Aircraft Commander).

AFA-AFSC MANAGEMENT AWARDS

AFA-AFSC Distinguished Award for Management—To **Lt. Gen. James T. Stewart,** Commander, ASD, Wright-Patterson AFB, Ohio, for management of many programs, including the F-15, B-1, F-111, C-5A, and SRAM.

AFA-AFSC Meritorious Award for Support Management—To **Brig. Gen. Robert T. Marsh,** DCS/Development Plans, Hq. AFSC, Andrews AFB, Md., for support management of the F-15, B-1, F-111, and gunship programs.

AFA-AFSC Meritorious Award for Program Management—To **Col. Wilbur B. Botzong,** SAMSO/YD, Los Angeles AFS, Calif., for excellence in program management at SAMSO, Los Angeles AFS, Calif.

AFA-AFLC MANAGEMENT AWARDS

AFA-AFLC Executive Management Award—To **Col. John J. Barta,** Director of Procurement and Production (OOAMA), Hill AFB, Utah, for outstanding performance as Director of Procurement and Production, Hq. OOAMA, Hill AFB, Utah.

AFA-AFLC Middle Management Award—To **Kenneth L. Hoover,** Acting Chief of Requirements and Distribution Branch (SAAMA), Kelly AFB, Tex., for management excellence in the Propellants Division, Hq. SAAMA, Kelly AFB, Tex.

AFA-AFLC Junior Management Award—To **Capt. Ray W. Tidwell,** 2701st Explosive Ordnance Squadron, Chief, Operations Branch (OOAMA), Hill AFB, Utah, for management excellence as Chief, Operations Branch, 2701st Explosive Ordnance Disposal Squadron, Hill AFB, Utah.

Air Force Secretary McLucas, center, in front of Boeing exhibit, is flanked by, from left to right, former Louisiana State AFA President Toulmin Brown, Sen. J. Bennett Johnston, Louisiana State AFA President Lou Kaposta, and Sen. Russell B. Long.

President Ostrow presented a Citation of Honor posthumously to Capt. Steven L. Bennett for exceptional valor while serving in Southeast Asia. Mrs. Linda V. Bennett accepted the award for her late husband.

Maj. Gen. R. P. Lukeman, USAF's Assistant Chief of Staff for Studies and Analysis, was the keynote speaker at the Convention's Aerospace Workshop.

launched missile—that can approximate the flexibility and firepower of the B-1. I sincerely believe that the country must have the capabilities of these aircraft in the future threat environment," General Brown stated.

As a result, he said, the Air Force in the coming decade "can look forward to significant changes in weapon systems in the operational forces," involving not only aircraft but "a great variety of air armament, including modular weapons, hard-structure munitions, fuel/air explosives, and new missiles. The practical applications of new developments, such as Remotely Piloted Vehicles, will call for innovative thinking in employment concepts, tactics, and strategy."

These changes, General Brown predicted, are likely to lead to changes "in our organization and structure. The major command structure of a 12,000-aircraft Air Force may not be the most efficient and effective for an 8,000-aircraft force. An Air Force three-quarters based in the United States, whose very composition has been affected by Total Force planning with Reserve and National Guard, with the other services, and with allies, might need adjustments. Certainly, a personnel force of little more than 600,000 could require structure, composition, and deployment varying significantly from that of a force of 900,000."

Because of these massive changes in weapons, people, and mission, General Brown said, "during the time I have been serving as Chief of Staff, everything I have observed has repeatedly turned my attention to the same, single thought: The challenges confronting the

Air Force are too demanding, our mission too critical to entrust our future to less than the best."

The Aerospace Workshop

The Convention's special Aerospace Workshop, attended by AFA delegates as well as the members of the Worldwide Information Officers' Conference and other Air Force groups meeting in conjunction with the Convention, focused on new developments in strategic deterrence, with emphasis on the B-1. The lead-off panelist, Maj. Gen. R. P. Lukeman, the Air Force's Assistant Chief of Staff for Studies and Analysis, examined the effects of SALT I on Air Force requirements and concluded that "the present Soviet advantage in strategic missiles, coupled with the Soviets' intensive military research and development programs, have further increased the importance of manned bombers in the strategic equation and the strategic Triad of forces." Advanced electro-optical visual sensors will enable the B-1 to perform a damage-assessment strike role and to execute options well below all-out nuclear war, General Lukeman said.

"The bomber is also the most visible element of the Triad. During times of crisis, it could respond with advanced air-alert readiness through a plan called 'selective employment of air or ground alert,' or SEAGA. Moreover, if an attack appeared imminent, the bomber force could be launched under positive control and await instructions from the National Command Authority. It can then be ordered to targets, or could be recalled after such positive control launch, and recovered for reuse. Not only is the bomber recallable and reusable in any type of mission, but it may well be the deciding factor in determining the outcome after a major nuclear exchange," he explained.

Regarding the B-1's ability to cope with future threats, General Lukeman said that "survivability of bombers is primarily a function of enemy actions in the prelaunch phase—if ballistic missiles are the attacking force—and the penetration phase, when the bomber will encounter airborne interceptors and surface-to-air missiles.

"The land-launched ballistic missile's time of flight allows the bomber to react and launch prior to warhead detonation. However, the shorter flight time of sea-launched missiles carried by increasing numbers of Soviet nuclear submarines represents a growing threat to the bomber.

"The Soviets are continuing to field improvements in both airborne and land-based warning-and-control systems, fighter-interceptors such as the Mach 3 Foxbat, and surface-to-air missile systems. USSR offensive and defensive advancements will require the B-1 to possess those prelaunch and penetration characteristics designed to offset threat improvements."

Under the terms of the interim arms limitation agreement, the Soviets are permitted to have sixty-two strategic submarines; in turn, these submarines can be assumed to be capable of launching about 900 ballistic missiles with nuclear warheads. "The relatively short launch-to-impact time of the sea-launched ballistic missile," General Lukeman said, "is generally less than half the thirty to thirty-five minutes of an intercontinental ballistic missile. This has increased the importance of rapid reaction by bombers."

The B-1's prelaunch survivability will be able to cope with threats that can be postulated for the 1980s and is predicated on the fact that it:

- Is designed for a sustained high-alert rate.
- Reacts faster to reach a safe escape distance.
- Takes off at a closer interval on each runway.
- Can be dispersed to more runways.
- Has increased hardness that improves safe escape.

B-1 Penetration Capability

Safe escape time, General Lukeman explained, consists of threat detection time, crew reaction, aircraft takeoff, and "safe separation from a nuclear weapon targeted against the launch base. The rapid acceleration of the B-1 after takeoff and an airframe design that will withstand blast overpressures several times greater than the B-52 account for a B-1 safe escape time less than that of the B-52."

The B-1 penetration capability, General Lukeman said, is derived from its low radar cross section, high subsonic penetration speed at treetop levels, and sophisticated ECM equipment. He pointed out that "there are no Soviet fighters capable of performing a tail-chase intercept on the B-1 flying at its maximum low-level speed." The importance the Soviets attach to the US strategic bomber force, General Lukeman pointed out, is manifested in their enormous investments in air defenses that, over a ten-year period, "could range from $50 billion to $79 billion."

Asked why the Air Force designed the B-1 as a penetrator rather than as a standoff weapon system, General Lukeman explained that, on the basis of currently available technology, standoff bombers equipped with long-range cruise missiles appear to be confined to

soft targets. The US already has sufficient capability to deal with this category of targets. There is, however, a deficiency in terms of "ability to provide accuracy, first across a broad spectrum of targets in the functional sense, and in the hard sense, and those kinds of targets that are not suitable for missile attack." The B-1, by contrast, is designed to cope with hard targets and, in addition, brings "human judgment into the target area," something that the standoff bomber can't do.

In this context, General Lukeman categorically denied press reports that the Air Force had abandoned the SCAD (Subsonic Cruise Armed Decoy) program because it allegedly endangered the B-1 program. (The Department of Defense, earlier this year, merged the Air Force's and the Navy's R&D work on subsonic cruise missiles and postponed a production decision on SCAD.) "The Air Force was enthusiastic about SCAD and its potential, and convinced of the vital importance of its contribution. The Air Force in no way, covertly or otherwise, took any action to cause the redirection of the program" ordered by the Secretary of Defense, according to General Lukeman.

The Vice Commander of the Aeronautical Systems Division of the Air Force Systems Command, Maj. Gen. Homer G. Hansen, and the B-1 Deputy Program Director, Col. James E. Hildebrandt, gave a detailed status report on the B-1 program and disclosed that the program's cost increase from FY '73 to FY '74 was about $500 million, expressed in 1970 dollars, or from $9.7 billion to $10.2 billion.

The Outstanding Airmen Dinner

One of the Convention's most colorful and pleasant events was the Outstanding Airmen Dinner, honoring USAF's top twelve airmen of 1973 *(see box, p. 58, for their names)* and, thereby, in a symbolic sense, all enlisted people of the Air Force. Featuring USAF's Vice Chief of Staff, Gen. Horace M. Wade, as the principal speaker, the gala event was emceed by the Chief Master Sergeant of the Air Force, Richard D. Kisling. In paying tribute to the Air Force's NCOs, General Wade said, "Simply stated, we rely on the NCOs to get the job done. The NCOs serve as the communications conduit, the example-setters, the teachers, the know-how, the stabilizing influence, the leaders, and the doers." In discussing the Air Force's ability to retain high-caliber people in the all-volunteer force era, General Wade pointed out that "selective retention is viewed too frequently as the commander's responsibility. This is simply not true. It is the business of everyone—the supervisor, the section chief, and on up the chain of command to the commander." The first-term airman, he said, "looks to his supervisor not only for technical supervision but also for personal guidance, knowledge, compassion, and understanding. To the first-termer, his supervisor, most likely an NCO, *is* the Air Force. His, or her, impression of the Air Force is quite frequently molded by the personal impact of the immediate supervisor. Surely, the NCO supervisor has considerable responsibility in this regard."

Wide-Ranging Programs

Among the wide range of informative Convention activities and programs was a topical seminar involving Air National Guard and Air Force Reserve issues *(see p. 78)*. The Guard and the Reserve held a special conference, attended by some 400 people, in conjunction with AFA's 1973 National Convention. Other Convention activities involved various AFA Aerospace Education Foundation and Arnold Air Society organizational activities, and the AFA-sponsored fourth Worldwide Junior Officers Conference. The latter was attended by thirty lieutenants and captains, representing Air Force junior officers on a worldwide basis *(see p. 72)*.

A key element of the Convention was AFA's widely acclaimed Aerospace Development Briefings and Displays, which attracted more than 3,000 government and military leaders, including some fifty members of Congress. *(A report on the displays appears on p. 74)*. Secretary McLucas and General Brown commented on the great educational value of the exhibits and briefings, designed to acquaint Congress, government officials, and military leaders with recent advances in aerospace technology.

The grand finale of the Convention was the festive Air Force Anniversary Dinner Dance. Built around the theme of "Hail and Farewell to the Chiefs," it served as the festive backdrop for the presentation of AFA's highest tribute, the H. H. Arnold Award, to former Air Force Chief of Staff Gen. John D. Ryan. Lt. Gen. Daniel James, Jr., Principal Deputy Assistant Secretary of Defense for Public Affairs, narrated "I Am an American," with the USAF Concert Band. The Band, with the Singing Sergeants and the Airmen of Note, entertained an audience of some 2,500 with a theme of "Westward Ho," narrated by SMSgt. Harry H. Gleeson. The musical program was planned and directed by Col. Arnald Gabriel, Conductor of the Band. Martin M. Ostrow, outgoing AFA President, was emcee. ■

BENEFITS ANNOUNCED AT CONVENTION

At the recent National Convention, AFA's Board of Directors voted to include interest on payments to the beneficiaries of MIAs covered under AFA's Military Group Life Insurance program. This important step demonstrates AFA's continuing concern for . . .

USAF PERSONNEL STILL MISSING IN ACTION

FOR THE past four years, the cause of American Prisoners of War and Missing in Action in Southeast Asia has been a key concern and a focus of activity for the Air Force Association. Recognition of this effort was provided by President Nixon (*see p. 57*) when he wrote, "You can take great pride and satisfaction in your vital role in the return of our American prisoners of war from Southeast Asia."

There remains, however, the unresolved problem of the Missing in Action. In this connection, AFA took a giant step at the recent National Convention when the AFA Board of Directors voted to include compound interest in payments to the beneficiaries of Missing in Action personnel who are covered under AFA's Military Group Life Insurance program. Details of the action were set out in a letter from AFA President Joe L. Shosid to Air Force general officers. The text of that letter follows:

> It is a source of personal pride and pleasure that one of my very first duties as the new President of the Air Force Association is to inform you firsthand of an important action taken by our Board of Directors at our recent National Convention. It concerns Air Force personnel listed as missing in action who are covered by AFA's Military Group Life Insurance program.
>
> As you know, AFA's coverage was continuously available to all active-duty Air Force people throughout the hostilities in Southeast Asia. Unlike most similar group programs, there were no war restrictions whatsoever, and more than $2,275,000 has been paid to beneficiaries of 145 insured AFA members who were killed in action.
>
> Meanwhile, more than 100 missing in action personnel remain insured under our Group Life Insurance Plan, and I wanted you to know, in advance, the manner in which AFA has arranged to handle these claims.
>
> In 1967, we established a special reserve fund to make sure that all MIA claims would be fully covered and, since that time, the fund has grown to $1,590,000. As, and if, it is officially determined that one of AFA's insured MIA members was indeed killed in action, AFA will pay, from the fund, the principal sum of the insurance to the named beneficiary and return all premium payments that were made subsequent to the officially established date of death.
>
> This satisfies the legal obligation of AFA under the terms of the policy. However, AFA's Board of Directors has voted to go an important step further and pay interest to the beneficiary on the principal sum. Interest will be compounded at an annual rate of 5% and will be computed from the officially determined date of death. Since the majority of persons still listed as missing in action have been in this category for several years, the additional benefits will amount to several hundreds of thousands of dollars over and above the principal amount of the policies.
>
> As you know, the cause of our POWs and MIAs has had top priority with AFA for a long time. This recent action is a tangible and meaningful manifestation of our continuing interest and involvement.

AFA insurance programs are an important service to the membership, and there is a continuing effort to improve them. For example, last summer the Military Group Life program was completely revamped to provide:

1. Substantially higher benefits, at no extra cost, for all program participants under the age of fifty.
2. A new high option plan—in addition to the standard plan—so that coverage can be more closely tailored to an individual's needs.
3. Extension of the program to all ROTC and Academy cadets.
4. Full retainability of the coverage after leaving active duty by elimination of any waiting period.

Other plans offered include a civilian group life program (currently in the process of major revision), a hospital indemnity program (providing benefits of up to $60 per day), flight pay insurance (to protect income of rated personnel removed from flying status for medical reasons), and a worldwide accident insurance program with coverage up to $200,000.

For information on any or all of AFA's insurance programs, write to:

Richmond M. Keeney
Director of Insurance Programs
Air Force Association
1750 Pennsylvania Ave., N. W.
Washington, D. C. 20006

SUPPORTING AFA'S NO. 1 POLICY RESOLUTION

On September 18, during AFA's annual Convention, President-elect Joe L. Shosid appeared before the Stratton Subcommittee of the House of Representatives to present AFA's views on the flight-pay issue. He examined the inequities and follies of the present situation in detail and set forth AFA's strong recommendations for long-term solution to this important problem. Here's his statement . . .

AFA—United for

By Joe L. Shosid, PRESIDENT, AIR FORCE ASSOCIATION

MR. CHAIRMAN, Members of the Committee:

In behalf of the more than 115,000 members of the Air Force Association, I thank you for this opportunity to present the Association's views on the important subject of incentive pay for aviators.

In the beginning, I want the record to show that, although I am currently an active Air Force Reservist, my extended active-duty service was in the Army. I am not a pilot. I've never been a pilot. So I have no emotional hangup on the issue of aviation incentive pay.

The Air Force Association is the only organization that represents all elements of Air Force people. In our ranks are pilots, former pilots and non-pilots, officers and ex-officers, airmen and ex-airmen, active duty and retired, Reservists, Guardsmen, ROTC and Academy Cadets, and retirees—and a large number of civilians. I point this out to assure the Committee that the Air Force Association approaches the aviation incentive pay issue essentially from the standpoint of broad national security considerations.

It happens that the Association is meeting at this very moment in national convention in this city. On Monday of this week, our delegates—representing every state—expressed themselves on the subject by approving unanimously the following resolution. It is not long, and I beg your indulgence in making it a part of this statement. I quote:

> WHEREAS, retention of qualified, experienced flying personnel continues to be a problem; and
>
> WHEREAS, recent congressional action has created uncertainty and concern as to the stability of the flying pay program among career flying personnel of the military services; and
>
> WHEREAS, if current inequities continue to exist, the possible severe impact of early retirements and increased resignations will create considerable added training and replacement costs and eventually impair mission capability; and
>
> WHEREAS, in response to congressional suggestion and to overcome the inequities created by the Fiscal '73 Appropriations Act, the Department of Defense has submitted a legislative proposal, H.R. 8593, to the Congress which would restructure the present career incentive pay system to make it more responsive to today's defense needs;
>
> NOW, THEREFORE, BE IT RESOLVED that the Air Force Association recognizes H.R. 8593 as a step forward in eliminating uncertainty in the minds of military flying personnel, correcting existing inequities in aviation career incentive pay and providing incentives to attract and retain qualified and experienced career aircrews; and
>
> BE IT FURTHER RESOLVED that the Air Force Association urges the Congress in its deliberations on H.R. 8593 to seek additional insights on the issue from the people affected by it—the aircrews themselves.

This latter point is one on which we feel strongly. No third party—no matter how interested, or experienced, or responsible—can provide the kind of insight that comes from the personal involvement of those who have centered their lives on careers in military aviation.

It is our understanding that this Committee is considering a series of visits to operational military bases to obtain the views, firsthand, of flying personnel—and especially those of younger officers. We are confident that such an approach will be most productive. We believe the evidence so gathered will result in improved legislation with a very positive effect on both the immediate and long-range effectiveness of America's flying military forces.

The new approach to aviation incentive pay, as set out in H.R. 8593, is, we understand, acceptable to and supported by the military services and departments as well as by the Department of Defense. We view it as a solid step in the right direction, recognizing at the same time that it is capable of improvement by the Congress.

In our view, three criteria are essential to an effective aviation incentive plan.

First, it should be structured so as to maintain the required retention rate among younger flying officers,

Solidly Flight Pay

Joe L. Shosid is the newly elected President of AFA.

especially those who are finishing their obligated tours of active duty.

Second, it should insure, over a flying officer's career span, a mix of flying and nonflying assignments to provide a source for the future senior leadership of the Air Force. A flying service, in our view, requires leadership which knows what flying is all about—through personal participation. Without this blend, it is quite possible that future senior leadership will consist, on the one hand, of managers who have no first-hand experience of flying and, on the other hand, flyers who have little or no background in the principles of management. Thus, we support the idea, as set forth in the legislation, of continuing the historic concept of paying aviation incentive pay to flying officers regardless of duty assignment.

The third criterion, relating to both of the above, is a matter of economics. We have observed a great deal of unrest, doubt, and uncertainty among flying personnel. We are told that requests for early retirement from colonels and Navy captains are accelerating. And this phenomenon, in turn, is having a deep and negative effect on the more junior ranks. As the retention rate goes down, new officers must be trained to fill the slots. And the cost of training one replacement is six times the amount of aviation incentive pay a man could draw in a thirty-year career.

Already, the negative effect of the current cutoff of flight pay for colonels, Navy captains, general officers, and admirals, except those who have to fly as part of their duty assignments, has been significant.

A young combat-experienced colonel, who may currently be in a nonflying assignment because he was promoted faster than his peers, has taken an annual pay cut of $2,940. More junior officers can foresee a similar fate for themselves. Survey data indicates that nearly forty percent of rated officers with close to twenty years' service have indicated they will retire as soon as they can. Worse, there is bound to be a mad scramble among rated people to avoid nonflying assignments. This would be a tragic barrier to the kind of career-broadening required for successful senior leadership.

Meanwhile, a number of capable and dedicated people have been hurt and continue to be hurt. To take away pay during this period of inflation is a gross injustice. In truth, it represents, in our view, a breach of faith with those who feel they have had an implied, if not explicit, contract with their government so long as they maintain their physical and professional fitness.

The "on again, off again," "no fly, no pay" approach to administering aviation incentive pay has extremely dangerous implications. First, there is the basic inequity of penalizing the career flying officer because he may also be well qualified for a responsible staff position. More important is the need to develop broad administrative, planning, and managerial experience in a man while he is still young enough to fly and command an operational unit.

Ultimately, of course, one comes to the position outlined to this committee by [Air Force] Secretary [John] McLucas when he said,

> The reason why our senior military people must fly is that they must know both the equipment and the people and the capabilities and limitations of both. That familiarity, based on past experience, while providing an excellent foundation, is not a substitute for up-to-the-minute knowledge in an environment of rapid technological change.

Other nations have ignored this principle to their peril. A pertinent example can be culled from the experience of the Luftwaffe in World War II.

During the later stages of World War II, when our bombers were striking targets deep in the heart of Germany, the need for long-range fighter escort was well recognized. Our fighters were able to extend their range only because of external, jettisonable fuel tanks. Once intercepted by hostile fighters, these tanks had to be dropped for maneuverability; hence their escort range was shortened. The Luftwaffe fighter pilots knew

this, but their senior, nonflying staff officers did not, or would not, listen. Had the German High Command known, they could have had their fighters feint intercept early, over the Channel, leaving our bombers unprotected and easy prey.

This is a prime example of a tactical blunder—with historic results—made by senior staff personnel who were not aware of changing conditions.

In sum, we of the Air Force Association are concerned that the basic rationale for aviation incentive pay may be overlooked in a quest for simplistic answers.

The basic and underlying factors as we view them are these:

1. Military flying, in peace as well as war, is hazardous. Congress has thought so ever since aviation incentive pay was first authorized in 1913.

2. Air forces are effective only when led and managed by experienced airmen.

3. It is cheaper to retain an experienced pilot than it is to train a green replacement for him.

These considerations go to the heart of the matter. An aviation incentive pay system that fails to recognize their significance will not do the job.

Mr. Chairman, we are impressed by the thoroughly objective manner in which your Committee is addressing this issue. We are confident that a fair and equitable plan will emerge from your findings.

Mr. Chairman, that concludes my statement. I thank you again for this privilege. ■

HOW YOUNG, RATED USAF OFFICERS FEEL ABOUT FLIGHT PAY

During his appearance before the Subcommittee, President Shosid also read two letters to the Air Force Association from young, rated Air Force officers. The first, which appears in full below, is from Capt. Richard S. "Steve" Ritchie, USAF's first ace of the Vietnam War, now assigned to the USAF Tactical Fighter Weapons Center, Nellis AFB, Nev. Captain Ritchie's letter is followed by excerpts from a letter reflecting the views on flight pay of Air Force Academy cadets, signed by Capt. James P. Fleming and Capt. Lawrence E. Gill, both assigned to the Military Training Division of the Academy. Captains Fleming and Gill are combat-experienced pilots, decorated for service in Southeast Asia. Captain Fleming is a recipient of the Medal of Honor.

19 Sept 73

Gentlemen:

Sooner or later, every thinking young man faces the question, "To what shall I devote my life?" Since early days at the Air Force Academy, I have been motivated toward and dedicated to a career in the United States Air Force. I believe that if we as a Nation are to remain free, we must be strong—and we *must* have quality people in the military.

Our mission in the Air Force is largely to provide airpower when and where it is necessary to achieve national objectives. To properly accomplish this mission, those of us who fly modern combat and combat-support aircraft spend many years in intensive, professional training. The hours are long and hard. The time away from our wives and children is considerable. The risk is much greater than that of a commercial airline pilot while the compensation is much less. To recruit, motivate, and maintain the quality, professional pilot [who is] necessary to accomplish today's complex mission, the compensation must be in line with the risk and demands of the job.

Therefore, I am forced to agree with an ever-increasing number of my contemporaries who are significantly discouraged by the recent flying pay restrictions. It seems grossly unfair to not pay a man whose business it is to fly airplanes when he is *required* to accept a nonflying job.

I have four years at the Air Force Academy, and nine years of flying experience. However, I must honestly say that I would seriously consider resigning if flying pay were further cut and if colonel's flying pay were not reinstated.

Respectfully yours,
Capt. Steve Ritchie, USAF

The present attitude by some Members of Congress toward flight pay is of very great concern to us at the present time. This concern is not just because of the faith which we feel will be broken between all of us who fly, and the people we work for—the people of the United States.

We feel as a consequence of what we consider to be this breach of faith, certain questions must be faced by anyone who flies in the Air Force today or in the future. These questions become even more important when you consider that we have to convince young men at the Air Force Academy that a career in the Air Force is worthwhile. . . .

It has been said that there is no more hazard in flying than any other job in the Air Force. If this is true, why then must flyers pay more for insurance than nonflying officers of the same age?

In the eventuality of whatever form of conflict our nation is engaged in, can we afford not to have a cornerstone of ready professionals to help resolve that conflict? Will there be time to hire and train new flyers if the need arises?

What will be the consequences if a man knows he will lose pay for going to school to further his education, professional or otherwise?

Why work for advancement or promotion when I will lose money (flight pay) because of that promotion, as is the case of colonels or general officers today?

We recognize that we have many benefits. But flight pay is not a benefit. However, if flight pay is curtailed, how long will it be before our actual benefits come under attack?

—Capt. James P. Fleming and
Capt. Lawrence E. Gill

Flight pay is the subject of much heated discussion throughout the armed services and in Congress. There are potentially serious implications associated with any decision affecting flight pay. To bring you up to date on where flight pay stands today, and on the differing views of DoD and the House Armed Services Subcommittee, AIR FORCE Magazine examines both sides of the subject and looks at the prospects for flight pay as we report on . . .

What They're Saying About Flight Pay

By Capt. Don Carson, USAF
CONTRIBUTING EDITOR, AIR FORCE MAGAZINE

THE Department of Defense hopes that its new flight incentive pay bill (H.R. 8593) will be presented to Congress before the end of this session in December. This bill has grave implications for the USAF aviators and their career plans. Some of the letters USAF flyers have written to their congressmen indicate a lack of understanding of H.R. 8593 and its career effects. We print the following summary of the flight-pay situation, as it stands today, to better inform the many USAF aviators who have expressed or will express their concern over this bill.

How We Got in This Fix

Section 715 of the annual Defense Appropriations Act has, for more than a decade, placed a restriction on the flying, but not the flight pay, of many aviators. More recently, it was extended to include those attending schools for over ninety days, officers serving remote tours, and colonels and generals unless in, or anticipating, combat flying assignments. Section 715 must be approved by Congress annually.

In the 1973 Appropriations Act, which was passed in August 1972, a phrase, ". . . except O-6s and above not assigned in combat duties," was added. DoD interpreted this to mean "assigned to nonoperational jobs." This means that colonels and generals in nonoperational jobs do not fly and do not get flight pay.

The restriction on colonels and generals was to take effect on May 31, 1973. This gave DoD time to develop a new legislative package. Hopefully, this new program would be in effect before flight pay for senior officers was lost. The new package (H.R. 8593) was presented to Congress on May 17, 1973—not in time to prevent a cutoff of pay, because Congress had little time for deliberation. To prevent a pay loss for colonels and generals until new legislation could be passed, a rider was attached to an existing bill, which would have extended the effective date of Section 715. This plan passed the Senate, but the House rejected it on June 28. It was here the "no fly, no pay" confrontation surfaced.

In July, the House Armed Services Committee began hearings to review the DoD proposal and to look at the entire flight-pay program of the services. The Stratton Subcommittee (House Armed Services Subcommittee No. 4) heard witnesses for both sides. The subcommittee now plans a visit to the field to talk with aviators of all services, to get their feelings on what is proposed.

What H.R. 8593 Says

That is where flight pay stands today. Now let's examine the DoD proposal (H.R. 8593) and see what it will offer, if accepted.

Flight pay will be paid on the current increasing scale for the first six years of aviation service, commencing with the date flying begins. This new rate scale will graduate up to $245 per month at the six-year period and continue at that rate through the eighteenth year. Beginning at the nineteenth year, it will gradually decrease until the twenty-fifth year, when all flight pay will cease. Included are proposed "saved pay" features of up to three years, which would offer protection against immediate loss of pay under this new plan.

There is also a separate pay scale for warrant officers and enlisted aviators, based on rank and length of service up to thirty years.

The major change in H.R. 8593 involves "front loading" of the pay scale; that is, more flight pay at an earlier stage of the flying officer's career—the period in which his cockpit duties and risks are greatest. Front loading is also aimed at countering the greatly increasing problem of retaining young rated people. This has been a concern of all services for some time, but may become even more acute in the next two to three years when airlines will require from 3,000 to 4,500 new pilots annually.

Pentagon surveys show that a large number of young officers have adopted a "wait and see" attitude over the flight-pay controversy. If they feel they are getting a raw deal from Congress, many say they will separate and seek employment elsewhere *(see also p. 68).*

Increased losses would place the military services in a very disadvantageous position. The average cost to train one combat-ready fighter pilot is $299,000. Greatly increased separations and resignations would cause a quantum increase in pilot training programs, far exceeding any savings in flight pay. No price can be placed on the experience that may be lost, which would show up in decreased operational effectiveness and higher accident rates.

Highest Pay in Middle Years

Under H.R. 8593, the highest pay rates would be paid during the middle years of a flyer's career. It is during this period that he is most tempted to separate

from active duty. The first five or six years pose no great problem to the services, since most flyers are committed to active duty for up to that long.

After the eighteenth year, there is less concern over retention. By that time, most officers have either been committed to a career or have already separated. Pay for flying after the eighteenth year is to be reduced as most officers move to staff and command positions, while flying less. Under H.R. 8593, colonels may fly and receive flight pay for it, but the pay will be less than under the old system.

Terminating flight pay at the twenty-fifth year of rated duty will remove the majority of general officers, even those in flying jobs, from flight pay since most generals have more than twenty-five years of service behind them. Flight pay for generals has been one of the biggest thorns in the side of Congress.

One of the detracting factors of H.R. 8593 relates to total-career flight pay. The average officer who made every promotion on time and remained on flying status for a full career earned $74,000 in flight pay under the old system. Under H.R. 8593, he would receive $61,000 during his twenty-five-year flying career, or $13,000 less under this pay system. The DoD proposal will somewhat offset this by giving more of the pay at earlier stages, but $13,000 is a considerable loss.

H.R. 8593 is DoD's attempt to establish a system of managing flight pay that is acceptable to both the military aviator and Congress. Obvious compromises were made to satisfy both sides. This bill is being studied by the Stratton Subcommittee, which will draw up a final flight-pay proposal for presentation to the House of Representatives. H.R. 8593 may or may not be the subcommittee's final recommendation to Congress.

THE VIEW FROM THE HILL

The Stratton Subcommittee will draft a flight-pay bill for the House. It is on this bill that the House will act. Let's look at what they're saying on Capitol Hill . . .

The Stratton Subcommittee plans to have its flight-pay study completed by the end of October in order for the House to act on it before the end of this session of Congress in December. The House recommendation will still have to meet with Senate approval, which will extend passage of a new bill until the next session of Congress. The Hon. Les Aspin (D-Wis.), a member of the subcommittee, and Mr. John J. Ford, Counsel for the House Armed Services Committee, expressed their feelings on flight-pay legislation during interviews with the author.

Dissatisfaction

Both Mr. Aspin and Mr. Ford expressed dissatisfaction with the DoD proposal H.R. 8593 as it stands. The subcommittee feels that the front-loading concept is good, but is still considering the point when the rates should be highest and when the cutoff of flight pay should come. The subcommittee is examining the idea of paying the highest rates over a shorter period, possibly to the fourteenth or sixteenth year.

Mr. Aspin believes that "you have to get a system that is understandable and defendable. Whatever you sell Congress has to be clearly understandable and simple in principle. It is hard to defend why a colonel who is not flying much should receive the highest rates of flight pay. Congress cannot understand this. They can understand such statements as 'no fly, no pay.' This is a simple concept. If we present a system that does not closely parallel pay with the years of hazard, it will not sell."

The subject of lessened total-career earnings under H.R. 8593 does not seem to carry the impact upon the House subcommittee that it does in the military. Mr. Ford pointed out that, economically, an officer is better off to receive more flight pay earlier in his career, when it is a greater percentage of his total pay, than late in his career. It still boils down to less total earnings over a full career.

Both Mr. Aspin and Mr. Ford emphasized that cost was not the overriding factor in a new flight-pay system. A workable system anywhere in the ball-park cost of the existing system would be satisfactory to Congress. There are three factors that the subcommittee feels are most important in presenting a new bill. First is getting more for the money being spent. This could be accomplished by spreading flight pay out during a flyer's career so it parallels his periods of most active flying and most risk.

This happens to coincide with the second factor, which is the need for retention of younger officers. Thus, front loading would also address the retention problem during the middle years of a flyer's career. The third factor is that of cutting off senior officers from flight pay. If all flight pay is terminated at the twenty-three- to twenty-five-year point, as the subcommittee feels it may be, generals and senior colonels will no longer be receiving flight pay at rates not commensurate with their amount of flying.

Earlier Cutoff?

The subcommittee seems to favor an earlier cutoff than the twenty-five years proposed by DoD. Mr. Aspin stated, "DoD has justified flying pay on the basis of retention and hazard; yet, beyond the twenty-three-year point, you are paying those who do not face the hazard and those who are not the retention problem. We have no retention problem with colonels. In fact, there is a bulge of colonels who do not fly and are not likely to fly in the future."

Mr. Ford agreed that the retention problem was not with the senior flyers, but with the middle-year flyers. However, he emphasized that the subcommittee and Congress wish to treat senior officers equitably. The subcommittee is studying saved pay proposals that would provide a transition period for colonels and generals who would not fly under either system.

"Saved pay for senior officers is a separate question. It must be treated separately," said Mr. Ford. "The subcommittee is looking at various versions of saved

The author, Capt. Don Carson, is currently assigned to AIR FORCE Magazine under the Air Force Education With Industry (EWI) program. A senior pilot with extensive experience in both fighter-bomber and fighter-interceptor aircraft, he's the author of the article "Flying the Six" in last month's issue of this magazine.

pay, including the DoD-proposed retroactive clause of up to three years. This is an area of legitimate DoD concern, but its real impact on the retention problem should not be overstated. Senior officer retention is not a problem. Equity is the concern here. Subcommittee members and DoD share a belief that Congress owes some form of saved pay to senior officers who are now, or in the near future will be, taken off flying status. It is important to show that Congress is concerned with treating the senior officer fairly, as evidence of good faith to younger officers who are not affected, but who may be closely watching how Congress treats their seniors."

However, Mr. Aspin feels that "DoD is placing the most emphasis on the area of least importance. If DoD could get the saved pay clause through to get the colonels off its back, I think they would accept almost anything else offered in the way of a new bill. Front loading should have been done long ago. There has been a retention problem for years, but no one was talking to us about it until the matter of colonels and generals not flying surfaced. Now DoD is showing us figures that indicate young flyers are becoming more of a retention problem since the enactment of Section 715. We find this hard to accept."

Getting the Facts

Of the many witnesses scheduled to come before the subcommittee, only the Air Line Pilots Association remains to be heard. "I don't buy people leaving in great numbers to go to the airlines," said Mr. Ford. "There is no way we can compete with airlines. They pay more money, but it is a taxi service. That appeals to a certain few, but, hopefully, not the type we want to attract to the Air Force, whose object is to command and lead. This is not available in the airlines."

The subcommittee will visit the USS *Kitty Hawk* on October 15, legislative business permitting, to talk to young pilots. "The DoD generals give us their impression of what their young flyers are thinking. We want to talk to these men personally and see how they feel." According to Mr. Ford, there will be other fact-finding trips to Fort Rucker, TAC, MAC, and SAC bases to talk to a cross section of flyers. The subcommittee may place a great deal of weight on what they learn from personally talking to aviators.

"After the trips, we will draft up several proposals," said Mr. Ford. The three most prominent alternatives as they now stand are: H.R. 8593, the DoD proposal; a modified version of H.R. 8593, employing the front-loaded principle with pay rates more closely paralleling flight activity; and a dual-track system.

The dual-track system is favored by some congressmen because it separates flight pay into two parts—hazard pay and incentive pay. Hazard pay would be paid only when a flyer is assigned in aviation duties. He would receive no hazard pay when in staff positions or in schools that would place him in excused status. The other portion of flying pay would be the incentive pay to be paid throughout an aviator's career.

This plan offers several features that are attractive to Congress. The concept of paying hazard pay whenever someone is flying and not paying it when he is excused is easily justified to Congress. The constant payment of an incentive pay for retention to young flyers is also easily defensible in view of service needs for aviators.

This plan would cause fluctuations in income as an officer moved from flying to staff and school assignments. Aviators themselves dislike this, and it is one of the areas in question. The other area of concern in a dual-track system is what percentages of flying pay fall into hazard and incentive categories. This type of arrangement could influence officers when accepting school or staff assignments that would cause the loss of hazard pay.

What's Ahead

There is a great deal of dramatic rhetoric on both sides of the flight-pay issue. It sounds as if DoD and the Stratton Subcommittee are miles apart. This is not the case. Beneath the emotion and dramatic oratory, there is much mutual agreement and common understanding of the issues at hand.

Both DoD and the subcommittee agree on the principle of front loading. There are some differences over what rates should be paid and at what year points flight pay would begin to taper off and eventually cease. The monetary differences are not great, and it seems likely that a compromise will be reached.

Both sides agree that there should be some form of equity for those who were suddenly removed from flying by Section 715. This is an area to be resolved in amount, not in principle. DoD has suggested a three-year saved pay clause, and the subcommittee seems to favor a lesser amount, possibly two years, retroactively.

DoD and the subcommittee share a common concern over the growing aviator-retention problems of the services. Any bill sent to Congress will address this problem directly. The visits to bases will give subcommittee members a better understanding of the concern of young aviators.

Mr. Ford summed it up: "You can no longer sell a bill to Congress by waving a flag. They want facts! The subcommittee must draft a bill that can be passed on the floor of the House, or we have just wasted our time. We want a bill that is equitable and economically justifiable to Congress.

"The House has given us directions to come up with a bill more equitably related to the patterns of an officer's flying career—that is, to the risk involved. The hearings have disclosed a retention problem that needs to be addressed. We must write a bill that meets both of these imperatives. Ironically, the result of the House action on flight pay may well be a bill to solve a serious retention problem to which the Defense Department had paid insufficient attention." ■

FOURTH ANNUAL AFA-JOAC CONFERENCE

During the AFA Convention, thirty young men and women gathered in Washington, D. C., to discuss some of the problems affecting USAF. The result was a plan to help . . .

JUNIOR OFFICERS GET INVOLVED

By Capt. Don Carson, USAF, CONTRIBUTING EDITOR, AIR FORCE MAGAZINE

Capt. John Pronsky leads Junior Officer representatives in a discussion of how they can become more involved in problems facing today's Air Force.

WITH shirt sleeves rolled up, thirty young men and women of the Air Force Association's Junior Officer Advisory Council (JOAC) worked late into the night to consolidate their ideas on how to make Junior Officer Councils throughout the Air Force a greater asset to USAF. This was the fourth AFA Worldwide Junior Officer Conference, and many of the delegates had traveled halfway around the world to attend. The officers represented almost every career field and had varied experience levels and backgrounds. The one common denominator was their sincere interest in betterment of the USAF through junior officer involvement.

Junior Officer Councils (JOCs) have existed at base and command levels for many years, with varying degrees of effectiveness. Their achievements have been dependent upon the local chapter presidents, membership, and especially the receptivity of their commanders. Over the years, many councils deteriorated due to lack of organization or imaginative leadership, or because of command indifference. In many cases, the JOC had become little more than a group of socially compatible young officers who sponsored rock bands at the Officers' Club for Saturday dances.

The Air Force Association realized that young officers had much to contribute in helping shape the policies that guide the Air Force. AFA established the JOAC in 1967 as one of several specialized groups. Its purpose is to advise the AFA President on matters pertaining to the junior officer population of the Air Force.

At first, the JOAC concerned itself with identifying irritants and problems that directly affected young officers. They recommended positions that the Air Force Association might wish to support, on a national level. Initially, the JOAC had seven members, but, at the request of many commanders, it was expanded to include at least one representative from each major command and separate operating agency. The original group of seven became the executive committee, and the expanded council became the working body of the JOAC annual conference. This is the existing organizational pattern.

Today, the JOAC is no longer a self-interest group of young officers. It concerns itself with identifying problems that affect not only junior officers, but the entire USAF and its mission accomplishment.

This change, which did not occur overnight, is reflected in the new sense of purpose now evident in most Junior Officer Councils. Like the JOAC, the JOCs' emphasis has shifted from identifying minor irritants to helping solve key problems facing the USAF. This new direction was readily accepted by commanders. Local JOCs now assist their commanders on retention, minority relations, education, housing,

and many other issues. Their record of success has gained them support all the way up to the Chief of Staff. Many studies and suggestions submitted by JOCs have found their way into the Air Staff, where they have influenced Air Force policy. The JOAC can take pride in its accomplishments in guiding Junior Officer Councils toward involvement in matters of importance to the entire USAF.

The three previous AFA-JOAC conferences have been concerned with getting JOCs involved in the larger problems of the USAF. This new orientation has evolved to the extent that the JOAC felt it could direct the fourth conference to assisting local JOCs in their organization and daily activities.

Although the Advisory Council was concerned primarily with how to initiate JOC involvement in Air Force problems, the problems themselves were not overlooked. JOAC members received across-the-board briefings by Martin M. Ostrow, past AFA President; Maj. Gen. John W. Roberts, DCS/Personnel, Hq. USAF; Maj. Gen. Kenneth W. Tallman, Director, Personnel Plans, Hq. USAF; James H. Straubel, Executive Director, AFA; and Maj. Robert W. Hunter, Internal Information Division, Hq. USAF.

JOAC delegates also attended the Aerospace Workshop, where they received briefings by Maj. Gen. Robert P. Lukeman, ACS/Studies and Analysis, Hq. USAF; Maj. Gen. Homer K. Hansen, V/C ASD, AFSC; and Maj. Gen. Oliver W. Lewis, Director of Personnel Programs, Hq. USAF.

This year's convention report deals with the day-to-day operation of a Junior Officer Council. It offers suggestions and thought-provoking ideas to stimulate continued productive JOC actions, together with case histories of problems that have been effectively solved by JOCs.

Members of the JOAC have been preparing for this conference for most of the past year. Several major air command-JOC conferences were held during the year. Their recommendations and the minutes from hundreds of JOC meetings throughout the USAF have been studied to learn how JOCs have been functioning. This information was used to give the various JOAC committees background data from which to work.

All of these inputs were put together after five days and nights of collective labor. The result is a report called *A Guide for Effective JOCs*. The guide is a pragmatic handbook for reaching goals of last year's JOAC convention report, *Patterns for Change*, which laid down the paths the JOCs should take to better serve the Air Force.

JOAC Chairman John Pronsky explained that "the handbook is not a checklist for instant success of a JOC. It is an idea list to spark creative thinking, which must be adapted to local conditions or problems. I feel that the JOC has not yet seen the potential for growth inherent in changing their direction. We hope that the contents of this book will create an increased awareness throughout the Air Force and provide a catalyst for discussion of our role. Hopefully, it will raise our sights to provide an increased awareness of the opportunity surrounding us all."

Thirty young officers left this week-long conference with fresh ideas and renewed enthusiasm. They have seen the JOAC efforts of the past four years turn the dormant Junior Officer Council program into a dynamic and productive endeavor. By helping the Air Force solve many of its problems, they are creating a better community within which to live and work. At the same time, they are learning many valuable lessons in management and leadership that will help them perform their own mission in a more professional manner. ■

AFA'S JUNIOR OFFICER ADVISORY COUNCIL

The fourth Air Force Association Junior Officer Advisory Council met during the annual AFA Convention in Washington, D. C. The following officers—representing every major command and separate operating agency—made up the thirty-member committee, which studied junior officer involvement in Air Force problem areas:

Capt. John H. Pronsky
(General Chairman)
Hq. USAF, Washington, D. C.

1st Lt. Lee R. Aldridge
Hq. AF Systems Command
Andrews AFB, Md.

Capt. Theodore E. Anderson
Air Force Audit Agency
McClellan AFB, Calif.

Capt. Terrell Berkovsky
Headquarters Command, USAF
Bolling AFB, D. C.

Capt. Richard C. Brown, Jr.
Air Reserve Personnel Center
Denver, Colo.

Capt. Glenn D. Crowell
Hq. Air Force Reserve
Robins AFB, Ga.

Capt. Toby Van Rossum Daum
Inspection and Safety Center
Norton AFB, Calif.

1st Lt. Ralph E. Dunbar, Jr.
Alaskan Air Command
APO Seattle

Capt. Richard L. Farkas
Hq. Strategic Air Command
Offutt AFB, Neb.

Capt. David G. Francis
USAF Academy
Colorado

Maj. Robert Frank
Hq. USAFE
APO New York

Capt. William M. Gladski
Air Force Logistics Command
F. E. Warren AFB, Wyo.

Capt. Fred Green
AF Military Personnel Center
Randolph AFB, Tex.

1st Lt. Richard L. Hertz
USAF Security Service
San Antonio, Tex.

Capt. Dennis L. Hippensteele
AF Data Automation Agency
Gunter AFB, Ala.

Capt. Mark W. Masterson
USAF Southern Command
Albrook AFB, Canal Zone

Capt. Jack D. Mattingly
Air University, AFIT
Wright-Patterson AFB, Ohio

Capt. Thomas McKay
Hq. Tactical Air Command
Langley AFB, Va.

Capt. James M. McKean
AF Accounting and Finance Center
Denver, Colo.

Capt. James A. Miller
Office of Special Investigations
Washington, D. C.

1st Lt. James D. Mitchell
USAFE
APO New York

Capt. Alvia W. Moore II
Pacific Air Forces
Wheeler AFB, Hawaii

Capt. Audrey J. Page
Women in the Air Force
Washington, D. C.

Capt. Morton V. Plumb
Hq. Air Training Command
Randolph AFB, Tex.

Capt. Keith F. Poch
Hq. AF Communications Service
Richards-Gebaur AFB, Mo.

Capt. Albert C. Rock III
Aerospace Defense Command
Malmstrom AFB, Mont.

Capt. Monroe S. Sams, Jr.
Military Airlift Command
APO San Francisco

1st Lt. Miles Sawyer
Headquarters Command, USAF
Andrews AFB, Md.

Capt. Dennis R. Walling
Hq. Aerospace Defense Command
Ent AFB, Colo.

Capt. John M. Williams, Jr.
Air National Guard
Alcoa, Tenn.

Everything was up to date at this year's Aerospace Development Briefings, a major adjunct to AFA's annual National Convention. With a record number of exhibitors crowding the display area to capacity, the discernible industry theme for its aerospace hardware was . . .

NEW WEAPONS DELIVERED ON TARGET . . . ON COST

By Claude Witze, SENIOR EDITOR, AIR FORCE MAGAZINE

Beech Aircraft Corp. showed how it contributes to USAF's R&D.

At right, Gen. John C. Meyer, SAC Commander, tells a story to USAF Secretary McLucas and wife.

Two USAF captains, including one from our distaff side, study insides of turbine.

THE impact of the war in Southeast Asia, where the US now is at peace even if the Vietnamese are not, was evident this year at the annual Aerospace Development Briefings and Equipment Displays staged as part of the Air Force Association Convention.

Last year's theme of nostalgia, appropriate for USAF's silver anniversary year, was replaced by a renewed interest in modern weaponry. Emphasis was on more lethal and accurate munitions and their delivery systems. Conventional bombs and rockets have been vastly improved under the pressures that came from the jungles of Southeast Asia. The exhibits told the story. We began the war, as many USAF pilots know, with weapons hardly better than those of World War II. We ended it in

Aerospace Industry Roll of Honor

Companies Conducting Briefings at the 1973 AFA Convention

American Telephone & Telegraph Co.
Dataspeed 40—A New Family of Data Terminals

Astech
Stresskin®, All-Welded Honeycomb Sandwich

Boeing Aerospace Co.
Military Applications of the 747

Control Data Corp.
Aerospace Div.
Micro Programmable Processor (MPP)/Disc Subsystem; Flexible Digital Terminal/Plasma Display
Computing Devices of Canada Div.
Integrative Display Processor System (IDPS)

Delco Electronics Div., GMC
Advanced Electronic Systems for Space, Air, Land

Garrett Corp., The
Garrett Propulsion Systems

General Dynamics Corp.
YF-16 Lightweight Fighter Prototype Aircraft

General Electric Co.
Aircraft Engine Div.
Understanding the New Generation of USAF Engines
Aircraft Equipment Div.
Coran for Pinpoint Navigation—Digital Flight Control and Displays
Space Div.
Computer Generated Images for Visual & Radar Simulation and Training Systems

Hoffman Electronics Corp.
Tactical Area Navigation & Microtacan

IBM Federal Systems Div.
Digital Electronics

LTV Aerospace Corp.
A-7D Nav/Weapon Delivery System

Lear Siegler, Inc., Astronics Div.
Modular Core Avionics

Lockheed Missiles and Space Co.
Space Relay Laser

Martin Marietta Aerospace
Advanced Air-Launched Missile Concepts

McDonnell Douglas Corp.
Douglas Aircraft Co.
YC-15 STOL Transport
McDonnell Aircraft Co.
F-15 Eagle, the Versatile Fighter
McDonnell Douglas Astronautics Co.
Advanced Instructional System—AIS
McDonnell Douglas Electronics Co.
VITAL II—Visual Simulation System

Northrop
Northrop Family of Tactical Fighters

Philco-Ford Corp.
Aerospace & Communications Systems for Today and Tomorrow

PPG Industries, Inc.
Aircraft Transparencies of the Seventies

Rockwell International
Autonetics Div.
New World of Avionics
B-1 Div.
B-1 Development Progress Toward 1st Flight
Missile Systems Div.
Response to Challenge: From Target Acquisition to Precision Hit

The Singer Co., Kearfott Div.
Kearfott Third Generation Inertial Navigation System

Sperry Flight Systems
Digital Avionics for the Aircraft of Tomorrow

Sperry Univac Defense Systems
Processing of Sensor Data

Standard Manufacturing Co., Inc.
Comparative Study of Mechanical Weapons Loading Equipment

Texas Instruments
Imagery Interpretation Station of TIPI. High Performance Airborne Forward-Looking Infra-Red System

TRW Systems Group
Military Communications Satellites

United Aircraft Corp.
Pratt & Whitney Aircraft Div.
F100-PW-100 Air Superiority Fighter Engine
United Aircraft of West Virginia
The JT15D—New Look in Small Turbofans

Vega Precision Laboratories, Inc.
Radar Tracking and Control Systems for Remote Powered Vehicles

Westinghouse Aerospace & Electronic Systems
Track, Jam, Deliver—Precisely! Westinghouse Helps Make It Happen

Williams Research Corp.
Applications for Small Gas Turbine Engines

The following companies displayed products, but did not hold briefings:

Armed Forces Cooperative Insuring Assoc.
Offering many forms of liability insurance for military personnel

Avco Corp.
USAF Oriented Ordnance Hardware, Turbo-Propulsion Systems and Defense Support Systems

Beech Aircraft Corp.
Missiles, targets, and aircraft supporting USAF

Boeing Computer Services, Inc.
Worldwide computer capabilities available to USAF

Coca-Cola USA
Beverage service

Davis Agency Inc.
Military-DoD-dependent charter flight program

E-Systems, Inc.
AN/TRN-26 Multi-Mission TACAN System

Grimes Manufacturing Co.
Strobe lighting for collision avoidance for military and aerospace applications

Grumman Aerospace Corp.
New F-14 ADC Interceptor. Display honoring past and present Combat Aces

Jet Electronics & Technology Inc.
New J.E.T./Thompson-CSF Electronic Cockpit Display System. Automatic Flight Control Systems and Gyroscopic Systems

Kaiser Aerospace and Electronics Corp.
Advanced flight systems

Kollsman Instrument Corp.
A variety of aircraft flight instruments

Lear Siegler Inc., Instrument Div.
ACMR Strapdown Reference System. ARN-101 Navigation and Weapons Delivery System, Low-Cost Aircraft Reference System

Leigh Instruments, Ltd.
Data recorders for accident and maintenance applications

Lockheed-Georgia Co.
C-130 operational improvements and new JetStar II

Pepsi-Cola Co.
Beverage service

Photo-Sonics Inc.
Gunsight and strike cameras

RCA Government & Commercial Systems
AN/TPQ-27 Radar Course Directing Central

Raytheon Co.
Tactical missile systems, avionics, mobile GCA systems, ATC systems, and EW Radars

Shoftour
Military-DoD-dependent charter flight program

Sierra Research Corp.
Computer-controlled electronic system for station keeping, aircraft tracking, etc.

Lt. Gen. William F. Pitts, 15th AF, visits with Brig. Gen. Abbott Greenleaf at Delco.

USAF's new Secretary, Dr. John L. McLucas, sits in B-1 cockpit.

Army, Navy, and other agencies came to look. Here an admiral stops at Lear-Siegler booth.

Some of the 4,000 visitors who attended briefings line up to register before entering Exhibit Hall.

the era of the "smart bomb," new range capabilities, more deadly ordnance, and far greater strategic mobility.

It is only a few years ago that the annual exhibit, on one occasion, did not include a single engine. This year, the diverse effort toward more powerful units to propel upcoming aircraft, and the perfection of efficient small engines for weapons and RPVs, was featured by several manufacturers.

Their exhibits occupied 29,360 square feet of space in the Sheraton-Park Hotel exhibit hall, a new record for the AFA show. Fifty-one companies took part, providing sixty exhibits. The show managers estimate that more than 6,000 persons went through the hall. Of these, nearly 4,000 took the opportunity to listen to the briefings, which were offered at thirty-eight of the exhibits.

Their audience, which included some fifty members of Congress, was topped by USAF's new leaders, Secretary John L. McLucas and Chief of Staff Gen. George S. Brown. There were chiefs and Indians present from twenty-seven government and military agencies, ranging all the way from Army headquarters and the Defense Nuclear Agency to the National War College and the Library of Congress.

Industry reaction to the program was uniformly enthusiastic. ■

Garrett Corp. presentation told the story of advances in triple-fan and turboprop engines for military aircraft.

US Senator Strom Thurmond, in striped tie, visits Boeing.

Secretary McLucas, on left, himself a real electronics expert, stops at Control Data.

A full house listens in on GE briefing that tells how navigation aids have been improved.

Passing crowd showed major interest in the Philco-Ford display of weapons, communications.

Under the Total Force policy, the Reserve Forces have assumed a new order of importance in national defense. Some 500 Air National Guard and Air Force Reserve leaders faced their greatest peacetime challenge as they met, during AFA's National Convention, at the . . .

AIR NATIONAL GUARD AND AIR FORCE RESERVE SEMINAR

By John L. Frisbee
EXECUTIVE EDITOR, AIR FORCE MAGAZINE

ON SEPTEMBER 19, the twentieth annual Air National Guard and Air Force Reserve Seminar met in Washington in conjunction with the Air Force Association's National Convention. The Seminar convened less than a month after Secretary of Defense James R. Schlesinger's memorandum of August 23 on the Reserve Forces had made it clear that the Total Force "concept" is now a *policy*. In that memorandum, the Secretary put the full weight of his office behind priority manning, modernization, and training of the Reserve components. *(For the full text of the memorandum, see October '73 issue, p. 81.)*

Martin M. Ostrow presents AFA's Citation of Honor to Col. Milton Mitler during the Air National Guard/Reserve Awards Ceremony.

Col. James Dawson, Commander of the 115th F-I Group, receives the AFA Outstanding ANG Unit of the Year Award from Mr. Ostrow.

The 500 Air Guard and Reserve leaders at the Seminar faced the greatest peacetime challenge in the history of their organizations: to assimilate large quantities of sophisticated first-line equipment, and to meet mobilization goals as a matter of priority, despite the recruiting and retention problems associated with the new all-volunteer force.

AFA President Martin M. Ostrow opened the meeting by presenting the Air Force Association's annual Air National Guard and Air Force Reserve Awards. *(See p. 60 for the list of award winners.)* Mr. Ostrow then introduced the Seminar moderator, retired Air Force Reserve Maj. Gen. John R. Alison—a World War II fighter ace, past President of AFA, former Assistant Secretary of Commerce, one-time Air Force Reserve Wing Commander, and now Vice President of Northrop Corp.

In his opening remarks, General Alison pointed up the importance of the Seminar:

"While the debate about our defense posture goes on, our military strength is slowly shrinking, bit by bit," he said. "Intemperate and unwarranted attacks on our military establishment have damaged morale, discouraged young men from taking up a military career, and have made difficult the management of the great sums which the taxpayers have invested in the world's most effective military establishment.

"Whether it will remain the world's most effective military establishment is a question of vital interest to those who have gathered here today.

"With Russia stepping up her development and with deployment of advanced weapons, with the United States in retreat to austerity here at home, with our transition to an all-volunteer force, a strong Reserve and Guard become more important than ever before in our history. It is the purpose of this Seminar to bring you up to date on the posture of these important elements of our nation's defense."

Report From the Commands

The first Seminar speaker introduced by General Alison was Brig. Gen. Jesse M. Allen, Deputy Chief of Staff for Plans, Tactical Air Command. He described how TAC is carrying out its responsibilities for supervising the training, safety, and inspection of the Air National Guard and Reserve units for which it is the gaining command. Included in the ANG and AFRES flying units and the nearly one hundred nonflying units affiliated with TAC are 57,000 ANG people and 1,100 aircraft together with 21,000 Reservists and 300 AFRES aircraft.

General Allen reported that "since January of 1971, all of the thirty-one Air Reserve flying units and fifty of the sixty-seven Guard flying units for which TAC is the gaining command have converted or are in the process of converting to a new type aircraft, and in some cases an entirely new mission. Normal conversion problems were compounded by these mission changes, such as conversion from C-124s to F-105s and from C-119s and C-124s to A-37s. These conversions are going very smoothly.

"Modernization is the number-one problem facing our Reserve Forces today, as far as TAC is concerned, but it is not the only problem," General Allen said. "We are also taking a hard look at possible future personnel shortages. With the elimination of the draft, our Reserve Forces nonprior-service airman enlistments will probably be reduced, and, if so, our collective efforts will have to be expanded and intensified to fill this void."

While TAC is deeply involved with both the Reserve and Guard, Aerospace Defense Command is the gaining command for only one Air Reserve unit, according to Maj. Gen. Royal N. Baker, Assistant to the Vice Commander of ADC. However, Air National Guard units make up seventy percent of the Command's manned interceptor force, and for years the ANG units have shouldered a large share of ADC's alert commitment.

General Baker cited several examples of ADC/ANG teamwork in cooperation with Air Force Logistics Command to solve maintenance and supply problems. "Their operational and support problems will be given the same attention and priority . . . as that accorded active-duty ADC units," he declared.

Valuable Resources

Maj. Gen. Paul R. Stoney, Commander of the Air Force Communications Service, told the audience that twenty-five percent of his Command's personnel are Guardsmen or Reservists. With fewer men and less money, he pointed out, "we are turning more and more to the valuable resources we have in the Guard and Reserve."

General Stoney cited the extent to which Reserve Forces communications units have been furnished advanced equipment. The Reserve Forces mobilization of 1968 underlined the fact that "things had moved ahead a complete generation since World War II in our business, and the people who were called up had a lot of learning to do before they were productive. . . . We don't have time for that anymore . . . and that caused us . . . to equip our Reserve Forces with modern, up-to-date equipment."

Reflecting some of the sweeping changes that have taken place in the missions assigned to Guard and Reserve units, Gen. Paul K. Carlton, Commander of the Military Airlift Command, observed that two years ago, 26,000 Guardsmen were in units affiliated with MAC. Today, there are only 4,000. But MAC also is responsible for training 15,000 Air Force Reservists, many in the Command's Associate Program and others in a wide variety of support units.

"When we activate the last two C-5 squadrons, planned for later this year, we will have a Reserve Airlift squadron matched with every active-duty airlift squadron in MAC" under the Associate Program, General Carlton reported. More than two-thirds of the Associate units' proficiency flying is on operational missions, and half of those missions are flown by all-Reserve crews, he said.

General Carlton singled out recruiting for Reserve and Guard units as one of the major concerns. Particularly affected are the loadmaster and flight engineer

fields, since few regulars in those areas leave the Air Force short of thirty years' service. Palace Chase, the program that allows airmen to transfer from the regular Air Force to Reserve components, where they will serve two years for each remaining year of their enlistments, has not been very productive in these areas or in enlisted ground-support skills.

The Commander of Air Force Logistics Command, Gen. Jack Catton, told the Seminar that his command has no affiliated Guard units but does have Reserve maintenance, supply, and support squadrons, which, together with individual mobilization assignees, total about 2,000 Air Force Reserve people.

AFLC, which is authorized about 100,000 civilians out of a total military/civilian strength of 115,000, is in the unique position of *losing,* rather than gaining, people when Reserve Forces are mobilized, since many of the command's civilian employees are members of the Guard or Reserve. "I'm working hard to get additional Reserve authorizations," the AFLC Commander said.

General Catton emphasized that Air Force Reserve and ANG units get the same priority of support from AFLC as do active-duty units.

The Big Questions

In the Question and Answer period, General Alison was assisted by the speakers and by a Response Panel made up of Dr. Theodore C. Marrs, Deputy Assistant Secretary of Defense for Reserve Affairs; Maj. Gen. I. G. Brown, Director of the Air National Guard; Maj. Gen. Homer I. Lewis, Chief of the Air Force Reserve; and Dr. James P. Gilligan, Air Force Deputy Assistant Secretary for Reserve Affairs and Education.

Questions from the floor ranged from interpretation of Secretary Schlesinger's August 23 memorandum to mission assignments, recruiting, and training issues.

Dr. Gilligan, Gen. I. G. Brown, and General Lewis agreed that Dr. Schlesinger's directive on assignment of responsibilities for management of the Guard and Reserve was, in effect, a reaffirmation of the policy and concepts under which the Air Force has been operating for several years. Dr. Gilligan added that Air Force Secretary John L. McLucas had just asked for "a listing of actions that have to be taken or that are planned to ensure full implementation of the Total Force policy."

During discussions of recruiting and retention problems, General Lewis told the Seminar that the Reserve now is authorized to recruit against losses that will take place twelve months hence, and is allowed to overman through the grade of staff sergeant in order to enhance recruiting and increase promotion opportunities as a retention incentive. General Brown reported that the Guard expects to implement somewhat comparable changes before the end of the year.

Dr. Gilligan said that Guard and Reserve recruiting and retention is the number-one problem so far as his office is concerned. The Air Force budget for recruiting is "nearly twice as large as last year" and there is "a closer tie-in with the regular force recruiting service: it is too early to say how successful this is going to be."

The panel was asked what effect a RIF (reduction in force) of the active-duty Air Force would have on Reserve and Guard recruiting. General Lewis believes that "it would completely negate the objective of Palace Chase. . . . It will completely wash out Palace Chase because there will be nothing to motivate people to come into the Reserve Forces." [As of this writing, it appears that a RIF is, indeed, imminent.]

General Carlton was asked if there are plans for assigning C-141s to the Guard or the Air Reserve. He pointed out that, through the Associate Program, the Reserve already is in the C-141 business "up to their eyeballs." However, because of the nature of the strategic airlift business and the great productive capacity of the C-141, which can be exploited only with a high level of round-the-clock manning, General Carlton indicated that there was little high-level enthusiasm for separate C-141 units in the Guard or Reserve. He added that he and I. G. Brown "have been talking about how we can work out in the Guard something similar to the Reserve Associate Program."

Reserve—Guard Merger?

The most emotionally charged issue raised from the floor related to rumors that a Department of Defense study to determine the feasibility of merging the Guard and Reserve is in the offing.

Dr. Marrs commented that "since Secretary Schlesinger directed on August 23 that we conduct a study of all aspects of the Reserve Forces, I think we can assume that it [merger] will be included in the study. . . . I would like very much to see us approach evaluation of this issue . . . with a high degree of integrity, of objectivity, and of wisdom and maturity. . . . But it will be considered along with the important issues of force mix and the question of economy.

"I don't believe we should zero in on a merging of the Guard and Reserve as the most important single issue . . . when our most important issues are manning, equipping, and training, in order to produce a combat-capable force."

There is no doubt that these are the prime Reserve Forces issues of the day in this Total Force/All-Volunteer era, when the US response to a growing threat is increasing congressional pressure for a reduction of active-duty forces and of the defense budget.

If there was ever any doubt about former Secretary of Defense Melvin Laird's declaration of two years ago that Guard and Reserve Forces will be used as the initial and primary augmentation of the active force in time of emergency, Secretary Schlesinger's recent memorandum should have dispelled it. Combat capability is the priority goal of the Air National Guard and the Air Force Reserve.

After years of living with obsolete or obsolescent equipment, low priorities, and less-than-adequate budgets, it is apparent that the Reserve Forces have assumed a new order of importance in national defense. It is equally apparent that the Reserve Forces leaders at the Seminar are determined to fill their new role as full members of the Total Force aerospace team. ■

Meeting for the first time in more than ten years with no Americans involved in a shooting war, delegates to AFA's twenty-seventh National Convention—faced with the reality that antimilitary factions in US society now have set their sights directly on the military man as well as on his weapon systems—honored outstanding Air Force personnel and AFA leaders, and adopted a Statement of Policy and Resolutions that reaffirm AFA's belief in, its concern for, and its all-out support of all Air Force people during . . .

THE BUSINESS SIDE OF THE CONVENTION

By Don Steele
AFA AFFAIRS EDITOR

The highlight of the Awards Ceremony occurred when AFA Board Chairman Joe L. Shosid, right, presented AFA Gold Life Member Card No. 9 to AFA President Martin M. Ostrow.

"FOR THE first time in more than a decade, we hold a National Convention without Americans being involved in a shooting war, and with our POWs back on home ground. For this we can be grateful. But the complexities and ambiguities surrounding our MIAs in Southeast Asia continue to add to the many frustrations of that unfortunate conflict.

"Meanwhile, as we convene for the twenty-seventh time, there are many problems to plague us.

"Beset by doubt and by controversy, and frustrated by economic problems, the American people tend to look inward and be less concerned than in the recent past with the one issue that is central to all our pursuits and aspirations, our survival as a free and united society.

"The need for national defense, the main guarantor of our liberty and of our survival as a nation, is being questioned as never before in the last thirty years. Facile notions about the motivations of those who, if not deterred, might become our adversaries, are being mouthed blindly and have become the rationale for attempts to emasculate our defense capabilities.

"Perhaps most ominous and most important, the factions in US society that in the past have been content to attack the military on matters pertaining to weapon systems have now set their sights directly on the people in uniform. The men and women of the Air Force, and of all the military services, need and deserve our support as never before."

With these words, AFA National President Martin M. Ostrow opened AFA's 1973 National Convention, a convention at which official delegates from thirty-seven states and the District of Columbia analyzed and evaluated many crucial, national security issues—including both the vexing manpower problems and pressing hardware needs—and offered recommendations to our leaders in government and in the Congress on specific action designed to provide this nation with adequate power to maintain world peace.

Following Mr. Ostrow's opening remarks, AFA's National Chaplain Rev. Msgr. Rosario L. U. Montcalm gave the invocation, including a memorial tribute to the Air Force and AFA leaders and supporters and aviation pioneers who have passed on since our 1972 Convention, namely: Jaye Bigda, Joe E. Brown, retired Brig. Gen. Merian C. Cooper, Charles Davidson, Joseph Dudick, retired MSgt. Roy W. Hooe, Harry M. Jones, Maxwell A. Kriendler, Thomas G. Lanphier, Sr., retired Brig. Gen. William A. Matheny, Edward Merrill, Louis F. Musco, Marcella Myers, Dick Palen, Maj. Gen. James L. Price, Capt. Eddie Rickenbacker, Paul A. Robinson, Igor I. Sikorsky, Robert W. Smart, Lewis Turner, Al R. Weinhandl, William M. Whitney, Jr., Janet Wolf, three members of the Navy's Blue Angels, and sixteen

AFA National President Ostrow, left, joins Mr. and Mrs. Joe Higgins as Joe displays the AFA President's Award, designating him as "AFA's Man of the Year."

Thomas R. Fowler, President of Langley Chapter, Va., "AFA's Unit of the Year," accepts Membership Achievement Award from Paul W. Gaillard, Chairman of AFA's Membership Committee.

New York AFA President Gerald V. Hasler, left, accepts his Citation of Honor from AFA National President Martin M. Ostrow during the Awards Ceremony.

Lt. Gen. James T. Stewart, Commander, Aeronautical Systems Division (AFSC), accepts the "Distinguished Award for Management" from President Ostrow.

members of the Army's Golden Knights.

Presentation of Awards

During the Awards Ceremony, more than 100 individuals and units were recognized for their efforts on behalf of the Association's mission and membership objectives and of management of the Air Force *(see complete list of award recipients on pp. 60 and 61).* President Ostrow was master of ceremonies and presented the awards. Paul W. Gaillard, Chairman of AFA's National Membership Committee, assisted in presenting the membership awards.

In recognition and appreciation of his outstanding leadership and contributions to AFA's mission and objectives as National President for the past two years, President Ostrow received AFA's Gold Life Member Card No. 9, the highest "in-house" award AFA can bestow. Board Chairman Joe L. Shosid, on behalf of the Board of Directors, made the presentation.

For his dedicated and productive support of the US Air Force mission, particularly as a speaker and master of ceremonies at numerous Air Force, and AFA National, State, and Chapter functions throughout the country, Joe Higgins, of North Hollywood, Calif., the "Toastmaster General of the Air Force" and a Past President of AFA's Los Angeles Chapter, received the AFA President's Award designating him "AFA's Man of the Year."

For overall excellence in support of the US Air Force mission, particularly in the areas of aerospace education, civic affairs, military relations, industrial liaison, and membership activity, the President's Award to "AFA's Unit of the Year" went to the Langley Chapter, Va., and was accepted by its President, Thomas R. Fowler.

An AFA Citation of Honor was awarded to Gerald V. Hasler, President, New York AFA, in recognition of his outstanding leadership in mounting a well-planned, comprehensive campaign to gain passage by the New York State Legislature, and gubernatorial approval, of a bill lifting the ban against Junior ROTC in New York. This was an achievement of far-reaching national importance and a major milestone in AFA's support of the AFJROTC program.

Paul W. Gaillard received an AFA Life Membership in recognition of his unique drive and leadership as Chairman of AFA's National Membership Committee for the past two years, during which period AFA's membership increased by more than 18,000, to an all-time-high of 115,431.

The USAF Honor Guard from Headquarters Command, USAF, Bolling AFB, D. C., presented the colors, and the USAF Ceremonial Band, Bolling AFB, provided music.

In opening the third business session, President Ostrow presented AFA Certificates of Honor (MIA/POW) to five individuals in recognition of their "outstanding service to the cause of human rights by virtue of taking positive action in behalf of Americans who are missing in action or held prisoner of war in Southeast Asia." The recipients, listed in alphabetical order, are: Col. Archie W. Gratch, Chief, Missing Persons Branch, Hq. Air Force Military Personnel Center, Randolph AFB, Tex.; Lt. Gen. Daniel James, Jr., USAF, Principal Deputy Assistant Secretary of Defense for Public Affairs; Lt. Col. James B. Jones, Director of Information, US Air Force Academy, Colo., and former Chief of the Operational Forces Branch in the Office of Information at Headquarters USAF; Dr. Roger Shields, Assistant to the Assistant Secretary of Defense for International Security Affairs; and Frank A. Sieverts, Special Assistant to the Deputy Secretary of State for POW Matters. Mr. Sieverts and General James made brief remarks pertaining to the MIA/POW situation *(see also "MIA/POW Action Report," p. 18).*

Recipients who could not be present to personally accept their awards are: John A. Foster, California AFA Historian, Anaheim, Calif.; Margaret M. "Dolly" Foster, President, Gen. Jimmy H. Doolittle Chapter, AFA, Anaheim, Calif.; Dr. Jess Nathan, Past President, Santa Monica Chapter, AFA, North Hollywood, Calif.; and Brig. Gen. Russell G. Ogan, USAF, US Deputy Chief of Staff/Live Oak, EUCOM.

Following the awards presentations, Mrs. Gloria Coppin, Chair-

Mrs. Gloria Coppin, Chairman of VIVA's National Advisory Board, joins three who received AFA Certificates of Honor for work in behalf of MIA/POWs. Recipients are, from left, Dr. Roger E. Shields, Lt. Col. James B. Jones, and Col. Archie W. Gratch (see opposite page for details).

man of the National Advisory Board of VIVA (Voices in Vital America), presented a VIVA Certificate of Recognition and Appreciation to AFA "for your significant efforts on behalf of Americans held captive or missing in Southeast Asia." President Ostrow accepted for AFA.

General Resolutions

At the four business sessions, official delegates adopted the annual Statement of Policy *(see p. 6);* fourteen policy resolutions, including one containing two continuing resolutions *(p. 8);* and twenty-four general resolutions, one of which includes twenty-two continuing resolutions.

The general resolutions resolve that the Air Force Association;

- Urge the Department of Defense to approve and submit and the Congress to enact legislation that will provide a permanent Defense Officer Personnel Management System.
- Urge the Congress to enact legislation to provide for the procurement and retention of judge advocates and law specialist officers for the armed forces.
- Urge the Comptroller General to promptly issue a decision that will eliminate the inequities which, under existing law, preclude a female member from claiming any person as a dependent unless he is, in fact, dependent on her for over one-half of his support.
- Call upon Congress, when it is considering the legislation required to implement the "Proposed New Military Non-Disability Retirement Plan," to fully evaluate the impact on the retention, recruitment, and morale of the men and women on active duty with the armed forces.
- Call upon the Air Force to review the feasibility of providing low-cost, on-base, mobile homes for married personnel on their first enlistment.

AIR FORCE ASSOCIATION UNITS AND INDIVIDUALS HONORED AT THE CONVENTION

THE AFA PRESIDENT'S AWARDS

To **Joe Higgins,** California, "Toastmaster General of the Air Force," and widely known AFA Speaker and Master of Ceremonies, designated "AFA's Man of the Year."

To the **Langley Chapter, Virginia,** accepted by Thomas R. Fowler, President, designated "AFA Unit of the Year."

AFA GOLD LIFE MEMBER CARD #9

Martin M. Ostrow, California

AFA CITATION OF HONOR

Gerald V. Hasler, New York

AFA LIFE MEMBERSHIP AWARD

Paul W. Gaillard, Nebraska

AFA PRESIDENTIAL CITATIONS

Dr. Dan Callahan, Georgia
Gen. Paul K. Carlton, USAF, Illinois
Joseph J. F. Clark, Virginia
K. G. Freyschlag, Colorado
James C. Hall, Colorado
Gen. William W. Momyer, USAF, Virginia
Lt. Gen. James T. Stewart, USAF, Ohio
A. A. "Bud" West, Virginia
New York State Organization

AFA UNIT EXCEPTIONAL SERVICE AWARDS

Sal Capriglione Chapter, New Jersey (Unit Programming)
Front Range Chapter, Colorado (Aerospace Education)
Fort Worth Chapter, Texas (Community Relations)
Utah State Organization (Best Single Program)

AFA INDIVIDUAL EXCEPTIONAL SERVICE AWARDS

Victor R. Davis, Alaska
Alexander E. Harris, Arkansas
Naomi "Tillie" Henion, California
Jack C. Price, Utah
William C. Rapp, New York
Barbara Rowland, California
Sgt. Russell L. Stiteler, USAF, Ohio
Lynn S. Summers, Utah
Liston T. "Zack" Taylor, California
Thomas Turner, Washington, D. C.

AFA MEDALS OF MERIT

Ace J. Allred, Utah
Artie Bee Armstrong, Colorado
Stanley L. Campbell, Texas
Amos L. Chalif, New Jersey
R. L. Devoucoux, New Hampshire
John F. Dolan, New York
Joseph R. Falcone, Connecticut
Herbert O. Fisher, New York
James P. Grazioso, New Jersey
Roy A. Haug, Colorado
E. D. Jewett, Jr., Arizona
Troy H. Jones, Florida
Leo E. Jordan, Arizona
Lt. Richard J. "Rick" Knapp, USAFE, Germany
Donald E. Lee, Texas
Herman T. "Hank" Meinersmann, Delaware
Bernard D. Osborne, Ohio
Lester J. Rose, Virginia
Kenneth A. Rowe, Virginia
C. W. Scott, Virginia
Frances M. Sigmund, Pennsylvania
Herman F. Stute, Jr., Texas
Brig. Gen. Felix L. Vidal, USAF (Ret.), Florida
Joseph G. Vincent, New York
Ray E. Yost, Jr., Florida

1973 MEMBERSHIP ACHIEVEMENT AWARDS

REGIONAL WINNERS	VICE PRESIDENTS
Mid West	Earl D. Clark, Jr.
New England	Edward T. Nedder
STATE WINNERS	**PRESIDENTS**
Georgia	Donald L. Devlin
Illinois	William A. Johnston
Kansas	Don C. Ross
Mississippi	William A. Browne
Nebraska	Lyle O. Remde
North Carolina	Monroe E. Evans
North Dakota	Kenneth A. Smith
Oklahoma	Edward L. McFarland
Tennessee	James W. Carter
Utah	Verl G. Williams
CHAPTER WINNERS	**PRESIDENTS**
Abilene	Charles W. Borders
** Air Force Mothers'	Fran Sigmund
Ak-Sar-Ben	Paul W. Gaillard
Alexandria	Norman Gunn
All-Iowa	Ric Jorgensen
Big Sky	George C. Page
Central Utah	Ray Dunn
Chautauqua	John H. Householder
Columbus	Francis Harris
Eglin	William E. Bethea
Enid	Kenneth H. Martin
"500"	Oliver K. Loer
Front Range	Edward C. Marriott
General Leonard E. Thomas	Earl Rose
Golden Spike	Frank Coppin
Gus Grissom	Michael E. Medo
* H. H. Arnold Memorial	Leonard T. Glaser
High Point	Joseph Gumb
Hudson	Joseph J. Bendetto
Langley	Thomas R. Fowler
Las Vegas	Floyd White
L. G. Hanscom	Richard M. Stone
Lincoln	David Tews
Lubbock	Tom Ireland
Merced County	Earl A. Cometta
*** Middle Georgia	William R. Powell
Middle Tennessee	Clarence E. Reynolds, Jr.
Minot	Kenneth R. Bischke
New York Air Reserve	Ruth Leibold
Pease	Howard W. Sibson
Pope	David E. Drake
Pueblo	Melvin L. Harmon
Red River Valley	John O'Keefe
Rocky Mountain	Anita E. Berry
** Sal Capriglione	Joseph M. Capriglione
* Savannah	Richard H. Stein
Scott Berkeley	John D. Lewis
Silver & Gold	E. J. Wittbrodt
Steel Valley	Patrick J. Logan
Swamp Fox	James D. Catington
Teterboro-Bendix	Anthony Distefano
Thomas B. McGuire, Jr.	Frank Kula
Topeka	Robert D. Fromme
Ute	Larry D. Barton
**** Wasatch	James H. Della Silva

* Award Winner for second consecutive year
** Award Winner for third consecutive year
*** Award Winner for fourth consecutive year
**** Award Winner for seventh consecutive year

- Urge the Department of Defense to propose and the Congress to enact legislation to provide for the scaling of BAQ rates to geographical areas.
- Support pending congressional legislation to permit the AF Enlisted Widow's Home Foundation to purchase land on Eglin AFB, Fla., and urge its State organizations and local Chapters to support the fund-raising program of this Foundation.
- Urge the Department of Defense to submit and the Congress to enact legislation that would amend CHAMPUS to provide for lifetime coverage under CHAMPUS for the military retiree and his dependents.
- Urge the Department of Defense to submit and the Congress to enact legislation to improve the Military Survivors Benefit Program (SBP Act) by eliminating current inequities.
- Provide the Air National Guard and Air Force Reserve with maximum support in obtaining and retaining qualified personnel.
- Urge the Congress to provide a recruitment and retention incentive in the form of an annual pay bonus to health professionals.
- Urge the Department of Defense and the Civil Service Commission to support and the Congress to enact necessary legislation to eliminate the Performance Rating Act and substitute legislation covering all performance evaluation objectives.
- Urge the Department of Defense to support and the Congress to enact legislation that will enable civilian employees who have participated in mobility programs for the convenience of the government to return, at government expense, to the home of record from which they originally left.
- Urge the Department of Defense and the Civil Service Commission to support and the Congress to enact necessary legislation to provide for lump-sum payment immediately upon retirement for those employees retiring under disability retirement.

• Urge the Civil Service Commission to submit, and the Congress to enact, necessary legislation that would authorize moving costs of statutory appointees, and the return to their home of record.

• Recommend that the Air Force make every effort to give higher priority to the training aids, equipment needs, and on-base encampments of AFJROTC units.

• Urge the Air Force to allow AFJROTC cadets point-to-point air travel once annually on Air Force aircraft on a seat-available, opportune-airlift basis.

• Recommend and urge that franking privileges be approved for AFJROTC enrollment efforts and continuing membership requirements.

• Encourage the Air Force to establish a policy of awarding the E-3 rank (two stripes) to AFJROTC graduates entering the Air Force.

• Go on record as favoring the proposed changes to the "ROTC Vitalization Act of 1964."

• Support the funding necessary for expansion of the Civil Air Patrol's capability for its noncombat Air Search mission in support of the Air Force.

• Support enactment of pending legislation and the early implementation of its provisions designed to establish the Man in Space Historic Site at Cape Kennedy (Canaveral), Fla.

Continuing Resolutions

The delegates continued the resolutions that pertain to:

• Legislation to equalize military and Civil Service movement allowances.

• A dental-care program for military dependents.

• Supporting the special pay legislation for airmen now under consideration by the Congress.

• Permit early Reserve retirement on a reduced annuity basis.

• Provide an accelerated promotion program for Reserve medical officers comparable to that in effect for the active forces.

• Support legislation to eliminate nonresidency status for military personnel.

• Continued support of CAP by AFA's State organizations and Chapters.

• Legislation to eliminate the gross inequity that exists in the treatment of retired regular officers employed in the federal Civil Service.

• Legislation to amend the Joint Travel Regulations to authorize total reimbursement for trailer moves and dislocation allowances for military personnel.

• Action by appropriate authorities to include the Chief Master Sergeant of the Air Force as a member of the Board of Trustees of the Air Force Aid Society.

• Amending Title 5, US Code, to give full credit for service performed prior to the 1968 National Guard Technicians Act (P.L. 90–486).

• Authorization of an increase in the number of pre-med students at the Air Force Academy.

• Support of the concept of the Community College of the Air Force.

• Enactment of legislation by all State legislatures that would provide tuition assistance for children of MIA/POWs.

• Support of the efforts of the National Committee for Employer Support of the Guard and Reserve.

• Support of those steps now being taken to authorize incentives for service in the National Guard and Reserve Forces.

• Support of legislative actions to change eligibility for earlier retirement for civilian employees.

• Congressional action to correct the constructive service inequity.

• AFA State organization and Chapter encouragement to AFJROTC units to make maximum use at the lowest possible cost of all local civilian flying training facilities.

• Air Force authorization for AFJROTC cadets to attend the already established CAP summer encampments.

• Provide reenlisting personnel a choice of being reimbursed for some or all of their leave and permission to carry the balance of their leave forward.

• An increase in the authorized amount of unaccompanied baggage for E-4s under four years of service up to the level currently authorized for military personnel over the grade of E-4.

Election of Officers

The delegates unanimously elected the following AFA leaders to serve in AFA's highest elective offices: Joe L. Shosid, President; Martin M. Ostrow, Chairman of the Board; and incumbents Martin H. Harris, Secretary, and Jack B. Gross, Treasurer.

Mr. Shosid, of Fort Worth, Tex., is President of Advertising Unlimited, Inc., a Fort Worth public-relations and advertising agency, and a well-known football and basketball official in the Missouri Valley and Southwest Athletic Conferences, and the National Collegiate Athletic Association. He also serves as an assistant to Congressman James C. Wright, Jr. (D-Tex.).

A World War II veteran, he currently is an Air Force Reserve officer with an M-Day assignment as Assistant Director of Information, Office of the Secretary of the Air Force, Washington, D. C.

For more than thirteen years a member of AFA, Mr. Shosid is the immediate past Chairman of AFA's Board of Directors and has served AFA as an elected National Director; a member of its Executive, Finance, Resolutions, and Convention Site Committees; a Vice President (Southwest Region); Chairman of the Organizational Advisory Council; a member of the Air Reserve Council; and as a State and Chapter officer. He is a member of the Board of Trustees of the Aerospace Education Foundation, and Chairman of AFA's Fort Worth Airpower Council. In 1963, he was named AFA's "Man of the Year."

Mr. Ostrow is an attorney with offices in Beverly Hills, Calif., and also serves as president of three corporations: Wilshire Associate Investments, Applied Management Control, and World Leasing Corporation. He is a veteran of World War II and the Korean conflict and is an officer in the Air Force Reserve. Mr. Ostrow has served as AFA National President for the past two years and has also served as a Vice President (Far West Region); an elected National Director; Chairman of the Executive, Resolutions,

This Is AFA

The Air Force Association is an independent, nonprofit, airpower organization with no personal, political, or commercial axes to grind; established January 26, 1946; incorporated February 4, 1946.

OBJECTIVES

The Association provides an organization through which free men may unite to fulfill the responsibilities imposed by the impact of aerospace technology on modern society; to support armed strength adequate to maintain the security and peace of the United States and the free world; to educate themselves and the public at large in the development of adequate aerospace power for the betterment of all mankind; and to help develop friendly relations among free nations, based on respect for the principle of freedom and equal rights to all mankind.

PRESIDENT
Joe L. Shosid
Fort Worth, Tex.

BOARD CHAIRMAN
Martin M. Ostrow
Beverly Hills, Calif.

SECRETARY
Martin H. Harris
Winter Park, Fla.

TREASURER
Jack B. Gross
Hershey, Pa.

NATIONAL DIRECTORS

John R. Alison
Arlington, Va.
Joseph E. Assaf
Hyde Park, Mass.
William R. Berkeley
Redlands, Calif.
John G. Brosky
Pittsburgh, Pa.
Dan Callahan
Warner Robins, Ga.
Daniel F. Callahan
Nashville, Tenn.
B. L. Cockrell
San Antonio, Tex.
Edward P. Curtis
Rochester, N. Y.
Floyd F. Damman
Cerritos, Calif.
James H. Doolittle
Los Angeles, Calif.
George M. Douglas
Denver, Colo.

A. Paul Fonda
Washington, D. C.
Joe Foss
Scottsdale, Ariz.
Paul W. Gaillard
Omaha, Neb.
George D. Hardy
Hyattsville, Md.
Alexander E. Harris
Little Rock, Ark.
Gerald V. Hasler
Johnson City, N. Y.
John P. Henebry
Chicago, Ill.
Joe Higgins
N. Hollywood, Calif.
Joseph L. Hodges
South Boston, Va.
Robert S. Johnson
Woodbury, N. Y.
Sam E. Keith, Jr.
Fort Worth, Tex.

Arthur F. Kelly
Los Angeles, Calif.
George C. Kenney
Bay Harbor Island, Fla.
Thomas G. Lanphier, Jr.
La Jolla, Calif.
Jess Larson
Washington, D. C.
Curtis E. LeMay
Newport Beach, Calif.
Carl J. Long
Pittsburgh, Pa.
Howard T. Markey
Washington, D. C.
Nathan H. Mazer
Ogden, Utah
J. P. McConnell
Washington, D. C.
J. B. Montgomery
Beverly Hills, Calif.
Edward T. Nedder
Hyde Park, Mass.

J. Gilbert Nettleton, Jr.
New York, N. Y.
Jack C. Price
Clearfield, Utah
Julian B. Rosenthal
Decatur, Ga.
John D. Ryan
San Antonio, Tex.
Peter J. Schenk
McLean, Va.
C. R. Smith
Washington, D. C.
Carl A. Spaatz
Chevy Chase, Md.
William W. Spruance
Wilmington, Del.
Thos. F. Stack
San Mateo, Calif.
Arthur C. Storz
Omaha, Neb.
Harold C. Stuart
Tulsa, Okla.

James M. Trail
Boise, Idaho
Nathan F. Twining
Hilton Head Island, S. C.
Winston P. Wilson
Arlington, Va.
Jack Withers
Dayton, Ohio

Rev. Msgr. Rosario L. U. Montcalm
(ex-officio)
National Chaplain, AFA
Holyoke, Mass.

Henry A. Huggins, III
(ex-officio)
National Commander,
Arnold Air Society
Univ. of Kentucky
Lexington, Ky. 40506

VICE PRESIDENTS

Information regarding AFA activity within a particular state may be obtained from the Vice President of the Region in which the state is located.

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Pennsylvania

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Massachusetts, Vermont,
Connecticut,
Rhode Island

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Central East Region
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District of Columbia,
Virginia, West Virginia,
Kentucky

Herbert M. West, Jr.
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Tallahassee, Fla. 32303
(904) 488-1374
Southeast Region
North Carolina,
South Carolina,
Georgia, Florida,
Puerto Rico

and Convention Site Committees; Chairman of the Organizational Advisory Council; an ex-officio member of all AFA Committees and Councils; and as a State and Chapter President. He is a member of the Aerospace Education Foundation's Board of Trustees.

Mr. Harris, of Winter Park, Fla., is a research scientist with the Martin Marietta Corp., and an officer in the Air Force Reserve. He has served as a member of the Executive, Resolutions, and Finance Committees; a member of the Organizational Advisory Council; an elected National Director; Vice President (Southeast Region); and as a State and Chapter President. He is a member of the Aerospace Education Foundation's Board of Trustees and, in 1972, was named AFA's "Man of the Year."

Mr. Gross, a Harrisburg, Pa., civic leader and businessman, was elected to an unprecedented twelfth term as Treasurer. He has served as Chairman of AFA's Board of Directors; Chairman of the Finance Committee; a member of the Executive, Resolutions, and Convention Site Committees; and as a State and Chapter President. He is a permanent member of AFA's Board of Directors and a member of the Aerospace Education Foundation's Board of Trustees. Mr. Gross is a colonel, retired from the Air Force Reserve. He was AFA's "Man of the Year" in 1958.

Six new Vice Presidents were elected to head AFA activities in as many Regions, joining six incumbents who were reelected. The new Vice Presidents are: Dr. Clayton K. Gross, Portland, Ore. (Northwest Region); John H. Haire, Huntsville, Ala. (South Central Region); Roy A. Haug, Colorado Springs, Colo. (Rocky Mountain Region); Keith R. Johnson, Minneapolis, Minn. (North Central Region); Edward L. McFarland, Tulsa, Okla. (Southwest Region); and Andrew W. Trushaw, Jr., Florence, Mass. (New England Region). *(See also p. 86.)*

New Board Members

Eight new Directors were elected to the Board: B. L. Cockrell, San Antonio, Tex.; Floyd F. Damman, Cerritos, Calif.; Alexander E. Harris, Little Rock, Ark.; Gerald V. Hasler, Johnson City, N. Y.; Joe Higgins, North Hollywood, Calif.; Edward T. Nedder, Hyde Park, Mass.; J. Gilbert Nettleton, Jr., New York, N. Y.; and Jack C. Price, Clearfield, Utah.

The eight newly elected Directors join ten incumbent Directors who were reelected for another year, as well as all the Past National Presidents and Board Chairmen, other permanent Directors, National Officers, the National Chaplain, and the National Commander of the Arnold Air Society, to form a Board of sixty-six. *(The full Board membership appears in "This Is AFA," on the opposite page.)*

Gen. John D. Ryan, recently retired Air Force Chief of Staff, has accepted President Ostrow's invitation to serve as a permanent member of AFA's Board of Directors, as provided for in AFA's national constitution. Under the same constitutional provision, William R. Berkeley becomes a permanent member of the Board by virtue of his having been elected as a National Director or National Officer for an aggregate period of ten years.

Award to President Ostrow

During the Secretary's Luncheon, Air Force Secretary Dr. John L. McLucas presented the Air Force Exceptional Service Award to AFA President Ostrow. The citation accompanying the award reads: "Mr. Martin M. Ostrow distinguished himself by exceptionally meritorious service to the United States Air Force as President of the Air Force Association from September 21, 1971, to September 19, 1973. During this period, Mr. Ostrow provided vigorous and influential leadership to the Air Force Association and guided its many activities in support of maintaining the highest level of military preparedness and strength of our nation. Through his personal efforts the Air Force Association exerted an effective and strong influence upon the many areas of national life concerned with substantiating aerospace power and safeguarding the freedom of our nation. The singularly distinctive contributions of Mr. Ostrow reflect great credit upon himself and have earned for him the sincere gratitude of the United States Air Force."

Convention Activities

In addition to the Awards Ceremony, business sessions, and the luncheon honoring the Secretary of the Air Force, the program also included a President's Reception for AFA Officers, Official Delegates, and Air Force Information Officers, which featured entertainment by an authentic Spanish Flamenco dancer, singer, and guitarist (through the courtesy of the Trans Rep Travel Agency as a prelude to what is in store for AFAers who participate next year in AFA's Overseas Reunion Trip).

In addition, there was a banquet honoring the Air Force's twelve Outstanding Airmen *(see p. 58)*; an Aerospace Workshop, which featured presentations by Maj. Gen. Robert P. Lukeman, Assistant Chief of Staff for Studies and Analysis, Hq. USAF, Maj. Gen. Homer K. Hansen, Vice Commander, Aeronautical Systems Division (AFSC), and Col. James E. Hildebrandt, B-1 Deputy Program Director, on the basic strategic requirements of the US with emphasis on the B-1 strategic bomber and the B-1 program specifically, and a presentation by Maj. Gen. Oliver W. Lewis, Director of Personnel Programs in the Office of the Deputy Chief of Staff for Personnel, Hq. USAF, on personnel matters; the annual Air Force Association Reception in the exhibit halls; a luncheon honoring the Chief of Staff of the US Air Force; and a Seminar on "The Resources of the Air National Guard and Air Force Reserve" *(see p. 78).*

The climax of a most successful and productive Convention was the annual Air Force Anniversary Reception and Dinner Dance, the theme of which was "Hail and Farewell to the Chiefs." The dinner program featured a musical tribute to the outgoing and incoming Chiefs of Staff titled "Westward Ho." Participating in the tribute were the United States Air Force Concert Band conducted by Col. Arnald Gabriel, the USAF Singing Sergeants, and

The President's Reception for Official Delegates, AFA Officers, and Air Force Information Officers featured entertainment by an authentic Spanish Flamenco dancer, singer, and guitarist, as a prelude to the AFA Overseas Reunion Trip scheduled for next July 30–August 14 (see also opposite page).

Enjoying industry exhibits during the reception in the Exhibit Hall are AFA National Treasurer Jack B. Gross, third from left; Rev. Msgr. Rosario L. U. Montcalm, AFA National Chaplain; and New Hampshire AFA President R. L. Devoucoux, extreme right.

SMSgt. Harry H. Gleeson, the narrator.

Following the presentation of AFA's H. H. Arnold Award to Gen. John D. Ryan, USAF (Ret.), designating him the "Aerospace Man of the Year," Lt. Gen. Daniel "Chappie" James, Jr., the Principal Deputy Assistant Secretary of Defense for Public Affairs, backed by the Air Force Band, narrated "I Am An American." Music for dancing was supplied by the USAF Airmen of Note and the Steve Lesieur Orchestra.

Acknowledgments

The Hon. Howard T. Markey, Chief Judge of the US Court of Customs and Patent Appeals, and a former AFA National President and Board Chairman, served as parliamentarian. The Credentials Committee included Robert S. Lawson, Chairman, Earl D. Clark, Jr., and James P. Grazioso, Vice Presidents for AFA's Far West, Midwest, and Northeast Regions, respectively.

Inspectors of Election were Kenneth Banks, Chairman, Ohio AFA Treasurer; Cecil Brendle, Alabama AFA President; and Lloyd Nelson, New Jersey AFA Treasurer.

With deep gratitude, AFA acknowledges the support of the following: A. B. Dick Federal Government Sales Office, for Model 675 copiers; International Business Machines Corp., Federal Systems Division, for sponsoring the Outstanding Airmen Program; Ling-Temco-Vought, Inc., for sponsoring the Press Lounge and for publishing the daily *AFA Profile* newspaper; and Avco Corp., Boeing Co., Hughes Aircraft Co., Martin Marietta Corp., Northrop Corp., Rockwell International Corp., Sperry-Univac, Teledyne CAE, and Teledyne Ryan Aeronautical for cosponsoring the Ladies Hospitality Lounge and activities.

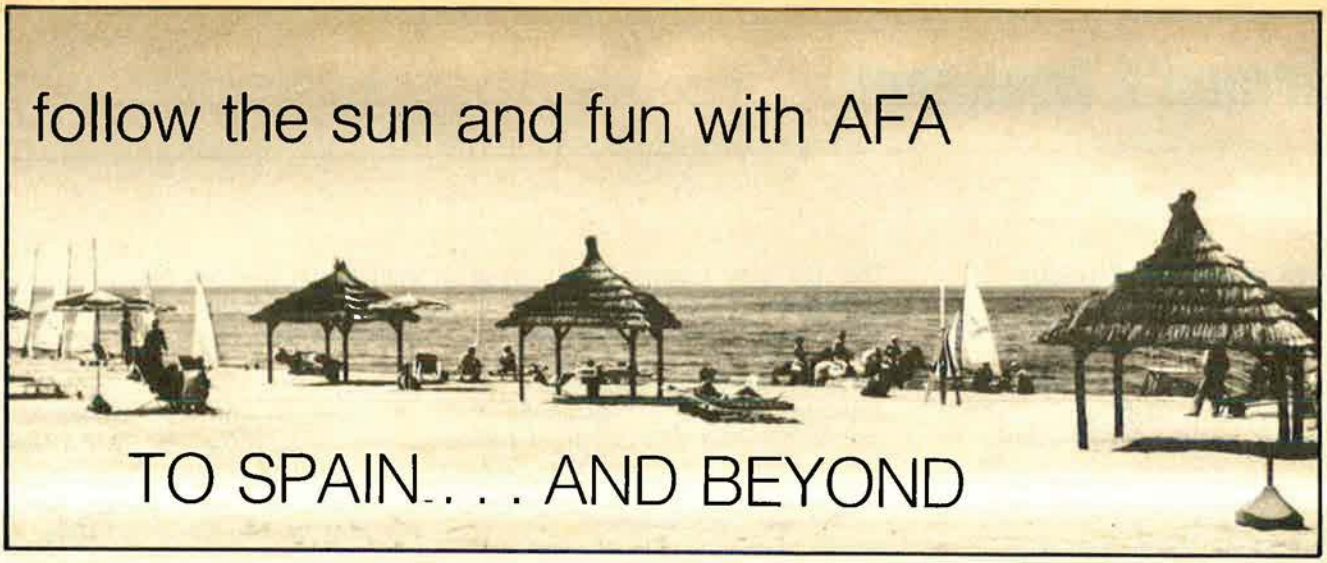
We also gratefully acknowledge the contributions made to our program by personnel of the United States Air Force—too many to list here, but represented by our Military Host, Maj. Gen. John L. Locke, Commander, Headquarters Command, Bolling AFB; and by the following Project Officers; Col. William D. Hatcher, Lt. Col. John T. Halbert, and Capt. Angelo Cerchione, Hq. USAF; Brig. Gen. C. J. Douglas, Jr., Commander, 1st Composite Wing, Headquarters Command, Andrews AFB, Md.; Col. William W. Carpenter, Jr., Director of Information, Headquarters Command; Lt. Col. Russell V. Nixon, Transportation Project Officer, Bolling AFB; Maj. Thomas Hill, Jr., Andrews AFB Project Officer; Capt. Donald E. Sisk, Bolling AFB Project Officer; and TSgt. Malcolm O. Haynes, Honor Guard Project Officer, Bolling AFB.

To each of these—and to the many officers and airmen they represent—as well as to Barbara Arnold, Cecil Brendle, Patricia Muncy, Lt. Rick Knapp, Mary Steele, and Maj. David Van Poznak, who volunteered to work on their personal time, we express our deep and enduring gratitude for their valuable help.

Our appreciation also goes to the AFA leaders and delegates who attended the Convention and to the many AFA leaders in the field, those individuals whose personal contributions of time, effort, and finances have made AFA the great organization it is today.

We are most grateful for the many congratulatory telegrams and letters we have received, most of which express the opinion that this Convention was one of AFA's most enjoyable and productive.

AFA's 1974 Convention will be held in Washington, D. C., September 15–19. We urge each of you to mark the dates on your calendar and to plan to attend. ■



Atalaya Park Hotel Beach

This is your invitation to

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July 30-August 14, 1974

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Airman's Bookshelf

Evolution of US Strategy

The American Way of War: A History of United States Military Strategy and Policy, by Russell F. Weigley. In "The Wars of the United States" series, Louis Morton, general editor. Macmillan, New York, N. Y., 1973. 584 pages with notes and index. $12.95.

This book is less a history of the ideas underlying American strategy and military policy than it is a recounting of our attitudes toward warfare and its uses. The author, however, had little choice, because until 1945 few Americans wrote on strategy, and our soldiers and sailors generally tried to apply European ideas. For much of his story, therefore, Weigley has had to deduce American strategic ideas from American acts.

To the extent that Weigley finds a common strategy underlying American wars, it is a strategy of annihilation. Whenever our strength has been sufficient, our generals and admirals have usually sought to annihilate the enemy armed forces, and sometimes enemy peoples. Scott in Mexico was the principal exception. Washington and Greene recognized the limits of their power and, after the first few years of the Revolution, tried only to erode the British will to continue.

For the sake of reconciliation, Lincoln tried to limit the ferocity of the Civil War. But the North had adequate power, and, in time, Grant, Sherman, and Sheridan openly pursued a strategy of annihilation against both army and society. Weigley criticizes Lee for not emulating our revolutionary generals. In spite of the adverse balance of military resource and the changes in military technology, Lee did what most nineteenth century generals did—he sought again and again a Napoleonic battlefield victory, and he lost the war.

Annihilation is a fair generalization for the strategy employed in most of the Indian wars. Mahan taught the US Navy to seek the destruction of the enemy battle fleet in one grand, Napoleonic encounter. The US was unable to influence strategy in World War I; but in World War II, primary American objectives throughout were the annihilation of the German army and the Japanese fleet. The frustrations of the Korean War followed from Truman's refusal to apply the traditional American strategy.

The last two chapters, dealing mostly with the Eisenhower and Kennedy years, provide an excellent summary of the new era in which civilian intellectuals devoted themselves to strategy. The early theorists of deterrence denied the traditional American strategy, because trying to annihilate the enemy would be suicidal. From the mid-1960s, all attempts to regain the initiative, to formulate strategies of action, to use military force in pursuit of a national objective have, in Weigley's view, failed; and "at no point on the spectrum of violence does the use of combat offer much promise for the United States today." This quotation sums up a secondary theme of the book: that with the exception of the brief German blitzkrieg, warfare has become less and less decisive.

Blue suiters may be irritated by Weigley's repeated charge that from the advent of the B-17, American air leaders have given insufficient attention to close air support. While Weigley scarcely proves the charge, there is surely much truth in it. Anyone tempted to defend the USAF on this issue must find some other explanation for the US Army's decision to build its own very large air arm.

On the other hand, I believe that Weigley gives the American air theorists of the 1930s insufficient credit for the humanitarianism inherent in the theory of precision bombardment of selected industrial targets. Indeed, those officers believed they had found a way to restore decision to warfare without the massive attrition of World War I, and without massive civilian casualties.

Although there is some repetition, the book is clearly written. The encyclopedic notes reference most of the primary and secondary sources of American military history and will be useful for students. And for US military officers, this thoughtful volume is an excellent addition to a series that is growing in value—and some promising titles are yet to appear.

—Reviewed by Monte D. Wright, Director, NASA Historical Office.

Air War on the Eastern Front

The Soviet Air Force in World War II: The Official History, Originally Published by the Ministry of Defense of the USSR, edited by Ray Wagner, translated by Leland Fetzer. Doubleday, New York, N. Y., 1973. 440 pages with appendix and index. $12.95.

There are few more provocative questions in military history than those involving the truth of what happened to the Luftwaffe on the vast Eastern Front in World War II. Until now, nearly all of the versions are German-written or use predominantly German sources. Frequently, these give a biased and incomplete picture, for, until the Soviet view is considered, the account lacks balance.

The Soviet Air Force in World War II is the only full-scale study of the role played by Soviet aviation in "The Great Patriotic War" against German invaders, 1941–45. Like all official history, this one must be read with discernment and patience. The account is laced with political commentary which American readers will find difficult to swallow. The text abounds with fatuous paeans like, "Every day the resistance, courage, and heroism of the fighters increased." Despite obvious limitations, however, the Soviet history is an excellent find for the student of military aviation. It provides a new and long-awaited point of departure. If there is a single underlying weakness, it is a disquieting deference to the Red Army. That the Red Air Force was patterned on the German model, following shared experiences after World War I, explains the inherent subordination of Soviet air to ground forces, but no one needs constant reminding of the battle prowess of the Red Army.

The official text begins with a brief discourse on Soviet and German air forces before the implementation of Operation Barbarossa, June 22, 1941. Even the official Soviet historians cannot conceal the gross lack of preparation, training, and equipment abruptly revealed by the shock of the Nazi attack. Despite a total numerical superiority in aircraft, the Soviet air forces were overwhelmed by German "qualitative and quantitative superiority . . . in the border military districts." One word describes the action of the Soviet Air Force—resistance. Even attempts to regain air superiority were abandoned because the air force was commanded to attack advancing enemy tank columns. One easily sees desperation and confusion by reading between the lines.

Red air operations are detailed for all the major battles. Especially interesting as a sidelight are reports of long-range raids such as their first attack on Berlin on August 8, 1941. Other sections describe paratroop drops behind German lines, fighter tactics, activities of political commissars, and numerous individual heroics of Stalin's "glorious falcons."

Supplemented with invaluable footnotes by the American editor and graced with fine photographs, *The Soviet Air Force in World War II* is an important volume. There are also good tables in the appendix on aircraft data, production, and Lend Lease.

Without a doubt, this translation is a vital work that, taken with the German accounts, adds immeasurably to our knowledge of the climactic war fought in Russia.

—Reviewed by Capt. Tim Kline, Department of History, US Air Force Academy.

The Loening Legend

Amphibian: The Story of the Loening Biplane, by Grover Loening. New York Graphic Society Ltd., 140 Greenwich Ave., Greenwich, Conn. 06830, 1973. 196 pages with appendix and index. $14.95.

The history of powered flight now spans seven decades. There are not many living who have seen it all unfold, and, among those who have, there is none we can think of who played so large a part in the development of American aviation as Grover Loening. Now, at the age of eighty-five, Mr. Loening has produced another book—the lively, often humorous, and always exciting story of his tractor amphibian, which was a fixture in the rotogravure section of the Sunday papers during the 1920s and '30s.

Mr. Loening was awarded the first master's degree in aeronautics in 1910. Before founding the Loening Aeronautical Engineering Corp. in 1917, he was associated with the Wright brothers and was Chief Aeronautical Engineer of the Army's Aviation Section.

The Loening amphibian, which first flew in 1924, was produced continuously for more than a decade. In this book, Mr. Loening tells of its famous flights by the military services—arctic exploration, the Air Corps' 1926–27 goodwill flight around South America in Loening OA-1As, Navy mapping of Alaska in 1929. The Loening amphibian went through many modifications for the military services and even more as a commercial transport and "flying yacht" owned by such famous people of the late '20s as Bernarr Macfadden and Marshall Field.

In one of the most interesting chapters of the book, Mr. Loening tells about his amphibian's miraculous performance as the backbone of China National Airline during the 1930s. Flying the Yangtze River gorges from Shanghai to Chungking in all kinds of weather and without radio aids, the Loenings carried more than 30,000 passengers with only one fatality. But there were plenty of brushes with Chinese bandits and Japanese fighters.

This is a fascinating book about a great airplane and a great era of aviation, told by one of the last surviving aviation pioneers. More than 250 excellent photographs complement a story told with style and the assurance of one who was there. It's all packaged in a beautifully designed, large format book that belongs in the library of every aviation enthusiast.

—Reviewed by John L. Frisbee, Executive Editor, AIR FORCE *Magazine.*

New Books in Brief

Aeroplane Scrap Book Number 2, 1911–1939, compiled by David D. Hatfield. A scrapbook of advertisements as they originally appeared in the wood-and-wire flying days long past. In this entertaining volume, you will find the little-known aircraft and engines that got America off the ground in the first war years and the roaring twenties, when aviation came of age. Others may be recognized by well-informed antique aviation buffs. There's something here for everybody. Northrop Institute of Technology, Inglewood, Calif., 1971. 280 pages with index. $4.50.

Battleships and Battle Cruisers, 1905–1970, by Siegfried Breyer. This comprehensive and definitive work contains descriptions of all ships representative of their kind that were started by all maritime nations during the period covered, irrespective of whether they were taken into service, remained uncompleted, or only reached the drawing-board stage. The broader political considerations that influenced the size of ships and composition of fleets are also mentioned, some of the arguments being illustrated with examples of well-known naval engagements. 922 detailed and accurate drawings by the author. Doubleday, New York, N. Y., 1973. 480 pages with index. $25.00.

How to Think About Arms Control and Disarmament, by James E. Dougherty. This monograph, the seventeenth to be published by the National Strategy Information Center in its Strategy Papers series, provides an introduction to the whole complex subject of arms control and disarmament. Several of the subjects covered are: the causes of war; history of disarmament negotiations down to World War II; policies of major powers; analysis of the problem of general disarmament; more limited forms of arms control ("Hot Line" Agreement between the US and USSR, the Partial Nuclear Test Ban Treaty, the Nuclear Nonproliferation Treaty, agreements for the prohibition of biological and chemical weapons); and SALT. Crane, Russak & Co., New York, N. Y., 1973. 202 pages with bibliography. $5.95.

Military Aircraft of the World, by John W. R. Taylor and Gordon Swanborough. Every combat type known to be in service with the world's air forces is included in this single-volume reference work. Also covered are transports, trainers, and second-line machines. More than 290 photographs, plus silhouette drawings. Charles Scribner's Sons, New York, N. Y., 1973. 240 pages with index. $5.95.

—By Catherine Bratz

The Bulletin Board

By Capt. Don Carson, USAF
CONTRIBUTING EDITOR, AIR FORCE MAGAZINE

On the Hill

The Senate Committee on Armed Services has completed a comprehensive analysis of military personnel requirements. It advocates a "lean" but adequate and less expensive Department of Defense, to be achieved presumably by better organization and utilization of DoD resources. The committee recommended a DoD-wide manpower cut of 156,000 people in the active force. The Secretary of Defense would prescribe the apportionment of this reduction among the services, with the proviso that it come from support forces where practicable.

While endorsing the continued need for a strong, efficient, and well-balanced defense capability, the committee took a close look at the trend toward fewer operational units but relatively more manpower. The sharp phasedown of combat forces below FY '64 levels has not been matched by a corresponding reduction in manpower, particularly in support areas.

For example, in FY '74, DoD proposes a twenty percent reduction in Army divisions, thirty-seven and twenty-eight percent cuts in Navy carriers and escort ships, respectively, and a fifty-nine percent reduction in USAF heavy bombers from the FY '64 levels.

At the same time, the current DoD request for manpower is only sixteen percent lower than in 1964. Thus, despite stringent budgets, rising operating costs, the added costs and difficulty of fielding an all-volunteer force, and technological advances that should substitute machines for men, the ratio of manpower to operational forces rises in FY '74.

In line with the committee's belief that manpower cuts should be absorbed largely in support areas is the recent consolidation of NORAD and ADC headquarters staffs. This action came after a two-year study by the Senate Bomber Defense Subcommittee of the Armed Services Committee. There will be a 930-person reduction in the two major headquarters staffs, including eight generals, twenty-four colonels, and sixty-six lieutenant colonels. The committee has been advised that this will result in "no degradation in air-defense capabilities."

It is this type of sound economizing that will enable the DoD to live within budget limitations, yet maintain a "lean but mean" military force, capable of meeting the defense needs of the nation.

Employer Support of Reserves

The Secretary of Defense announced that more than 124,000 of the nation's employers have signed statements supporting the goals of the National Committee for Employer Support of the Guard and Reserve. These employers cover more than 57.7 million employees, or better than forty-six percent of the work force. By signing, the employer agrees to provide his employees in the Guard or Reserve the necessary time to fulfill their drill and active-duty requirements. He also agrees to give them equal opportunity in career advancement and job benefits.

The National Committee, established by the President in 1972, seeks to inform the public of the necessity for support of the Reserve Components during this period of the all-volunteer, total force.

Palace Chase

Palace Chase, the program that releases active-duty personnel to join ANG and Reserve units, has

Col. Lawrence Skantze, AWACS System program director, briefs Secretary of Defense James R. Schlesinger during a flight demonstration of the aircraft's capabilities. Secretary Schlesinger and members of the Defense Systems Acquisition Review Council were given a two-hour flight aboard AWACS in September to acquaint them with the new system.

been expanded to include more than 200 enlisted speciality codes. Airmen in most AFSCs may now apply for transfer to the Reserve Forces. Application must be for a specific unit where there is a vacancy in the individual's AFSC. Applicants may trade their remaining active-service commitment for a contract to serve in one of the Reserve elements. The trade is on a two-for-one basis for each remaining year of the enlistment.

There are more than 10,000 Palace Chase vacancies covering most enlisted specialties. Numerous openings also exist for experienced F-100, F-105, and F-106 pilots and for qualified navigators with airlift experience in C-130 and C-141 aircraft. Local CBPO Customer Service Centers have details and application procedures.

Palace Flicks

The Air Force Aid Society provided almost $1.5 million in emergency assistance to men and women of the Air Force last year, but many persons are not aware of how the Society can help them. Not understanding the Aid Society, they resort to private loans at high interest rates when emergencies occur. The Palace Flicks film report No. 83 gives examples of when Air Force aid may be obtained and explains the educational funds available.

Palace Flicks No. 100 explains the Total Objective Plan for Career Airmen Personnel (TOPCAP). Included is information on the number of people (by skill level and grade) who will be in tomorrow's Air Force. The film also deals with career progression and provides a systematic set of rules for managing the flow of airmen in the career force.

Senior Staff Changes

PROMOTIONS: To **General:** Robert J. **Dixon;** Richard H. **Ellis;** Timothy F. **O'Keefe.** To **Lieutenant General:** Joseph R. **DeLuca;** John B. **Hudson;** George H. **McKee;** John R. **Murphy;** John W. **Roberts.**

RETIREMENTS: M/G Leslie W. **Bray,** Jr.; M/G John R. **Kullman;** B/G Archie S. **Mayes;** Gen. William W. **Momyer;** L/G Jammie M. **Philpott;** L/G Austin J. **Russell;** B/G Robert R. **Scott;** M/G Paul R. **Stoney;** Gen. Horace M. **Wade.**

CHANGES: B/G Charles C. Blanton, from Dep. Chief, Budget Management Div., to Dep. Dir. of Budget, AF Comptroller, Hq. USAF, replacing M/G Howard M. Fish . . . **M/G Ray M. Cole,** from Cmdr., 21st AF, MAC, McGuire AFB, N. J., to Asst. DCS/P, Hq. USAF, replacing L/G John W. Roberts . . . **L/G Duward L. Crow,** from Comptroller of the AF, to Asst. Vice C/S, Hq. USAF, replacing retiring L/G Austin J. Russell . . . **L/G Joseph R. DeLuca,** from Dir. of Budget, to Comptroller of the AF, Hq. USAF, replacing L/G Duward L. Crow . . . **M/G William A. Dietrich,** from DCS/Plans, to C/S, Hq. MAC, Scott AFB, Ill., replacing M/G Lester T. Kearney, Jr. . . . **Gen. Robert J. Dixon,** from DCS/P, Hq. USAF, to Cmdr., Hq. TAC, Langley AFB, Va., replacing retiring Gen. William W. Momyer.

B/G (M/G selectee) Billy J. Ellis, from Cmdr., 17th Air Div. (Prov.), SAC, U-Tapao AF, Thailand, to DCS/P, Hq. SAC, Offutt AFB, Neb., replacing M/G George H. McKee . . . **Gen. Richard H. Ellis,** from Cmdr., AIRSOUTH, and Cmdr., 16th AF, USAFE, Torrejon AB, Spain, to Vice C/S, Hq. USAF, replacing retiring Gen. Horace M. Wade . . . **M/G Howard M. Fish,** from Dep. Dir. of Budget, to Dir. of Budget, AF Comptroller, Hq. USAF, replacing L/G Joseph R. DeLuca . . . **L/G John B. Hudson,** from DCS/Systems, to V/C, Hq. AFSC, Andrews AFB, Md. . . . **L/G Gerald W. Johnson,** from Cmdr., 8th AF, SAC, Andersen AFB, Guam, to IG, Hq. USAF, replacing L/G Louis L. Wilson, Jr. . . . **M/G Lester T. Kearney, Jr.,** from C/S, Hq. MAC, Scott AFB, Ill., to Cmdr., 21st AF, MAC, McGuire AFB, N. J., replacing M/G Ray M. Cole.

L/G George H. McKee, from V/C, to Cmdr., 8th AF, SAC, Andersen AFB, Guam, replacing L/G Gerald W. Johnson . . . **M/G John M. McNabb,** from DCS/P&O, PACOM, Camp H. M. Smith, Hawaii, to DCS/Intelligence, J-2, NORAD/CONAD, and DCS/Intelligence, Hq. ADC, Ent AFB, Colo., replacing retiring M/G John R. Kullman . . . **M/G Edward P. McNeff,** from V/C, 12th AF, TAC, Bergstrom AFB, Tex., to V/C, 5th AF, PACAF, Fuchu AS, Japan, replacing L/G John R. Murphy . . . **L/G John R. Murphy,** from V/C, 5th AF, PACAF, Fuchu AS, Japan, to C/S, US Forces, Korea, and C/S, UN Command, Korea, replacing retiring L/G Robert N. Smith . . . **B/G Milton E. Nelson,** from DCS/Plans, Hq. ATC, Randolph AFB, Tex., to Dep. Dir., J-3 (NMCC), Jt. Staff, OJCS . . . **L/G (General selectee) Timothy F. O'Keefe,** from Vice CinC, US Readiness Cmd., MacDill AFB, Fla., to Cmdr., US Support Activities Group, and Cmdr., 7th AF, PACAF, Nakhon Phanom, Thailand, replacing Gen. John W. Vogt, Jr.

B/G James G. Randolph, from V/C, to Cmdr., OCAMA, AFLC, Tinker AFB, Okla., replacing M/G William Y. Smith . . . **L/G John W. Roberts,** from Asst. DCS/P, to DCS/P, Hq. USAF, replacing Gen. Robert J. Dixon . . . **Col. (B/G selectee) Charles E. Shannon,** from Cmdr., 60th MAW, MAC, Travis AFB, Calif., to V/C, OCAMA, AFLC, Tinker AFB, Okla., replacing B/G James G. Randolph . . . **M/G William Y. Smith,** from Cmdr., OCAMA, AFLC, Tinker AFB, Okla., to Dir. of Doctrine, Concepts, and Objectives, DCS/P&O, Hq. USAF, replacing retiring M/G Leslie W. Bray, Jr. . . . **Gen. John W. Vogt, Jr.,** from Cmdr., US Support Activities Group, and Cmdr., 7th AF, PACAF, Nakhon Phanom, Thailand, to CinC, Hq. PACAF, Hickam AFB, Hawaii, replacing Gen. Lucius D. Clay, Jr. . . . **L/G Joseph G. Wilson,** from DCS/P&O, Hq. USAF, to Cmdr., AIRSOUTH, and Cmdr., 16th AF, USAFE, Torrejon AB, Spain, replacing Gen. Richard H. Ellis . . . **L/G Louis L. Wilson, Jr.,** from IG, Hq. USAF, to Vice CinC, Hq. USAFE, Lindsey AS, Germany, replacing retiring L/G Jammie M. Philpott.

—Compiled by Catherine Bratz

The Bulletin Board

These and many other informative Palace Flicks film briefings are available at local CBPOs.

Legislation

H.R. 8495, a bill for granting Vietnam-era veterans attending schools an additional $1,000 annually for tuition and books, is pending. Statistics attest that fewer Vietnam vets are attending schools. They simply cannot afford the expense on the current allotment.

Women in the Military

The military services, except for the Marine Corps, plan to more than double the number of enlisted women by FY '77. No problems are foreseen in recruiting qualified women in numbers well above present levels. All women who are enlisting are high school graduates, or GED equivalents, and all of them have average or above average mental ability.

The Army has had to reduce its quality requirements to the extent that fifty percent of the young men recruited are not high school graduates. One way to remedy the quality problem is to recruit women in skill areas open to them. Today, eighty-one percent of all job specialties in the DoD are open to women. This is essentially all jobs not related to combat.

Physician Assistants

Ten noncommissioned officers who entered the Physician Assistant program in July 1971 were awarded their bachelor of science degrees on September 28. The ten men are now serving one year of practical clinical training under physicians at USAF hospitals. Their training also includes one year of study at the USAF School of Health Care Sciences at Sheppard AFB, Tex. The BS degrees were awarded by the University of Nebraska at Omaha.

Physician Assistants will assume many of the routine duties now performed by USAF doctors. This will free the doctors to devote additional time to more critical areas of health care. The USAF goal is to maintain 400 Physician Assistants in the active force.

Junior Officers

Representatives from sixteen bases attended the Air Training Command Junior Officer Conference at Randolph AFB, Tex. They were addressed by Lt. Gen. William V. McBride, Commander of ATC, on ways they can assist their commanders to identify problem areas and find solutions. The conference was also addressed by Capt. Thomas J. Barrett, a POW for seven years.

General McBride told the Junior Officers: "You are better educated, better trained, better disciplined, and come from better backgrounds than any other group I know. I tell you this not to make you proud, but because it makes me expect more from you."

He asked for the help of Junior Officers in solving problems involving NCOs and airmen. "They are the best we've ever had," he added. "They deserve your help."

AF Career Survey

USAF's Military Personnel Center (MPC) has released recent information on the attitudes toward Air Force careers. The attitude of young officers toward a career continues to improve. The airman reenlistment intent, which has shown steady improvement, stabilized for the first time in recent years. However, the "true volunteer" was much more reenlistment-motivated than those who were in the Air Force for draft reasons.

Officers listed flying, retirement, the Air Force way of life, and type of job as primary factors in favor of an Air Force career. Policy and procedures, job dissatisfaction, family separation, and no control over career were the major complaints of young officers.

First-term airmen listed education and training, income security, travel, and retirement as their most favorable factors. Airmen expressed a negative reaction to Air Force life in general, the PCS system, job dissatisfaction, and pay.

The airmen group survey was further broken down into male/female responses. Females were more favorably influenced than males by travel and new experiences, and less by the retirement system. They were more unfavorably influenced by their jobs and housing than males, and males were less happy with the PCS system.

With the recent transition to an all-volunteer force, commanders and supervisors will be expected to devote more attention to their people. MPC hopes these surveys will help commanders identify areas of satisfaction and dissatisfaction in order to more effectively direct their personnel management programs. ■

Capt. Thomas J. Barrett, a prisoner of the North Vietnamese for seven years and three months, points out the spot where he was shot down. Captain Barrett was a featured speaker recently at the Air Training Command Junior Officer Council conference held at Randolph AFB, Tex.

Ed Gates . . . Speaking of People

How About a Single Salary System for Military Pay?

The typical worker in this country receives a regular salary or wage and, from time to time, maybe a bonus or overtime. If he incurs expenses in this job, he is reimbursed for them.

It's all pretty simple, easy to understand. The list of deductions may prove irritating, but Mr. Average Employee has no difficulty figuring out his pay. The public comprehends the system.

Not so in the military service. There's no such thing as a salary. Instead, there are a variety of "pays," an array of allowances, several bonuses, and even something called a "tax advantage." The individual service member, not surprisingly, has a tough time understanding exactly what he makes. The general public—employers, credit managers, newspaper reports, among others—is almost totally ignorant of what a serviceman receives.

At a recent count, there existed at least thirty separate items of compensation payable to members of the armed services. Seven or eight is about the most any individual would draw at one time, but over a career, a person conceivably might receive fifteen of them.

Here's the current list of compensation items: basic pay, basic allowance for subsistence (BAS), basic allowance for quarters (BAQ), tax advantage, reenlistment bonus, flying pay, jump pay, other hazard pays, foreign duty and sea pay, overseas housing and cost-of-living allowances, hostile fire pay, lump-sum leave pay, retirement pay, "age-sixty" retirement pay, dislocation allowance, trailer allowance, proficiency pay, superior performance pay, family separation allowance, per diem, combat arms bonus, nuclear sub officer pay, medic-dentist special pay, responsibility pay, service academy pay, general officer expense allowance, clothing maintenance allowance, disability severance pay, readjustment pay, and several separation pays.

And pending before Congress, meantime, is the Uniformed Services Special Pay Act, which provides a new series of bonus payments for medics, regular and Reserve enlistees and reenlistees, and line officers in shortage skills. These bonus payments are designed to help the services attain their all-volunteer force goals, so it is important that they become law without further delay.

Still, there's no denying that their creation would tend to make the overall military compensation picture a bit more cumbersome and slightly more difficult for service members and the public to understand.

The creation of the "new pays," even though urgently needed, constitutes a patching up of the existing compensation framework to meet requirements of the moment. Hopefully, the day is not too far away when the government can seriously consider reforming and simplifying the entire compensation system, without reducing anyone's total pay. It would be tough. Streamlining a system that has grown helter-skelter over the years would take considerable resolve.

The idea of a "single salary" system is not new. The most ambitious study of the pay structure occurred in the late 1960s when an all-service group, headed by Navy Rear Adm. Lester E. Hubbell, toiled for more than two years in search of an acceptable salary formula.

The Hubbell group hoped to combine the four major elements of military compensation—basic pay, BAS, BAQ, and tax advantage—into one salary for each member. That particular salary was to be pegged at a level comparable to that of a civil servant with similar duties, education, and training.

Hubbell also called for related reforms. For instance, the government's "imputed contribution" to the retirement fund would be recorded for each member to see. Should he leave or be forced out of service before retirement, he would receive a cash settlement.

Single and married men, under Hubbell's plan, would draw the same salaries, meaning an end to the discriminatory policy of the latter receiving more in housing money. And a percentage deduction would be made from salary for contribution to retirement; members leaving service before retirement would get back their contribution with interest. Many other reforms were put forward.

Unfortunately, that Defense study group cluttered up its package of proposals by championing a two-pay system—one for careerists and one for noncareerists. This drew loud boos from the troops at large. Another Hubbell proviso calling for a two-step retirement pay scheme was totally denounced by service members.

Other critics scored the estimated heavy costs associated with reforming the system. By the spring of 1969, three years after it was formed, the Hubbell pay study disbanded, and its plans were shelved.

But maybe they should be dusted off, reworked, and simplified; the basic idea behind Hubbell seems like a winner.

Defense staffers report that the "single-salary" idea pops up "every now and then," but no one is eyeing it seriously. Pay officials in the Defense Department appear to be spending their time almost exclusively on projects that would patch up, not reform, the compensation mess.

Yet, the absence of pressure for pay reform is puzzling. Presumably, the rank and file of the troops would welcome a simple, straightforward system. Recruiters, eager to provide prospects with understandable pay figures, should too.

Finance staffers, plagued with overpays, underpays, and other pay errors because of the present system's complexity, should eagerly welcome reform. So should public affairs and information offices, which try to explain "military pay" to the media. It almost never comes out right in the newspapers or on radio-TV. It's simply too complicated for civilians to comprehend.

Service leaders, supporting sound business practices, should want the pay system simplified—and urgently press for action.

And for the duties and situations that rate bonuses, special allowances, and other pays? What's wrong with a single supplemental scale? It might be set up in increments of $10; thus, a flyer drawing $200 a month in flying pay would receive twenty increments monthly. An airman due $1,000 in reenlistment bonus would receive 100 increments.

Other compensation items, even travel payments, could be computed in the same fashion. Rate changes could easily be applied. New pays to meet special needs of the future could be added, all under the umbrella of a single supplemental payment scale.

Switching to a salary system plus one all-purpose supplemental scale might cause a king-sized headache in the switching-over process. But what smooth sailing afterward!

Bob Stevens'

"There I was..."

GLORY! NO MORE REGULATIONS...
RIP THEM DOWN IN ALL THE STATIONS!
GROUND THE GUY THAT TRIES TO MAKE ONE!
AND LET US ALL FLY LIKE HELL!

— OLD AAF SONG

AT A FORWARD FIRE BASE DURING THE MOST RECENT UNPLEASANTNESS—

THEN THERE WAS THE NEWLY-MINTED 2ND LT.—NAVIGATOR TYPE—WHO SHOWED UP AT BASE OPERATIONS FULLY OUTFITTED FOR A SCHEDULED FLIGHT—

*INSPECT and REPAIR AS NECESSARY

AND IN CADETS, YOU COULD ALWAYS SCARE HELL OUT OF YOURSELF and THE INSTRUCTOR BY SWITCHING TO AN EMPTY TANK IN THE PATTERN PULLING THE **GUMP** CHECK—

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