NOVEMBER 1980/$1

AIR FORCE MAGAZINE

PUBLISHED BY THE AIR FORCE ASSOCIATION

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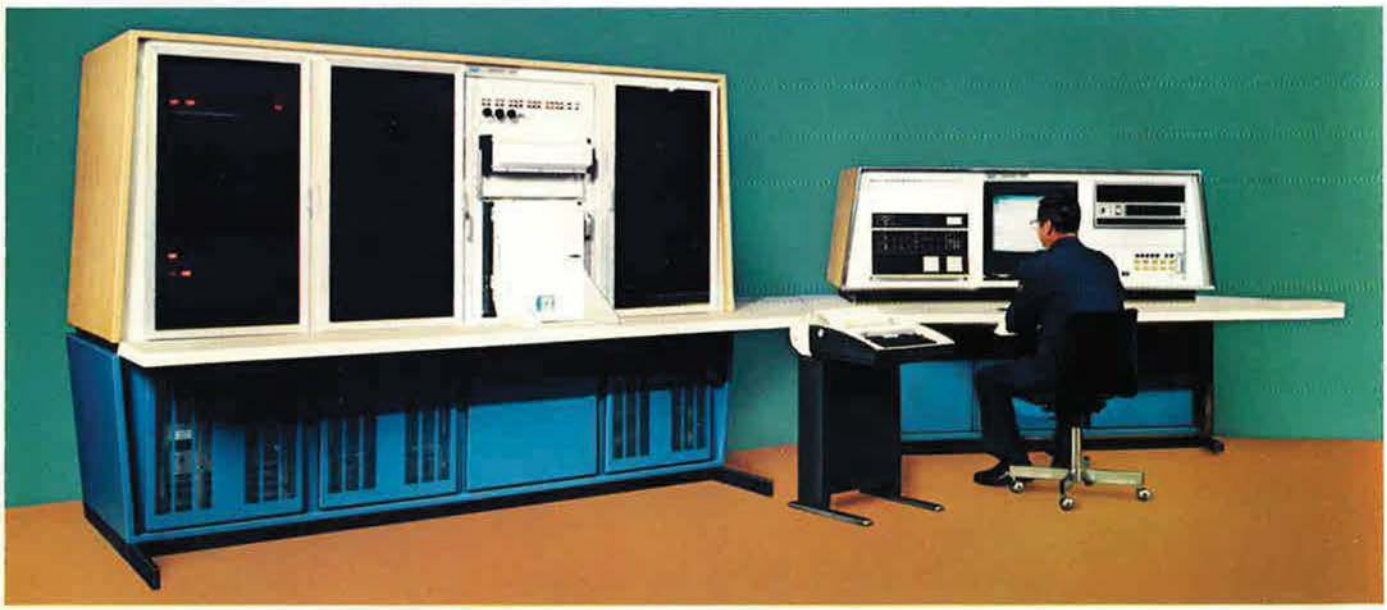

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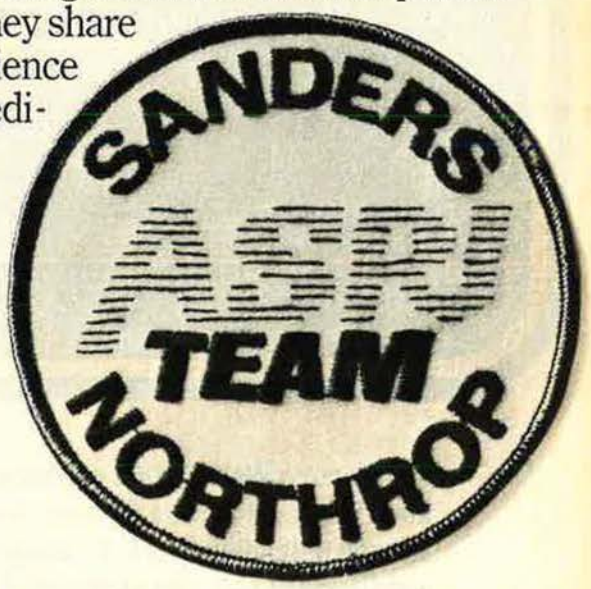

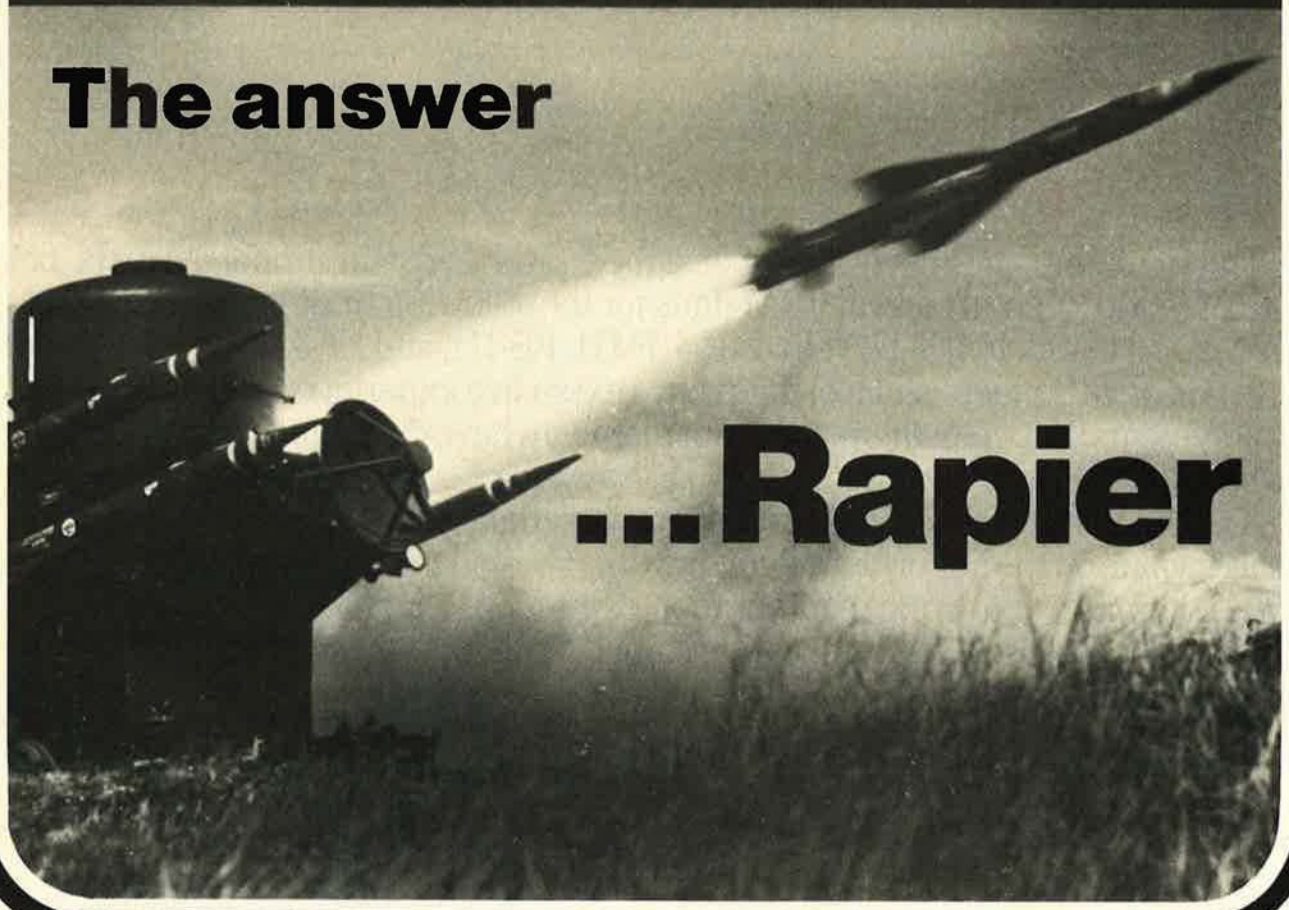

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This Month

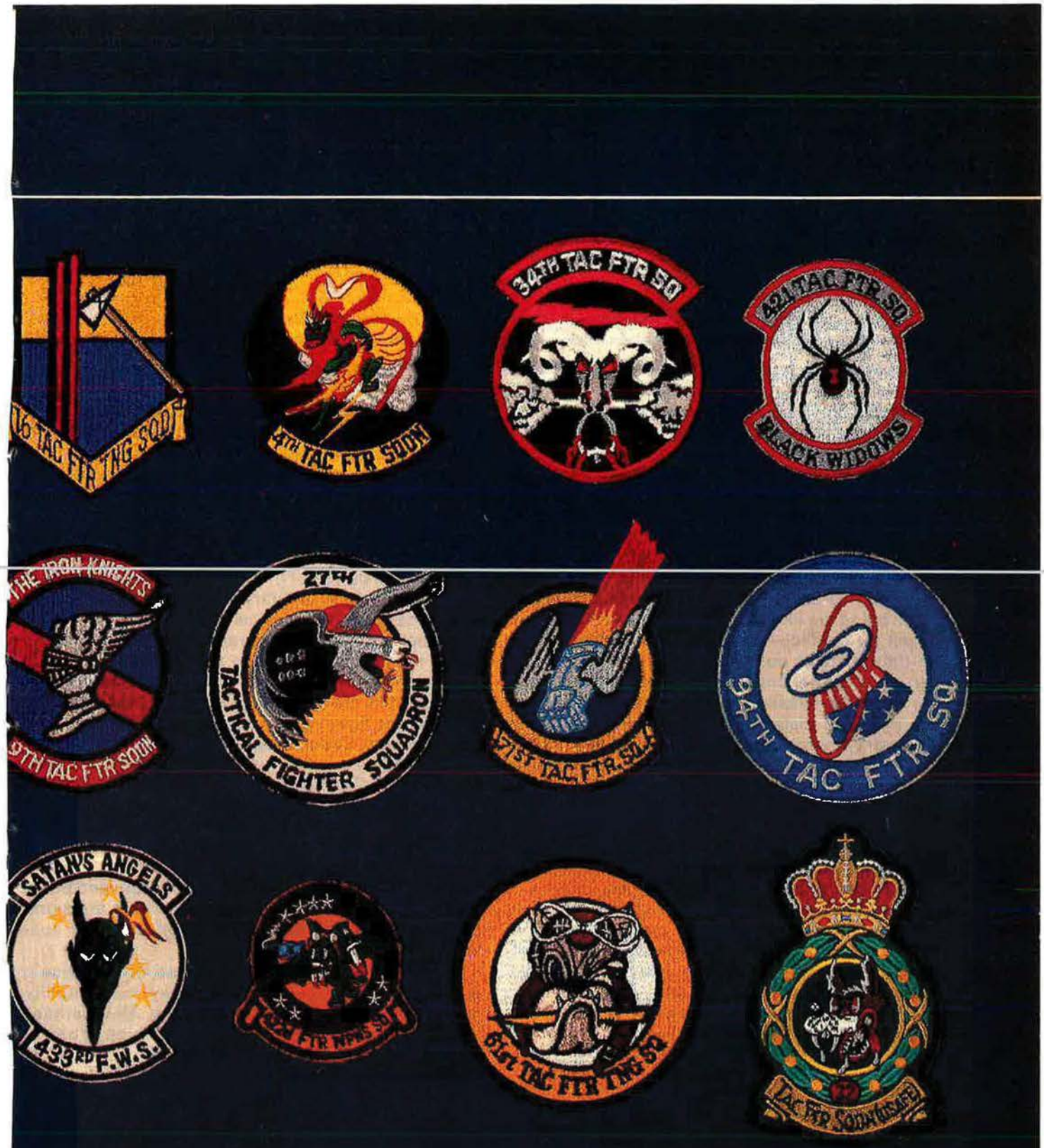
NOVEMBER 1980 • VOLUME 63, NUMBER 11

ABOUT THE COVER

The B-52G seen head-on on our cover is specifically modified for air-launched cruise missile flight testing at Edwards AFB, Calif. It epitomizes the need for force modernization of strategic power, an issue addressed by the AFA Convention delegates. (Staff photo by William A. Ford)

Departments

These Air Force squadrons all have one powerful thing in common.



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AFA's 1980–81

Statement of Policy

Adopted unanimously by delegates to AFA's Annual National Convention, September 15, 1980.

No element of military power is more important than the combination of readiness to fight wherever and however necessary and the endurance to see the fight through to a decisive stage. The importance of this vital element to deterrence or defense continues into this nuclear missile age. But the capabilities and materiel needed to achieve readiness and sustainability don't come cheaply or easily. Also, they lack the visibility, glamour, and constituencies of new weapons. Yet, the types of war the US is likely to have to deter—or if deterrence fails, fight—are come-as-you-are wars. Forces and capabilities in being are likely to determine whether or not there will be conflict—and if that answer is affirmative—determine its outcome.

In an era of Soviet blitzkrieg strategies, intercontinental ballistic missiles, and global interdependence, time and distance no longer provide either reliable safety margins or effective insulation. In the strenuous competition for constrained defense funds, readiness and sustainability have not fared well. A choice of either cutting back force levels and weapons procurement or curtailing military pay, training, operations and maintenance functions, and the supply of spare parts and munitions leads to both poor economics and inadequate defense.

For the US to be able to deploy, support, and sustain combat forces of sufficient size, quality, and stamina to prevail is first and foremost a matter of people. The nation is losing too many experienced military professionals—in both enlisted and officer ranks—too fast. They are walking out on their chosen careers because their patriotism can only be stretched so far. And they are walking out—one enlisted Air Force professional every six minutes—many because of lagging compensation, a decline in the quality of military life, and constant assaults on the dignity of their calling.

But that climate is changing. The nation must be made aware, for example, that more than 100,000 military families qualify for food stamps. This is a national disgrace.

The nation must be made aware that inequitable paycaps in a period of inflation have eroded the purchasing power of military careerists to the point where many of them are below the minimum wage. This, too, is a national disgrace.

The nation must be made aware that its defense depends to a critical extent on the Reserve components of its armed forces for both the deterrence of war and for fighting it. Yet, in many instances, the Reserves are underequipped, underpaid, and undermanned by several hundred thousand. This, too, is a national disgrace.

The nation must be made aware that its sons and daughters who stand guard on the frontiers of freedom deserve its gratitude and respect. This must be made evident across the land as is the fact that the profession of arms—the shield of freedom and patriotism—is both honorable and vital. There are signs of hope. These signs must be nurtured and sustained.

There is, at long last, evidence of America's willingness to improve the relative pay comparability levels that were provided when the All-Volunteer Force concept was born. This, too, is a sign of hope.

This Association pledges to act as a catalyst of America's conscience, committed to the proposition that providing adequate compensation and benefits for the armed forces is *the* precondition for raising volunteer armies and providing for the common defense. Further, this Association sees no basis, either in terms of logic or precedent, for making military pay increases conditional on curtailing other forms of defense spending. Today's defense expenditures measured against the output of the entire American economy represents less than half the share they ab-

sorbed in 1958. At approximately five percent of its gross national product (GNP), America's defense spending runs at about half the Soviet rate, which is estimated conservatively at between eleven and fourteen percent of GNP.

There is, this Association believes, no justification for pressing the Air Force—or the other services—to either buy weapons at a low, uneconomical rate or to sacrifice the readiness and sustainability of the forces in being by shortchanging munitions stocks, the supply of parts, maintenance capacity, and training levels. As the Soviet Union continues to outman, outgun, and outdeploy the US in the decisive categories of military power, this country's armed forces must not be starved into paralysis by undermanning, undertraining, underequipping, and undersupplying them.

Debilitating shortages in spare parts, fuel, munitions, and other combat consumables combine to weaken the nation's ability to sustain major combat operations. While recent recognition at the highest levels of government of these deficiencies—and the willingness to act on them—is welcome, the proposed remedies are questionable and unbalanced. Procurement of weapon systems vital to force size and force modernization continues to be adjusted downward. As a concomitant of slowed or deferred acquisition of weapon systems, the industrial ability to "surge" under wartime conditions is eroding. There is hope that recent congressional actions denote increased determination to shore up readiness and sustainability as well as force modernization—and thereby strengthen the military and industrial capabilities of the nation.

Meanwhile, a realistic concept of deterrence of strategic nuclear war must remain America's uppermost national security concern. This Association supports the decision to commit the nation to a countervailing strategy. It is vital to develop capabilities to fight nuclear war on a selective, sustained basis rather than rely on the mutual assured destruction concept.

The notion that the Soviet Union might be deterred from attacking—or threatening to attack—the US by the latter's single option, short of surrender, of reducing Soviet cities to radioactive rubble is as outdated as it is naïve. Soviet strategic doctrine does not envision a nuclear war as ending in a matter of hours but rather as continuing until one side or the other has gained military control. The response to an attack of this type—and its deterrence—requires enduring survivability and sustainability of both command and control and nuclear strike systems.

There can be no doubt that the Soviet Union is much closer to—if it does not already have—such a nuclear war-fighting capability than the US. Correcting this potentially fatal flaw must remain the paramount defense objective of the United States. Anything less would be poor logic and hence poor deterrence.

It is time to heed the admonition of America's first President to Congress 203 years ago: "If we desire to avoid insult, we must repel it; if we desire to secure peace . . . it must be known that we are at all times ready for war." ■

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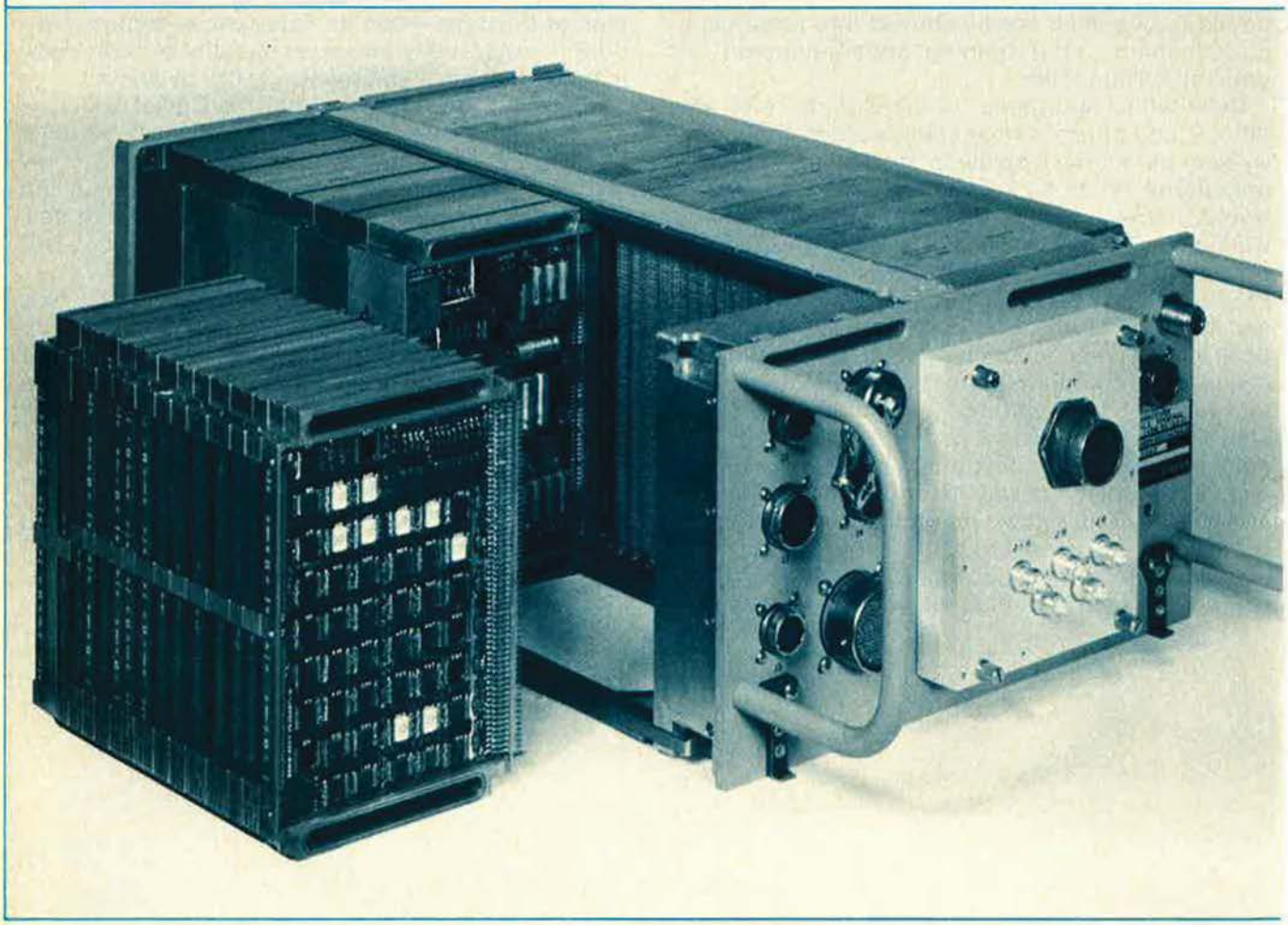

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AIRMAIL

September Issue Cover

Your cover picture on the September issue was of extreme interest to me as I was the leader of the photoreconnaissance mission and pilot of *Hobo Queen II* on August 18, 1945.

What happened that day and the many variations in the stories, as well as claims of enemy aircraft destroyed, I believe was primarily the result of a story written by an INS reporter and published in US newspapers and *Time* Magazine. . . . I have an official transcript of the mission from the debriefing of the crew of *Hobo Queen II.*

Briefly: I had denied permission for a low-altitude pass over Hiroshima to view the atom bomb damage. We still had two photo trip passes to make of the Tokyo-Yokohama area when Lieutenant Anderson called and said his camera shutter was frozen and that he was descending to a lower altitude. His aircraft disappeared toward Hiroshima.

On completion of the next pass, we could see fighters taking off from Tokyo North III Field. I radioed Lieutenant Anderson, asking him to rejoin the formation. No reply was received, but shortly after a waist gunner reported sighting his ship climbing toward our photoreconnaissance position. I completed the final pass and warned Lieutenant Anderson of a flight of Japanese fighters approaching him from below. *Hobo Queen II* was at 22,000 feet, and Anderson at approximately 10,000–12,000 feet.

I have visited Japan frequently since the war, and have visited with Saburo Sakai, who led the Japanese fighter squadron. He only saw one aircraft which (he identified it as a B-29), in his book *Samurai,* he claimed to have destroyed. I have copies (in Japanese) of his report of the mission, as well as the English text of his book. I have met several of the other Japanese fighter pilots who flew this mission, and one of them has a complete list of the pilots who flew that day. According to them, none of their planes was destroyed, and all of the pilots were present that evening when they drank heavily to the end of the war, the breakup of their fighter group, and to Saburo Sakai's last victim. Saburo Sakai is considered Japan's leading fighter pilot of World War II.

Curiosity led my tent companion and close friend, Lt. Leonard Sill, to agree to fly a group of squadron staff officers over Hiroshima several days later in a B-32. The plane crashed on takeoff from Yontan strip on Okinawa, and all were killed.

Maj. J. L. Klein, USAF (Ret.)
Stillwater, Minn.

. . . The photographer reported killed in B-32 tail number 2108578 was TSgt. Anthony J. (Tony) Marchione, nineteen years old, from Pottstown, Pa. Tony and I spent many liberties together in our hometown of Pottstown.

I think Tony was the last one killed in aerial combat in World War II. I talked to his sister last night, and she is anxious to obtain a copy of the fine painting by artist William Reynolds that appears on the cover of the magazine. Tony's mother is still alive, and I am sure she would be pleased to know that AIR FORCE Magazine included her son in Maj. Thomas L. Sack's article.

Tony's sister still lives in Pottstown. She would be happy to hear from any of the survivors of 578.

Warren J. Brown, M. D.
Largo, Fla.

• *Survivors of the mission who would like to contact Tony Marchione's sister may write Mrs. Theresa Sell in care of* AIR FORCE *Magazine. We will be happy to forward your letter.*—THE EDITORS

Imagine my surprise when I received the September 1980 issue of AIR FORCE Magazine and recognized the B-32 scene on your cover. I was aboard *Hobo Queen II* that day in August 1945 as an RCM officer and experienced the Japanese attack described in the article. Thirty-five years have come and gone, but that day seems like just a few weeks ago. One interesting comment—although top speed was listed as 357 mph—in a shallow dive to clear the area the airspeed indicator hovered around 430 mph. At that point, we were not sure whether we would hold together or not.

I was with the 312th Bomb Group from the start of the B-32 program (Cook Project), flew on many of the missions, and feel that the B-32 was every bit as good an airplane as the B-29, although, of course, it came much later. Unfortunately, according to the Air Force Museum, there are no B-32s in existence, all having been scrapped soon after the war. . . .

John R. Blackburn, Jr.
Bedford, Pa.

If the following names are associated with this action, then I believe I participated in this mission with the 20th Reconnaissance Squadron (long-range photo-radar countermeasures). I was a photographer-gunner (MOS 939) assigned to an F-7 (B-24 photographic version) for this mission.

The F-7 took off first but was redlined at a lower speed so the B-32 arrived first over Tokyo. It ran into the engagement with the fighter aircraft. While the B-32 was fighting them off—out to sea—the F-7 arrived and penetrated sixty miles inland twice under antiaircraft attack but was unsuccessful in obtaining the required photographs under evasive tactics. The F-7 was hit several times, but was fortunate not to sustain major damage or personnel injury. The damaged B-32 arrived at home base at approximately the same time as the F-7 and requested early landing due to dead and wounded aboard.

The man killed in this action was "Marchione," a fellow squadron member, and the man wounded in the legs was "Lacharite" (photographer/MOS 940), who was one of my crew members assigned to the B-32 for this mission.

I, too, feel convinced that this was the last aerial combat since combat operations flights had ceased for approximately two weeks prior to this mission. During briefing we were in-

formed that no combat time was to be logged for this mission, which I believe was subsequently changed after debriefing.

Michael Tarase
(formerly Michael Tarasewich)
Savannah, Ga.

Your article on the B-32 in the September issue was interesting, but I was surprised to note a couple of omissions that would seem to be of interest to your readers.

It is my belief that the B-32 was the first production aircraft with reversing propellers, and I witnessed their operation for the first time when I got my one and only view of a B-32 landing at Honolulu in 1945 after the Japanese peace.

The second item of interest is that the particular flight which I saw was carrying the Japanese Peace Treaty to Washington after the widely publicized signing by MacArthur and the Japanese on the deck of the *Missouri*. So the B-32 does have a claim to fame in spite of its overall reputation and short life.

Brig. Gen. C. R. Bullock,
USAF (Ret.)
Scottsdale, Ariz.

• *AFA's Aerospace Education Foundation has made arrangements to produce special-edition prints of artist Bill Reynolds's September issue cover painting. (See ad, p. 116.)*

We Hope So

The past three issues of our magazine have been outstanding.

Keep pouring it on for national preparedness. Somebody has to face the facts and do it. Perhaps someone who counts will listen.

Maj. Thomas C. Dorsey,
USAF (Ret.)
Riverside, Calif.

From and About Loosbrock

I'd like to express publicly my gratitude to all the able people on the staff of AIR FORCE Magazine, those now there and those who have come and gone over the years, for making me look reasonably good over the twenty-nine-plus years I spent at AFA. Equal gratitude goes to those in other departments with whom I worked closely. I'm especially secure in the knowledge that all the essential operating parts of the national headquarters are in good hands, ready and able to do a superb job for the new Executive Director, Russ Dougherty, for whom I have great admiration and in whom I have great confidence.

If the professional expertise of the staff is acknowledged and utilized, the next thirty years of AFA can surpass the past thirty years in effectiveness and accomplishment.

I wish I could single out individual staff members for the truly top-drawer accomplishments they have achieved, more often than not under adverse circumstances. I'll content myself here by saying "Thanks and good luck."

John F. Loosbrock
Washington, D. C.

I have known Jack Loosbrock as an editor for almost twenty years. Receptive to ideas and an imaginative writer and thinker himself, Jack always cut through to the heart of what was important.

Writing under Jack's editorship was an exciting process of learning and perfecting. His standard was excellence. His wit and humor were always bracing. I consider it a privilege to have written for Jack and for AIR FORCE Magazine.

More than an editor, Jack has been a friend and a wise counselor who could be counted upon to put things in their proper perspective.

Respected and admired by people who came to know him, his talent, counsel, and standards will continue to influence many.

Herman S. Wolk
Silver Spring, Md.

Spare Kits No Solution

Re "The Quality vs. Quantity Battle" item in the "In Focus . . . " column, September issue: Mr. Ulsamer—you only added insult to injury! I will give you this: No fighter pilot or fighter commander wants to employ an aircraft of inferior quality—performance-wise—thus, large quantities of "VFR and perhaps even propeller-driven fighters," as advocated by certain system analysts, just won't hack it.

But to contend that low in-commission and/or sortie-generation rates will be solved by the fighter forces' spare kits, to be used only in case of war, is a travesty. They will give us some additional capability—a few days or even weeks. It's hard to tell because you didn't define the war.

But the root cause of low in-commission and sortie-generation rates is the complexity of certain parts or components (or systems) and the ability of our maintenance crews to keep them serviceable. And not necessarily in that order. In the same issue, General Allen, in his article "The Premium on Quality," called the continuing departure of experienced people "intolerable." Unless we can maintain a trained work force, all the spare kits in the world won't do it.

The old saying "Too many moving parts for a fighter pilot" is no longer a joke either. It never really was. Inexperienced aircrews can't operate multiple systems with the required efficiency and proficiency, especially with reduced flying training. I say again—flying training.

Our Vietnam ace, Steve Ritchie, didn't achieve his kills through luck. He was one of and possibly the most highly trained pilot we had. A graduate and then an instructor in the fighter weapons school prior to this combat tour, Steve really knew his stuff. It took that extra edge to achieve his success.

Don't give me a P-38 with props that counterrotate, but don't give me a B-52 full of black boxes for the fighter role either. Give me performance with simplicity. Gear up the technology—adapt it—but don't put each one of every black box in my fighter. Those system analysts aren't all wrong. They counted the threat order of battle, and I agree with them that a few aircraft, no matter how sophisticated, cannot stave off masses, should it come to that.

So, Mr. Ulsamer, the debate goes on. I would suggest you talk to some fighter people in the field before you put any money on your spare kits statement.

Col. William D. Mol,
USAF (Ret.)
Austin, Tex.

Where Are the Keepers of the Flame?

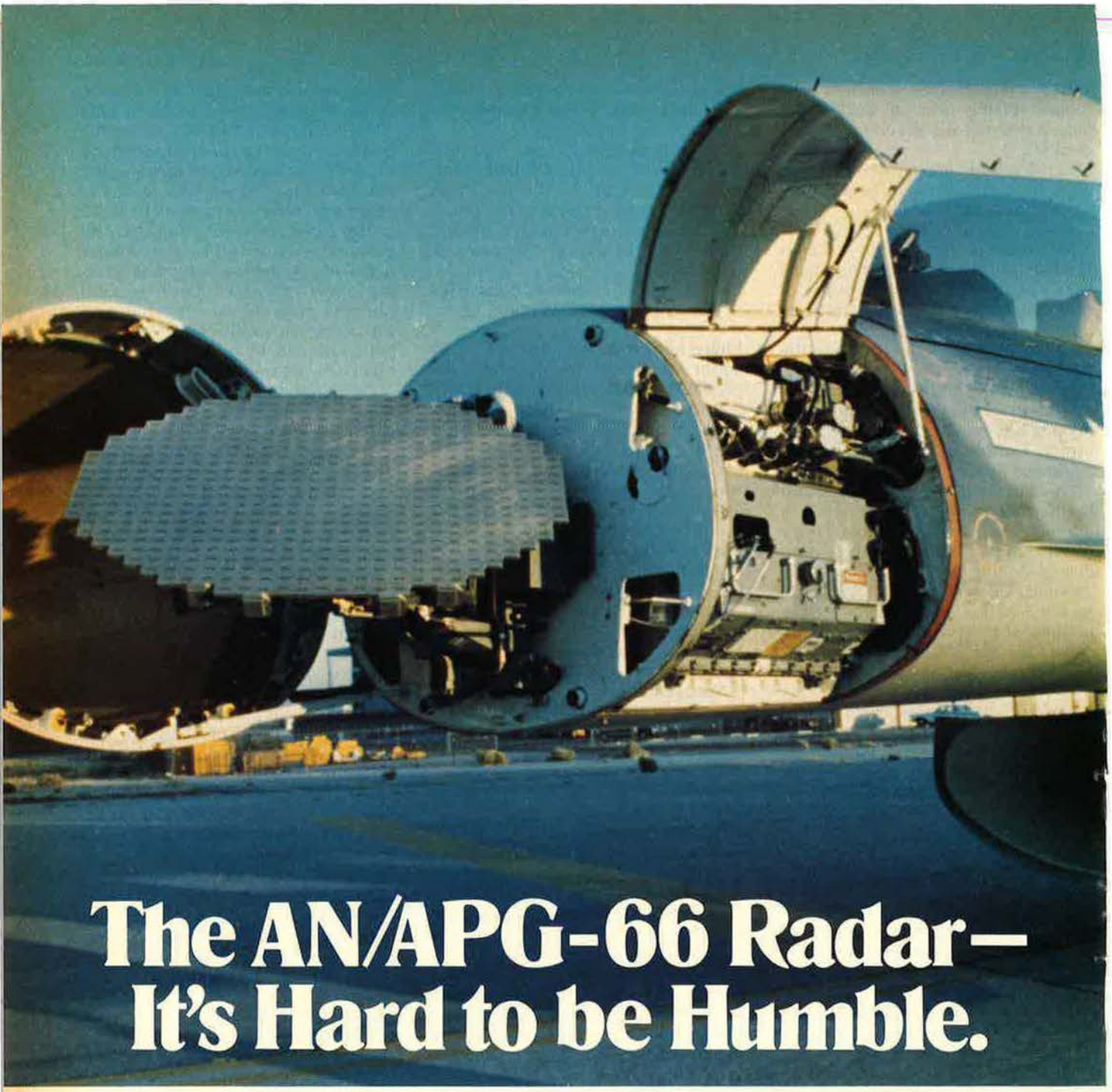
Your September articles by the Hon. Hans Mark, Secretary of the Air Force, and Gen. Lew Allen, Jr., Chief of Staff, USAF, make me write this letter. One day I was talking to Jimmy Jabara when he was leading an F-104 outfit at Westover AFB, Mass., for an article I was doing for *Argosy*. On his desk was this sign:

"The mission of the US Air Force is to fly and fight, and don't you ever forget it!"

I asked Jim if that was how he felt. He rolled the dead cigar to the other side of his mouth and stared at me with those black eyes that looked like wet black glass. "What other reason is there?" he asked.

Now comes Hans Mark with the sort of nonstop drone that has become standard for all high-level utterances over the past years, with a headline so

We suggest that readers keep their letters to a maximum of 500 words. The Editors reserve the right to excerpt or condense as required in the interest of space or good taste. Names will be withheld on request, but unsigned letters are not acceptable.



The AN/APG-66 Radar— It's Hard to be Humble.

The F-16's APG-66 fire control radar is getting high praise from pilots for its performance, operability, and availability. Operational experience is showing that this radar far exceeds previous systems in critical areas such as very low false alarm rate and reliable detection and tracking. The APG-66 is a perfect match for the F-16, and we're making sure it stays that way by developing radar modifications necessary to meet extended mission requirements. Incorporation of a Programmable Signal Processor (PSP) and Dual Mode Transmitter will enable the F-16 to fully exploit the capabilities of AMRAAM, as well as providing extensive software growth potential for both air-to-air and air-to-surface missions as new requirements are defined.

In development for over a year, these modifications have now been authorized by the U.S. Air Force for full-scale development by Westinghouse. The PSP, a fourth-generation design, offers an unmatched degree of modularity and software flexibility. The innovative transmitter design permits optimum waveform control for true multi-mode multirole performance. Together with the PSP, it significantly enhances detection range, provides unique electronic counter-countermeasures (ECCM) capabilities and greatly expanded multiple target engagement capability.

Thanks to the modular structure of the present radar, the new capability is available in the same form factor as present, resulting in earlier operational availability and easy retrofit.

The F-16 radar. The best is yet to come!

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tired it seems to have been used at least a thousand times, which, if Mark really wrote it, is worse than if some sergeant in PAO wrote it, which is probably the case. Lew Allen's piece is just as tired and dreary. *Somebody* ought to *tell* these generals you can't run an airline with corporate-type boiled-spinach crap.

Sitting in the ready room of the 509th Fighter-Bomber guys at Langley years ago, interviewing for a story for the Satevepost, I looked at their insigne over the coffee bar. It was a skull, half buried in the ground, and a blood-red rose sprouted from one socket. "I sometimes think that never blows so red, the rose as where some buried Caesar bled" was hand lettered under it.

Oh, there was another bit of lettering over the bar, a poem that went like this:

> I know I shall meet my fate
> Somewhere among the clouds above;
> Those that I fight I do not hate,
> Those that I guard I do not love; . . .
> Nor law, nor duty bade me fight,
> Nor public men, nor cheering crowds,
> A lonely impulse of delight
> Drove to this tumult in the clouds; . . .
> —William Butler Yeats

What happened? Has it all really now gone to computers, fringe benefits, boiler-plate dronings by political appointees, and airplanes out of commission awaiting parts? Doesn't *anybody* run down to the flight line anymore and kick the tire and light the fire? God help us, somebody *should!*

Frank L. Harvey
Hackettstown, N. J.

Awareness of Problem Lacking

I read with considerable interest both of the articles in the September issue that dealt with the retention problem. The recently passed pay bills and the remainder of the twenty-four-point compensation plan should have a positive effect on easing the exodus. Isn't there something missing, however? None of the proposals even address any change to the manner in which the Air Force goes about its daily life. Specifically, what is going to change on the Operations side to make the Air Force a more attractive place to work and live?

In the period that the retention problem festered and became a problem there appears to be no recognition that working conditions might be a part of it. Squadron Operations continue to run as if they are divorced from the problem and only Personnel must deal with it. There has not been one change to the daily routine "down in the trenches" as a result of anything connected with lack of retention.

The units continue to run and operate as if they were unaware that a retention problem exists; or that they might have a hand in either causing or easing it. The Air Force is still managing flying operations on the basis of flying hour commitments and other management tools that should have been replaced at the time of the first gasoline crisis. The Air Force is still hacking every mission and filling every square despite critical lacks of people and experience. Every day and every week is a recurring crisis of meeting artificial goals by squeezing maximum effort from the people available. Airframes count, flying hours count; people count only with regard to filling the other categories.

The Air Force does not have a recruiting problem; it has a retention problem. Increased pay, allowances, and more realistic personnel policies are long overdue, but I doubt if they will provide a complete fix, especially in the critical areas of aircrew retention. Somewhere along the line basic changes to the established mode of Operations are called for. Recognition of the need for those changes is still sadly lacking.

Name Withheld by Request

AIRMAIL

Right Side Wrong Side

Reference is made to the picture of Capt. Robert Stevens on the wing of his F-86A Sabre on p. 161 of the September issue.

Reflecting on my F-86A Sabre flying experience, I do not believe we "mounted" on the right side but, instead, on the left side, equestrian style.

This leads me to the conclusion that the picture was reversed during the publishing process.

The magazine is superb.

Maj. Gen. Grady L. Patterson, Jr., SCANG
Columbia, S. C.

• *General Patterson's observation is correct, but his conclusion is wrong: The picture was not reversed. Bob Stevens tells us he was standing on the Sabre's right side (where there is a step) for picture-taking purposes because the light was better on that side at the time, but that he, too, normally mounted the Sabre from the left.*

—THE EDITORS

Outstanding Team Members

Just read September issue's "USAF Personnel Situation in the 1980s," by Ed Gates. Interesting article to me as I am in the Air Force personnel business at Kelly AFB, Tex., in a management position.

But, what happened to about a quarter million Air Force civilian employees? Psychologically, this article "kicked us out of the team." Had the article been titled "USAF's Military Personnel," or had any mention been made that it was a military personnel outlook, I would not have felt so left out. I have worked twenty-eight years out of forty-six years of my life for the Air Force and am proud of it.

I usually share special articles with my staff, like your July promotion board article, etc. I will not share this one lest I also share the bad feeling of not being acknowledged as a part of the Air Force.

Don't do this to us; it hurts.

Rebecca C. Garcia
San Antonio, Tex.

Mideast Hotspot Flare-Up

As a long-time member of AFA, a contributor to the Enlisted Men's Widows Home, and a source of gift AFA memberships to my friends, in addition to enjoying the status of a Doolittle Fellow, I feel qualified once again to object to the slanted journalism you have employed whenever you print an article that includes information on Israel.

You always seem to have subtle shadings of the truth about Israel. The wording in the editorial-like article on p. 61 of the August issue ["Middle East: Perpetual Hotspot," by Gen. T. R. Milton] (" . . . the genuine and easy friendship of Jordanian pilots for the young American captain who flies with them . . .", compared to ". . . the hypercritical Israelis") is a good example.

What these phrases *really* mean is that the Jordanians, who don't begin to compare with the Israelis in expertise and skill in the use of the weaponry we give them, demonstrate little interest or ability trying to learn to master the equipment; while the Israelis are hard at work honing their skills and constantly examining, improving, changing, and modifying the equipment we give them to the point that our own ordnance becomes more superior in their hands than it was when we sent it to them. And we have incorporated many, if not all, the suggestions the Israelis themselves have adopted. We wind up with better weaponry than we had before because of these "hypercritical Israelis."

It is not possible to detect these truths from that editorial on p. 61.

There are at least twelve other instances of this slanted reporting in the article ["Mideast Survey: Problems and Prospects," also by Gen. T. R. Milton], starting on p. 67. One of them is the condemnation of the Israelis for playing a "rough game" with the PLO without mentioning the terroristic activities of the PLO against Israel that constantly trigger these rough-game retaliations.

Another is the implication that Israel is unfairly determined to keep Jerusalem undivided and under their control instead of permitting it to become an international city, while leaving out the fact that the last time Jerusalem was an international city (1949–1967) the Jordanians burned or destroyed all the synagogues, desecrated and humiliated nearly all the sites holy to Judaism, let the sacred shrines of nearly every world religion fall into disrepair, and did not permit any Jews (and few Christians) into "their" area. Now that the Israelis have recaptured Jerusalem, the city is open to anyone at any time at all the shrines. The buildings holy to *all* religions have been restored, and the place is finally the international city the UN mandated it to be.

There are many other examples but they are too numerous to list in one letter.

It is time we recognized Israel as the only democratic, staunch, and unwavering friend we have in the Mideast, compared to the despotic, almost medieval governments of the twenty-one Arab countries whose fickle favor we bow and scrape to curry.

Rest assured, if our needs were suddenly put to the test in the Mideast, Israel would not be found wanting; but I wonder how many of those twenty-one Arab countries we could count as an asset.

Neil November
Richmond, Va.

With regard to General Milton's article on the Middle East, there are a few points that require comment.

The population of Jordan is one hundred percent Palestinian, not a third as the General indicated. When the British took over the Palestine Mandate from the League of Nations in 1921, they created an instant kingdom of Transjordan, using eighty percent of the Palestine landmass for this purpose, and all of the population living there are descendant Palestinian. The fact that London installed a friendly Bedouin chieftain, grandfather of the present king, as the reigning monarch does not in any way add any legitimacy to this area as an entity apart from Palestine. Jordan is and will be for all time the Arab nation for Palestinians. They have no legitimate claim to Judea and Samaria.

As to the General's question " . . . how long can this confrontation go on?", would you believe three to five hundred years as a reasonable guess? The Roman consul in Jerusalem, under orders from the Emporer Titus, destroyed the second temple in the year 79 A.D. Since then, those of Hebrew descent have waited patiently for the opportunity to return and having now achieved that, can certainly extend their patience for whatever additional time is necessary. There is no hurry when one has the winning hand.

As for the Egyptian people now receiving American aid, they are without a doubt the kindest, most considerate, and most appreciative society with whom we deal, and I know this first hand from my work in the Nile delta in the recent past. I submit they will prove to be as important an ally as we have anywhere, including our supposed friends in Europe. We would do well to treat them with compassion.

Sol Greenberg
Roslyn Estates, N. Y.

AIRMAIL

Raids on Schweinfurt

The book *The Fall of Fortresses* ["Airman's Bookshelf: New Books in Brief," August issue], left me with the feeling that the author is downgrading the importance of the Schweinfurt raids, and that ball bearings are not a critical item in modern warfare.

If ball bearings were not important in WW II, why did the British construct five high-speed plywood boats in 1940? These special boats were used to dash across the North Sea to pick up SKF bearings at the towns of Lysekil and Marstrand, for use in British and US aircraft engines. Lysekil and Marstrand are located north of Gothenburg, Sweden.

After the questionable success of the 1943 October raid, it was decided the United States would buy SKF's 1944 bearing production to prevent the bearings from being shipped to Germany. The transaction was termed "preemptive buying." On New Year's Day 1944, John Von der Lieth, US Vice Consul in Gothenburg, presented Mr. Hamberger, president of SKF, a US Treasury check for $8 million. John, now deceased, used farms in western Sweden to bury bearings not shipped to the UK. In the spring of 1944, shipments to the UK were increased, using Bernt Balchen's airline, which had just begun its operation. The Swedes permitted us to strip B-24s that had landed in southern Sweden, load them with bearings, and fly them to the UK by interned US crews.

Shortly after the liberation of Paris, I was instructed to visit the manager of SKF factories in France, a Mr. Gustafson, to determine his food situation. Mr. Gustafson speculated the reason for my visit. "Oh, it must be because of the copy of my October Schweinfurt bomb assessment report to the Germans that I was able to send to London."

Mr. Gustafson informed me that he and five European SKF managers had been ordered by the Germans to Schweinfurt to assess the damage. "We found that your bombs had only blown off the roofs of the factories, and started some small fires. As soon as the raid was over the Germans greased and wrapped the milling machines in tarpaulins to prevent rust damage. You should have used deep penetration bombs to tilt the machines. These are set in five cubic meters of concrete. A slight tilt makes them useless. The Germans replaced the roofs, and in a couple of months they were back in full production. I told my French contacts to inform London that future raids should use penetration bombs."

Col. Stone Christopher,
USAF (Ret.)
Cocoa Beach, Fla.

A Head on the Milk?

I think we all enjoyed "You Men on Java Are Not Forgotten," by Col. Lester J. Johnsen, USAF (Ret.), in the September issue. However, the words in the box on p. 108, "The Per Diem Ribbon," are downright mystifying; ". . . Since leaving for Java, we had not had any *milk* (italics supplied) to drink, and the Australians have great *milk* (ditto) bars. . . ."

Is it not true that official Australian records show that while there the Yanks consumed 60,000,000 gallons of beer and only three gallons of milk? I checked out Colonel Johnsen's words with a few of our local ex-fighter pilots and cannot find anyone who remembers Australia even having water, let alone milk. Also, in dealing with Australian tourists, I have never found one that has heard

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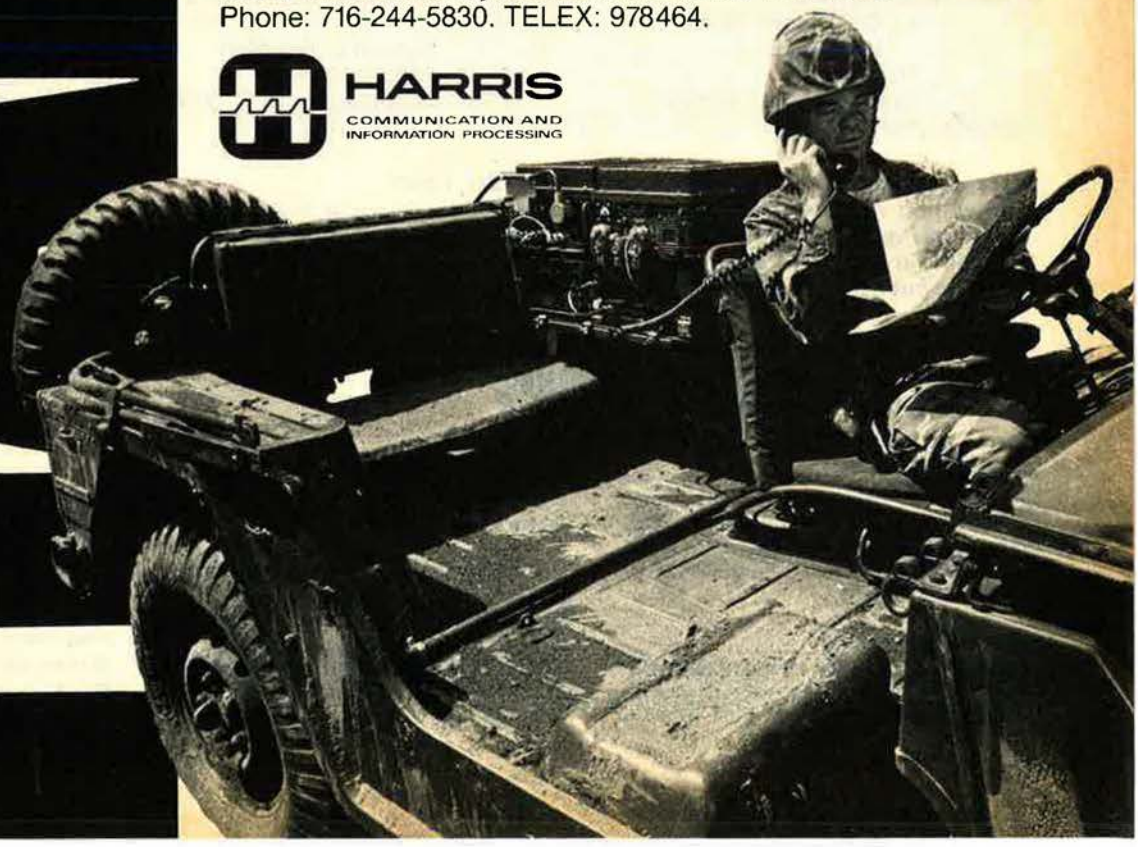


of milk. Colonel Johnsen's strange story should be checked out by the "Milkgate Committee."

W. E. Dudley
Las Vegas, Nev.

• *A full-scale, fully funded Milkgate Committee with impartial counsel could probably determine if Mr. Dudley's statistics are sustainable. Over the almost forty years my memory may have slipped a bit, but I will swear that was milk we were drinking. However, there is a possibility that, under the stress of the time, that world-famous Australian sudsy beer was "milk."*—Lester J. Johnsen

Anyone Remember Algeria?
During the period November 1942 to about June 1943, I was the commanding officer of Battery G, 62d Coast Artillery (AA). This battery was composed of eight 40-mm Bofors guns. At this time my battery was guarding the airfield of, I think, the 94th Fighter Squadron ("Hat in the Ring"), stationed just outside the town of Chateaudun du Rumel, Algeria, and the 14th Fighter Group.

As I recall, the airfield was just on the edge of town, and I would appreciate hearing from anyone who can tell me what these outfits were and/or who served with them at that time.

About two or three miles on the other side of Chateaudun du Rumel was a Flying Fortress field. Again, I would appreciate hearing from anybody who can tell me what this outfit was and who served during that time at that particular field.

Lt. Col. Robert M. Murray, USA (Ret.)
Box 388
Springfield, Va. 22150
Phone: (703) 354-7234

Prestwick History
I am writing *The First Fifty Years*, a history of Prestwick Airport from its formation in 1936 to 1985, which is due to be published in 1986. I am now working on the activities of the Air Transport Command and the USAAF groups that ferried through Prestwick during 1942–46.

The type of detailed information I am looking for is as follows:

(a) Unit, date of arrival at Prestwick, aircraft type, aircraft serial (tail) number, crew list and duties for trip, route flown, and recollections of trip and of Prestwick, photographs taken at Prestwick, in the USA prior to leaving, or on arrival in England.

(b) Contact with any former members of the USAAF who may have ferried via Prestwick, or associations of any groups or squadrons arriving through Prestwick.

Over the years I have found that aircrew log books contain a tremendous amount of information that has never been put into the official records of units. In the case of Prestwick, they are invaluable since very little has been retained in the records held in London.

T. J. Macfadyen
58, Kildonan Dr.
Helensburgh, Dunbartonshire
Scotland

Korean War History
Author would appreciate anecdotes from FEAF personnel (1950–53), especially "MiG Alley" accounts, and November–December 1950 stories.

Joseph C. Goulden
2500 Q St., N. W.
Washington, D. C. 20007
Phone: (202) 965-4757

319th BG, FEAF
I am researching a book on the Douglas A-26 and would like to hear from former members of the 319th Bomb Group.

Any information, be it photograph, official or unofficial records, will be gratefully accepted. All material loaned will be handled carefully and quickly returned to donor, who will be duly credited.

John Horne
15/20-22 Speed St.
Liverpool, N. S. W.
Australia 2170

B-29s in the Marianas
I would like to hear from anyone connected with the Mariana Islands-based B-29s during World War II.

Jog your memory and jot down a humorous or lighthearted experience that happened to you or someone you knew during your tour and it will be included in a collection of anecdotes titled "One Thousand Reasons Why We Won the Pacific War."

Chester Marshall
2990 Watson
Memphis, Tenn. 38118

USAF Photos and Slides
I'm a Dutch aviation enthusiast, and my main interest is in the USAF. I think it is the best in the world. My hobby is photographing military aircraft. For a long time I have been trying to get good in-flight slides of USAF aircraft, but without much success. Therefore, I would like to ask if readers have any in-flight slides or would be able to take some for me. I have Kodachrome slides from USAFE and West European air forces aircraft for exchange.

Harry Berger
Marktstraat 10
7551 DT Hengelo (0)
The Netherlands

A-26 Invader Units
I am attempting to obtain information on the A-26 Invader aircraft used by the US Army Air Forces during World War II. What I am looking for is information regarding the units that used it and the way the aircraft were painted and how successful they were in use. Photographs as well as any sort of drawings would be of much help. I would be more than willing to pay for anything of help to me.

Jerome J. Ringl
720 Janice Ave.
Lockport, Ill. 60441

POW March
I am extremely anxious to obtain a copy of a book published by Macmillan in 1955 titled *Maybe I'm Dead*, by Joe Klaas. It is the story of the trials and hardships of Allied prisoners during the forced march of the entire POW camp from Stalag Luft III, Sagan, Germany, toward Munich. The

AIRMAIL

UNIT REUNIONS

Airlift Operations School
November 12, Scott AFB Officers' Open Mess. 1st annual reunion for all AOS graduates. **Contact:** Hq. MAC AOS, Scott AFB, Ill. 62225. Phone: (618) 256-5188 or AUTOVON 638-5188.

Valiant Air Command
February 21–22, 1981, flying about 100 WW II fighters, bombers, trainers; bombing, strafing, dogfights, at Tico Airport, Fla. **Contact:** Col. Bob Reid, VAC, 1369 S. University Dr., Plantation, Fla. 33324. Phone: (305) 475-0800 or 472-2356.

82d Troop Carrier Sqdn., 436th Troop Carrier Gp.
November 21–22, Boston, Mass. Organized by Communications Section. Open to all. **Contact:** Bob Juppé, 678 Eastern Ct., Ridgewood, N. J. 07450. Phone: (201) 445-3369.

march took place in January 1945, accompanied by extreme cold, blizzard conditions, and heavy snow. The book is well presented and accurate—I was there.

Anyone having a copy, hardbound or paperback, or knowing of one that I could purchase, please contact me.

A. Nelson Allred
329 Country Club Rd.
Mt. Airy, N. C. 27030

Kadena AB Jocks

Author seeks to correspond with or talk to members of aircrews of the 19th, 22d, or 307th Bombardment Groups who operated from Kadena AB, Okinawa, in 1950–51 during the Korean War.

I am working on a novel that is based on Okinawa during those years. Of course, I have read Robert F. Futrell's classic, *The United States Air Force in Korea, 1950–53,* but I want to talk to some of the aircrews.

Sanford Zalburg
1350 Ala Moana, Apt. 1003
Honolulu, Hawaii 96814

ATILO Personnel

Beginning in 1949, the Air Technical Intelligence Center, now known as the USAF Foreign Technology Division, established Air Technical Intelligence Liaison Offices (ATILOs) in major overseas commands and US embassies. These offices were staffed with officers, airmen, and civilians having engineering and scientific backgrounds with the primary mission of obtaining information on the technological activities of foreign countries.

A reunion of ATILOs will be held in Long Beach, Calif., next October. There are a number of ATILOs we do not have current addresses for but would like to contact. Would appreciate hearing from you.

Vern Prentiss
3607 Catamaran Dr.
Corona del Mar, Calif. 92625

Vets of 6th Repair Squadron

All who served in the 6th Repair Squadron of the 6th Air Depot Group at Ladd Field, Fairbanks, Alaska, in 1942–43, are invited to contact me by mail or phone.

This organization helped supply, maintain, and transfer some 8,000 aircraft to the Russians during World War II, according to Stephen E. Mills in his book *Arctic War Planes.* It played an important role in supplying needed combat aircraft to the Russians at the time of Stalingrad. The Russian crews told us they flew, not to depots, but directly to the front.

Our TO called for some 340 officers and enlisted personnel. Those serving in this squadron will remember me as a staff sergeant.

I am attempting to establish a control point to compile a list of those veterans in the 6th Repair Squadron and help them contact each other. I will answer every communication.

Allen R. (Dick) Back
1411 Devereux Dr.
Dayton, Ohio 45419
Phone: (513) 299-1086

P-61 Replica

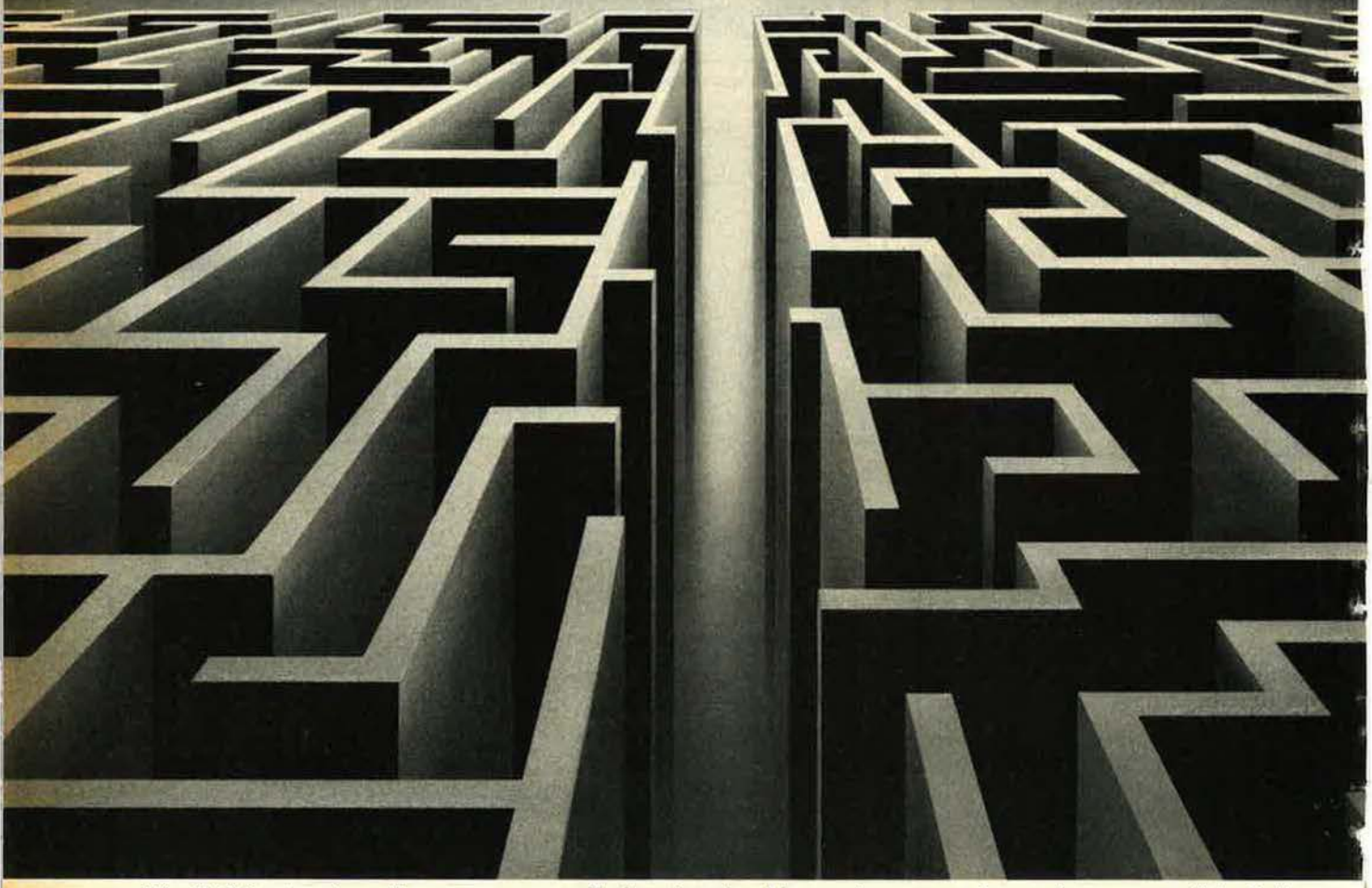
I am building a one-sixth-size replica of the P-61 Black Widow and need former pilots to assist in answering questions. One of my airplanes currently rests in the March Field Museum, Riverside, Calif. I would be most appreciative of any efforts to contact me.

Harry H. Darrah
6171 Kip Pl.
Riverside, Calif. 92509
Phone: (714) 683-8491

A/C Colors and Markings

I am studying and documenting the color schemes and markings of aircraft of the Air Force and its pre-

HOW A BELL ACCOUNT EXECUTIVE CUTS THROUGH THE MAZE OF YOUR PROBLEMS.



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In a 90-day test conducted by Headquarters, Fifth United States Army, the objective of increasing the retention rate of first term Reservists was reached and exceeded.

As a result, the program was expanded throughout the Fifth Army.

The program also showed that it can pay for itself many times over by eliminating training costs for new Reservists.

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And that's our business—the knowledge business.

The knowledge business

AIRMAIL

decessors. Volume I of my book *Air Force Colors* dealt with the period 1926–42, and was released last year. Volume II, on the air war over Europe and the Mediterranean, appears this November. Volume III, now in preparation, will examine aircraft assigned to the Pacific during WW II, and at home prior to the formation of USAF in 1947. This includes planes of the Air Transport Command, training organizations, depots, and all combat units.

This type of project cannot succeed without a great deal of help from people who were there. If you have an old trunk full of photos or slides, that's great, but anyone with only one or two prints can still be a great help. There are some units that have never been shown in any popular aviation books. Even the squadron emblems worn by some aircraft are important.

Loaned material will be handled with respect, and promptly returned, and all published photos will be duly credited. Thanks!

Dana Bell
5131 Lincoln Ave.
Alexandria, Va. 22312

Former Spitfire Trainees

In the early months of 1941, a number of United States Army Air Corps pilots (fighter-type) were seconded to No. 53 (Spitfire) Operational Training Unit, RAF Heston, Middlesex, England. In that unit we instructed pilots in fighter tactics we had adopted during the blitz in 1940. The Army Air Corps pilots joined in with great enthusiasm.

If any of those officers are readers of the magazine, or if any readers know of their whereabouts, I would like to get in touch.

Jock Sherrington
2918 Colchester Rd.
Cocoa, Fla. 32922

Fighter Pilots and Their Aircraft

I am gathering information and photos of aircraft flown by Francis S. Gabreski and Robin Olds in WW II, and by Gabreski in Korea and Olds in Vietnam.

Also of interest to me is information/location of Lt. Carl Fraser and Lt. William Hudson. These men made the first kill of the Korean War while flying an F-82E (#46-383).

I am preparing to produce paintings and limited-edition lithographs of these men and their aircraft. If anyone can provide information please write:

Lt. Col. David L. McFarland
542 High Point North Rd.
Macon, Ga. 31210

Directional Finders Needed

I would like to know if any readers have any information as to where I might obtain instructions to build a small, inexpensive, radio-directional finder. This would be used in units of the Civil Air Patrol to locate downed aircraft by tracking the Emergency Locator Transmitter (ELT). Since the cost of a factory set is in the area of $195–$255, and most of the equipment in use by the CAP is member paid for, building finders is the only logical way to get them.

It would have to be either nine or twelve volts, small, and use crystals. The operating range would be 100–136 MHz (VHF aircraft band: 121.5 MHz).

2d Lt. Jeffrey Milges, CAP
P. O. Box 238
Oregon, Wis. 53575

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IN FOCUS...

By Edgar Ulsamer, SENIOR EDITOR (POLICY & TECHNOLOGY)

Washington, D. C., Oct. 8

Alarming Soviet Developments

In response to Secretary of State Edmund Muskie's claim that this fall's presidential election constitutes a "national referendum" on arms control, Rep. Robin L. Beard (R-Tenn.), a member of the House Armed Services Committee and a congressional SALT advisor, released detailed information concerning recent ominous Soviet activities. Mr. Beard's information—which he claimed the voters had every right to know about—is gravely important in terms of what the Soviets *are* doing, and what the US is *not* doing, as well as pointing up loopholes and gray areas in SALT II and other arms-control accords.

The most perturbing and consequential Soviet breach of the intent—if not the language—of SALT II was a recent exercise involving the reloading of twenty-five to forty SS-18 ICBM silos. "This was more than just simulation. I understand that all the hardware was actually moved from place to place. While they naturally stopped short of an actual mass launch, they certainly proved that the physical wherewithal and logistics of such a reloading are now possible," according to Mr. Beard. While it is not clear that this exercise violated the provisions of SALT II in a narrow legal sense, it runs afoul—in the view of most US analysts—of the intent of the accord. SALT II prohibits the "rapid reloading" of ICBMs, albeit in a somewhat waffled way.

More importantly, the accord almost invites stratagems for "break out" from its ceiling on the permissible number of ICBMs by counting launchers rather than missiles. The section of the accord pertinent to the recent SS-18 reloading exercise obligates the signatories "not to supply ICBM launcher deployment areas with intercontinental ballistic missiles in excess of a number consistent with normal deployment, maintenance, training, and replacement requirements." In an "agreed statement"—meaning a mutually agreed-to clarification of the official treaty text that is not an integral part of the latter—"normal deployment requirements" are defined as "the deployment of one missile at each ICBM launcher." The official treaty text also makes it illegal to "develop, test, or deploy systems for rapid reload of ICBM launchers." There is no real definition in the official text and the appended statements and common understandings of what constitutes "rapid reload." Informally, the US view is that rapid reload means anything less than twenty-four hours.

The frailty of the reload definitions had been recognized by Congress long before President Carter signed SALT II. On December 23, 1978, for instance, the House Armed Services Committee's SALT panel warned in a special report that "with the deployment of the cold-launched SS-17 and the SS-18, the Soviets have already acquired the capability to reload and reuse their silos with extra missiles." The SALT panel added that "reload times for cold-launch ICBM systems, according to testimony before the committee, would take only a matter of hours. The absence of a secure retaliatory US ICBM capability, in combination with the existing Soviet ICBM reload capability, could thus pose a serious asymmetrical threat to a stable strategic environment."

As reported in this space previously, the number of Soviet ICBMs available for launcher reloading or use without hardened silos—in conjunction with gantries erected on presurveyed sites—is estimated to be in the thousands. Sen. Jake Garn (R-Utah) asserted on September 16 of this year, "We have no idea how many missiles the Soviets have. We can't even account for third-generation missiles [such as SS-9s and SS-11s] we know they produced for initial deployment in these silos."

The reload exercise reported by Mr. Beard covered a five-day period and reflected a scenario keyed to nuclear wars lasting several months. The SS-18 is the world's largest ICBM. Under SALT II rules the SS-18 can carry up to ten MIRVs, but it has been tested for the release of fourteen warheads.

Mr. Beard charged that the recent Soviet reload exercise makes a mockery of the Administration's claim that SALT II puts a cap on the Soviet strategic buildup: "The Soviets have demonstrated that they build more missiles than the number of silos deployed and permitted under the SALT II agreement. If forty SS-18 silos can be reloaded, so can all 326 [SS-18] silos currently permitted under SALT II. There is also no reason the Soviets could not do the same with their cold-launched SS-17 ICBMs."

Other congressional experts pointed out to this column that the paramount significance of the SS-18 reloading exercise lies in the fact that the Soviets are deliberately showing off their protracted nuclear warfighting capability at a time when all of Moscow's mouthpieces are berating the United States for committing itself to the development of limited, flexible nuclear options known as a "countervailing strategy." *(See October 1980 issue, p. 21.)* It follows from Mr. Beard's disclosure of the SS-18 reloading exercise that this country's countervailing strategy would require counterforce strikes against all SS-18 silos, whether the ICBMs deployed in them initially had been launched in a Soviet first strike or not. Yet, until the advent of the MX, beginning in 1986, the United States lacks the ability to execute such a counterforce strike swiftly and reliably.

Another alarming Soviet action reported by Mr. Beard and others involved Soviet high-yield nuclear weapons testing, culminating on September 14 in a detonation whose yield ranged between 320 and 640 kilotons and thus represented a violation of the Threshold Test Ban Treaty outlawing underground nuclear tests in excess of 150 kilotons. Other congressional sources told this column that some measurements suggest that the actual yield of the explosion was probably around 700 kilotons.

US satellite photography also provided clues that the September 14

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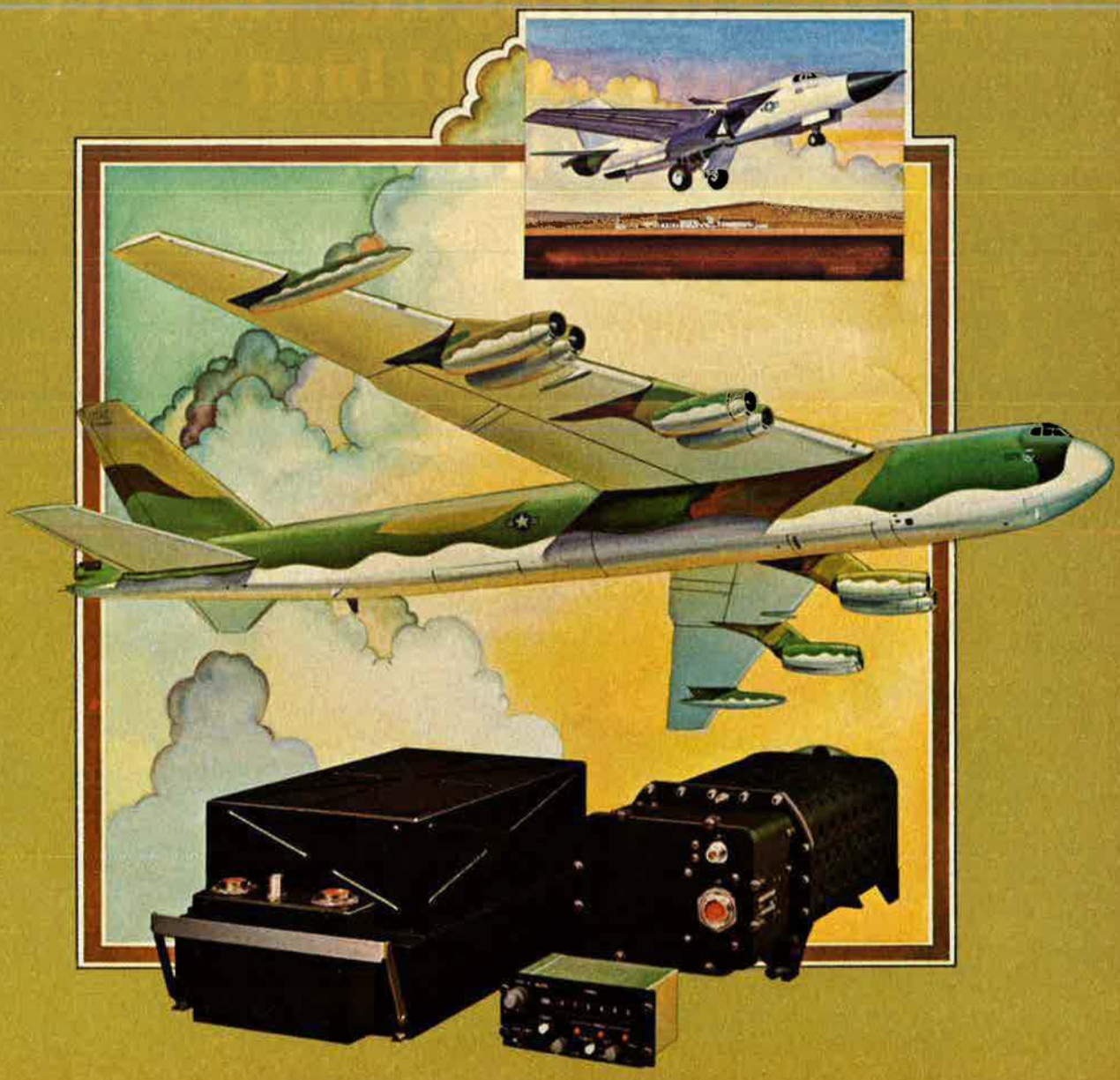

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detonation at the Semipalatinsk test site was in excess of 150 kilotons. For one, the Soviet measurement vans were kept at about twice the normal distance from the test site, presumably to keep out of harm's way. Similarly, the ground fissures and subsidence (surface depression) induced by the explosion were considerably greater than from previous events involving yields at or below the permissible threshold.

Because of this evidence, the US filed a protest with the Soviets over this violation of the test ban, but did not make this information public. The Administration subsequently was urged by influential members of Congress to stage a US underground test involving similar yields but declined, this column learned.

Yet a third instance of recent Soviet arms-control violations alleged by Mr. Beard involved two tests—on July 18 and November 2 of last year—of the SA-10 air defense radar in an antiballistic missile (ABM) mode. This act was in violation of the 1972 ABM Treaty, he charged. This column learned from other congressional sources that the Soviets also have started flight tests of a new, high-performance interceptor missile eminently suitable for destroying US ICBM and SLBM warheads within the atmosphere.

In the same vein, there is considerable concern among US defense experts about a new Soviet phased-array radar said to be four times larger than the world's largest operational system of this type, USAF's PAVE PAWS system. Thought to be about a year away from completion, the gigantic Soviet radar system is located near Moscow. Although the full range of its capabilities is not completely understood because of the system's nascent state, US intelligence experts believe that it is both an ABM target acquisition and engagement radar that can handle a large number of targets simultaneously.

A series of other questionable or illegal actions undertaken recently by the Soviet Union, according to highly placed congressional sources, involves encryption of flight-test data from the Typhoon SLBM, camouflage of new ballistic missile-launching submarines, encryption of the SS-18 mod "X" and of the SS-NX sea-launched cruise missile, and continued stockpiling of SS-16 mobile ICBMS.

Civil Defense and Continuity of Government Issues

Over the next five years—if the Carter Administration has its way—the US will spend about $2 billion on civil defense, mainly in the form of what John W. Macy, Jr., the Director of the Federal Emergency Agency (FEMA), terms "crisis relocation."

IN FOCUS...

Basis for this spurt in civil defense and related funding is a recently declassified Presidential Directive—PD-41—which orders the US civil defense program to seek to "enhance deterrence and stability in conjunction with our strategic offensive and other strategic defensive forces." Further, the Presidential Directive treats civil defense as an element of the strategic balance that "should assist in maintaining perceptions of that balance favorable to the US."

Other tasks assigned to civil defense by PD-41 include reducing the nation's susceptibility to coercion in time of crisis and providing "some increase in the number of surviving population and for greater continuity of government, should deterrence and escalation control fail." The latter circumstance, the directive suggests, would boost both the nation's ability to cope with crises and to increase the chance of eventual national recovery from nuclear war.

Key mechanism for increasing the population's survival chances, PD-41 proclaims, is to be a combination of mobility derived from the country's extensive highway system and widespread automobile ownership and the abundance of nonurban housing facilities to which the population from high-threat areas could be evacuated.

Crisis relocation depends largely on warning times of at least a week, comprehensive planning, and timely activation of the evacuation apparatus, according to Mr. Macy. Under such conditions, a recent interagency study concluded that crisis relocation could assure survival of about eighty percent of the US population in case of a heavy attack on US military and urban/industrial targets in the mid-1980s.

By contrast, only twenty percent of the population would survive such an attack if no civil-defense provisions exist. The most effective form of civil defense in case of a nuclear attack on the United States, according to FEMA, would involve a comprehensive array of blast shelters in all the high-risk areas. Such a system would provide the urban population with significant protection even if warning is limited to a few minutes. Up to ninety percent of the population might survive a nuclear strike against the US if such a system is used. But the cost of building the required number of blast shelters would be about $70 billion, which is far more than either the Administration or Congress is willing to spend on civil defense at this time.

In FY '81, FEMA's emphasis is on accelerated crisis relocation planning for areas in the vicinity of "counterforce" targets, such as ICBM complexes, SAC bases, and ballistic missile submarine ports. At the same time, these same areas will be provided with shelters under a comprehensive preparedness program. Overall, fifty-one sites in thirty-one states have been identified as potential counterforce targets. About 40,000,000 people live in these high-risk areas, according to FEMA surveys. This year's civil-defense investment tops last year's by about twelve percent in real dollars. But even with this increase, Soviet per capita spending on civil defense is about sixteen times that of this country.

So far as survivability of the national leadership, especially the National Command Authorities (NCA), is concerned, the analyses triggered by PD-41 are somewhat troublesome. Assuming a sneak attack on Washington, D. C., by SLBMs launched from submarines standing off the eastern US coast—and hence a warning time of only a few minutes—FEMA concedes that it may not be possible to evacuate those members of the NCA in town at the time to either hardened ground-based or airborne command posts.

In such an eventuality, the so-called continuity of government planning calls for successor elements of the NCA to pick up the reins of government. Admittedly, the likelihood of an attack of this type probably is infinitesimal for two principal reasons. For one, an attack out of the blue aimed at the NCA makes little sense militarily since it virtually compels the surviving elements of the NCA to instantly mount the most massive retaliatory strike the US is capable of.

Further, the combination of US early warning capabilities and the difference in flight times between Soviet ICBMs and SLBMs would prevent Moscow from attacking US targets simultaneously with both. Hence, the US would have time to launch its ICBMs after the warheads of the Soviet SLBMs have detonated.

Nevertheless, National Security Council and FEMA analysts see a need for planning against such a contingency and to assure continuity of government under even the most extreme conditions.

One of the key steps toward assuring continuity of government in case of nuclear attack is to provide the nation with telecommunications facilities that can function during and following a nuclear war. Toward this end, the White House issued another Presidential Directive, PD-53, that promulgates a new National Security Telecommunications Policy. Its purpose is to furnish communications links between the NCA and strategic and other essential forces to "support flexible execution of retaliatory strikes during and after an enemy nuclear attack."

In a manner similar to PD-59—which commits the nation to flexible, sustained nuclear war-fighting capabilities—PD-53 stipulates "responsive support for operational control of the armed forces, even during a protracted nuclear conflict," as well as the ability to gather intelligence, conduct diplomacy, mobilize, command and control military forces, provide continuity of essential functions of government, and reconstitute the political and social structure of the nation.

"Footprints" of Early Soviet MIRVing

Prominent defense analysts who believe in the action-reaction principle of nuclear arms developments portray this country's decision in the 1960s to MIRV its ICBMs as *the* prime example of one side's technological innovation forcing the other into a series of responses that perpetuate and escalate the arms race. MIRV technology ostensibly was developed to negate emerging Soviet ballistic missile defense capabilities; in reality, it probably was a technology whose time had come and whose operational payoffs were so pervasive as to make it inexorable.

Despite a maze of security considerations entwined with ideological and political considerations that obscured the issue at the time, there are, in retrospect, grounds for arguing that the Soviets were already well on the way toward developing and deploying MIRVed systems—with or without a corresponding US effort.

Looked at from the vantage point of time and in the context of subsequent Soviet actions and advances, an increasing number of US analysts now are willing to classify the Soviet testing of the SS-9 Mod 4 configuration as a "rudimentary MIRV" and as tangible evidence that the USSR was committed to MIRV its ballistic missiles when the US tested its first MIRV—the Mk12—in August 1966. A small number of American scientists felt that way then but their views were not given general dissemination for a variety of reasons, not the least of which was the tendency to underestimate Soviet technological prowess.

IN FOCUS...

Although the SS-9 Mod 4 lacked a post-boost vehicle, or bus, for dispensing its three reentry vehicles (RVs), the design exceeded the performance criteria of a "dumb" MRV (multiple reentry vehicle system devoid of individual targeting capability) in several ways. US "post-mortem" analyses found, for instance, that the accuracy of the RV release mechanism far exceeded the degree of precision required for the MRV scattergun purpose. Similarly, the flexibility and "footprint," or targetability of the RVs against such dispersed points as US ICBM silos, exhibited unmistakable MIRV characteristics, in the view of some US experts.

The SS-9 Mod 4's first flight testing followed the US Mk12's first flight within less than a month. Allowing for the prevailing state of technology on both sides and associated lead times, it seems certain to most analysts in this country that the Soviets must have had the Mod 4 design in the developmental pipeline for several years prior to the 1966 test.

In retrospect, the issue transcends the academic question of whether the Soviet Union's SS-9 Mod 4—which underwent twenty flight tests—was a hybrid between MRV and MIRV or a true but primitive MIRV. Rather, the moral of these ex post facto assessments is that the Soviet Union will exploit any opportunity across the full compass of technology, whether pressured to do so by external factors or not. By extension, this logic suggests that shackling US technology as a hoped-for deterrent of Soviet technological advance is probably as counterproductive as it is simplistic.

Soviet Defense Spending Growth Continues

CIA witnesses before the House Permanent Select Committee on Intelligence reported on September 3 that, while Soviet defense spending between 1965 and 1978 accounted for eleven to thirteen percent of Soviet GNP, that share increased to twelve to fourteen by 1979. The reason for this increase, according to the CIA, is that Soviet economic growth declined to its lowest rate since World War II. Nevertheless, Soviet defense spending continues to grow at a steady rate of between four and five percent annually in real terms.

Since 1965, about half of Soviet defense spending has gone to investments in weapons, equipment, and facilities, almost one-third to operating costs, and roughly one-fifth to military research and development, according to the CIA's testimony.

The current decline in Soviet economic growth, which the CIA predicts will continue, would seem to put in question the USSR's ability to continue to increase defense spending. Yet, the agency concluded that "Soviet defense spending will continue to increase in real terms at least through 1985. . . . We think it unlikely that, even in the longer term, economic difficulties will force a reversal of the Soviet leaders' long-standing policy of continuing to improve their military capabilities."

Washington Observations

★ Eighteen senior former defense officials recently urged Defense Secretary Harold Brown not to "tolerate any further revelations of sensitive policies, hardware, or intelligence sources for the President's partisan political advantage." The signers of the petition included three former Secretaries of Defense, two former Chairmen of the Joint Chiefs of Staff, former USAF Chief of Staff Gen. John Ryan, and former Commander in Chief of the Strategic Air Command Gen. Bruce Holloway. The eighteen officials said "Secretary Brown should refuse to politicize an office that, throughout thirty-five years of its existence, has remained essentially above the political fray." A spokesman for Dr. Brown subsequently denied the allegation.

★ As a result of the October 1 11.7 percent military pay raise and the continued $50,112.50 federal pay ceiling, two-star generals now make the same as four stars. Since the ceiling does not apply to political appointees, there are now such anomalies as the Director of the First Lady's personal staff earning more than the Commander in Chief of the Strategic Air Command or the Chairman of the Joint Chiefs of Staff. ■

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AEROSPACE WORLD
News, Views & Comments

By William P. Schlitz, SENIOR EDITOR

With the possibility of the fighting between Iran and Iraq spreading to neighboring regions, four USAF E-3A AWACS aircraft were recently dispatched from CONUS to Saudi Arabia to safeguard that oil-rich nation's airspace.

Washington, D. C., Oct. 6

★ SAC is studying the feasibility of the use of a "Companion Trainer Aircraft" (CTA) to cut B-52 operating costs and fuel consumption and yet maintain aircrew flying proficiency.

CTA would be a relatively low-cost, "off-the-shelf" business jet minimally modified with radar, electronic countermeasures, and navigation equipment.

"The potential benefits of a CTA are innovative and responsive to our concern over the worldwide energy problem," said CTA Project Officer Capt. Gene L. Harbula. "For example, a twenty-five percent reduction in B-52 flying time, supplemented by a CTA, would result in an annual savings of more than $100 million for fuel alone.

"When the CTA program was launched into the conceptual phase in March 1979," said Captain Harbula, "JP-4 fuel prices were running at forty-four cents per gallon. By February of 1980 fuel costs had skyrocketed to $1.18." And presumably are still climbing.

SAC officials have discussed aircraft procurement with a number of aircraft companies; the avionics industry has been surveyed about the electronics modifications.

The CTA concept would break the B-52 mission into its basic components, *i.e.*, low-level navigation, low-level bombing procedures, and the like. All crew members would participate except gunners.

SAC plans to begin a test program to identify training objectives in August 1981, with full-scale development of the CTA system in October 1982.

★ USAF C-130 and C-141 transports may one day be called upon to supplement the US Navy's mine-laying capabilities.

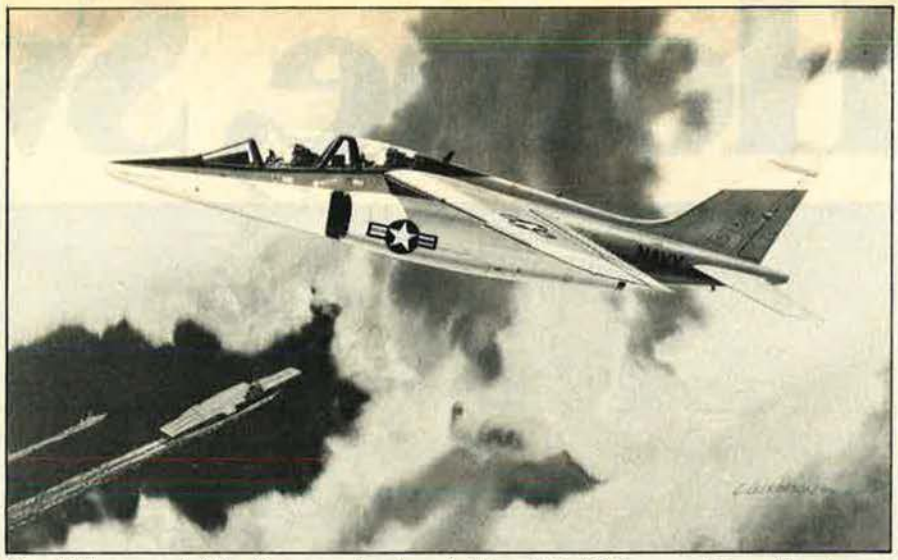
Using a MAC C-130 on loan, the Navy and Lockheed-Georgia Co. recently undertook aerial trajectory tests at Eglin AFB, Fla., under a twenty-two-month program conducted by the company for the Naval Surface Weapons Center, Silver Spring, Md.

The tests involved mines ranging from 500 pounds (227 kg) to 2,400 pounds (1,088 kg) and were dropped using a Lockheed-designed Cargo Aircraft Minelaying System (CAML). While the system is intended to use hydraulics as well as gravity to dispense mines, the initial Eglin tests were gravity drops.

Various size pallets holding mines have been meshed with the C-130 cargo loading and restraint system.

The mine-laying capability is important, because of the three Navy planes that can seed mines—the A-6/7 and P-3 patrol aircraft—the fighters have limited range. The Air Force's B-52 has also been tested successfully in mine-laying but in war might be required for higher-priority missions.

The timetable calls for aerial testing of CAML—including self-contained



An artist's concept of the European-developed Alpha Jet in US Navy markings. The plane was demonstrated at various US military installations recently in its bid as a contender in the competition for the next Navy trainer. If selected, the aircraft will be built in the US by Lockheed-California at Burbank. See item.

hydraulics, mechanical drive, and computer-monitored controls—next summer.

★ NASA has initiated parallel system design studies for its Numerical Aerodynamic Simulator, a specialized supercomputer that will be used in developing and testing new aircraft and other flight vehicle designs. The computer will also be useful in general research in such fluid-flow areas as meteorology, gas dynamics, and computational chemistry.

The capabilities of today's high-speed, advanced-technology computers are almost mind-boggling, yet NASA's proposed computer is visualized as having a data processor perhaps forty times faster than existing supercomputers and a high-speed memory sixty times larger than the current generation.

NASA's Ames Research Center, Mountain View, Calif., has picked for negotiating the parallel studies Burroughs Corp.'s Federal and Special Systems Group, Paoli, Pa., and Control Data Corp.'s Special Programs Division, Arden Hills, Minn.

The new specialized computer will use fluid-flow equations to calculate continuously three-dimensional airflows at thousands of points simultaneously, meaning that actual airflow can be duplicated and wind-tunnel tests simulated at a fraction of the cost of the real thing.

Plans call for the computer to perform one billion operations per second using a data base of 40,000,000 words.

Following the parallel design definition studies, one of the two firms will be picked for a detailed design, fabrication, test, and integration program that could take five years, with the new computer becoming operational late in 1986.

★ A new jet aircraft designed for advanced pilot training was demonstrated for the first time in the US during a September tour of various military bases sponsored by Lockheed-California Co. of Burbank.

Company officials said the Alpha Jet, a twin-engine, two-seat aircraft currently being built in Europe by French and West German manufacturers, can save US taxpayers some $600 million if it is selected for American armed forces.

Lockheed-California is entering the Alpha Jet in the US Navy's competition for a new trainer for the 1980s and 1990s. The company would build the plane in the US under a coproduction pact with its developers, Avions Marcel Dassault-Breguet Aviation of France and Dornier of West Germany. Its engines would be built by Teledyne CAE, Toledo, Ohio.

Alpha Jets could enter the operational inventory as early as 1986, officials said. European-built versions began to enter the air forces of Belgium, France, and West Germany this year.

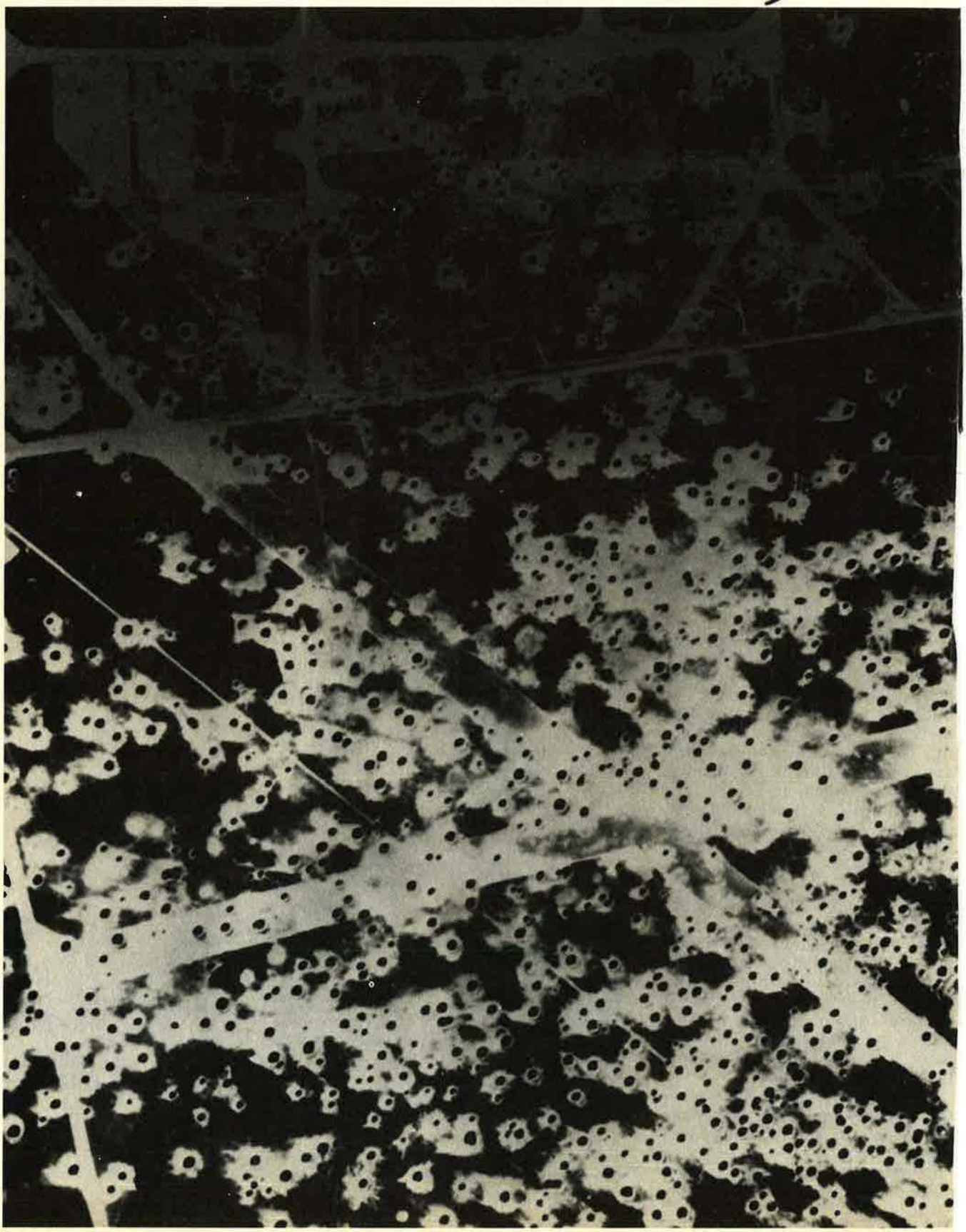
According to company officials, the Alpha Jet burns considerably less fuel and has significantly lower operating costs than the Navy's current trainers, the T-2C and TA-4J.

The plane was demonstrated for congressional and governmental leaders and key Navy and Air Force officers at Andrews AFB, Md.; Pensacola NAS, Fla.; Meridian NAS, Miss.; Corpus Christi NAS, Tex.; Kingsville NAS, Tex.; Beeville NAS, Tex.; and Randolph AFB, Tex.

★ In another cooperative weapons venture, British Army Lynx helicopters are to be armed with the TOW

A dummy mine is loaded aboard a USAF C-130 Hercules during a test of a Cargo Aircraft Minelaying System to demonstrate that Air Force transports can supplement the Navy's aerial mine-laying capabilities. Initial gravity drop tests have been conducted at Eglin AFB, Fla. See item beginning on opposite page.

Home, Sv



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antitank missile system developed for the US Army and currently arming the air and ground forces of some thirty nations.

What's more, the system—but not the missiles—is to be produced in the UK by British Aerospace Dynamics Group under a Defence Ministry contract; Hughes Aircraft Co., which developed TOW in the US, has okayed a coproduction license.

The contract award came at the conclusion of a test-firing program during which a full complement of eight TOW missiles was fired in rapid succession, seven while the Lynx was in hover and the eighth against a moving target while the helicopter was in forward motion. All eight hit their targets.

The TOW system for Lynx will include a new roof-mounted sight; Lynx manufacturer Westland Aircraft will supply the weapon-launcher mountings and install the systems.

As part of the program, Hughes has delivered twelve preproduction TOW systems to BAe.

AEROSPACE WORLD

★ Work has begun in the UK on the development of a cockpit head-up display that will enable USAF A-10s and F-16s to attack targets at night while flying at low altitudes.

Core of the system is infrared optics that will project the image of the night scene in line of sight through the windscreen, along with information about the aircraft's performance and mission, to give the pilot "virtually a daylight picture of the ground below him."

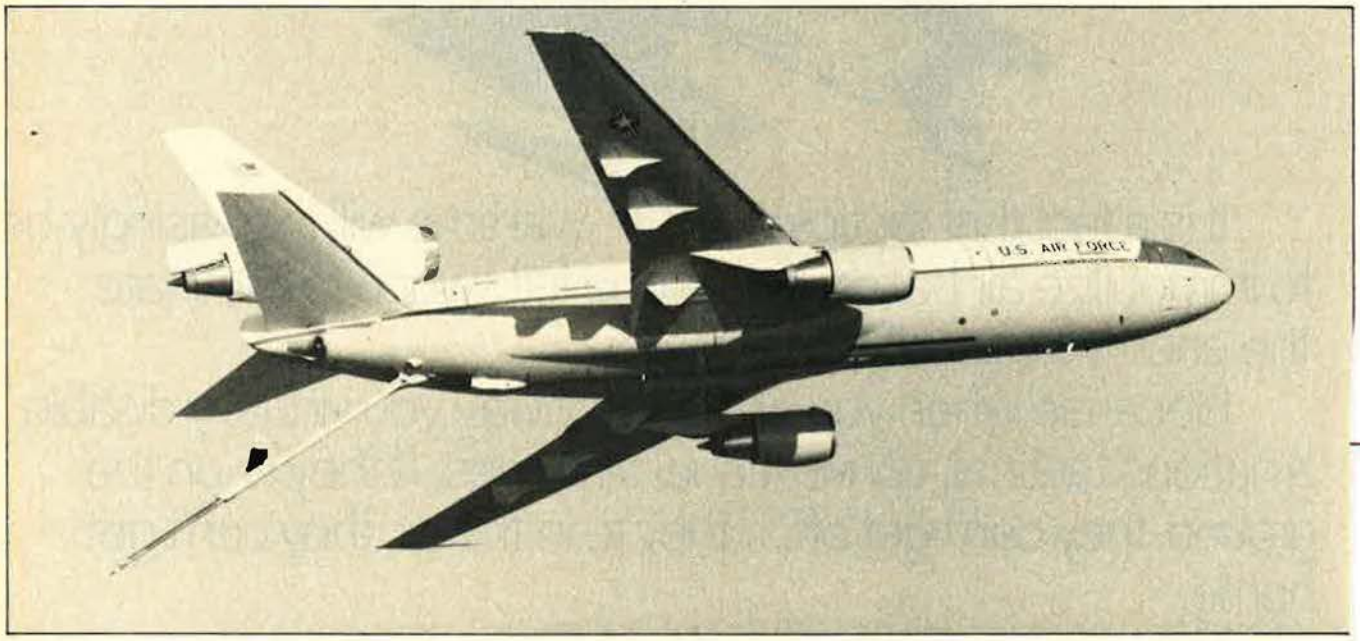
Under a recently awarded £6 million ($14.34 million at current rates) contract, Marconi Avionics, a pioneer in HUD development, will design and build the display unit and required prototypes.

If tests are successful, the development of a low-altitude night visual device could lead to a follow-on production contract amounting to another £45 million ($107.55 million), officials said. If a production goahead is given, Marconi would share the work with Norway's Kongsberg Vapenfabrikk and Oldelft of the Netherlands. Marconi's US subsidiary, Marconi Avionics, Inc., Atlanta, Ga., will also participate in the production phase.

The night vision system development comes under USAF's LANTIRN (Low Altitude Navigation Targeting Infrared for Night) program.

The infrared ground scan will be conducted from an equipment pod mounted outside the aircraft.

Marconi currently supplies the only in-service night attack display system



Above, at Edwards AFB, Calif., extension tests of the aerial-refueling boom of USAF's new tanker, the McDonnell Douglas KC-10A. The tail-boom system, operated under digital fly-by-wire control, can deliver 1,500 gallons of fuel per minute to refueling aircraft. Left, a British Army Lynx helicopter launches an antitank TOW missile during a test-firing program. See item.

of its kind for US Navy Corsairs and a HUD weapon-aiming system for USAF's F-16 and aircraft of four NATO air forces.

★ A surface-to-air missile electronic warfare threat simulator has been installed at the RAF Electronic Warfare Training Range at Spadeadam in the UK.

Developed by AFSC's Armament Division, Eglin AFB, Fla., and General Dynamics, Fort Worth, Tex., the simulator will be used jointly by the RAF and USAFE aircrews under a cooperative agreement dubbed "CONSTANT OWL."

Under the agreement, RAF will operate the range while USAF is to provide the threat simulators, including others currently under development.

★ Research on a small rocket engine to power spacecraft of the future is presenting technicians at the Arnold Engineering Center, Arnold AFS, Tenn., with a unique set of problems.

Called the Pulsed Plasma Engine, the device is powered by solar panels that collect energy from the sun and store it in a series of capacitors. When the engine is fired, a burst of electricity from the capacitors is conducted across the face of a Teflon block set between two copper plates in the engine's nozzle. This powerful burst of energy vaporizes a thin film of plasma from the Teflon and creates a magnetic field strong enough to fire it down the plates and into space at speeds in excess of 50,000 mph.

That's where the trouble begins. The gas molecules are hurled at such tremendous velocity that they ricochet off the walls of the test chamber and compromise data being recorded. Technicians have had to turn to computer-designed baffles in an attempt to "trap" the meddlesome particles in the test chamber.

The Pulsed Plasma Engine is to be used to control the position of orbiting spacecraft and is designed to produce reliable, low-thrust pulses for more than five years with no maintenance or refueling. It was developed for USAF by Fairchild Republic Corp., Long Island, N. Y.

★ AFRES has initiated two major personnel policy changes intended to strengthen the manpower pool of Ready Reservists available for mobilization.

Effective July 1, Ready Reservists no longer will be transferred to Standby Reserve for lack of participation but will be retained in the Ready Reserve and continue their eligibility for presidential or congressional mobilization.

US Army Takes Major Steps to Shore Up "Cohesion"

Morale, esprit, or whatever word is used to describe the spiritual core that motivates the fighting force depends, to a certain extent, on how much time the individual soldier spends in the small units that comprise the combat cutting edge: companies, platoons, squads, teams, and crews.

With about forty-five percent of the active Army stationed overseas—a situation complicated by the high personnel turnover rate—the length of time soldiers have to get to know and depend on each other is not enough, the US Army has concluded. For example, because of the need to keep overseas units up to or above table-of-organization strength, some military specialists such as tank crew members and mechanics spend less than twenty-one months in CONUS before once again being posted abroad. "This frequency of moves causes a loss of training continuity as well as personal dissatisfaction," Army said.

The Army has prepared a package of moves to counter the social and other changes that have occurred over the last several decades that have affected Army unit cohesion.

Already instituted: battalion and brigade commanders now receive precommand training and stay in their jobs thirty months (plus or minus six months). General officers receive special orientation before joining their commands so they are aware of the distractions to cohesion and training. Promotion by specialty, a reevaluation of training systems, and efforts to build trust and confidence also have been initiated, Army officials say.

Among other initiatives either under way or being studied:

- Stop the practice of bringing units up to strength for exercises and have them "come as they are."
- Eliminate overstrengths in certain selected units; reduce overseas units above 100 percent manning to their authorizations.
- Reduce personnel strength of such units as headquarters and support.
- Develop a test plan to rotate entire companies of soldiers rather than individual replacements. (The Army is examining rotation by battalion and brigade and a "regimental" system to allow long-term attachment to particular units.)
- Keep company commanders in place for eighteen months.
- Make flexible the times junior officers will be eligible for promotion to eliminate shortages at the company level.
- Authorize insignia for soldiers in basic training as soon as their future assignments are known.
- Develop additional peacetime awards and distinctive uniform accoutrements.
- Study pay proposals that more clearly reflect degrees of experience and responsibility to retain trained leaders.
- Consider combat arm tours for combat support personnel and officers.
- Study increased benefits for soldiers who must spend frequent and repetitive tours overseas because of specialty shortages.

The "come as you are" policy for exercises, officials said, is a recognition of the real world. "It is unfair to the units and soldiers to fill up units at the expense of other units prior to a major training exercise. It hampers morale and the true readiness of a unit. Within weeks after the exercise, such units are at reduced capabilities again and valuable training events are soon forgotten. Units must learn to adapt to less than full strength, much like actual combat."

Rapid turnaround time and frequent changes in commanders are detractors to well-trained units. Commanders will be in charge of their units longer and will be able to take more time, learn from mistakes, and progress toward higher goals.

Stateside units bear the brunt of the policies of maintaining overseas units at greater than 100 percent strength. By eliminating "directed" overstrengths, reducing overseas units to 100 percent, and changing assignment policies, more soldiers will be available for Stateside units, thus easing the need for short turnaround time in many specialties.

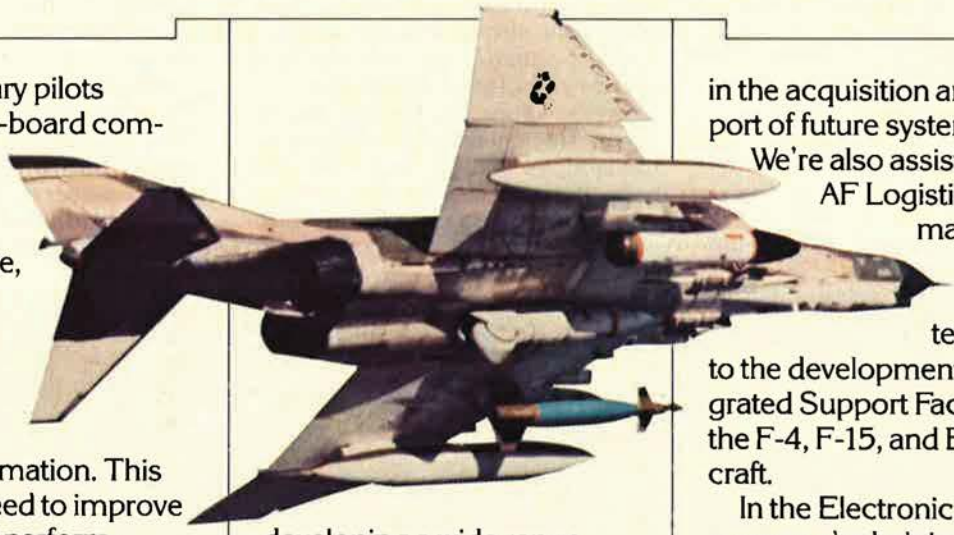
The shortage of officers and NCOs at the company level is a grave concern. The Army is developing a plan to put more noncommissioned officers with troops and to review the military educational systems for this important core of the Army. Leadership in the officer ranks is also receiving attention. Their educational system is being reviewed.

At the soldier level, time in initial entry training (IET) may be extended so that the soldier more quickly contributes to unit effectiveness. Early attachment to the unit will be encouraged by soldiers wearing the unit's distinctive insignia, even while in IET.

A new look is being given to the wearing of distinctive accoutrements to enhance unit pride. Recognition of good performance will be increased by awards. The Army is also studying proposals to provide an increased pay differential for experience in order to provide a greater incentive to strive for promotion. Other proposals are being considered to ease the burden of short turnaround times for some specialties. These benefits might include tax breaks, home leave, and home basing.

Identification could further be enhanced by an "Americanized" regimental system. This would not emulate the British system but rather offer an "umbilical cord" that would attach a soldier to a particular unit throughout his career.

Digital Technology for Avionics of the 80's



Today's military pilots need their on-board computers more than ever to help them navigate, automate weapons delivery, and access real-time mission information. This means the need to improve reliability and performance margins in avionics systems has increased. So has the need to reduce spiralling life-cycle costs.

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DIGITAL AVIONICS TECHNOLOGY from

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Prior to that date, failure to maintain participation minimums usually resulted in transfer to Standby Reserve in either the Nonaffiliated Reserve Section (NARS) or Inactive Status List Reserve Section (ISLRS) and not eligible for immediate call-up to active duty. In addition, those in ISLRS are not eligible for promotion.

Nonparticipating Reservists are to be redirected into the Ready Reinforcement Personnel Section until their service agreement or enlistment expires.

Under a second policy change, the Air Reserve Personnel Center is offering a change from Standby to Ready status to certain Reservists now in NARS or ISLRS based on qualifications and availability of slots. Screening of Standbys was to begin in October.

Not eligible are NARS and ISLRS members with more than twenty years for retirement or with two ROPA promotion passovers. Other disqualifying criteria are under consideration.

AEROSPACE WORLD

★ The Swedish Space Corp. has awarded a contract to Saab-Scania, a Swedish firm, for development and manufacture of a scientific satellite, "Viking," the nation's first.

Viking's mission will be to explore earth's magnetosphere—the region of charged particles trapped by earth's magnetic field. The aim would be to help scientists understand more about the transfer of energy from the sun to the magnetosphere and other processes underlying auroral phenomena—an important field of research in Sweden.

Saab-Scania will handle systems engineering, scientific payload and telemetry, and overall responsibility for the satellite program, including systems testing. US subcontractor Boeing Aerospace Co. will supply the spacecraft platform.

Delivery of Viking is expected early in 1984 with launch the same year piggyback aboard the European Ariane launcher, which will also orbit a French earth resources satellite. Sweden is also a participant in that program.

Whether or not Austria will select the General Dynamics F-16 Fighting Falcon as its new interceptor will be determined by the series of flying trials recently conducted by an Austrian test-pilot team at the company's Fort Worth, Tex., plant.

★ A cooperative Polish/US effort for the sale and service of American-built machine tools in Poland, and perhaps other Eastern European nations, has been announced by a Polish government agency and a US international trading firm.

The new export promotion program for US machine manufacturers has been developed by the Polish-American Machinery Corp. (PolAmCo), a subsidiary of Metalexport of Warsaw, and Kobelinski International Trade and Investment Co. (KITI) of Chicago.

Among the first export promotion initiatives in which US machine tool manufacturers are invited to participate will be a US machine tool/metalworking/packaging exhibition to be held in Poznan, Poland, in October of 1981.

KITI, the American trading firm, was organized by Mitchell P. Kobelinski, former director of the Export-Import Bank of the US and former head of the US Small Business Administration.

"In view of the fact that approximately fifty percent of the world's machine tools in recent years have been sold in socialist countries, with US participation less than five percent, it would appear that this market has been grossly neglected by the American machine tool industry," said Mr. Kobelinski, who added that West Germany is a leader in these sales, followed by Austria and France and with Japan coming on strong.

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Decorated by the Federal Republic of Germany, retiring Gen. John W. Pauly, former USAFE Commander, is congratulated by Lt. Gen. Friedrich Obleser, chief of the German Air Staff.

AEROSPACE WORLD

★ **NEWS NOTES**—USAF's **last active-duty warrant officer, CWO James H. Long,** retired from the 438th Transportation Squadron, McGuire AFB, N. J., recently. ANG still has forty-seven, ranging in duties from Fire Protection Engineer to Chief of Ground Safety. AFRES has eight.

Effective October 1, **manpower authorizations** in the Air Force **Reserve Chaplain Mobilization Augmentee Program** expanded from 150 to 450, a 200 percent increase.

The Air Force and Army **basic fire-protection training courses have been consolidated** at Chanute AFB, Ill. The soldiers and airmen are separated only to learn firefighting and damage-control techniques unique to their services.

A balloon endurance record for certain categories of lighter-than-air craft **set by the Soviets in 1941** fell to US balloonists **Ben Abruzzo** and **Larry Newman** of *Double Eagle* transatlantic flight fame (their partner, Max Anderson, and his son Kris, made the first transcontinental balloon flight last May). Their time in last April's California flight: **seventy-five hours ten minutes.** Official notice came recently from the Fédération Aéronautique Internationale.

In mid-September the Soviets orbited Soyuz-38 spacecraft. Aboard were mission commander and space veteran **Yuri V. Romanenko** and **Arnaldo Tamayo Mendez,** a Cuban and the **seventh non-Soviet citizen** to fly in the USSR's Intercosmos manned space program. Soyuz-38 then linked up with orbiting space station Salyut.

The attempted flight of the balloon *Super Chicken* **from the west to the east US coast** was terminated near Columbus, Ohio, when the crew—Phoenix businessmen **John Shoecraft** and **Ron Ripps**—encountered a severe thunderstorm and bailed out safely.

Died: Willard F. Libby, a chemist who **helped develop the atom bomb** and **who won a 1960 Nobel Prize** for his carbon-14 method of dating geological and archeological objects, of a blood clot in his lung in Los Angeles, Calif., in September. He was seventy-one. ■

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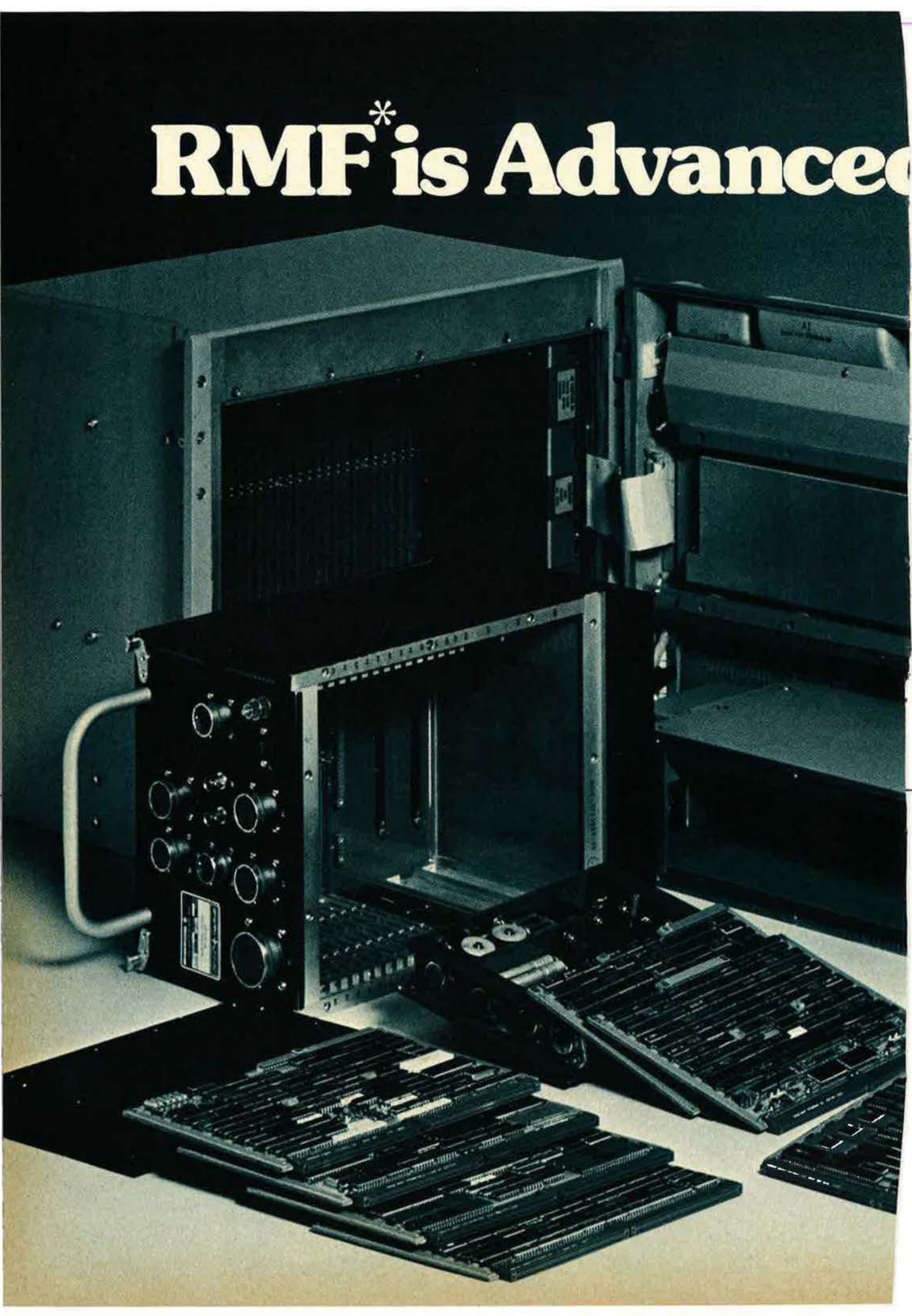

Avionics Technology

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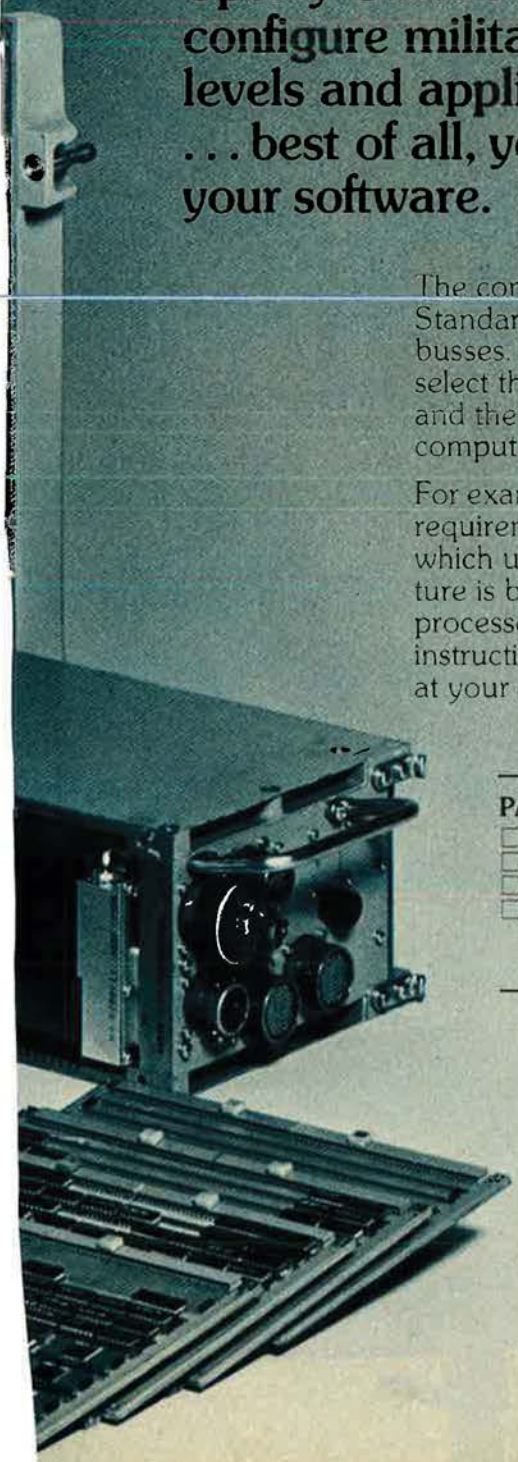

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CAPITOL HILL

By Kathleen G. McAuliffe, AFA DIRECTOR OF LEGISLATIVE RESEARCH

Washington, D. C., Oct. 1

MX Hit

MX funding may be in for a substantial cut for FY '81.

The House Appropriations Committee recommended and the full House concurred in a $120 million cut in the $1.6 billion authorized for MX R&D in FY '81.

Air Force officials heading the MX program emphatically disagree with committee references to "lack of firmness in program planning" for the basing mode and leftover funds from FY '80 as reasoning for the cut. MX staff cite an amendment last year by Sen. Ted Stevens (R-Alaska) mandating that alternate basing mode designs be considered by the Air Force. Accordingly, the Secretary of Defense only this April approved the engineering refinement that resulted in final selection of the loading dock basing mode.

Further, USAF officials state that every dollar for MX appropriated in FY '80 will have been obligated by the end of the fiscal year and argue, therefore, that the committee statement is misleading.

The proposed cut could retard or even jeopardize the MX program. The Initial Operating Capability (IOC) date could be pushed well past the July 1986 target. One Air Force official reminds Congress that "it's a documented fact that every major defense program which has run into trouble has done so because of underfunding in the first years of development. Cuts in the MX program now could set a dangerous precedent by using MX as a sponge to absorb reductions so other programs may be expanded."

The House action does not represent a *fait accompli*. The outlook in the Senate is brighter where full funding could be restored, thereby saving the MX request of $1.6 billion in conference.

Semiannual COLA

The budget proposal to save more than $750 million in FY '81 by giving federal and military retirees only one cost-of-living adjustment (COLA) per year was beaten back by the House during debate on the Omnibus Reconciliation Act of 1980.

In an attempt to balance the budget, the First Budget Resolution mandated that all congressional committees find specified savings for FY '81. The Armed Services Committee proposed that the requested $400 million saving be realized by going to an annual COLA in this fiscal year. The House voted overwhelmingly to retain the semiannual provision while the Senate did not.

This will be a point of contention in conference, but House conferees have a mandate from the House to keep the COLA as is.

Interim Spending

The House and Senate have compromised on a continuing resolution to keep the government operational until appropriations levels are reached for the new fiscal year.

The stopgap funding measure will provide interim spending for the period October 1–December 15, 1980. As in the past, under the stopgap funding government agencies and programs will be limited to spending levels of the previous fiscal year.

However, in a departure from the norm, the Department of Defense will operate at the new $157.2 billion level passed by the House since the Senate will not have acted on the bill until well after the start of the new fiscal year. The FY '81 House version earmarks about $19 billion more for defense than was provided in FY '80.

Secretary Mark on C-5

In recent testimony, Air Force Secretary Hans Mark stressed the need for continuing the wing modification program of the seventy-seven aircraft in the C-5 fleet.

Questions were raised by a panel headed by Sen. William Proxmire (D-Wis.) concerning a halt to funding for the so-called "H Mod" rewinging, while another study is conducted on the overall program. In response, Dr. Mark emphasized further delay to wing modification of our only aircraft capable of carrying outsize equipment would be shortsighted and would be a real threat to contingency planning.

The wing mod program is to stretch the C-5's service life by 30,000 flying hours to roughly match the service life of the rest of the aircraft. Because of structural deficiencies of the wing, the current C-5 fleet has only five to six years of safe life remaining under restricted peacetime use. Under wartime conditions, Dr. Mark warned the C-5 could be operational for only another year.

Dr. Mark said, ". . . we must continue appropriations for the production of the wing modification in order to avoid the situation where a large fraction of the C-5 force may have to be grounded during a conflict in the future."

The House has appropriated $187 million for mods of twelve C-5s in FY '81.

DoD Appropriations

The House has passed a record $157.2 billion Defense Appropriations bill, marking the first time in thirteen years that funding has exceeded the request. The new level is $2.5 billion more than the Administration budgeted.

While the Air Force received the largest share of R&D money, some priority items were cut back. In addition to the MX cut of $120 million, the CX was cut $61 million to a new total of $20 million.

Only $175 million was included for R&D of a new strategic bomber, and no money was added for procurement of long lead items. The USAF is directed to study all bomber possibilities including "Stealth" technologies.

Readiness was stressed in the committee report. Notably, substantial increases in USAF spare and repair parts accounts were included for a total of $2 billion; funds for more fuel were added to allow increases in F-15 and F-16 flight training hours; and numerous personnel benefits were funded, including allowance in the budget for the 11.7 percent pay raise supplemental appropriation. ■

Farnborough 80 drew the largest number of exhibitors, trade visitors, and spectators ever. The real business was conducted not in the air, but in the chalets. The real trends were visible everywhere for thoughtful analysts to discern.

The Tin Trees of Farnborough 80

BY JOHN W. R. TAYLOR
EDITOR, *JANE'S ALL THE WORLD'S AIRCRAFT*

Super Mirage 4000 lands at Farnborough after performing in the flying display.

NEAR the end of the main runway at Farnborough airfield stands a tree. Visitors treat it with the respect owed to a hallowed ancient monument. It was to this tree, they are told, that the great Anglo/US air pioneer "Colonel" Samuel Franklin Cody tethered his big biplane, via a spring balance, to measure the thrust of the aircraft's powerplant before making the first officially recognized powered flight in the UK, in October 1908. In fact, the real tree began crumbling to dust years ago; this one is a metal replica.

Those searching for evidence of Western airpower at the Farnborough 80 air show were equally likely to find a simulation in lovingly fashioned metal if they looked carefully enough. Star of the flying display for the first few days was the French Dassault Super Mirage 4000 twin-turbofan, multirole combat aircraft, perhaps the most costly private venture prototype in history. Its superb handling qualities at low speeds are unique for a Mach 2-plus aircraft with equally high potential for interception or low-altitude penetration attacks on distant targets. But when it left Farnborough in mid-show, for demonstration to an interested party across the Channel, it reminded the thoughtful that it has yet to find a customer.

The French Air Force can afford only its small brother, the single-engine Mirage 2000, which, though equally agile and exciting to watch, is far less formidable. No successor is envisaged to the current Mirage IV strategic bombers of the French nuclear deterrent force. Nor can the RAF's new Tornado attack aircraft, as good as it is, offer a true replacement for the mighty delta-wing Vulcan, of which a nonparticipant example was parked anonymously on one side of the airfield throughout "Farnborough week."

Within its limitations, this was an exemplary air show. The organization was immaculate, the atmosphere right for business rather than simply a social occasion, and the exhibits of high standard. Representatives of Warsaw Pact nations were impressed by the quality of a British suit designed to protect the wearer against the chemical and biological weapons in which the

Above, the Panavia Tornado Air Defense Variant (ADV) for the Royal Air Force complements the interdictor/strike version. Left, the fuel-efficient Brazilian EMBRAER 312 flew first in mid-August, and is being produced for Brazilian and foreign customers.

East maintains such a front-line superiority. In the shadow of a Tornado on static display, the twin pods of Hunting Engineering's JP233 low-altitude airfield attack system showed how this jointly funded Anglo/US venture promises to produce a weapon of the utmost value to NATO in Europe. Nothing could be more valuable than a munition able to deny an enemy the use of everything from airfields to roads, railways, ports, depots, and production facilities.

Ever-Present Danger

A close study of this and other new weapons displayed or discussed at Farnborough, and of the latest developments in ECM, ECCM, IFF, and the whole field of operational equipment, leaves little doubt of the West's continued ability to enable its combat aircraft to survive, and do their job to the limit

John W. R. Taylor has been editor of Jane's All the World's Aircraft *since 1959. His "Jane's Supplement" appears regularly in this magazine. He compiles or edits the galleries of aerospace weapons for our USAF and Soviet Almanac issues. Trained as an architect, he fulfilled his ambition of becoming an aircraft designer by working under the great Sidney Camm at Hawker during the war years. He has written nearly 200 books and countless articles on aviation, and his next major project is a multivolume series on the history of flight. He is a fellow of the Royal Historical Society and the Society of Licensed Aircraft Engineers and Technologists and a Member of the Royal Aeronautical Society.*

of their design potential, in a 1980s battlefield environment. The ever-present and supreme danger lies in the fundamentally different approach to military procurement in East and West. The Soviet Union buys the best that its engineers and scientists can devise. The West buys what its politicians believe they can afford.

The results of such a policy are apparent at NATO air bases, and in flying displays of the kind seen at Farnborough. On the basis of an edition of *Jane's* published only five years ago, we might have expected to see the US contribution to this year's flying display led by an operational squadron of B-1 bombers, whose production deliveries to SAC were to begin in 1978. By then the B-1 had been canceled.

Boeing's YC-14 advanced medium STOL transport (AMST) had not flown five years ago. When it did fly, it offered completely new standards of flexibility to MAC, as did its McDonnell Douglas competitor, the YC-15. The carcasses of the prototypes now lie in the aeroplane graveyard at Davis-Monthan AFB, Ariz., while available funds are devoted to stretching the C-141 and rewinging the C-5. These are good aircraft, but the West *could* have aircraft that are not merely good but uniquely capable. Only in the Soviet Union is the YC-14's advanced layout entering production, in the form of the much smaller An-72 STOL transport.

Even when the West does take advantage of the technological breakthroughs of its aerospace industry, it often does so in a half-hearted and incompetent way. Concorde illustrates this in the commercial sphere. In the military arena, complete absence at Farnborough of a succession of new V/STOL combat aircraft based on Harrier technology was even more depressing, especially in an era of weapons like the JP233. All NATO front-line aircraft except the Harrier require uncratered runways from which to operate. Having become airborne in Europe, they often need an all-weather capability that they lack, and weapons better able to find a target in European weather than, for example, the TV-guided Maverick.

Penny-Pinching Decisions

Any discussion at Farnborough with top people of industry or Western air forces tended to evoke a feeling of deep gloom—almost always stemming from the belief that East/West parity in the air is being eroded by penny-pinching political decision-making.

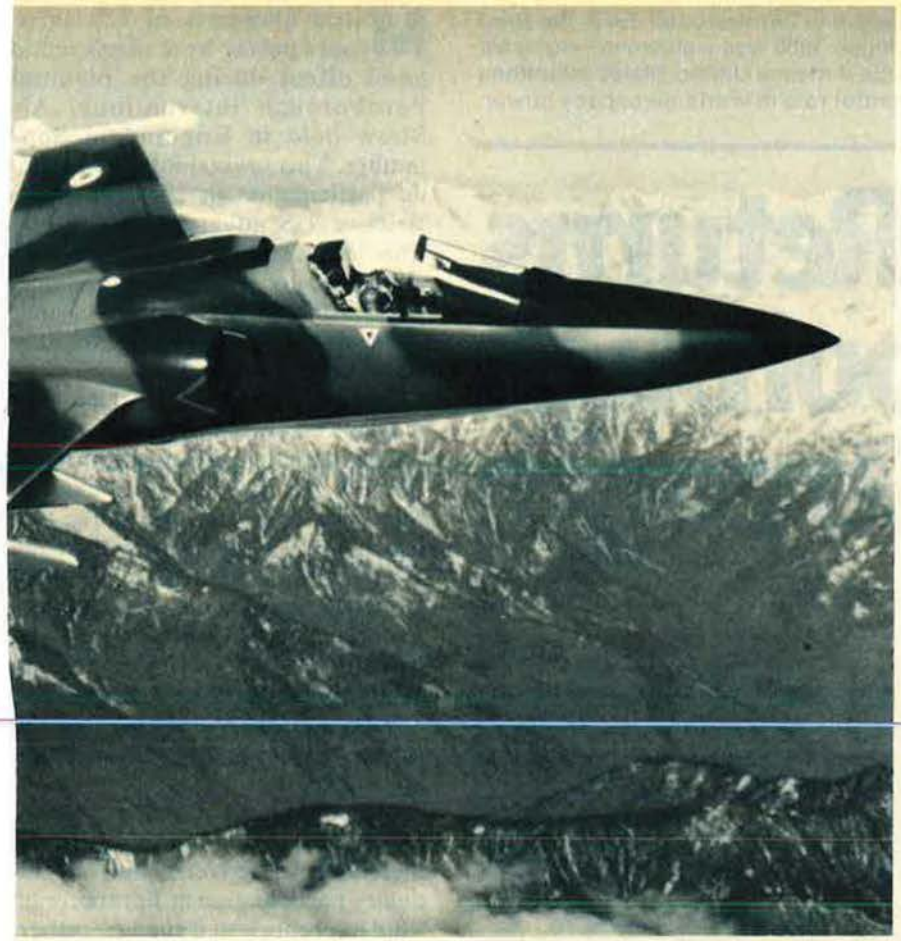
Media revelation of the US's "Stealth" aircraft was still news at Farnborough in September, despite entries in *Jane's* and in other publications several years ago. A "Stealth" bomber is regarded as an alternative to a stretched early 1960s F-111 or a degraded B-1. Even if such an aircraft were flown as a prototype in the late 1980s, it would probably follow the B-70 and B-1 into cancellation by the '90s. In the end, the B-1 in its original form probably offers the best, quickest, and most economical answer to SAC's increasingly urgent need.

One of the happiest facts to emerge at Farnborough is that two of the so-called "smaller nations" have already learned the lessons of the last decade. At a news conference, Aeritalia and Aermacchi of Italy, and EMBRAER of Brazil explained how their respective governments had agreed to work in partnership to develop the new combat aircraft needed by their national air forces. It will be based on the Italian AM-X, which was conceived as a tactical fighter to supplement the larger Tornado for all future air-to-ground missions of the Italian Air Force. The Brazilians require more elaborate equipment, for all-weather operations, but this

will fit easily into the Spey-engine AM-X, and the two-nation design team predicts a first flight as early as 1983. The presently foreseen requirement is about 200 aircraft for Italy and 100 for Brazil, and there is every hope of exports to Third World countries in search of a thoroughly practical and versatile combat aircraft.

Aerospace Industry Phenomenon

EMBRAER is something of a phenomenon in the aerospace business during a recessionary period. Since it was founded eleven years ago, it has delivered more than 2,200 aircraft. Many have been Pipers, built under license; but its own Bandeirante commuter airliner has achieved major success in the world market, notably in the US. Its ability to get things done was typified at Farnborough by distribution of a brochure packed with fine air-to-air color photographs of its new EMB-312 turboprop basic trainer/light-attack prototype, just fourteen days after the aircraft flew for the first time.



The AM-X lightweight tactical fighter is to be developed as a joint project by Italy (Aeritalia) and Brazil (EMBRAER).

The EMB-312 indicates EMBRAER's awareness of the energy crisis. Having acquired Brazil's second-largest aircraft manufacturer, Neiva, as a subsidiary, it has decided to abandon the piston-engine Neiva Universal II trainer. Instead, it will now produce the fuel-efficient EMB-312 for the Brazilian Air Force, as well as for such other military and commercial customers as Britain's Oxford Air Training School, which announced an order for three at the air show.

Unlike Paris 1979, there were no Soviet aircraft at Farnborough 80. It may be as well for the peace of mind of the West that the Soviet Union no longer stages its own Aviation Day flypast over Moscow in July of each year. Had it done so, there could have been huge formations of Tu-22M Backfire bombers reminiscent of the B-1, Su-24 Fencer attack aircraft in the class of the Tornado but not built to a price, fighter counterparts to the F-16 and F-18, ground-attack aircraft in the class of the A-10, the world's most heavily armed helicopters flown by pilots skilled in helicopter-to-helicopter air combat, new AWACS aircraft, and flight-refueling tankers based on the latest Ilyushin turbofan transports.

All would have displayed evidence that the once-comforting Soviet inferiority in avionics, equipment, and munitions can no longer be counted a major advantage for the West—however good the prototypes and projects looked at Farnborough. ■

The tiny jet-powered Caproni C22J is Italy's concept for a fuel-efficient primary trainer for the 1980s. (J. M. G. Gradidge)

After pallid participation in Farnborough 1978, the solid US Air Force and industry showing in 1980 was welcomed—not least of all by foreign leaders who hope it means United States intentions to resume its central role in world aerospace power.

The US Returns to Farnborough in Strength

BY F. CLIFTON BERRY, JR., EDITOR IN CHIEF

USAF's own exhibit (above) drew heavy crowds and compliments. Secretary Hans Mark's candid press conference generated heavy coverage of his comprehensive presentation.

MAJOR elements of US aerospace power were displayed to good effect during the biennial Farnborough International Air Show held in England in September. This revival followed a pallid participation in 1978 under restrictive US government policies. The increased US presence was welcomed by US military and corporate officials at Farnborough and, somewhat surprisingly, by friendly allied officials as well.

In fact, one of the most popular displays among all the wares shown by the more than 500 exhibitors was the US Air Force's own exhibit. Sited in a corner of one of the two huge exhibit halls, it drew a steady stream of visitors to watch and listen to the audiovisual presentations featuring USAF research and development efforts for the 1980s and 1990s. Particularly strong press and official interest was created by the model of USAF's NC-135 airborne laser aircraft.

On policy, Air Force Secretary Hans Mark said at the show that the increased US government and industry participation at Farnborough "did not represent a change; rather it was more a shift in emphasis" and a recognition of reality. That is, the restrictive arms-transfer policy enunciated by President Carter in May 1977 had not diminished the world's commerce in military goods and services as hoped. Instead, other nations had surged into the vacuum created by the Carter restrictions, with an apparent net loss of US trade and influence with customer nations.

The daily flying display featured more aircraft performing than ever. US Air Force planes put through their paces by company pilots included the F-15B Eagle (in Strike Eagle configuration) and F-16B Fighting Falcon. Other US aircraft flown daily were the Bell 249 helicopter gunship, the Gates Learjet 35 in its maritime surveillance role, the Navy-Marine F/A-18 Hornet, and three variations of the Hughes Helicopters' 500 MD in a variety of gunship and scout versions. Other US military aircraft on static display were USAF's A-10 from the 81st Tac Fighter Wing at Bentwaters, England, and a UK-based FB-111, plus the Rockwell OV-10D night observation surveil-

Test pilot Pat Henry flies F-15B Strike Eagle with conformal fuel tanks and twenty-two 500-pound bombs, a typical load.

lance aircraft. (A C-130H flying hospital from the Royal Air Force was planned for display, but was deployed operationally and did not show.)

Secretary Mark's Candor

Air Force Secretary Hans Mark was one of several senior USAF officials on hand. His press conference during the show generated more interest and speculation among aerospace experts than any of the flying or static displays. This was because he was so candid and comprehensive in his responses to questions, far different from the reticence or evasions that have come to be expected from European government ministers.

Secretary Mark opened the session by confirming that USAF will purchase twenty-eight British Rapier air defense fire units for use at American air bases in the UK. They will be manned by British crews from the RAF Regiment. He said the funds for the purchase are in the Air Force's 1981 budget, $50 million initially. When asked whether twenty-eight fire units is enough, Secretary Mark replied, "It is certainly better than having none," which is the present situation.

Secretary Mark noted that he had spent the entire previous day in talks at the Ministry of Defence. The purpose, he said, is to "get into advanced technology project areas while they are still in the development stage" in order to maximize the eventual benefits. He identified some areas of discussion as Vertical Takeoff and Landing (VTOL) and Short Takeoff and Landing (STOL) technology, trainer aircraft planning, and eventual C-130 replacement transport.

Secretary Mark said he believes that collaborative efforts work best when motivated by considerations of technology and economics, not forced by other factors. He said, "Those tend not to work so well." He said where each potential partner has something advanced to bring to the partnership, it will work better. As for specifics, he said, "Obviously, in the Harrier, Britain has a technical lead."

He said that a potential development could be to work together for an eventual USAF fighter aircraft that might be a follow-on to the AV-8B now in development. He cautioned, however, that in the tactical fighter area, "we ought to finish our present buys, and then decide what to do next. In that process, VTOL [technology] will be a player." The present fighter buys, begun in the 1960s and 1970s, as well as evolutionary improvements to them, will occupy a good deal of USAF resources in the immediate future. But he said that USAF must "lay the collaborative groundwork now" with potential partners so that the greatest technical and economic benefits can be realized.

USAF's Current Priorities

For the mainly European press corps, Secretary Mark reiterated his view of the Air Force's top priorities now, and mentioned other current programs. The priorities "have to be," he said, modernization of the strategic nuclear force, including the MX system; B-52 upgrade and eventual B-52 replacement; improving airlift (mainly strategic but not ignoring intratheater lift); and taking advantage of the Space Shuttle to operate better in space.

On the trainer aircraft issue, Secretary Mark said USAF might modify its T-37s, or choose a different aircraft from the group now competing under the Next Generation Trainer program.

On the question of industry's selling a lightweight fighter abroad, Mr. Mark said he did not consider the F-16 powered by a downgraded J79 engine as a good idea, on the grounds that deliberately diminishing capability is the wrong way to go. He said no decision has been

Strong spectator interest was created by the collection of Dassault Super Mirage 4000, Mirage 2000, and F1, here parked.

F-15B Strike Eagle closeup shows arrangement of Rockeye bombs and AIM-7 Sparrow missiles grouped around conformal fuel tank.

made about the F-15 Strike Eagle aircraft, noting that industry and USAF are still discussing and still evaluating the F-15 modified for the strike role.

He believes that the future of helicopters is not as bright as it once was, mainly because other concepts (like the tilt-rotor XV-15) are maturing that are simpler, more reliable, and capable of larger payloads.

Hardware Highlights

In the flying display and on the ground, the F-15 Strike Eagle drew substantial "oohs and ahs," dressed as it was with a lizard camouflage paint job and lugging conformal fuel tanks through its aerobatic maneuvers. *(See the accompanying Strike Eagle box.)* The French Dassault-Breguet Mirage 4000 and 2000 flew well, following their fine performances in the 1979 Paris Air Show, which was the 4000's debut. (Show officials were nonplussed one day when the 4000 was found missing. It turned out to have been taken back to France for the day for display to a potential customer.)

Industry and government officials noted the continued trend toward more emphasis on conducting business in aircraft components and accessories, and less on the concept of introducing a totally new aircraft or setting a new world record. Additionally, they agreed that now a major purpose of Farnborough (and Paris in alternate years) is to begin or continue the relationships that lead to partnership programs in aircraft and component development.

Foreign Reactions

The very fact that USAF had a display, and that the show was attended by Secretary Mark, uniformed USAF officers, and congressmen, caused several European experts to venture hopes that the US government was recognizing the vital role played by its aerospace power in the world. The poor showing in 1978, due to the restrictive Carter policies, not only created a market vacuum, which they rushed to fill, but it also led foreigners to doubt the US government's sincerity about its central role in creating aerospace power to preserve the peace.

The renewed participation in this year's Farnborough led these ex-

perts to hope that the US might once again be willing to exert its leadership potential. Others more cynical, however, cautioned that the Administration's sudden renewed interest in Farnborough could be motivated more by election-year considerations than other factors.

The Thatcher Position

British Prime Minister Margaret Thatcher, in addressing the annual dinner of the Society of British Aerospace Companies (SBAC), left not a shred of doubt about her position. She is the first Prime Minister to speak to the SBAC Farnborough Air Show dinner, this being the thirty-fourth. Mrs. Thatcher noted that British industry was exporting more than £1.2 billion (about $2.8 billion) worth of defense equipment, and congratulated the SBAC members for their contribution to the total. She went beyond that, however, urging them to seek ways to increase their exports, thus bringing in larger sums and creating more jobs in the process. She suggested that the Ministry of Defence should design its requirements with the export markets in mind, and that aerospace companies should point out to the government where export opportunities lay so they could be followed up in a coordinated manner.

Large contingents of observers were present at the show from the Soviet Union, People's Republic of China, and countries of the Third World, particularly from the Middle East and Africa. The Russian group was so large that some of its members temporarily slipped away from British security and were found roaming another part of the Royal Aircraft Establishment not part of the air show grounds. At the show aircraft, the most frequent Russian questions were about tires and windshields, suggesting they may not have solved their continuing problems in those areas.

The main conclusion this observer drew from the 1980 Farnborough is that the increased US participation—especially the Air Force itself—was well worth the time and expense, and started the process of reversing foreign perceptions of the US drawing back from its leadership position in aerospace. ■

Strike Eagle—Night, All-Weather Attack System

The daily flying program at Farnborough began at 2:30 p.m. and ran for three hours. It began with the Canadair Challenger business jet and concluded on most days with the multinational Airbus 300 of Singapore Airlines. On the final public days, the Royal Air Force's Red Arrows aerobatic team delighted the public with their skill in flying their nine Hawk trainer-attack planes. They were topped only by the fly-past of the RAF's Battle of Britain flight with its Lancaster bomber and Hurricane and Spitfire fighters.

Spectators saw a mix of Canadian, British, Italian, Brazilian, German, and Spanish aircraft fly for more than an hour before the first American fighter plane took off. The French Mirage 4000 shook eardrums with the roar of its takeoff, while the multinational Tornado showed off in two versions: the ground attack and air defense variant (ADV). Late in the aerial program, fifty-sixth of sixty-two, the USAF F-16B delighted spectators with its nimble maneuvers preserved in the sky by wingtip smoke generators. The Navy-Marine Corps F/A-18 performed flawlessly during its time on the aerial stage, but was destroyed in a mishap (still under investigation at this writing) after the show ended. But the highlight of graceful and nimble aerobatics was provided by the USAF-McDonnell Douglas F-15 Strike Eagle.

Test pilot Pat Henry flew the Strike Eagle nonstop (and unrefueled) from Loring AFB, Me., to RAF Mildenhall, arriving with fuel to spare. With bombs removed to comply with safety rules, Henry put the F-15B through the same six-G aerobatics executed by its smaller counterparts.

On the ground in the static display park, the aircraft drew sizable crowds, with the most notable visitor being His Royal Highness the Duke of Edinburgh. During his visit to the show, Prince Philip walked along the static display line. When he reached the Strike Eagle, instead of passing on to the next aircraft he spent more than ten minutes with Chester V. Braun, Vice President for the F-15 of McDonnell Aircraft Co., asking questions about the aircraft and the array of possible loads spread on the hardstand around the plane.

The Strike Eagle is a company-modified F-15B equipped with an improved Hughes Aircraft APG-63 radar with Synthetic Aperture Radar (SAR) capability, a multimission aft cockpit, and other strike enhancements. The program has been under way for almost three years, and has cost about $40 million so far in funds from participating companies. It aims to fill the Air Force need for a night, all-weather strike aircraft with high survivability and high probability of destroying the targets it attacks.

The single aircraft seen at Farnborough is the demonstrator for the system. By midsummer 1981, all elements of the system will be on board and demonstrating the Strike Eagle's capability to detect, track, and attack fixed and moving targets at night or in adverse weather. Examples of the capabilities include radar acquisition of targets as small as ten feet from distances of twenty miles; actual blind weapons delivery, aiming to achieve accuracies of seven to eleven mils (striking within seven to eleven meters at a thousand meters, or thirty-five to fifty-five meters at 5,000-meter range); terrain-following performed while the search radar data remains displayed. Heart of the system—and the reason why so much can now be done with it that could not even three years ago—is the programmable signal processor in the APG-63 radar system. By linking it with the now-required avionics MilStd-1553, then bringing in the capability of forward-looking infrared (FLIR) sensors, and processing all the data into usable displays in the aft cockpit, the night/all-weather capability comes into being. With the addition of the conformal fuel tanks and standard bomb racks, the F-15B gets the unrefueled long range or time on station and variable load-carrying abilities needed for the attack role, while not giving up its air-to-air capabilities.

Participating companies with McDonnell Douglas in the Strike Eagle demonstrator are Hughes Aircraft as mentioned; Honeywell for the armament controls; Sperry for the cockpit displays; and Litton for the refinements to the Inertial Navigation System.

—F. C. B., Jr.

Chester V. Braun, McDonnell Aircraft Co. Vice President for the F-15 (left), briefs the Duke of Edinburgh on the range of ordnance carried by Strike Eagle.

Meeting at a time of grave threats to America's security and towering challenges to the men and women of the Air Force and the other services, AFA's 1980 National Convention took . . .

A Panoramic, Probing Look at US Defense Needs

BY EDGAR ULSAMER, SENIOR EDITOR (POLICY & TECHNOLOGY)

THE Air Force Association's thirty-fourth annual National Convention—held in Washington, D. C., September 14–18—was a "working" convention that probed the state of the nation's security, found it wanting in key areas, and made succinct recommendations for correcting existing and incipient deficiencies. The Convention's topics and concerns ranged across the horizon of national security issues.

Yet the most intense concerns—expressed by speaker after speaker and reflected in all major Convention actions—were reserved for matters involving military people in general and blue-suiters in particular.

As the Convention delegates put it in AFA's 1980–1981 Statement of Policy: "For the US to be able to deploy, support, and sustain combat forces of sufficient size, quality, and stamina to prevail is first and foremost a matter of people. The nation is losing too many experienced military professionals—in both enlisted and officer ranks—too fast. They are walking out on their chosen careers because their patriotism can only be stretched so far. And they are walking out—one enlisted Air Force professional every six minutes—many because of lagging compensation, a decline in the quality of military life, and constant assaults on the dignity of their calling."

But in limning the problems of people, the Convention also pointed the way toward solutions. As Sen. Bill Armstrong (R-Colo.) reported to a combined session of AFA's Junior Officer, Senior Enlisted, and Enlisted Advisory Councils at the Convention, the mood is "right" in Congress to support a three-pronged, bipartisan attack on the military manpower crisis. Claiming that "we have stopped the slide in pay and benefits for servicemen and women," he pledged that "they will erode no further."

The three measures that Senator Armstrong suggested would end the military manpower crisis are the National Defense Compensation Act, the GI Bill of 1980, and the Strength in Reserve Act of 1980. The first measure is pending before the Senate Armed Services Committee and calls for phased pay increases over the next three years of up to eighteen percent. Twin GI Bills introduced in both the Senate and the House would apply to service people who enlist after October 1, 1980, and perform two years of honorable service. They would receive up to $3,000 annually in tuition grants for up to four years as well as a living stipend of $300 a month for the four years.

During a Convention address, Sen. Bill Armstrong (R-Colo.) outlines remedies for the military manpower crisis.

The third measure provides educational benefits and preference in federal hiring for service in the National Guard or in a component of the Ready Reserve.

USAF Chief of Staff Gen. Lew Allen, Jr., speaking at the Convention luncheon in his honor, said, "I am torn between pride in what our people and their families have rendered because of their deep feelings of patriotism and service, and regret for the loss of so many superb professionals who simply could endure no longer." Expressing hope that this lesson about the limits of devotion may have finally struck home with those who control the purse strings, he said that "this lesson has little to do with registration or the draft. It has to do with retention of proud men and women who deserve dignity, respect, and a decent standard of living . . . men and women who cannot and would not strike to make their grievances known, who could leave their profession with a great sadness over a shortsighted society which has only now awakened to their plight."

After many years and enormous effort, General Allen said, "there is encouraging evidence that the nation and its political leaders are coming to understand the plight of military members and their families." Terming Congress's approval of the Nunn-Warner and Fair Benefits Compensation initiatives as well as of the 11.7 percent pay raise "important first steps," he warned, however, that "retention rates are still well below desired levels and we continue to experience shortages of our most highly skilled people. Therefore, we must continue to seek the additional im-

General Allen: ". . . we must continue to seek the additional improvements" needed to meet skilled manpower requirements.

provements that are essential to meet our Air Force needs for skilled professionals." *(See p. 66 for the full text.)*

People, especially enlisted personnel, were center stage at the Convention's opening ceremonies when MSgt. Wayne L. Fisk—the first noncommissioned officer to do so in AFA's thirty-four-year history—delivered the stirring Convention keynote address that stressed that no act of citizenship is more essential than "adequately compensating the people of our armed forces." Appealing to AFA to help restore "prestige, public esteem, honor, and a decent standard of living to the men and women of our military forces . . ." Sergeant Fisk, a much decorated pararescue specialist of the Aerospace Rescue and Recovery Service who served five combat tours in Southeast Asia and whom the Jaycees recently honored as one of the ten most outstanding young men in America, termed the present generation of service people "patriots' patriots who deserve better treatment than our fellow citizens have been providing."

Terming AFA's decision this year to call on an enlisted speaker for the Convention's keynote "most appropriate," Sergeant Fisk said it is unfortunate that the Association for years "has been regarded as something of an 'Officers' Club.' " Pointing out that "no other organization has such a recognized impact on the men and women of the United States Air Force as the Air Force Association," he exhorted AFA to "intensify . . . efforts to recruit enlisted personnel into [its] ranks. . . . The enlisted folks, with their wealth of information and experience, are an integral part of this Association, and their membership must be recognized more than it has been in the past." Although applauding the pending 11.7 percent pay increase, Sergeant Fisk suggested that the exodus of enlisted professionals won't be stopped until real purchasing power of military people is restored to 1972 levels: "A minimum of 17.6 percent is needed just to make up for the losses since 1972, and I don't hesitate to add, we need every penny of it—right now." *(Sergeant Fisk's speech is covered on p. 97.)*

The Air Force enlisted people, appropriately enough, were the theme and subject also of the Convention's first gala event, AFA's festive dinner honoring the twelve Outstanding Airmen of 1980. Vice Chief of Staff Gen. Robert Mathis, the event's featured speaker, talked about "an awareness growing in our country—an awareness of the need and value of our professional military men and women." Today, he explained, "we are faced with a clear and present danger to the security of the free world—and we are also engaged in debates over the proper size and role of our military forces. The condition of the individual military member has long been tied to the changing tides of public sentiment. Congress has historically struggled with the age-old question of pay and benefits—and how much defense is enough.

At the Convention black-tie dinner, from left, JCS Chairman Gen. David C. Jones, USAF Vice Chief of Staff Gen. Robert C. Mathis, and AFA National President Victor R. Kregel.

Sergeant Fisk: "The enlisted folks, with their wealth of information and experience, are an integral part of this Association."

"From the very beginning of our Republic, we have evidenced a remarkable ambivalence about the role of our armed forces. We have alternately enshrined—and then ignored—our people in uniform. This pattern has gone on for 200 years. . . . I hope that we have learned the lessons of unpreparedness—the story is clearly written in our hasty calls to arms and our equally hasty farewells to arms when the immediate danger has passed," General Mathis told the Outstanding Airmen of 1980.

The Pervasive Strategic Threat

"US strategic and offensive capability is the supreme guarantor of this country's and the free world's security. Conversely, Soviet strategic offensive and defensive capability is the ultimate threat to this country's and the free world's survival," asserts AFA's 1980–81 Policy Paper on Force Modernization and R&D, unani-

From left, Air Force Secretary Hans Mark, Charles Corddry of the Baltimore Sun and this year's recipient of AFA's Gill Robb Wilson Award, and Under Secretary of the Air Force Antonia Handler Chayes. A television and print journalist, Mr. Corddry was cited for directing public attention to the Soviet threat.

mously adopted by the Convention delegates. The Paper points out that "Soviet spending on strategic forces is more than twice that of the US, with the result that their relative capabilities are waxing while ours are waning. A window of vulnerability is opening up and portends a period of unprecedented peril and Soviet adventurism."

In a similar vein, General Allen told the Convention that to preclude disastrous miscalculations by the USSR, "we must, as a first priority, redress the impending disparity in US/Soviet strategic nuclear capability." Pointing out that the increasing momentum of Soviet defense spending is eroding the strategic nuclear balance, he warned that this condition "may increase Soviet self-confidence and thus encourage further aggression beyond Afghanistan."

AFA's Statement of Policy, after explaining that Soviet strategic doctrine pivots on protracted nuclear war-fighting capabilities rather than the mutual-assured destruction concept, asserts that "there can be no doubt that the Soviet Union is much closer to—if it does not already have—greater nuclear war-fighting capability than the US. Correcting this potentially fatal flaw must remain the paramount defense objective of the United States." In extension of this logic, AFA's Policy Paper, therefore, applauds the Administration's commitment to full-scale engineering development and deployment of the MX in a multiple protective shelters (MPS) basing mode. The Association urged the next Administration—whether reelected or new—as well as the Congress not to "succumb to diversionary or dilatory tactics, especially the blandishments of quick fixes that cost less [than MX] but can't cope with the increasing Soviet threat over the long term." General Allen, similarly, stressed the importance of getting on "with the crucial task of restoring the survivability of the land-based ICBMs to provide a resilient strategic triad for the years to come. There are no quick fixes or easy answers to this challenge."

General Allen added that "the time for debate regarding the MX is past; the search for alternatives is over. Multiple Protective Shelters basing is sound in concept, straightforward in construction, and will be manageable in implementation. The MPS basing mode has been reviewed in detail and approved by the Air Force, the Joint Chiefs of Staff, the Secretary of Defense, the President, and the Congress. While the issue of deployment area selection remains to be fully resolved, this is a matter being decided on grounds of operational concerns . . . costs, and local impacts. But there can be no question about need for MX and no quarrel about urgency. . . . Further delay in fielding the MX will jeopardize national security, provoke a rash of costly, unsatisfactory alternatives, and lead ultimately to less capability at greater cost."

Other Strategic Needs

So far as the air-breathing component of the strategic triad is concerned, AFA's Policy Paper recommends a mix of solutions "involving both radically new, high-risk approaches such as Stealth technologies, as well as evolutionary developments. . . . It would be wrong and reckless to forego development and deployment of a long-range combat aircraft (LRCA —also known as the multirole bomber) that can deliver large payloads comprised of either nuclear or conventional weapons and instead focus exclusively on speculative high-technology solutions."

While urging that research and development of Stealth and other potentially revolutionary technologies be pursued at an optimal rate, AFA pointed out that "there are unanswered questions about when such systems could become available." Additionally, the Policy Paper points out "it is not clear whether or not they could be overcome by a resourceful enemy. Lastly, systems employing these advanced technologies appear limited to small payloads and thus less capable of performing the full range of tactical missions."

Secretary of the Air Force Dr. Hans Mark, speaking at the Convention luncheon in his honor, reported in detail on modernization of the nuclear strategic forces which he said was progressing "very well. We are arming our B-52 bomber fleet with cruise missiles having nuclear warheads which will promise to keep these airplanes as an active portion of our . . . force for many years to come after they are phased out as penetrating bombers. I have spent much time reviewing both the technology and management of the cruise missile program, and I find it to be in excellent shape. The

missiles are accurate, reliable, and will have long shelf lives."

For the long term, he said, "we are in the stage of developing serious plans for a new bomber, and I hope that we can fund such a program by early next year. There is no doubt in my mind that we must do this as soon as possible." General Allen similarly referred to plans for a "new, highly versatile, long-range combat aircraft to replace the B-52."

Readiness and Sustainability

"No element of military power is more important than the combination of readiness to fight wherever and however necessary and the endurance to see the fight through to a decisive stage," AFA's Statement of Policy asserts. General Allen pointed out that the Administration's policy of defending with force, if necessary, America's vital interests in the Persian Gulf expands the demands on readiness and sustainability significantly beyond the previously used criterion, *i.e.*, credible defense of Central Europe.

Because of the high stakes involved in the Persian Gulf region, General Allen told the Convention, "we have levied even more stringent requirements on our forces, for immediate responsiveness and staying power than called for in our NATO planning. I underscore, however, that these new readiness and sustainability standards simply require improvements in a force that already possesses considerable capability. It should be clearly understood that this nation can mount, project, and employ an expeditionary force of considerable consequence, and with global reach, with great dispatch." Deployment and training exercises carried out by the "total" Air Force earlier this year, he said, demonstrated in a "superb manner" USAF's capabilities for operations in Southwest Asia: "At Red Flag and in deployments to Egypt and Saudi Arabia, for example, our people have shown that they can operate sophisticated equipment in the harsh environment of the Middle East. The United States has significant forces and equipment deployed in Southwest Asia, and we are taking major steps to reinforce and enhance that presence."

USAF's Chief of Staff underscored the importance of keeping the crucial energy resources of the Persian Gulf region from falling under Soviet control, saying that at stake is "not simply the prospect of economic hardship but the global balance of power as it has existed since the end of World War II. . . . A carefully orchestrated Soviet strategy that allowed them to dictate the terms of Western access to Persian Gulf oil could well lead to piecemeal defeat of the free world." General Allen called it vital that the US and its allies show the "resolve and the visible military capability to do what is required to frustrate Soviet attempts to gain control of the Persian Gulf region. We must remain steadfast through every test, whether in the form of naked military aggression, or a protracted period of calculated probes to measure our resolve."

Dr. Mark also stressed the criticality of "our readiness to engage in military action whenever necessary and at a level commensurate with the threat we know is there . . . . The single biggest increase in our budget for FY '82 is devoted to . . . the inventory of spare parts for all of our aircraft so that they will be ready to fly and fight if and when the time comes."

Yet, this shift in funding priorities is exacting a high price elsewhere, as General Allen told the Convention: "Greater emphasis on readiness, sustainability, and mobility [comes] at the expense of preferred rates of procurement for new aircraft. This shift in priorities is only acceptable for the short term. We cannot accept continued cutbacks and indefinite delays in our tactical modernization program. Not only do reduced production rates drive up unit costs, but they put us further behind a Soviet fighter production line that is turning out a modern aircraft every seven hours."

The Convention delegates, in the Association's new Policy Paper, pointed out that this "practice of robbing Peter to pay Paul is inflicting serious damage on both force strength and readiness" and suggested that "the solution lies in increased funding of both procurement and readiness investments." At the same time, AFA stated concern about the "growing tendency in Congress and the Administration to favor quantity over quality in tactical aircraft" and warned that the result are "combat systems neither able to cope with increasingly capable enemy aircraft nor able to perform their mission under adverse operating conditions. The tactical air force must be matched closely to the emerging threat and fit for any environment where conflict might occur. Going below this threshold not only would

A lighthearted moment at the Dinner Dance capping AFA's National Convention is shared by, from left, Mrs. Jones; JCS Chairman Gen. David C. Jones; Mrs. Dougherty; Vice Chief of Staff Gen. Robert C. Mathis; and Gen. Russell E. Dougherty, USAF (Ret.), the new Executive Director of the Air Force Association.

Gen. Richard Ellis, Commander in Chief of Strategic Air Command and this year's recipient of the H. H. Arnold Award, AFA's highest honor.

exact an unbearable price in blood and treasure but also create a marginally effective force."

General Allen noted this tendency, especially the contention that the Air Force cannot maintain and operate successfully high-performance systems of the F-15/F-16 type, with this pithy comment: "To this, I say nonsense."

Mobility and Airlift Needs

The Convention delegates prefaced the Association's recommendations for expeditious enhancement of airlift and mobility forces by pointing out that a "changing and deteriorating world situation coupled with declining US influence and shrinking landing rights on the territory of US allies rapidly escalates the need for more and better US airlift capabilities." Stressing that the nation's strategic airlift capabilities are about half of what they should be, AFA's Policy Paper warned that "these shortages are bound to become more critical as warning times grow shorter and as combat equipment becomes larger and heavier."

General Allen elaborated on this point, saying that the nation's "mobility assets, both air and sea, are inadequate to meet the requirements of a short-warning attack in Europe. These requirements are even more severe in the context of a rapidly developing contingency in Southwest Asia." Yet, the nation's worldwide military strategy is keyed to rapid reinforcement of in-place forces or rapid insertion of power into trouble spots where there are only a few forward deployed units. This strategy, he stressed, "must be supported by adequate mobility in its most visible, responsive, and flexible element—airlift. Therefore, we must expand our airlift force, especially with regard to the capability to carry outsize cargo over long ranges, with the flexibility to land and operate on existing fields within the delivery area." USAF's CX versatile airlifter, currently in concept formulation, is meant to provide the additional aircraft and capabilities to meet this need, General Allen said.

The Mounting Soviet Threat

Common to all major Convention activities and actions was recognition of the increasing Soviet threat. As General Allen put it: "It is now widely apparent that the US-Soviet relationship is fundamentally an antagonistic one and that the Kremlin is determined to pursue its interests relentlessly, aggressively, and even brutally; witness their actions in Afghanistan." He added that the "expansionist ambitions" of the Soviet Union must be viewed within the context of "the limitations we face in attempting to influence Soviet actions by diplomatic and economic measures" as well as the "serious deficiencies" of the US armed forces compared to the increasing military power of the Soviet Union.

The Association's new Policy Paper stressed that during the past decade the Soviet Union outspent the US by about $70 billion with the result that the USSR's overall military technology program is twice that of this country. Counting procurement of hardware, military construction, and R&D, the Soviet investment lead over the US during the 1970s amounted to $240 billion, with the result that "this country's technological lead is eroding to the point where America's technology won't be able to offset Russia's numerical advantages."

The delegates capped the Association's new Policy Paper with this statement: " . . . the Soviet Union is outspending the US in the military sector by about $50 billion a year. This differential is greater than the entire budget of the United States Air Force. The resultant imperative is clear: US defense spending must be increased significantly to match the Soviet military capabilities or we must be prepared to accept the consequences."

The threat and what to do about it also were the basis of AFA's highest award, the H. H. Arnold Award, which went to the Commander in Chief of the Strategic Air Command, Gen. Richard Ellis, for "leading the nation toward greater awareness of the relentless buildup of Soviet military power, thereby stimulating the executive branch and the Congress to take action to overcome the adverse strategic balance."

In accepting the award, General Ellis remarked that "I can think of no more important action that has taken place in recent years than the current realization that strategically we were a nation in trouble and something needed to be done—fast. Well, something is being done, for America is once again on its way toward rebuilding and modernizing the strategic forces, and that only comes from an informed public and an enlightened Congress. For this

The number of aerospace companies participating in this year's Aerospace Development Briefings and Equipment Displays was up by more than twenty percent from last year. The event drew a bigger audience than ever before.

reason, I believe it is the obligation of senior military officers to bring such matters to the attention of the American people and members of Congress, provided, of course, that it is done in appropriate forums. To do less would be to forsake the full meaning of our oath of office."

More and Better

Measured by any yardstick, the thirty-fourth National AFA Convention was a case of "more and better." Attendance, once again, grew over previous years, from the opening ceremonies to the Capitol Hill reception known as "Salute to Congress." About 140 members of Congress and many senior members of the Air Staff were hosted by the Convention delegates at the "Salute" program to discuss legislative issues relevant to USAF.

Similarly, the Aerospace Development Briefings and Equipment Displays were larger in size and drew a bigger audience than ever before. The number of aerospace companies participating in this event—pioneered by the Air Force Association to provide show-and-tell instruction on the latest developments in aerospace technology—was up by more than twenty percent from last year. In terms of floor space, the exhibits topped last year's by more than forty percent. About 6,000 military, government, congressional, and news media personnel attended the Aerospace Development Briefings and Equipment Displays.

The Convention's Chief Executives Reception and Buffet brought together members of Congress and defense experts from the congressional staff, as well as White House, Pentagon, and defense industry leaders for informal discussions of defense issues.

Climax and finale of the 1980 National Convention was the black-tie dinner commemorating the founding of the Air Force as an independent service in 1947.

The festive event also capped a set of special convention activities centered on the retirement of AFA Executive Director James H. Straubel after almost thirty-four years of dedicated service. Mr. Straubel, who was elected a permanent member of AFA's Board of Directors by the Convention delegates, had established AIR FORCE Magazine as the then official journal of the Army Air Forces in the early days of World War II and served as its editor for the duration of that war. He joined AFA as Executive Director in 1947 and over the ensuing thirty-three-plus years nurtured the Association to its present state of broad effectiveness and high respectability. As AFA National President Victor R. Kregel put it when presenting Jim with a solid gold AFA lifetime membership card, "We would not be here at all except for his thirty-three years of dedicated service."

In bidding farewell to Jim Straubel, the Convention also welcomed AFA's new Executive Director, Gen. Russell E. Dougherty, USAF (Ret.), Commander in Chief of the Strategic Air Command and Director of Strategic Target Planning for all US strategic forces before his retirement in 1977. ■

Providing entertainment at the annual dinner commemorating the establishment of the Air Force as a separate service was the Air Force Band.

AWARDS AT THE 1980 AIR FORCE ASSOCIATION NATIONAL CONVENTION

AFA's AEROSPACE AWARDS

The H. H. Arnold Award (AFA's highest annual award)—To **Gen. Richard H. Ellis**, Commander in Chief, SAC, for leading the nation toward greater awareness of the relentless buildup of Soviet military power, thereby stimulating the Executive Branch and the Congress to take action to overcome the adverse strategic balance.

The David C. Schilling Award ("The most outstanding contribution in the field of Flight")—To **Capt. Ronald G. Hahn,** USAF, for an extraordinary display of professional flying skill and raw courage as a helicopter pilot in saving the lives of three airmen during a rescue mission in Alaska accomplished under seemingly impossible conditions.

The Theodore von Kármán Award ("The most outstanding contribution in the field of Science and Engineering")—To **Capt. Randal L. Richey,** USAF, for bringing about a unique and crucial improvement of the national space defense system by brilliantly correcting a major technical deficiency and thereby contributing significantly to national security.

The Gill Robb Wilson Award ("The most outstanding contribution in the field of Arts and Letters")—To **Charles Corddry** of the Baltimore *Sun* for consistently excellent reporting and analyses of defense and foreign policy issues as a newspaper and television journalist, thus enhancing public understanding of the challenges and threats confronting our national security.

The Hoyt S. Vandenberg Award ("The most outstanding contribution in the field of Aerospace Education")—To the **Air Force Institute of Technology,** Wright-Patterson AFB, Ohio, for expanding its university-level curriculum and its advanced degree programs to better meet military requirements in 1979, its sixtieth anniversary year. (*Accepted by Lt. Gen. Stanley M. Umstead, Jr., Air University Commander.*)

The Thomas P. Gerrity Award ("The most outstanding contribution in the field of Systems and Logistics")—To **Col. William P. Bowden** for outstanding ingenuity and technical leadership in his application of sound management practice while serving as Director, Materiel Management, Oklahoma City Air Logistics Center, Tinker AFB, Okla.

Veterans Administration Employee of the Year—To **Dorothy L. Starbuck,** Chief Benefits Director, Washington, D. C., for inspirational leadership and sound administrative practices in enhancing the welfare of all veterans and their families.

SAC Commander in Chief Gen. Richard H. Ellis receives the H. H. Arnold Award, AFA's highest honor, from AFA National President Vic Kregel.

AFA CITATIONS OF HONOR

Lt. Col. Dennis C. Beasley, Commander, 2039th Communications Squadron, Fairchild AFB, Wash., for initiating and implementing improvements in vital command and control communications for US and allied forces in Europe by prepositioning communications systems at NATO airfields.

Joseph J. F. Clark for exceptional professionalism and leadership while serving as Associate Director of the Air Force Office of Legislative Liaison, thereby advancing the cause of the Air Force and its people.

Capt. Patricia M. Fornes, 381st Strategic Missile Wing/DOTI, McConnell AFB, Kan., for professionalism leading to her selection as the first woman officer on a missile crew and the first woman in the Eighth Air Force to be appointed as missile combat crew commander.

Capt. Kathy LaSauce-Arlington, 63d Military Airlift Wing, Norton AFB, Calif., for brilliant and dedicated service in articulating the cause of the armed forces during a series of voluntary speaking engagements on her own time.

Col. Alan W. Melvin for distinguished service as Commander, 68th Tactical Fighter Squadron, Moody AFB, Ga., in displaying great leadership in making his squadron the acknowledged expert in the field of tactical mobilization.

Frederick T. Rall, Jr., Aeronautical Systems Div., Wright-Patterson AFB, Ohio, for leadership and technical competence in guiding the development of Air Force aeronautical systems of crucial importance to national security. AFA honors him as Air Force Civilian of the Year.

Lt. Col. Francis Sabo for directing the implementation of the F-16's European flight acceptance program, thus furthering cooperation among NATO nations.

Ms. Margaret A. Shea and **Don F. Smart,** Air Force Geophysics Laboratory, Hanscom AFB, Mass., as Physicist/Task Scientist and Physicist, respectively, for achievements in assessing and predicting the effects of solar events on Air Force communications through pioneering research in cosmic radiation.

MSgt. Wayne A. Sturdevant for superior leadership of a team responsible for the development of mobile training for the Egyptian Air Force, thus enhancing the US's image abroad.

Maj. Joseph J. Tencza, Jr., for outstanding ability and professional skill resulting in the development of major programs that significantly enhanced the life of Air Force people while assigned as Chief, Legislative Section, Directorate of Personnel Plans, DCS/M&P, Hq. USAF, Washington, D. C. AFA honors him as Air Force Personnel Manager of the Year.

Clayton J. Thomas, Scientific and Technical Advisor to the Directorate of Strategic Force Analyses, Hq. USAF, Washington, D. C., for preeminence in strategic analysis and formulation of Air Force concepts that led to fundamental improvements of US deterrence forces.

Extraordinary flying skill and courage on a life-saving mission earned Capt. Ronald G. Hahn this year's David C. Schilling Award, presented by Mr. Kregel, right, at the National Convention.

SSgt. Gilbert E. Vaillancourt, Jr., 71st ARRS, Elmendorf AFB, Alaska, for heroic action, at the risk of his life, in rescuing a critically injured mountain climber from 16,200 feet on Mt. McKinley, Alaska, the highest hovering hoist recovery in Air Force history.

John E. Zipp for long and distinguished service to the Air Force Accounting and Finance Center and for significant contributions to AFA in a volunteer capacity including his several terms as advisor to AFA's President on civilian personnel matters. (*Presented in Washington, D. C., earlier this year.*)

Project CHECKMATE, Directorate of Operations & Readiness (XOOTR), Hq. USAF, Washington, D. C., for pioneering a unique educational and training system that helped trigger the Rapid Deployment Force concept. (*Accepted by Col. John L. Borling, Chief, Readiness, Analysis and Initiatives Group [Project CHECKMATE].*)

AFA MANAGEMENT AWARDS FOR LOGISTICS

AFA Executive Management Award—To **Col. George D. Benjamin,** for exceptional performance as Director of Materiel Management, AFLC, San Antonio ALC, Kelly AFB, Tex., in providing timely logistics support of Air Force programs of national and international significance.

AFA Middle Management Award—To **Lt. Col. Joseph A. Sabin** for superior performance as Director of Resource Management, Hq. AFLC, Wright-Patterson AFB, Ohio, in initiating changes to aircraft and engine work loads that enhanced AFLC's ability to meet wartime surge requirements, thus increasing USAF readiness.

AFA Junior Management Award—To **Capt. Stephen Gosciminski** for superior performance as Deployment and Maintenance Planning Manager, Directorate of Logistics Support, Deputy for KC-10, Acquisition Logistics Div., Hq. AFLC, Wright-Patterson AFB, Ohio, ensuring a smooth and efficient beddown of USAF's newest tanker aircraft.

His major contribution to national security won Capt. Randal L. Richey AFA's von Kármán Award, here presented by AFA Board Chairman Daniel F. Callahan, left.

AFA MANAGEMENT AWARDS FOR SYSTEMS

AFA Distinguished Award for Management—To **Maj. Gen. James W. Stansberry** for exceptional service as Deputy Chief of Staff for Contracting and Manufacturing, Hq. AFSC, Andrews AFB, Md., contributing immeasurably to the continuing success of Air Force systems acquisition.

AFA Meritorious Award for Program Management—To **Col. Aloysius G. Casey** for exceptional service as Assistant Deputy for Missile-X and Missile-X Program Manager, Ballistic Missile Office, Norton AFB, Calif., contributing immeasurably to the advanced development and full-scale engineering of the Missile-X system.

AFA Meritorious Award for Support Management—To **Col. Vaughn E. Hill** for exceptional service as Staff Judge Advocate, ESD, Hanscom AFB, Mass., in support management to ESD, other Air Force and DoD activities, and NATO, thus contributing immeasurably to a vigorous DoD systems acquisition and research and development program.

AIR NATIONAL GUARD AND AIR FORCE RESERVE AWARDS

The Earl T. Ricks Memorial Award—To **Capt. William R. Kennedy** and **Capt. James S. McIntyre,** 158th Defense Systems Evaluation Group, Vermont ANG, Burlington, Vt., for outstanding airmanship as EB-57 crew in locating and keeping in view two Canadian Forces crewmen downed in the Pacific, resulting in their recovery.

The Air National Guard Outstanding Unit Award for 1980—To the **152d Tactical Reconnaissance Group,** Reno, Nev. (*Accepted by Col. Wayne Adams, Commander.*)

The Air Force Reserve Outstanding Unit Award for 1980—To the **349th Military Airlift Wing,** Travis AFB, Calif. (*Accepted by Col. James C. Wahleithner, Commander.*)

The President's Award for the Air Force Reserve—To the **701st Military Airlift Squadron,** Charleston AFB, S. C. (*Accepted by Maj. James M. McCormick, Pilot.*)

SPECIAL CITATION

Lackland AFB, Tex., for outstanding support of the Air Force Recruiter Assistance Program. (*Accepted by Lt. Delores Marshall, AFRAP Project Officer.*)

AFA National President Vic Kregel presents the Gill Robb Wilson Award to Charles Corddry, right, Defense correspondent of the Baltimore Sun.

In his address at the AFA Convention luncheon in his honor, the Air Force Secretary outlined the priorities he and the Chief of Staff are striving for, both in short-term operations and the long-term "programmatic" sense. The essential element, he stressed, continues to be Air Force people . . .

A Progress Report

BY THE HON. HANS MARK, SECRETARY OF THE AIR FORCE

LAST year when I spoke to this group, I could do so without the obligation to make a progress report since I had just entered office. Since then, however, a year has passed, and I think I do owe you a report on what we have been able to do and where perhaps we have fallen short.

I think the most important job of people in positions of responsibility is to do their best to provide a sense of the future and an accompanying sense of priorities. I have spent a great deal of time thinking about, talking about, and arguing with all kinds of people about the priorities we must follow if our Air Force is to remain the strongest in the world. Yesterday, the Chief [USAF Chief of Staff, Gen. Lew Allen, Jr.—see p. 66] gave an eloquent description of these priorities, and I would like to go over some of the things he said, as viewed through a somewhat different prism—from the civilian side rather than military—in order to make it as clear as possible what he and I are trying to do and where it is that we as an Air Force are going.

When you think about priorities, it is important to recognize that there are really two separate kinds of priorities between which we need to distinguish. One set (and I call these "programmatic" priorities) deals with what we are going to do out into the future. Another set, our "operational" priorities, deals with things we may have to do tomorrow.

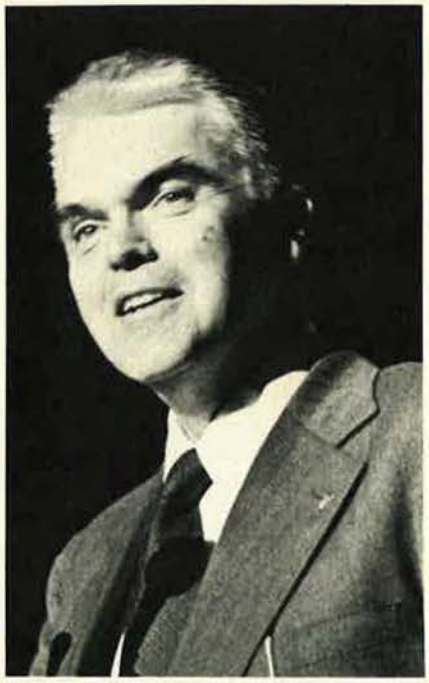
When we discuss our next year's budgets, most of the discussion revolves around programmatic priorities, that is, how we will work five or ten years from now. But when we talk about deployments, for example, or people programs, then we are talking about how the Air Force operates today and tomorrow. I would like to try to attempt to show you how I think these two things interweave.

Programmatic Priorities

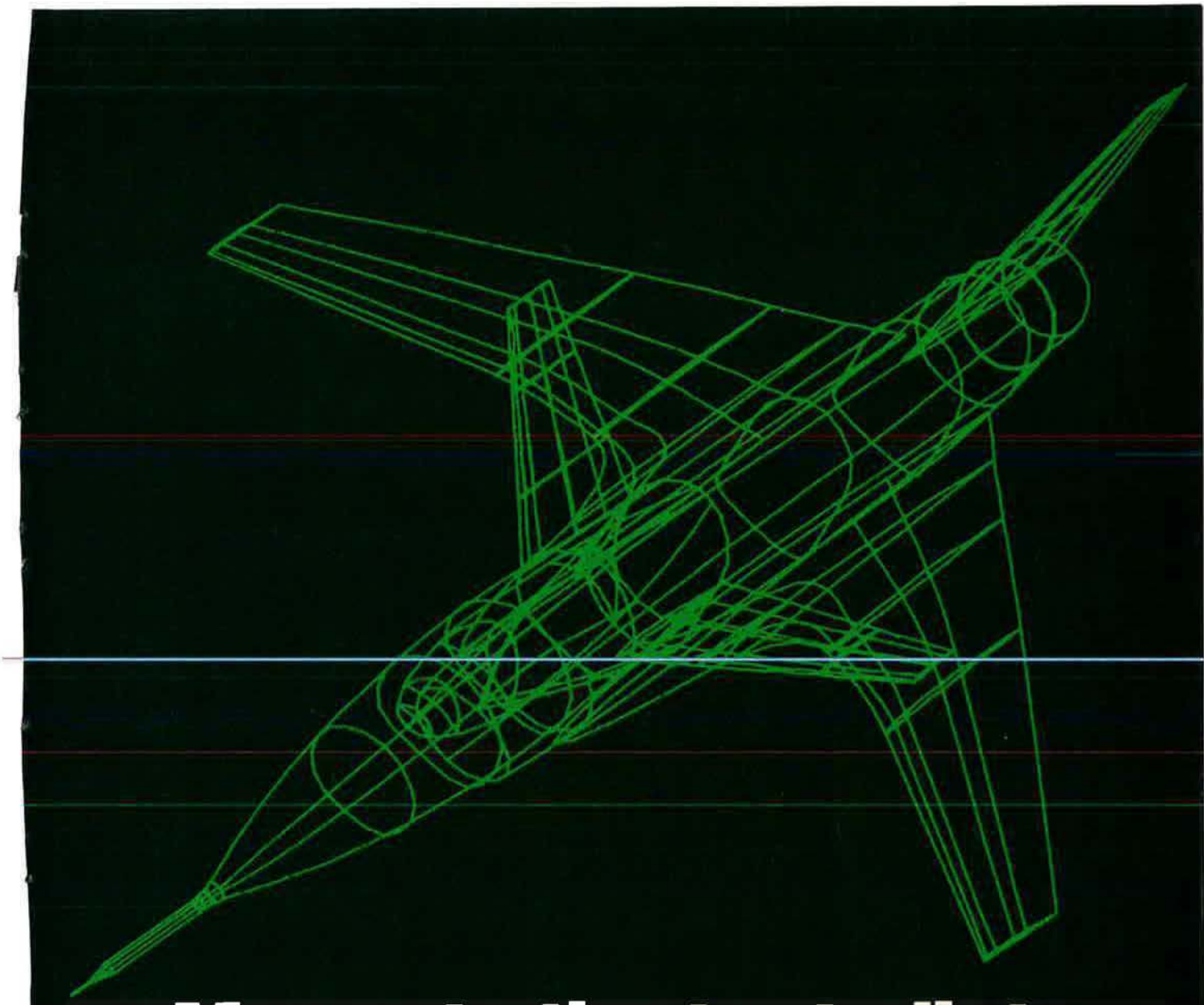
In terms of our programmatic priorities, I don't think there should be much doubt in people's minds where the first few important ones are. The Chief and I have been emphasizing them.

The absolutely first programmatic priority is to modernize our strategic nuclear forces. There is no question that one of the major thrusts by the Russians in the last fifteen to seventeen years has been to build up the nuclear strategic backbone of their military, and there is no question whatsoever that we need to maintain what has come to be called the strategic balance. We have some major programs—the MX, rearming of our B-52s with cruise missiles, and a number of other things I will talk about a little later on—which have had the attention of the highest-level people in our government. There is no doubt in my mind that this particular priority has been accepted all around. There is also no doubt that the Administration believes that we must do this, and that there is full support in all quarters—the Congress, the executive branch, and elsewhere.

The second priority that the Chief and I have talked about at length is the enhancement of our airlift forces. Airlift is an enormously important means for exerting our influence abroad. And if you want to see an example of readiness to do a job on a day-in and day-out basis, please go to the Military Airlift Command and see how they operate. We send airplanes every day, week in and week out, all over the world. They do things that are exceedingly important, if not always particularly dramatic, but things that quietly remind people of the worldwide influence of the United



Dr. Mark: "The absolutely first programmatic priority is to modernize our strategic nuclear forces."



Memo to the test pilot: It's made with the right stuff.

When you test this one you'll be flying an aircraft evolution. An aerodynamic phenomenon. With forward-swept wings to give it a big boost in performance and maneuvering abilities. Quite possibly, the fighter plane of the future.

Rockwell International's North American Aircraft Division—military aircraft manufacturer for over a half century—has proposed to design and build the X-FSW SABREBAT manned demonstrator. Among other things, they will use advanced composite materials to make the forward-swept wings strong enough to take the kind of punishment you dish out.

Participating with Rockwell in this aircraft's development are six divisions of Bendix, a high technology friend of aviation for more than 50 years. Bendix will supply the aircraft with a new type motion sensor system. The unique on-board oxygen generation system will come from Bendix. So will the flexible power takeoff shafts. Bendix will also provide the entire aircraft with new Tri-start electrical connectors. And the new kind of hydraulic actuators needed to fit inside those knife-thin, forward-swept wings are also a Bendix design.

In short, this advanced prototype will be made with the right stuff. By people with the right credentials.

Think about that before you hunker down inside that advanced, integrated cockpit, (also developed by Bendix).

It might give your spirits a lift.

Bendix

We speak tomorrow.

Shaping Airlifter Technology

Forming airlifter parts with the world's mightiest muscle.

A unique array of advanced facilities aids the conceptual designers at Lockheed-Georgia as they work on airlifters of the future. But the best wind tunnels, sound chambers and laser instruments go for naught if manufacturing technology cannot match the fast pace of R and D achievements.

The enormous machine you see above is but one of the huge steps Lockheed-Georgia has taken to make sure that its manufacturing experts can meet that challenge. It is a high pressure hydroforming press, the largest in the Free World. It can exert a pressure of 14,500 pounds per square inch on an airlifter part. The next largest hydroforming press in the U.S. has a pressure force of 10,000 psi.

Actually, you are looking at the tip of the iceberg. That press extends 20 feet below the surface. The cylinder you see on top alone weighs 93 tons.

Why such a press? It forms parts with greater precision than any other machine of its type because of that enormous force it can apply to bend metal. It precisely duplicates the tools which serve as the model for airlifter parts.

The press pays for itself in several ways. It saves time—lots of it—in forming parts. It eliminates costly hand-forming operations. And it also saves time on the assembly line, thanks to the "repeatability" of its parts. They are so precise that the assembly line craftsmen find that these parts mesh and mate quickly and smoothly. Result: a big increase in productivity and product reliability.

There's another great advantage formed from the press. It enables Lockheed-Georgia engineers to design to closer tolerances. Ultimately, this pays off in more reliability, less weight, bigger payload—better airlifters.

This Paul Bunyan of a press is but one of the modern manufacturing machines recently installed at Lockheed-Georgia. Another is shown at right. It's a Danly Spar Mill that can machine 50 foot beams of metal at various angles. With great precision. Up-to-date equipment such as the press and spar mill are what you would expect from the company that has built more airlifters, by far, than any other firm. When it comes to airlifters, the manufacturing experts, engineers and craftsmen at Lockheed know how.

Lockheed-Georgia

States. That's what is truly important about those operations.

Third in my list of programmatic priorities is the enhancement of our ability to operate in space. I was pleased to see that the Air Force Association awarded this year's von Kármán prize for work in just that area. I think that's simply a reflection of how dependent we have become on things that go on in space.

I am very pleased to be able to say that in all of these three areas—strategic modernization, airlift, and in space—almost every major program that we most need appears in the Fiscal Year '82 Air Force program now being submitted to the Secretary of Defense, and that these programs have support from the people in the Office of the Secretary. Our budget, as you know, has climbed relative to those of the other military services. I think that is simply recognition that the priorities I have just talked about must be dealt with.

Let me now talk a little about the operational end, even though that is not my province. As you know, my primary responsibility as Secretary is to see to the equipment, the training, and the organization of our forces, while the operational employment is the responsibility of my uniformed colleagues. Yesterday, the Chief eloquently expressed our operational priorities and why they are important. I think his indictment of the Soviet behavior in the last year is the best I've heard in a long time. That behavior is why the operational priority of achieving greater readiness to go fly and fight has taken on an even more important role this year.

Dr. Hans Mark came to the US from his native Germany in 1940. Following undergraduate work in physics at the University of California at Berkeley, he earned a doctorate in physics from MIT in 1954. A research physicist at the University of California and at the Lawrence Radiation Laboratory, he also served as chairman of the University's Department of Nuclear Engineering. He was named head of NASA's Ames Research Center in 1969, a post he held until his appointment as Under Secretary of the Air Force in July 1977. He became the thirteenth Secretary of the Air Force in July 1979.

This operational priority really has two aspects. One is that we must have the material things we need to operate and sustain our existing equipment. In that regard, we have made great efforts in this year's budget process to see to it that deficiencies in our operational systems will be quickly corrected. The second and more important aspect requires that we deal with the problems we have in maintaining a highly qualified group of people in the Air Force.

Readiness—A State of Mind

We can't have an effective Air Force unless we have the most dedicated technical and operational people we can find. I think it is this point where we have made some very important and clear progress in the last year. And, when you do something to alleviate people's difficulties, the results are felt right away. Improvements in benefits, in pay raises, and in making life better for our people have an immediate, clear, positive impact. This is especially important because, to me anyway, the word "readiness" refers more to people's state of mind than to almost anything else.

Forty years ago, I watched Germany overrun France. France at the time had a large, well-equipped military. By the physical measures of readiness that we sometimes use, they were ready to fight. The problem was that they were not prepared in their minds for what Germany was in fact doing, and that's why they were rolled back.

Now, I would like to talk a little about what I think I see in the minds of our Air Force people today. In the past year, I have visited more than forty Air Force bases and talked to literally hundreds of Air Force people all over our country, as well as in Asia and in Europe. I thought I would repeat for you some of the questions I was asked on my overseas trips and then explain how I answered them at the time. I want to do that in order to illustrate the state of mind of our people and, perhaps more importantly, what it is that we must do to support them.

A Few Tough Questions . . .

A staff sergeant in a firehouse at Yokota Air Base in Japan asked me the following question: "From what I read in *Stars and Stripes,* there appears to be a lack of national will. The message from Washington is confused. We don't appear to have a global strategy. What are we doing to establish our leadership role?"

That's a question that could have come from a Senator or a four-star general. It's an important question. I tried to answer him in the following way: I said that leadership is a question of behavior, a question of setting priorities, and I talked a little about priorities in the way I have here. Then I said, "Look, most important of all, the thing that you must never forget, even if you get confused signals, is that the United States is and will remain a great nation. There is just no question about that, and from that knowledge the national will emerges." We had a discussion then about what kind of a world strategy we had, in which

everybody in the firehouse participated. It was as challenging a discussion as any I've had in my travels.

A staff sergeant on the flight line at Clark Air Base in the Philippines was concerned about how the United States is going to respond to the Russian incursion into Afghanistan. He said that those at Clark couldn't see just what we are doing and think we should be doing more. Again, an exceedingly important and good question.

At that time, my answer to him was that we had taken some steps—the most important one, in my judgment, was the economic sanctions we have levied on the Soviet Union. Let there be no mistake that these sanctions hurt. As you know, I have a technical background. I am well acquainted with where the Russians know they are weak technically. One of the things that hurts them very much are the technology sanctions that we have imposed on them. That's the answer I gave the staff sergeant.

If I were answering the question today, I would add one other point, which I think is exceedingly important. I would have cited the situation in Poland. Certainly, we didn't do anything specifically aimed at causing the Soviets problems in Eastern Europe, but I do not believe that what has since happened in Poland would have happened if it were not for the example of free people elsewhere in the world exercising the rights and privileges that the Polish people are struggling for today. Merely by our example, then, we make problems for the Russians.

. . . And a Few More

I talked with a radar intercept technician at Wallace Air Force Station in the Philippines. She wanted to know what I thought about the fact that the Soviets are now using bases such as Cam Ranh Bay. She said, "How can we tell whether bases that we build around the world will not wind up in the hands of our enemies?" Again, I draw your attention to the depth and to the thoughtfulness of these questions.

My only answer to her was we can't make sure. Nevertheless, if we are going to be a great power—and we are—we must continue to help our friends overseas, and we must continue to take the risks that you incur when you do that. I then pointed out to her that over the years the Russians have probably lost more investments in foreign countries than we have, and I remind you in that regard of the investment they lost in China. Think of the industrial plant they built there over a decade! They put in their welfare and lost it. Nevertheless, they will continue, and so must we.

A technical sergeant who is an administrative specialist in a fighter squadron at Upper Heyford in England asked: "What impact do you think basing cruise missiles in England will have on the NATO alliance? Do you anticipate any Soviet countermeasures?" I said that as far as I was concerned, basing the cruise missiles there was itself a countermeasure to something the Soviets had already done; namely, the deployment of the SS-20s.

A B-52 crew chief at Andersen Air Base on Guam: "Many of our B-52s are as old as the people who maintain and fly them. The airplane I work on was built three years before I was born. The airplane is becoming increasingly difficult to maintain. Do you think that we will get a new bomber? If so, when and what will its capabilities be?"

I told him that I agreed most strongly that we must replace the B-52s as our front-line, large combat airplane. It is unthinkable to me that the United States can have an Air Force without a first-line, large, war-fighting airplane, and I pledge to you every effort that I can make to get a quick decision on moving ahead with such a program.

I think I have made my point about our people. The kind of questions they have asked me indicates their quality. That puts a very great burden and very great challenge on those of us who have the privilege to lead them. These questions are precisely the kind we in the Pentagon ask ourselves every day. We should never forget that our people in the field, at all levels, consider the same problems and have the same concerns that we do. They fully share our need to seek the answers.

I conclude from all this that the state of mind of our people, their ability to inquire, their ability to think through what they are doing—and why—argues very well for the future. That is to me the real measure of the state of readiness of our Air Force to do what it has to do.

A Vision for the Future

I have already said that the primary function of leadership is to provide a vision of the future for our people, to which they can apply their own strength of purpose and will. For myself, I see an Air Force that will continue to be the first line of our defense in times of trouble. I see an Air Force that will continue to be the mainstay of the nuclear strategic deterrent forces and—perhaps most important of all—I see an Air Force that will continue to be at the cutting edge of modern technology so that our country can maintain the strength we must have.

It is a sobering thought to remember that the officer who will be Chief of Staff of the United States Air Force in the year 2000 is already serving with us today. That officer may, in fact, be sitting in this room. Those of us who have the leadership responsibility today must see to it that we are laying the ground properly so that those who will have the responsibility to lead this country and its military into the next millennium can still look up and say, as we can, "This is the greatest nation in the world!" ■

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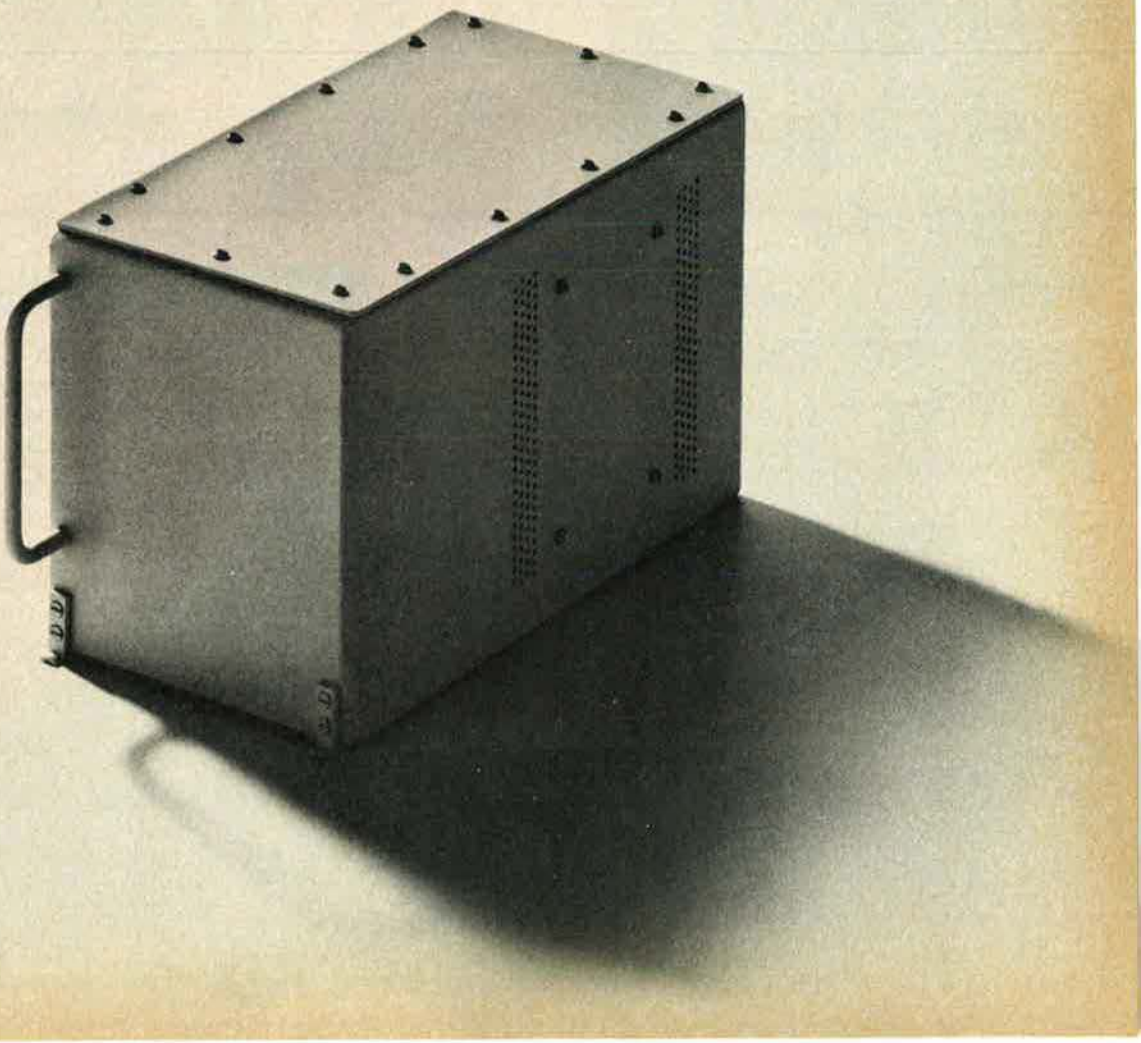


Proven power for tomorrow's new

It's not yet certain what the next generation of military trainers will look like. However, some things are certain.

Tomorrow's trainers will be rugged and efficient, based on the most cost effective design concepts.

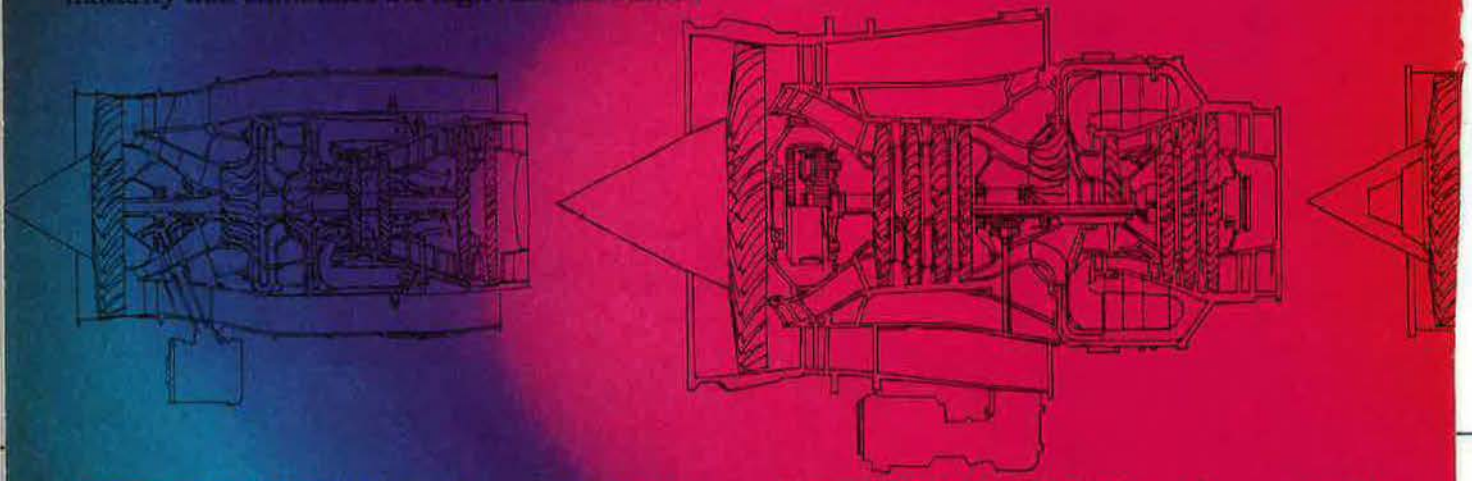
And they'll be powered by proven engines. Like the arsenal of Garrett engines shown below.

Each engine has a proven record of design maturity that eliminates the high risks associated with the development of a brand new engine.

Each offers low ownership costs and easy-to-service modular construction.

And, each is ready to bring the next generation of trainers a step closer to operational reality.

As the world's largest manufacturer of small gas turbines, Garrett isn't a stranger to the military. Over 1,000 of our engines are now flying in the inventory.



TFE76 1,500 lbs. thrust class

- Medium bypass turbofan.
- Based on the core section of Garrett's phenomenally successful T76 and TPE 331 turboprop engine.
- Core proven by over 16 million flight hours in over 50 different military and civilian aircraft.
- Turboprop combat experience in the Rockwell OV-10 Bronco and the Fairchild Peacemaker.

TFE731 3,500 lbs. thrust class

- High efficiency, medium bypass turbofan for increased range
- A fully matured design, proven by more than 1.5 million flight hours in 1,800 engines in 14 of today's leading business jets.
- Will have accumulated 15 million flight hours by 1985.
- Scheduled to fly in a twin-engine prototype overseas military trainer in Fall, 1980, and recently selected by another overseas air force to power their new single-engine trainer.
- Now flying in the Spanish Air Force CASA 101 military trainer
- Can be de-rated to 3,000 lbs. thrust class to provide long life with low operating costs, to meet a variety of aircraft and mission requirements.

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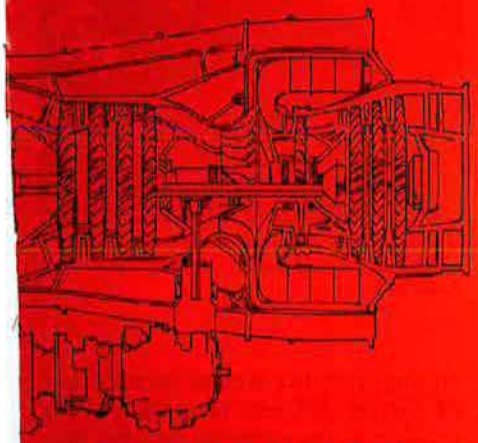
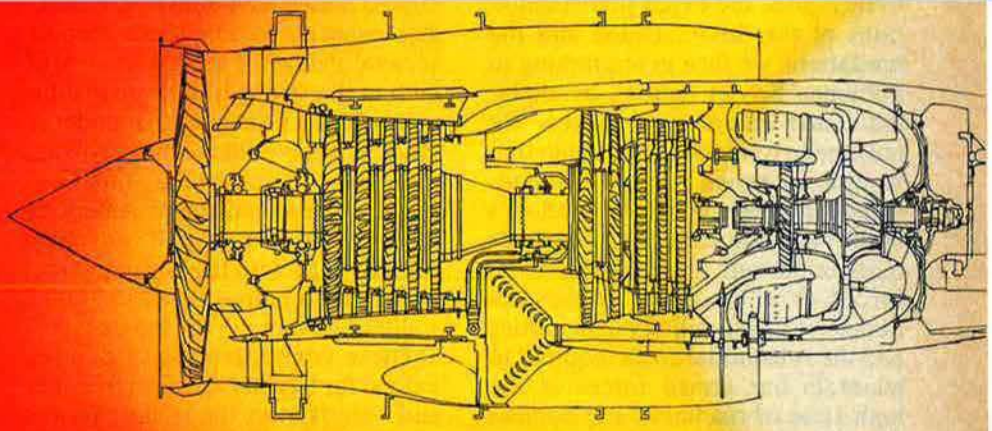
For more information, write: Propulsion Engine Sales, AiResearch Manufacturing Company of Arizona, P.O. Box 5217, Phoenix, Arizona 85010. Or call (602) 267-3011.





TFE1042 4,500 lbs. thrust class

- Low bypass, high performance turbofan.
- Fully militarized version of the commercial TFE 731, under development with Volvo Flygmotor.
- Version available at 3,600 lbs. thrust to meet a variety of aircraft and mission requirements, and provide longer life with low operating costs.
- Preliminary engine tests successfully completed at Volvo Flygmotor.

ATF3 5,500 lbs. thrust class

- Medium bypass with extremely low IR and noise signatures.
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Events of the recent past, says the Chief of Staff, have led the nation to a sobering reexamination of reality, be it Soviet expansionist ambitions or deficiencies in our own military capabilities. Now awakened, General Allen asserts, the country and its leadership are demonstrating . . .

A Growing Awareness

BY GEN. LEW ALLEN, JR., CHIEF OF STAFF, US AIR FORCE

I WANT to share with you some observations about where the turbulence of the past several years—and especially the events of the last months—have brought us, as a society, as a great democratic nation, and as the leader of the Western world.

Events of the past year have made defense issues a matter of foremost public concern. We have been forced to reexamine the reach of our responsibilities and the limits of our resources. We are compelled to recognize the expansionist ambitions of the Soviet Union and the limitations we face in attempting to influence Soviet actions by diplomatic and economic measures. We have been reminded once again that America's armed forces are the ultimate guarantor of the nation's most vital interests. And, perhaps most important, these events have forced us to recognize serious deficiencies in our military capabilities and the substantial costs required to maintain our armed forces at the high state of readiness and combat effectiveness essential to protect the worldwide security interests of the United States.

These past months have reaffirmed that we live in a complex, interdependent world in which many countries important to our interests are beset by domestic turmoil and persistent regional conflicts. I also believe that our nation has gained a clearer understanding of the threat posed by the massive Soviet military machine. It is now widely apparent that the US-Soviet relationship is fundamentally an antagonistic one and that the Kremlin is determined to pursue its interests relentlessly, aggressively, and even brutally; witness their actions in Afghanistan.

And yet, in the face of these sobering realities, I believe we are seeing a new confidence of the American people that, apart from the immediate issue of relative military strength, the political, economic, and spiritual underpinnings of our society are advantages that the bankrupt philosophy of Soviet communism is incapable of matching. We are more and more witness to fundamental flaws in Soviet dogma. The simple truth is history is *not* on their side. The basic institutions of the United States have shown a remarkable capacity to adapt to sweeping societal changes. I sense a renewal of faith in the strength of those institutions and the principles that underlie them. I believe that in the evolving superpower competition, time will work to the advantage of American democracy—but only if we come fully to grips with the consequences of having let time work to Soviet military advantage for the decade.

These consequences, of course, extend far beyond our own freedom and security. As the leading power of the free world, we bear the responsibility, in our own interest, for helping provide the security of many countries, some of whom exist in the very shadow of Soviet military arms. Our collective defense capabilities must be adequate to discourage further Soviet aggression. This burden cannot be taken lightly. For as Edmund Burke observed almost 200 years ago, "The only thing necessary for the triumph of evil is for good men to do nothing."

There are today many good men—and women—doing a great deal for our country. But the fact remains that the United States has serious deficiencies in its armed forces compared to those of an increasingly powerful Soviet adversary. We are entering a period of pronounced ICBM vulnerability resulting from the greater momentum of Soviet defense programs. This erosion in the strategic nuclear balance is of immediate concern since it may increase Soviet self-confidence and thus encourage further aggression beyond Afghanistan. At the same time, our General-Purpose Forces are strained by new requirements and have serious deficiencies. Chronic underfunding of such support elements as spare parts, munitions, and flying hours is preventing us from realizing the full potential of our tactical air arm. Our long-range air and sealift capabilities, while unmatched by any other nation, are unable to bring to bear rapidly the full weight of US military power in distant regions such as the Persian Gulf, where our vital interests are threatened.

General Allen: "The path to decisive influence . . . may well run through the Strait of Hormuz."

Gen. Lew Allen, Jr., USAF's tenth Chief of Staff, is a 1946 graduate of the US Military Academy. After completing flying training, he was assigned to SAC as a bomber pilot. In 1954, he earned a doctorate in nuclear physics and spent the next seven years in the nuclear weapons field. From 1961 to 1971, General Allen filled a variety of assignments associated with space systems. Following duty as Director of the National Security Agency and Commander of Air Force Systems Command, he was named Vice Chief of Staff of the Air Force in April 1978. On July 1 of that year, General Allen became Chief of Staff.

And we have suffered from the exodus of thousands of career men and women, whose patriotic commitment to service had been shaken by a sense that they were failing to provide a decent life for themselves and their families.

These deficiencies are a matter of urgency and concern. At the same time, it is essential to keep them in perspective. For example, with respect to our tactical and mobility forces, for many years now the focus of our planning and programming calculations has been NATO and the demands for a credible defense of Central Europe. While not totally satisfied with our posture in that region, we are confident that NATO deterrence is strong, and we continue to support a number of modernization programs to enhance that strength. However, events in Southwest Asia have increased the likelihood of near-term conflict in that critical area, thus superimposing a new, highly demanding set of readiness requirements on our General-Purpose Forces. While our commitment to NATO will remain steadfast, it is clear that the demands on our forces have been significantly expanded by the President's policy to defend with force, if necessary, America's vital interests in the Persian Gulf.

Stake in the Persian Gulf

In my view, the essence of US interest in this region is to preclude *any* Soviet control over the crucial energy resources it contains. Otherwise we will confront the unacceptable prospect that the enormous political leverage offered by Western dependence on Persian Gulf oil could be manipulated by the Kremlin to shatter the foundations of Western unity. What is at stake in the Persian Gulf is not simply the prospect of economic hardship, but the global balance of power as it has existed since the end of World War II.

The path to decisive influence in the capitals of many Western and nonaligned nations may well run through the Strait of Hormuz. A carefully orchestrated Soviet strategy that allowed them to dictate the terms of Western access to Persian Gulf oil could well lead to piecemeal defeat of the free world. Recognizing these vital interests in the Persian Gulf, this nation, in concert with its allies, must have the resolve and the visible military capability to do what is required to frustrate Soviet attempts to gain control of the Persian Gulf region. We must remain steadfast through every test, whether in the form of naked military aggression, or a protracted period of calculated probes to measure our resolve.

In recognition of what is at stake in the Persian Gulf region, we have levied even more stringent requirements on our forces for immediate responsiveness and staying power, than called for in our NATO planning. I underscore, however, that these new readiness and sustainability standards simply require improvements in a force that already possesses considerable capability. It should be clearly understood that this nation can mount, project, and employ an expeditionary force of substantial consequence, and with global reach, with great dispatch. No prospective aggressor can ignore the effectiveness with which Air Force units—active, Guard, and Reserve—deploy from the United States to worldwide locations. We have focused deployment and training exercises this year to improve and demonstrate our capabilities for operations in Southwest Asia.

And I am very proud, as you should be, of the response from the total Air Force. Everyone has turned to and demonstrated these capabilities in a superb manner. At Red Flag and in deployments to Egypt and Saudi Arabia, for example, our people have shown that they can operate sophisticated equipment in the harsh environment of the Middle East. The United States has significant forces and equipment deployed in Southwest Asia, and we are taking major steps to reinforce and enhance that presence.

I reemphasize that we must maintain and demonstrate firm determination to protect the free world's interest in this region. In displaying that determination, it is important to remember that equally cogent in Soviet calculations of risk

and gain in local conflict are judgments about the strategic nuclear balance. Therefore, to preclude any possibility of disastrous miscalculation, we must, as a first priority, redress the impending disparity in US-Soviet strategic nuclear capability.

The solution to the most critical aspect of this looming imbalance—the vulnerability of our ICBMs—is in hand, and the continuing strength of US bomber and SLBM forces will ensure a margin of retaliatory capability that will allow us to implement this solution in an orderly fashion. This margin is thin, however, and perishable. Therefore, we must get on with the crucial task of restoring the survivability of land-based ICBMs to provide a resilient strategic triad for the years to come. There are no quick fixes or easy answers to this challenge. But there is an answer. And that answer is deployment of the MX ICBM in a survivable, multiple protective shelters basing mode.

The time for debate regarding the MX is past; the search for alternatives is over. Multiple protective shelters basing is sound in concept, straightforward in construction, and will be manageable in implementation. The MPS basing mode has been reviewed in detail and approved by the Air Force, the Joint Chiefs of Staff, the Secretary of Defense, the President, and the Congress. While the issue of deployment area selection remains to be fully resolved, this is a matter being decided on grounds of operational concerns, economic costs, and local impact. But there can be no question about need for the MX and no quarrel about urgency. The need is great and the time is now. Further delay in fielding the MX will jeopardize national security, provoke a rash of costly, unsatisfactory alternatives, and lead ultimately to less capability at greater cost.

Strategic Force Improvements

Beyond the MX, the nation has embarked on an extensive series of strategic force improvement programs, which—assuming MX is deployed in a timely manner—represent a prudent response to the anticipated growth in Soviet strategic nuclear capabilities. We are also laying plans for further follow-on improvements, especially with respect to a new, highly versatile, long-range combat aircraft to replace the B-52.

In my view, these plans and programs represent a prudent response to the anticipated growth in Soviet strategic nuclear capabilities. There are still some key modernization decisions yet to be made, of course, and we must also note that these initiatives have been sized against a Soviet force projected within the bounds provided by the SALT II Treaty. With the fate of the SALT II agreements in serious question, we must also be prepared to expand our strategic capabilities further, should this prove necessary. The air-launched cruise missile, MX, and Trident programs all provide such force expansion potential. We would obviously prefer to avoid such a costly interaction. It is for this reason that the other service chiefs and I have consistently supported vigorous US modernization efforts, combined with the imposition of verifiable SALT constraints on Soviet strategic programs.

In the tactical arena, increased tensions in Southwest Asia have prompted a significant shift in our funding priorities. The potential for near-term conflict in this region has led us to place greater emphasis on readiness, sustainability, and mobility of the current force, at the expense of preferred rates of procurement for new aircraft. This shift in priorities is only acceptable for the short term. We cannot accept continued cutbacks and indefinite delays in our tactical modernization program. Not only do reduced production rates drive up unit costs, but they put us further behind a Soviet fighter production line that is turning out a modern aircraft every seven hours. Much of this Soviet production is earmarked for Warsaw Pact forces, and daily increases the threat to our principal alliance.

Not everyone shares our concern over this shift in emphasis, I might add. Some rationalize inadequate funding for modern equipment by saying we cannot maintain and operate these systems successfully. To this, I say nonsense. We must reestablish efficient production rates of aircraft, such as the F-15 and F-16, and, equally important, the nation must fund properly the spares and munitions so we can fly, fight, and win with them any time and any place. We will be taking unnecessary risks if we do less. As President John F. Kennedy once cogently remarked about the priority of defense spending, "This nation can afford to be strong—it cannot afford to be weak."

Mobility Planning

The great distances and difficulties associated with bases in Southwest Asia also drive our attention to mobility planning. We have known for years that our mobility assets, both air and sea, are inadequate to meet the requirements of a short warning attack in Europe. These requirements are even more severe in the context of a rapidly developing contingency in Southwest Asia. Through a combination of airlift, sealift, and prepositioning, we *can* meet these mobility demands. However, we have a significant deficiency in strategic airlift, a deficiency that we must now begin to remedy.

Our worldwide military strategy and posture is keyed to rapid reinforcement of in-place forces or rapid insertion of power into trouble spots where we have few forward deployed units. This strategy must be supported by adequate mobility in its most visible, responsive, and flexible element—airlift. Therefore, we must expand our airlift force, especially with regard to the capability to carry outsize cargo over long ranges, with the flexibility to land and operate on existing fields within the delivery area. The CX program is designed to provide the additional aircraft and capabilities to meet this need. We need to get our design and production plans squared away and then convince Congress that we must move ahead quickly.

The final concerns I want to address with you today are adequate compensation and recognition of military people. I am torn between pride in what our people and their families have endured because of their deep feeling of patriotism and service, and regret for the loss of so many superb professionals who simply could endure no longer. I hope that this lesson about the limits of devotion has finally struck home with those who control the purse strings and need never be learned again. This lesson has little to do with registration or the draft. It has to do with retention of proud men and women who deserve dignity, respect, and a decent standard of living—men and women who cannot and would not strike to make their grievances known, who could only leave their profession with a great sadness over a shortsighted society that has only now awakened to their plight.

After many years, and enormous effort, there is encouraging evidence that the nation and its political leaders are coming to understand the plight of military members and their families. The recent signing into law of the Nunn-Warner and Fair Benefits Compensation initiatives, as well as the 11.7 percent pay raise, represent important first steps, not only in restoring an adequate standard of living but also in demonstrating to servicemen and women that this country understands and appreciates who they are and what they do. And these are signs that our adverse retention trends are starting to turn around, perhaps as our people anticipate implementation of these initiatives. However, I hasten to emphasize that retention rates are still well below desired levels, and we continue to experience shortages of our most highly skilled people. Therefore, we must continue to seek the additional improvements that are essential to meet our Air Force needs for skilled professionals.

On balance, I would have to say I am cautiously optimistic about our ability as a nation to cope with the challenges that lie ahead. The events of the past year mark a dramatic change in regional power balances, in the balance between the superpowers, and in relations among allies on both sides of the Iron Curtain. Most important, however, we have witnessed evidence of a crucial change in American attitudes toward our global role and responsibilities.

The Hard Choices Ahead

I have characterized that change in attitude as a greater awareness of limits and reach, of problems and prospects, of burdens and destiny. The true measure of this new realism, however, is yet to be taken. The hard choices in terms of recognizing and facing up to the Soviet challenge are still to be made. Those choices deal first with having the resolve to meet that challenge, wherever and with whatever force might be required; and, second, with mustering the determination to maintain the military strength that makes that resolve credible to the Soviets, to our allies, and to all other nations whose fate is tied to American commitment to leadership of the Western world.

I believe that we will make the right choices, that the nation has awakened, not only to the condition of its armed forces but also to the ominous growth of Soviet military power and the realization that national security and global respect cannot be had on the cheap. In the final analysis, our success in dealing with the Soviet challenge and in providing effective leadership to our allies and friends depends on calculations about our strength and our resolve. Time and events have stripped us of our historic advantages of resource independence, insularity, and a dominant industrial base. But our greatest strengths as a people are not diminished: technological genius; stable, democratic institutions; a free enterprise economy; and a solid foundation of military professionals who have never lost sight of what America stands for.

These strengths do not endure by accident or fate. They are the fruits of labor by intelligent, patriotic people and organizations, people like those of you here today and the Association of which you are a part. The Air Force—indeed, the nation—is fortunate to benefit from your unceasing efforts to keep our defenses strong and our principles intact.

In closing, I want to extend my appreciation to Jim Straubel for his many years of leadership and contribution, and to congratulate Russ Dougherty on his selection for the post Jim is vacating. I look forward to working with him, with the other leaders of this great Association, and with all of you in our common purpose to keep the United States Air Force a towering pillar of national strength. ■

SCIENCE/SCOPE

A new air-launched missile will be the first weapon ever with a built-in ability to seek out and destroy enemy armor. The missile, called Wasp because it would be launched in swarms of 10 or more, will allow an attacking aircraft to withdraw before exposing itself to heavy enemy air defenses. Initially it will be programmed to fly to a target area. A terminal guidance seeker then will take over, identifying the armor and steering the missile to an individual target. Other missiles in the same swarm would aim for different targets. Wasp will operate day or night and in inclement weather. Despite its capabilities, it will weigh only about 100 pounds. Hughes, under a U.S. Air Force contract, is developing both infrared and millimeter-wave radar versions of Wasp for testing.

Water levels in cooling systems of nuclear reactors may be monitored more reliably, especially during an emergency core shutdown, by an innovative metal-coated optical fiber developed by Hughes. The thin glass thread, some 1000 of which would be placed around a reactor's core, is tipped with a sapphire retroreflector. Unlike plastic-coated fibers, it can withstand the harsh reactor environment of temperatures as high as 350°C and pressures up to 1800 pounds per square inch. Compared to resistive level sensors now in use, the fiber is a model of simplicity. The sapphire tip, when dry, reflects light transmitted through the fiber; when wet, it reflects no light. Prototype sensors were developed under Nuclear Regulatory Commission sponsorship.

Radar-guided missiles of the future will undergo simulated flight tests in a computerized facility under construction at Hughes. A unique signal generator will create up to four fully independent targets simultaneously. It also will simulate clutter and jamming. The three-story complex will evaluate missile hardware and software in real time under approximate real conditions, thereby saving the expense of certain flight tests. Ultimately the facility will serve a variety of missile seekers that operate within the range of 2 to 100 GHz.

In the first firings of TOW antitank missiles from a British Army Lynx helicopter, a gunner using a new roof-mounted telescopic sight scored all hits. The firings were part of a joint test program conducted by Westland Helicopters and British Aerospace Dynamics Group prior to installing airborne TOW systems on Lynxes now in service. The TOW system, including the roof-mounted sight, is produced in the United Kingdom by British Aerospace under license from Hughes. Westland builds the helicopters. TOW (Tube-launched, Optically-tracked, Wire-guided) systems have been selected by air and ground forces of 30 nations.

For the first time the U.S. Navy can monitor test firings of complete Phoenix missiles with the development of a compact telemetry unit. The telemetry components, made by Hughes with advanced microelectronics, come in kit form for installation in a small available area inside the radar-guided air-to-air missile. The previous telemetry equipment replaced the warhead. Telemetry is transmitted by a special antenna that wraps around one section of the missile's body, replacing the insulating material used to protect electronics from high-temperature build-up on the surface of the missile.

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AFA POLICY PAPER

Force Modernization and R&D

Adopted unanimously by delegates to AFA's Annual National Convention, September 16, 1980.

THE Administration that takes over the reins of government in January 1981—along with the new Congress—has a special opportunity and obligation to set a course of action over the ensuing four years to ultimately restore US global strategies and military capabilities to a level of unmistakable effectiveness. The American people clearly won't settle for a "second-best" defense posture and the acute dangers that such a condition induces. They are sending the message to Washington to provide the leadership to do what it takes to regain this country's position as the world's strongest and most respected power—militarily, politically, and economically.

A popular consensus is being forged on the imperatives of revitalizing the US defense effort and of formulating and maintaining a coherent, consistent, and credible national strategy. This momentum must not be dissipated by the divisiveness of partisan politics or thwarted by Washington's preference for rhetoric over action. This Association, therefore, urges the candidates and their advisors in the coming election campaign—and subsequently those of them who will exercise leadership during their terms of office—to recognize above all else that the price of peace is eternal vigilance against aggression. It would be naïve to believe or suggest that the US slide in military capability relative to the Soviet Union can be cured overnight by a massive infusion of funds through quick fixes. Rather the need, long recognized but slighted by administration after administration, is to formulate long-term strategies and basic programs consonant with this nation's fundamental defense objectives and to generate the stamina and sustained political cohesion to achieve these goals.

The root cause of America's security dilemma is that the Soviets have been outspending and outproducing this country in military hardware for at least a decade. During that period, Soviet defense spending increased at an annual rate of four or five percent and all available evidence points to a continuation of this trend. The US, by contrast, decreased military investments in terms of real dollars during most of these years. While this slide has been halted, the Air Force Association believes that annual increases in defense spending that on paper suggest a growth rate of around three percent but in reality represent no appreciable increase in military investments won't reverse the trends toward growing US inferiority in conventional, theater nuclear, and strategic forces.

Congress and the executive branch face no more urgent and crucial task than to take the steps necessary—and to obtain enduring bipartisan support for these steps—to correct existing and impending weaknesses in America's national defense.

MODERNIZING OUR STRATEGIC FORCES

US strategic offensive and defensive capability is the supreme guarantor of this country's and the free world's security. Conversely, Soviet strategic offensive and defensive capability is the ultimate threat to this country's and the free world's survival. Soviet spending on strategic forces is more than twice that of the US, with the result that their relative capabilities are waxing while ours are waning. A window of vulnerability is opening up and portends a period of unprecedented peril and Soviet adventurism. The "window" is the result of continuing rapid proliferation of Soviet MIRVed warheads combined with dramatic, unanticipated gains in their accuracy, which assures the Soviet Union of the ability to destroy the bulk of our ICBM force. The central defense requirement is to close the window of vulnerability in a systematic fashion. But while this goal is urgent, it does not justify, in the view of this Association, quick fixes strong on public relations and weak on military effectiveness. While steps can be taken to reduce strategic vulnerability, extreme care must be taken that they do not distract from nor hinder the actions that, over time, will fundamentally cure current and incipient weaknesses in the US strategic capabilities.

The paramount requirement in the strategic sector is the expeditious development and deployment of the survivably based MX ICBM system. This weapon system will ensure the viability of the land-based ICBM force—and thus of the strategic triad—well into the next century. MX offers effective deterrence of a Soviet nuclear attack against this country because it forces the Soviets to expend far more of their own weapons than they can hope to destroy on the US side. Thus, an aggressor's strike against MX will cause him to be weaker relative to the US after the attack than he was before. Further, the survivability of MX can be kept in step with long-term increases in the threat simply by adding more shelters—but not necessarily more weapons—in which the actual

missiles are hidden in shell-game fashion. Since it costs the US less to build additional shelters than it costs the Soviets to build additional weapon systems, MX offers a formidable incentive for the Soviets not to continue further pointless buildups of their ICBM arsenal.

The Soviets rely heavily on continual improvement of their ICBMs to achieve strategic superiority. The best and least costly way for the US to deny the Soviets strategic superiority is by building the survivably based MX that cancels out both quantitative and qualitative improvements in their ICBM force. US failure to maintain a viable ICBM force, conversely, would enable the Soviet Union to reallocate the major share of its current strategic spending to achieve strategic superiority over US sea-based and air-breathing (bomber and cruise missile) components of the triad.

Of fundamental and pervasive importance is that, in attacking MX or any other land-based ICBM force located in the American heartland, an aggressor is forced into the open. Such an attack would involve a very large number of ICBM warheads with a flight time of about thirty minutes from Soviet launch sites to US targets. The attacker, therefore, would know that the US leaders know with certainty and in some detail that a strike has been launched. The Soviet attacker knows further that the US has enough time to react to his unambiguous act, and most certainly will. Retaining a viable triad, each element with different characteristics and vulnerabilities, protects against temporary deficiencies in any one element due to Soviet technological breakthroughs.

MX is needed because Soviet breakthroughs in ICBM accuracy coupled with increased deployment have made the US silo-based ICBMs vulnerable. But this breakthrough did not impinge decisively on the other two triad components. By the same token, the air-breathing leg of the triad could be jeopardized by significant improvements in Soviet air defenses, or ballistic missile submarines could be threatened by major advances in Soviet antisubmarine warfare (ASW) capabilities. Yet, neither development would have an appreciable effect on the ICBM force.

The Air Force Association supports the Administration's strong commitment to full-scale engineering development and deployment of the MX in a multiple protective shelters (MPS) basing mode. This commitment recognizes the importance of retaining the unique characteristics of the land-based ICBM: quick, flexible response; independence from warning; high alert rate; dependable, proven command control and communications; and low operating costs. It is now incumbent upon the next Administration—whether reelected or new—as well as the Congress not to succumb to diversionary or dilatory tactics, especially the blandishment of quick fixes that cost less but can't cope with the increasing Soviet threat over the long term.

THE AIR-BREATHING TRIAD COMPONENT

For the air-breathing component of the strategic triad this Association finds an *either/or* approach unacceptable. The need is for *both* manned penetrating aircraft and airborne platforms that can launch cruise missiles (ALCMs) safely and efficiently from standoff positions. Similarly, looking at a mix of solutions, involving both radically new, high-risk approaches such as Stealth technologies, as well as evolutionary developments, makes sense. It would be wrong and reckless to forego development and deployment of a long-range combat aircraft (LRCA—also known as the multirole bomber) that can deliver large payloads comprised of either nuclear or conventional weapons and instead focus exclusively on speculative high-technology solutions. Research and development involving potentially revolutionary technologies must be continued at an optimal rate. Yet, there are unanswered questions about when systems relying exclusively on advanced technologies could become available. Also, it is not clear whether or not they could be overcome by a resourceful enemy. Lastly, systems employing these advanced technologies appear limited to small payloads and thus less capable of performing the full range of tactical missions.

It is imperative, therefore, that the US continue to develop and acquire air-breathing strategic systems that employ proven and evolutionary technology and are capable of performing conventional warfare missions. Additionally, we must capitalize on this country's lead in sophisticated technologies that show great promise over the long term for revolutionizing strategic warfare. The case for a modern penetrator is doubly compelling because of the associated economics. Such a system forces the Soviets to spend the equivalent of between five to ten defense dollars for every one dollar invested by the US.

Over the short term, there is, in this Association's view, an urgent requirement to upgrade the avionics and electronic countermeasure capabilities of the B-52 force to prolong its ability to operate in hostile airspace and to penetrate to Soviet targets.

The nation must also continue development efforts that ensure the survivability and enhance the effectiveness of our family of cruise missiles. Intensified efforts are needed to upgrade propulsion systems for longer range and greater maneuverability, reduce missile detectability through signature reductions, and provide high-payoff avionics enhancements such as lightweight countermeasures and retargeting sensors.

We believe that a sufficient supply of nuclear weapons (fissile) material must be produced to support the currently programmed cruise missile deployment in the early 1980s and, subsequently, for MX and other strategic deployments in the late 1980s.

STRATEGIC COMMAND AND CONTROL

Survivable command and control urgently needs improvement and modernization. Though the needed improvements are not cheap, they are only a small fraction of the costs of the nation's strategic forces. Specific requirements include better attack assessment and the ability to exercise command and control in a redundant, enduring fashion during all phases of nuclear war and improved means for maintaining contact between the strategic forces in the field and the national leadership. The E-4B Advanced Airborne Command Post is of paramount importance in the development of survivable command and control and should be acquired on an accelerated basis. This Association remains convinced that a flexible nuclear strategy—as opposed to reliance on the outmoded, genocidal mutual assured destruction concept—represents the best means for preventing nuclear war in any form. The nation's recent, formal decision to pursue a policy of flexible response and a countervailing strategy was both wise and timely. The capabilities required to make such a policy credible include primarily improved strategic command and control systems and procedures. Congress and the Administration must act promptly on these urgent requirements.

DEFENSIVE STRATEGIC SYSTEMS

The nation at this time lacks the capability to intercept and destroy Soviet bombers penetrating its sovereign airspace at low altitude. This condition can't help but encourage the Soviets to make massive investments in their bomber force on the assumption that such a force would be assured a free ride and high effectiveness.

Tragically, neither Congress nor the executive branch of government has been willing to make major investments in systems dedicated exclusively to strategic air defense. As a very minimum, the US must have a demonstrated capability to inflict substantial losses on at least small-scale Soviet bomber raids against this country. The first need, therefore, is for the Air Force to build up strategic air defenses through a force of dual-assigned aircraft—that is, air-superiority aircraft and crews that also can perform the air-defense interceptor role. Backing up the interceptor force must be an adequate number of E-3A AWACS aircraft and an effective ground-based radar network to provide for improved detection and tracking of Soviet bombers penetrating North America at low altitude.

SPACE MISSION

In order to protect crucial space-based command and control assets, an integrated space warning system as well as more survivable military spacecraft must be developed and deployed.

The Air Force's antisatellite (ASAT) program—confined for the time being to research and development—represents a unique and vital insurance policy against unilateral Soviet advantage derived from that country's arsenal of operational space interceptor weapons. Without a vigorous ASAT program—and the ability to counter Soviet space threats—the Soviet space weapons quickly could shatter the notion that space can remain a sanctuary from warfare.

This nation's desire for an agreement with the Soviet Union prohibiting test and deployment of space weapons must not cede unilateral advantages to Moscow. The USSR has capable, fully operational satellite killer weapons in its inventory while the US has none. Signing such an accord now would leave the US extremely vulnerable, should the Soviet Union decide to abrogate the accord at some future date.

Current arrangements concerning control over the National Space Transportation System, known as the Space Shuttle, slight Air Force and other national defense requirements and do not make adequate allowance for security protection essential for military and intelligence payloads. A major review of how this important new space system can be brought in consonance with military requirements is overdue.

INTELLIGENCE NEEDS

The US must support an effective national intelligence structure, with strong capabilities in military, political, economic, and technical fields, and be prepared to conduct covert political actions against hostile foreign governments or parties when deemed necessary in the national interest by the President and the appropriate congressional authorities.

A charter for the intelligence community can accommodate both responsible oversight and the latitude needed to act creatively, boldly, and rapidly. Above all, new laws must be promulgated to shield our intelligence agents from exposure.

MILITARY AIRLIFT NEEDS

The nation's strategic airlift capabilities are about half of what they should be. Yet, a changing and deteriorating world situation, coupled with declining US influence and shrinking landing rights on the territory of US allies, rapidly escalates the need for more and better US airlift capabilities. This is essential for bridging the vast distance between where US forces are located and where they might be needed.

Thus, we must boost mobility by enhancing the capabilities of the transport planes currently in USAF's inventory, as well as of the Civil Reserve Air Fleet (CRAF) aircraft, and proceed quickly with acquisition of vitally needed additional long-range aircraft capability through development of the CX. While the key mission of the airlift forces is to project and sustain combat forces until other means of transportation can provide the required follow-on support, there are many situations where airlift is the only means to provide a rapid response, either because of the geographic location of the threat area or the speed with which the threat develops. The short-

age of strategic airlift for such outsize equipment as infantry fighting vehicles, tanks, and mechanized artillery is pronounced. These shortages are bound to become more critical as warning times grow shorter and as combat equipment becomes larger and heavier.

Airlift enhancement programs in progress must be completed expeditiously. Sufficient spare parts must be acquired rapidly to assure the force's ability to sustain operations over protracted periods of time.

USAF's CX program is designed to meet the requirement for an aircraft capable of carrying outsized cargo over intercontinental distances into small austere airfields. The CX, tentatively defined as a 400,000-pound aircraft capable of operating from 3,000- to 4,000-foot semiprepared airfields, is essential to fill this void in MAC's capability.

To maintain intratheater airlift capability, the C-130 procurement program must be continued. Though the Civil Reserve Airlift Fleet program is separate from programs to increase MAC's capability to airlift outsize equipment, USAF needs to lift a great deal aside from outsize equipment. The CRAF program is the most efficient way to meet those *other* airlift requirements.

The objective of this program is to incorporate cargo convertibility features into new wide-body commercial passenger aircraft. These aircraft would then be used in times of national emergency to augment USAF's existing airlift fleet. The program has as its goal a capability equivalent of sixty-five 747s by FY '86 and it should not be delayed further.

TANKER/CARGO REQUIREMENTS

The KC-10 procurement program must be carried out according to plan to enhance both strategic airlift and general mobility. An ancillary but highly effective program to increase both strategic airlift and general mobility involves reengining and other modification of portions of the KC-135 tanker fleet. The Air Force requested funding and authorization to reengine 100 KC-135s during the first half of the 1980s and plans to increase this number later in the decade as additional funds can be made available. Using modern CFM56 engines, the KC-135 can take off in shorter distances and carry greater fuel loads. The reengined KC-135's full offload capacity will be about 150 percent of the conventional model.

TACTICAL AIRPOWER

Over the past decade, the Soviet Union produced tactical aircraft at a rate about twice that of the United States. Equally ominous is the fact that the technological lead that the US has been relying on to offset the numerical advantages of Soviet and Warsaw Pact airpower is vanishing. The makeup of Soviet airpower now reflects an increasingly offensive character. This is true not only in terms of the payload and range performance of new Soviet fighter aircraft but also so far as avionics, armaments, and ECM equipment are concerned. Yet, US military aircraft procurement is being curtailed because of fiscal constraints and the imperative of increasing the combat readiness and sustainability of USAF's general-purpose forces. The dilemma of having to trade off investments in O&M, training, spares, and procurement is not new. Yet, the problem is becoming more acute rapidly and the practice of robbing Peter to pay Paul is inflicting serious damage on both force strength and readiness. Additionally, slowing down buy rates of aircraft drives up their unit cost. This Association believes that the solution lies in increased funding of both procurement and readiness investments and applauds recent congressional steps in that direction.

There is reason for grave concern about the growing tendency in Congress and the Administration to favor quantity over quality in tactical aircraft. This condition could result in the acquisition of combat systems neither able to cope with increasingly capable enemy aircraft nor able to perform their mission under adverse operating conditions. The tactical air force must be matched closely to the emerging threat and fit for any environment where conflict might occur. Going below this threshold not only would exact an unbearable price in blood and treasure but also create a marginally effective force.

There is a clear-cut need, therefore, to enhance the performance of existing aircraft by adding upgraded subsystems, especially so far as tactical missiles, precision-guided munitions, night and all-weather capabilities, and electronic countermeasures are concerned. Other high priorities involve chemical-biological defenses, survivable and jam-resistant command and control, air-base defense, and devices to disrupt or destroy hostile command and control systems.

HELICOPTER REQUIREMENTS

This Association believes that modernization of the Aerospace Rescue and Recovery Service (ARRS) and Special Operations force to cope with increasing threats and overcome problems resulting from obsolescent, hard-to-maintain equipment must be started at once. The HX combat rescue helicopter, replacement of the aging HH-53s and UH-1s, should be developed and deployed as soon as practical to improve USAF's rescue, recovery, and special operations capabilities.

RESEARCH AND DEVELOPMENT

During the past decade, the Soviet Union outspent the US by about $70 billion in defense-oriented R&D, which has produced an overall Soviet technology program twice that of the US. Counting procurement of hardware, military construction, and research and development, the Soviet investment lead over the US during the 1970s amounted to about $240 billion, measured in current dollars. The Soviet high-energy laser program, for instance, is about four times the size of this country's. Overall, it has become obvious that the Soviet objective is challenging the US lead in defense technology while maintaining their numerical advantage. The widely held view—shared by this Association—that US defense-oriented basic re-

search must be increased annually at a real rate of ten percent while exploratory development is to be boosted at a rate of five percent per year is more valid than ever. Over the past few years, however, these growth goals have not been met, mainly due to greater-than-anticipated inflation. In fact, measured in constant dollars, investments in the technology base since 1964 have persistently lagged behind that year's funding level.

All signs point to continued strong, steady growth in Soviet R&D. A clear indication of this trend is that the share of Soviet military expenditures devoted to research and development increased from about twenty percent in the second half of the 1970s to almost twenty-five percent at present.

Because of this large and growing differential in R&D investments between the US and the USSR, this country's technological lead is eroding to the point where America's technology won't be able to offset Russia's numerical advantages. Exacerbating the problem is the fact that free-world technologies, especially in the computer and manufacturing fields, continue to be transferred to the Soviets. This must be stopped.

USAF's own technology programs are impaired because of a shortfall of about 1,200 officers in the engineering fields. This problem will be compounded by anticipated increases in the need for technical officers through the next two decades. During the same period, the demand for technically educated people in the civilian sector is likely to increase even more rapidly. The result will be intensified competition for scientists and engineers and increases in remuneration, already significantly ahead of military pay. USAF's success in attracting and retaining needed scientists and engineers will depend on the ability to sponsor adequate numbers of qualified people in fully funded graduate education programs and ensuring sufficient undergraduate scholarships for talented young officer prospects.

One of the key objectives in all military research and development efforts, in the view of this Association, must be to maximize return on investment. This means that in developing new systems, care must be taken that they are logistically supportable and affordable. The most technically advanced system, unless supported by a sound logistics base, cannot take full advantage of the technology designed into it.

When designing new systems, it is imperative that the engineering community look beyond the R&D phase. The cradle-to-grave concept is more important than ever before. The principal means of achieving this goal is through initiating logistics engineering during R&D and continuing through the transition phase of the system to an air logistics center.

Overall, a robust technology base is an absolute requirement in this era of deterrence that involves cycles of moves and countermoves. The US not only must be able to understand and correctly forecast Soviet weapon developments but be prepared to start implementing a technological counter before Moscow has fielded new systems.

In conclusion, this Association calls attention to the fact that the Soviet Union is outspending the US in the military sector by about $50 billion a year. This differential is greater than the entire budget of the United States Air Force.

The resultant imperative is clear: US defense spending must be increased significantly to match the Soviet military capabilities or we must be prepared to accept the consequences. ■

AFA POLICY PAPER

Defense Manpower Issues

Adopted unanimously by delegates to AFA's Annual National Convention, September 16, 1980.

WHEN the Air Force last year failed, for the first time in history, to meet its recruiting goal, the shortfall touched off some soul-searching in governmental circles. It raised serious questions about the viability of the all-volunteer concept. If the Air Force can't make it, if the service that traditionally has filled its manpower needs with volunteers is hurting for new members, it bodes ill for all services.

Fortunately, Air Force recruiting has improved. During the first eleven months of this fiscal year, the Air Force enlisted 68,100 young people, or 101 percent of its goal. Effective performance by the Recruiting Service did the job, assisted by thousands of Air Force members and friends and groups such as AFA.

But the generally deteriorating manning situation service-wide focuses attention on the need for a revitalized Selective Service System, something AFA has strongly urged. We commend the President for requesting, and the Congress for supporting, the

current Selective Service revitalization, to include registration of nineteen- and twenty-year-old males. But draft registration alone, we believe, is inadequate to create a viable military pool for future needs. As a minimum, classification of the registrants is needed, so that a competent evaluation of the manpower pool can be made. We urge this as the next step. At best, today's Selective Service remains a "paper system."

Even so, recruiting is not the Air Force's number-one people problem. It is retention—of pilots, aircraft mechanics, engineers, security police, etc. Mid-career enlisted personnel pose the greatest concern as their reenlistment rates have plunged.

Among officers, loss rates from the sixth to the eleventh year of service are: pilots seventy-one percent, navigators fifty percent, and engineers sixty-six percent. In the last fiscal year, 83,000 experienced enlisted people left the service. That means the loss of one in every five enlisted persons in the Air Force.

However, until recently the government ignored these warnings and, indeed, even worsened the retention situation by continuing pay caps and by piling on new irritants such as parking fees and a charge for space-available flight.

The Chief of Staff of the Air Force, Gen. Lew Allen, Jr., has summarized the situation in these words: "My greatest concern, as we move to improve the readiness and staying power of our forces, is that at the very time when we must significantly upgrade our defense capabilities we are confronted with another serious blow, the decision by increasing numbers of our men and women in uniform to leave military service. The experienced people we need most, particularly as the risk of near-term hostilities grows, are simply walking out the door. We are losing highly skilled pilots, technical people, mechanics, and other specialists—the core of our effectiveness. Each of them represents a huge investment in training and an irreplaceable asset in experience. I am doing all I can do to make their jobs rewarding and their leadership inspiring. However, surveys tell us that the single greatest factor in their decision to resign is inadequate pay."

Against this background, a new awareness of the problem has emerged, both in government and in the public sector. The Administration recently endorsed improvements in compensation and in other benefits that it had rejected earlier, including increases in allowances and dependent dental care. And Congress has come to life, supporting such attractive retention incentives as the Nunn-Warner package and promoting improved educational programs. The legislative and executive branches of government appear to have launched a campaign for corrective action—on basic pay, flight pay, subsistence, housing allowances, medical and dental care, bonuses, special pays, and other compensation items.

This "new attitude" is welcome, although obviously inspired in part by election-year pressures. But make no mistake about it. Service leaders, by speaking out loudly, quarterbacked this effort. They got the ball rolling.

The job can't be completed overnight; it will take some years. But several improvements this year, backed up by a slate of additional extras over the years immediately following, should pay important dividends in the retention battle. The rhetoric about more pay and benefits must be matched by action, or an even worse retention situation will develop.

The Air Force has led the way in putting its own plans in specific focus. It has developed a benefits timetable, a list of more than twenty "compensation and educational priorities." Estimated cost of each and the desired time-phasing are spelled out. The extensive list gives top priority to basic pay.

The compensation items the Air Force is sponsoring include a wide range of benefits, from per diem equity for airmen to a boost in flight pay, from increases in weight allowances for household goods, to "optional residency" for more members (they could live off base and receive their Basic Allowance for Quarters—BAQ), from larger reenlistment bonuses for more people to a $15,000 accession bonus for new engineers. The educational improvements call for noncontributory enlistment scholarships and an increase in tuition assistance from the present seventy-five percent to ninety percent. In AFA, we are encouraged by this activity, much of which reflects positions we have advocated for some time.

All this, of course, is expensive. While AFA has never subscribed to the general theory that any problem can be solved by throwing money at it, we firmly believe that this is one case in which such action is needed and will work. Specifically, the Department of Defense estimates a $7.4 billion annual price tag over present outlays for all the services. Officials don't expect to attain all the items this year or next, but certainly the time to start is now.

It is essential that the Department of Defense succeed in this bold compensation effort that aims to give military members a fair shake at the pay table. Without it, or without most of it, retention almost certainly will worsen and readiness will suffer.

All of this is not to suggest that a renewed surge of grass roots support for military personnel is not needed, that increased pay and benefits will "do it all." The federal government, along with state and local governments, must also promote activities designed to improve the military image and recognize uniformed members for their dedication to society's most important endeavor—national security. History is replete with sad examples of great nations which—at their own peril—slighted the role of their defensive forces. Patriotic dedication cannot be purchased with money alone. The coin of respect must also be paid. It is high time for some original thinking and a consideration of new alternatives. The thrust of any such new thinking—the overall "Grand Design"—would be to keep alive the "citizen soldier" concept that is traditional in this nation. It should emphasize the idea that public service, including military service, forms a rite of passage through which a significant number of young people will and ought to pass en route to their adult careers.

In any event, educational benefits seem, by all odds, to be the most effective means of securing a motivated volunteer. As Sen. William Armstrong (R-Colo.) has said, a new and improved "GI Bill" is "the single most significant step we can take to solve the critical recruiting problem facing our armed forces." We agree. Sen. Strom Thurmond (R-S. C.) has commented that already existing Department of Education subsidies to school attendees total more than $5 billion. As he points out, there should be some way to tie this expenditure to military manning requirements.

The Air Force Association will continue to give top priority to manpower issues and support those activities that will result in highly qualified, professional manning of combat-effective armed forces to defend our country. These actions are directed at manning the active-duty and Reserve Forces; securing just benefits for veterans; meeting the equally just needs of military retirees; recognizing support of dependents; and providing equitable compensation to civilian personnel of the armed services.

With all of this in mind, AFA makes special mention of the following:

COMPENSATION

The pay and entitlements improvements contained in the Nunn-Warner Amendment, the Fair Benefits package, and the 1981 DoD Authorization Bill enacted by the Congress in 1980 cumulatively represent the most significant pay improvements in nearly a decade. AFA commends the Congress for taking these significant critical first steps to resolve the military pay inadequacies that exist and to stem the dramatic exodus of experienced, trained mid-career officers and noncommissioned officers experienced by all of the military services. The authorization of an 11.7 percent pay increase in October 1980 (although below the 13.5 percent the President's Pay Agent determined was needed for comparability) will help to reduce some of the pay lag caused by previous "pay caps." However, AFA reaffirms its previous conviction that actions must be taken to eliminate "pay caps" and to maintain pay for the federal work force at the comparability rate specified in current law. Finally, we emphasize that a single year's initiative is not sufficient to solve all of the military pay inadequacies that have been documented by DoD and urge the Administration and the Congress to establish a long-range plan and commitment to provide the additive funds needed to specifically correct these problems over the next two or three years.

We support:

- An across-the-board military pay raise of sufficient magnitude to restore military pay to the relative comparability with the private sector as was provided in 1972.
- An additive flight pay increase totaling fifty percent to help stem the exodus of experienced officer and enlisted crew members.
- Establishment of the Variable Housing Allowance as an entitlement and sufficient funding of this program to ensure members assigned to high-cost Stateside locations are reimbursed when housing expenses exceed 115 percent of BAQ.
- Extension of full travel benefits to all junior enlisted members in the continental United States and elimination of the overseas dependent ceiling.
- Elimination of the differences between officer and enlisted per diem policies.
- Increased rates for hazardous-duty incentive pay plus the development of new statutory authority to provide payments for additional skills and duties.
- The authority to pay a bonus as required to all rated officers, for retention purposes.
- Establishment of a noncontributory educational incentives program that includes additional incentives for longer service and transferability features for dependent children.
- Continuation of the Technician Program for the Reserve Forces.
- Permanent authorization for enlisted flight pay.
- Broader authority and more funds for enlistment and reenlistment bonuses for both active-duty and Reserve component members.
- Educational and VA-type guaranteed home-loan aid for Air Force Reservists and Air Guardsmen.
- Full reimbursement to mobile-home owners for transfer expenses.
- Federal employee reimbursement of moving/travel expenses, upon retirement or death, to home of record (or equal distance), if the last move was for the convenience of the government.
- A permanent system of flight pay for flight nurses similar to that now authorized for flight surgeons.
- An increase in government liability for personnel whose household goods are lost overseas by virtue of unforeseen evacuation.
- An increase in dislocation allowance rates. Current rates have fallen behind the high cost associated with locating and settling in new quarters.
- Legislative authority to pay flight pay to those rated officers with more than twenty-five years' officer service who are required, by the needs of the service, to fly.

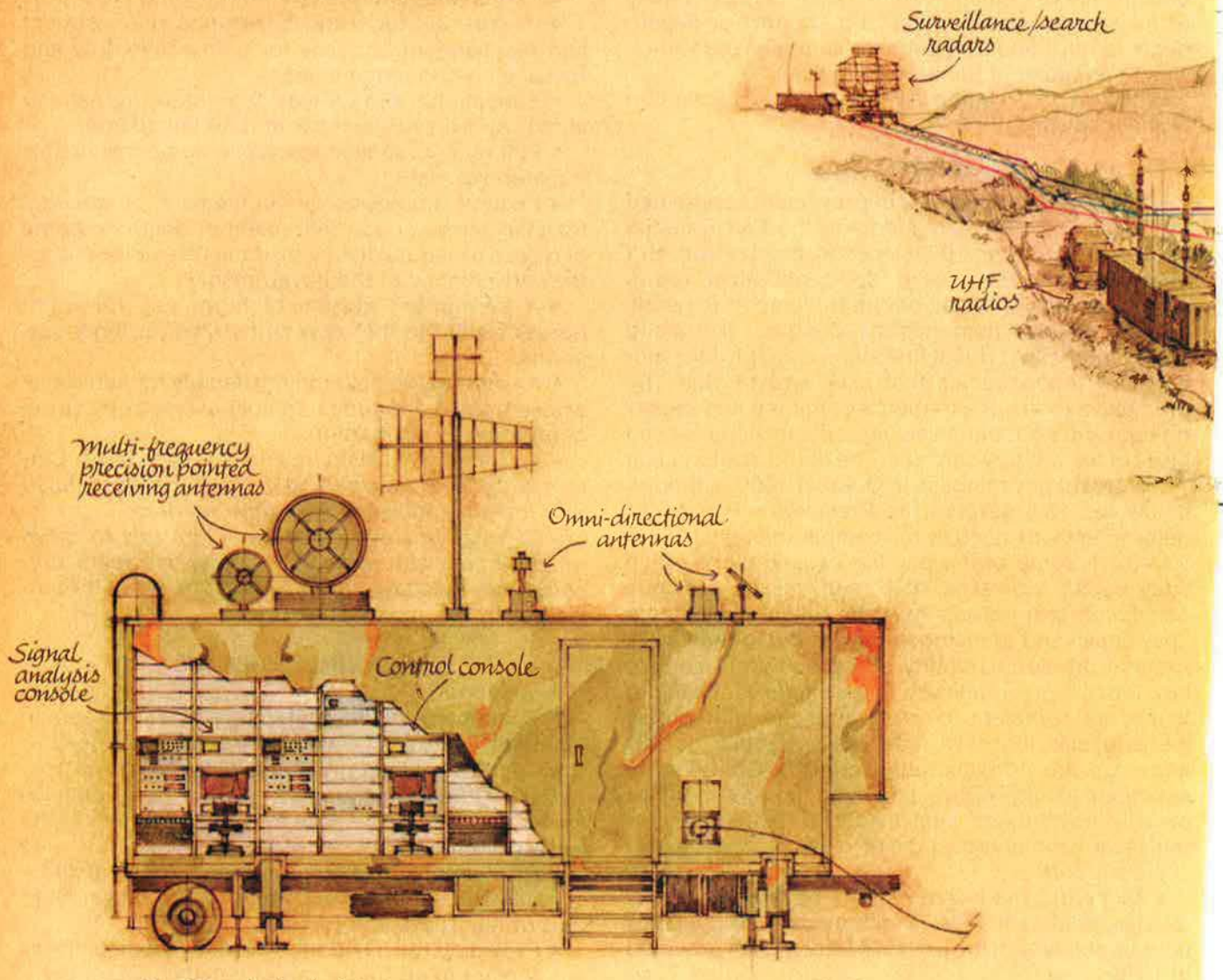
PERSONNEL POLICIES

AFA supports:

- Enactment of the Defense Officer Personnel Management Act (DOPMA) as originally proposed by DoD, particularly the grade-stabilization provisions.
- Continuation of current military leave policies for federal employees who are also members of the Reserve Forces.
- A tax credit for employers who hire Reservists.
- The President's Committee for Employer Support of the Guard and Reserve.
- Providing the basic allowance for subsistence as entitlement to all single career enlisted personnel.
- Payment of a cost-of-living allowance to single and unaccompanied members stationed in high-cost overseas locations who are not authorized to subsist off-base.
- Adequate housing for all ranks, or suitable reimbursement for the lack thereof.

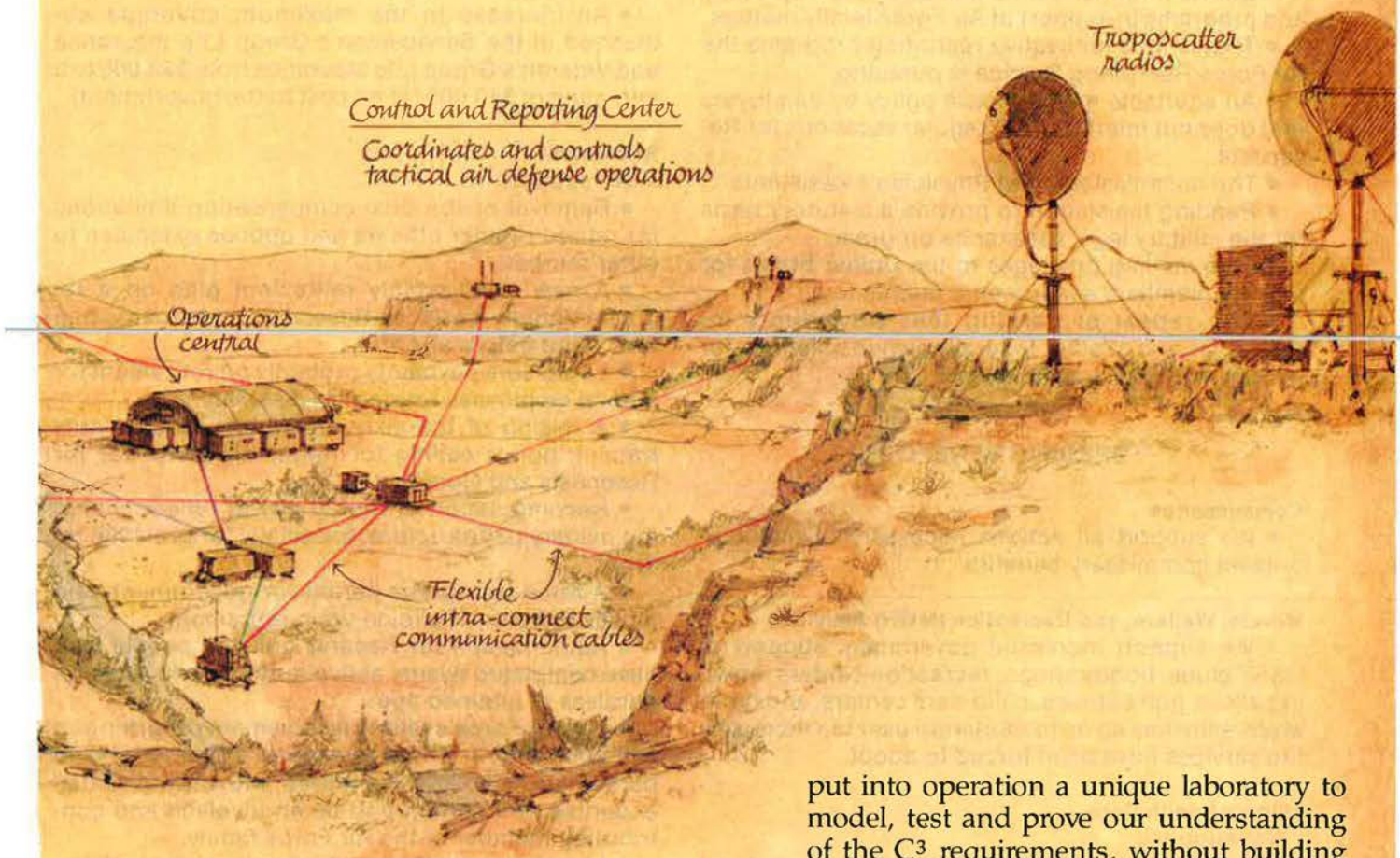
What do successful space and defense systems have in common?

C^3 imagination.



EW Signal Analysis Van

Monitors, identifies and evaluates electronic warfare signals



The swift pace of today's military operations demands the most effective command, control and communications systems to aid air, ground and naval commanders.

For decades, Martin Marietta has been designing and developing C^3 systems for space and defense programs that have performed under a wide variety of conditions.

To save time and money in this complex development process, Martin Marietta has put into operation a unique laboratory to model, test and prove our understanding of the C^3 requirements, without building expensive system software packages and hardware.

As a result, Martin Marietta's broad expertise in computers, software, electronics and automatic testing has been successfully applied to important programs, including the Space Shuttle, special tactical command and control systems and selected spacecraft.

And, in the future, this method will be used to help build new systems for NASA, the Air Force, and other elements of the Defense Department.

MARTIN MARIETTA

Martin Marietta Aerospace
6801 Rockledge Drive, Bethesda, Maryland 20034 U.S.A.

• Payment of advance-quarters allowance to personnel making a PCS move, a benefit that would cost the government nothing.

• Increased reimbursements, including payment of per diem to both the member and family members to offset the significant costs incurred from permanent change of station moves made to satisfy mission requirements.

• Continuing opportunity for qualified enlisted members to become commissioned officers.

• Efforts to better define and prioritize objectives and programs in support of Air Force family matters.

• The various innovative recruiting programs the Air Force Recruiting Service is pursuing.

• An equitable military leave policy by employers that does not interfere with regular vacations for Reservists.

• The commissioning of Physician's Assistants.

• Pending legislation to provide a statutory basis for the military legal assistance program.

• Free mailing privileges to the United States for military members serving on a remote tour.

• The repeal of parking fees on military installations and at other federally owned buildings for military and civilian employees.

SPECIFIC BENEFITS

Commissaries

• We support all actions necessary to maintain present commissary benefits.

Morale, Welfare, and Recreation (MWR) Activities

• We support increased government support of USAF clubs, hobby shops, recreation centers, bowling alleys, golf courses, child-care centers, and other MWR activities so as to moderate user fee increases the services have been forced to adopt.

Military Health Care

We support:

• Improved incentives and professional support for military physicians and other health-care personnel, to attract and retain more of them.

• Dental care for retired members and for dependents of active and retired members.

• Lifetime coverage under CHAMPUS for military retirees without regard to Social Security, Medicare, or service-connected disability treatment by the VA, and removal of current nonavailability certificate requirements.

• Raising the CHAMPUS reimbursement rates from the eightieth to ninetieth percentile.

• Improved administration of CHAMPUS to eliminate unnecessarily long delays in reimbursement.

• Major improvements to the CHAMPUS program such as updated fee profiles, eye examinations, and establishment of a limit on the member's share of costs in the case of catastrophic illnesses.

Survivors' Benefits and Insurance

We support:

Improvements in the current Survivors' Benefits Plan (SBP) to include:

• Erasing the rule that requires survivors' benefits to be offset by proportionate amounts of the deceased spouses' Social Security.

• Amending the Federal Employee Group Life Insurance program to permit federal employees to contribute after retirement with continued coverage.

• Maintaining the goals of both the Air Force Enlisted Men's Widows and Dependents Home, and Air Force Village.

• An increase in the maximum coverage authorized in the Servicemen's Group Life Insurance and Veteran's Group Life Insurance from $20,000 to a minimum of $40,000 (at no cost to the government).

Retirement

We support:

• Removal of the dual-compensation limitations for retired regular officers and oppose extension to other retirees.

• A new nondisability retirement plan on a reduced annuity basis for Reservists and Guardsmen who retire before age sixty.

• Lump-sum payments promptly on retirement for federal employees retiring for disability.

• A raising of the sixty creditable, inactive-duty training points ceiling for retirement purposes for Reservists and Guardsmen.

• Recomputation of retired pay to reflect changing military pay structure, especially for pre-1968 retirees.

• A three-year grace period for government-paid moves to home of choice upon retirement.

• Authorization for Reserve enlisted people who have completed twenty active-duty years to retire regardless of attained age.

• The Air Force's retiree involvement program and call upon the Air Force to expand it and retirees to participate in it. Thus, the retiree, with his/her valued expertise, will continue to be an involved and contributing member of the Air Force family.

• Legislation that would permit receipt of immediate retirement pay to totally disabled Reservists who have otherwise qualified for Reserve retirement.

We oppose:

• The reduction in long-term retirement benefits that would occur if the Defense Department's Uniformed Services Retirement Benefit Act becomes law. We also oppose the Act's Social Security offset proposal.

• Any action that penalizes retired service members working for the government by curtailing either their retired military pay or Civil Service salary.

• The integration of Social Security and Civil Service retirement benefits as called for in the Administration-recommended Civil Service retirement program.

• Any reduction in the current semiannual cost-of-living adjustment formula for both military and federal retirees.

• The current so-called "Catch 62" provisions of federal law that require retired military people who

have subsequent earned retirement from Civil Service to give up applicable credit for their military retired pay and replace it with Social Security at age sixty-two.

• The current guidance that requires members processing for retirement to "overcome the presumptions of fitness" together with the implicit assumption that if the retiree was "present for duty" or "fit for worldwide duty" the day before the processing, that person has, prima facie, no rateable disability. This slights the dedication that many members, of all ranks, have brought to their service and the fact that many have ignored physical discomfort and disability in order to accomplish the mission.

RESERVE OFFICER TRAINING CORPS

We support:

• An increase in the number of Junior ROTC units, and the full funding of authorized AFROTC scholarships.

• A review of the current monthly subsistence for AFROTC cadets to reflect the impact of inflation.

CIVIL AIR PATROL

We support:

• Continued federal funding of the Civil Air Patrol and an increase in CAP's capability to perform its search and rescue missions.

• Increased disability and death benefits for CAP members injured or killed on operational missions.

• The CAP Cadet Program and Aerospace Education mission.

VETERANS

We remain concerned about the public's inclination to forget, during peacetime, the sacrifices of both those who served during past wars and persons now serving on active duty. The problems encountered by Vietnam-era veterans, while moderating, remain a national concern. We believe there is a direct linkage between treatment of veterans and the current morale and retention problems plaguing the active-duty forces today. Broken promises to veterans and neglect or disregard of their legitimate needs is perceived by some active-duty people as major evidence of the public's low esteem for the military in general and is a factor in their assessment of the military as a career.

We support:

• Greater government emphasis on training and jobs for Vietnam-era veterans.

• A continuing network of VA hospitals, fully funded and adequately staffed.

• An expanded National Cemetery system responsive to the needs of US veterans.

• Legislation allowing disabled veterans retired from military service on a longevity basis to receive both retired pay and VA disability compensation.

• Extension of time restrictions on eligibility for earned veterans education benefits.

• The current veterans preference system in federal employment.

• Increased emphasis on making psychological counseling available to veterans, especially Vietnam-era veterans.

• Retention of all records by the Veterans Administration of either veterans still living or eligible dependents still living within the present form or in some reduced format such as microfiche.

MIAs/POWs

In light of new information as a result of the outflow of refugees from Southeast Asia, we urge the government to vigorously pursue the resolution of the status of all Americans identified as MIAs or POWs in Southeast Asia.

An increasing body of knowledge concerning the long-term effects of prolonged POW status is emerging. In this regard we salute the recent efforts of the Veterans Administration which brought forth the significant report "VA Study on Prisoners of War."

Based upon the evidence within this VA report, we support:

• Granting to all former POWs the assumption of "service connection" for compensation purposes for any chronic disease irrespective of the date of onset.

• Medical treatment for any disability on the same basis as that provided for veterans who have service-connected disability rated at fifty percent or more.

• Waiver of restrictions imposed on vocational rehabilitation by 38 USC 1503, so that former POWs may be granted vocational rehabilitation whenever and as many times as necessary to maintain the veteran's employability.

• Designation of an annual, specific date as POW/MIA Recognition Day to honor and recognize the extreme sacrifice made for their country by this special group of combat veterans.

• Continued physical examination of former POWs, along with continued national studies.

• Liberal presumption of unfitness, based chiefly on location and length of imprisonment, in connection with disability programs.

* * *

Perhaps more than any other similar group, the Air Force Association is an organization "of people—for people." Our membership includes every segment of the Air Force family—officers, enlisted, Reserve components, civilian employees, cadets, and retirees, as well as civilians from all walks of life. We are dedicated to the maintenance of airpower for peace, and we recognize that effective airpower rests squarely on the quality of the people—military and civilian—that make up the force. Similarly, the quality of the recruiting and commissioning efforts is essential in maintaining the force, and the treatment of veterans—those who have honorably served in the force—is a prime indicator of the will of the public to support the force.

Thus, the foregoing policy positions reflect our firmly held belief that an unequivocal commitment to quality requires an unequivocal commitment to people. ■

A glittering affair during AFA's National Convention in Washington, D. C., in September marked . . .

The 25th Anniversary of the Outstanding Airmen Program

By William P. Schlitz, SENIOR EDITOR

TSgt. David L. Butler and his wife, Sgt. Peggy Jean Butler, feed daughter, Tonya Renee (not shown: daughters Dana Lynn and Belinda). Sergeant Butler, a native of Marietta, Ga., and his family reside in Bossier City, La., near Barksdale AFB, where he is a SAC security specialist at Hq. Eighth Air Force. His efforts were cited as a contributing factor in the selection of his unit, the 351st Security Police Group, as USAF's best large security force.

Sgt. Gary R. Y. Shafovaloff and wife, Rachael, at the backgammon board. Sergeant Shafovaloff, from Pensacola, Fla., assigned to the Headquarters Squadron at the Air Force Academy as a personnel specialist, brought the post's airman performance reports from an accuracy of forty-eight percent to ninety-four percent through exhaustive effort in a year's time.

As guests of the Air Force Association, the twelve Outstanding Airmen for 1980 were accorded VIP treatment during their visit to the nation's capital and their appearance at the AFA National Convention in September. During a whirlwind week of activities, the twelve and their spouses toured the White House, Capitol, and the national monuments; visited Arlington Cemetery and spent an evening at the Kennedy Center for the Performing Arts; and had luncheon with the Chief Master Sergeant of the Air Force at the Pentagon, among other things.

But their crowning moment, and traditionally a high point of AFA's National Convention, was their evening in the spotlight at the Outstanding Airmen Dinner in their honor.

This year the event was especially glittering, for it marked the silver anniversary of the founding of AFA's Outstanding Airmen Program—the brainchild of retiring AFA Executive Director James H. Straubel. The program, since its humble beginnings in 1956, has acknowledged the achievements of a total of 402 of the best from the enlisted force.

An adjunct to the evening's printed program was a specially prepared booklet listing all of the Outstanding Airmen from 1956 to 1980.

"Like a good brandy," said AFA National President Vic Kregel in his address to the dinner audience, "the program has improved with age." And he touched on some highlights through the years, in-

CMSgt. Raymond F. Enright and family: front row from left, Kenny, Dorothy, Donny, and Danny; back row, Terry, Chief Enright, wife Dottie, and son-in-law Randy (not shown: son SrA Ray, Jr., and wife Carmen, stationed at Wiesbaden AB, Germany). A twenty-five-year veteran, Chief Enright, from Queens, N. Y., assures that appropriate funding and procedural guidance is provided to 100 AFTEC test sites and supporting agencies to meet normal schedules and numerous short-notice requirements.

SMSgt. John A. Norris and his wife, Ayra, have two children, Lisa and John, Jr., shown here with their father. As a social actions superintendent with the 3d Tactical Fighter Wing, Clark AB, R. P., Sergeant Norris develops programs for drug and alcohol-abuse control, equal opportunity and human-relations education for the wing and Thirteenth Air Force, and has completed requirements for an associate degree in social service from the Community College of the Air Force. A twenty-five-year veteran, he hails from Chattanooga, Tenn.

cluding the introduction by the Air Force of the Outstanding Airman Ribbon in 1968.

Said Mr. Kregel: "Our Outstanding Airmen Program has been a small token of our appreciation. We say small because we feel that the country owes them a lot more. I'm reminded of Air Force Chief of Staff Gen. Horace Wade's comments at the Outstanding Airmen Dinner in 1973: '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.' "

Two special guests at the banquet were among the first group named Outstanding Airmen in 1956: retired MSgt. Doyle Webb from Marshall, Tex., and retired MSgt. Wesley Gleason from North Conway, N. H. *(See also "The Bulletin Board," p. 122, for accounts of their activities since 1956.)*

In his after dinner speech, Vice Chief of Staff Gen. Robert C. Mathis traced the ebb and flow of the nation's respect and support of the military since the earliest days of the Republic. General Mathis warned that in this age "time is no longer an ally nor distance a safeguard," but voiced optimism in the public's growing awareness of the need for a strong military.

Among top Air Force leaders attending the dinner were Secretary of the Air Force Hans Mark, Chief of Staff Gen. Lew Allen, Jr., and fifty-five other general officers; representing the enlisted force were almost sixty senior and chief master sergeants, many in Washington to attend Senior Enlisted Council meetings at the AFA Convention.

Chief Master Sergeant of the Air Force James M. McCoy, himself an Outstanding Airman in 1974, acted as the banquet's toastmaster.

Entertainment at the Outstanding Airmen's Dinner, which was held at the elegant Sheraton Washington Hotel, was provided by the Air Force Band's Strolling Strings and a group dubbed WUSA (for radio station USA), a quartet of the band's Singing Sergeants.

The newcomers to the ranks of the Outstanding Airmen will serve as the nucleus of AFA's Enlisted Council for 1981, advising the AFA President on matters of special interest to the enlisted force. ■

Sgt. Clifton S. Diaz, who hails from Jamaica, N. Y., is airman in charge of the crime prevention and community-relations section, 2851st Security Police Squadron, Kelly AFB, Tex. He has completed a law-enforcement course at San Antonio College and has earned more than 100 semester hours toward a degree, plus eighty hours in crime prevention at Southwest Texas State University. He is a member of the Texas Crime Prevention Association and a founder of Law Enforcement Explorer Scout Post 888.

Sgt. Caren E. Calvin, from Temple Terrace, Fla., and her husband, Sgt. Joshua D. Calvin, visit historic King's College, Cambridge, in the UK. The two were the top winners in 1979's USAFE Intelligence First Term Airman of the Year competition. A squadron intelligence operations specialist, she devised a record-keeping program so unique that it was adopted command-wide by USAFE.

SMSgt. James F. Spears, a twenty-four-year veteran, is NCOIC of the USAF Pararescue School Medical Department, 1550th Aircrew Training and Test Wing, Kirtland AFB, N. M. He has been instrumental in the establishment of realistic medical training facilities at the wing and during his career is credited with saving more than 200 lives. Sergeant Spears, from Sanford, Fla., and his wife, Maxine, have three children, Jane, Stephen, and Tammy.

A1C Mark A. Watts is an administrative specialist and travel coordinator with the Organization of the Joint Chiefs of Staff. He has earned an associate of arts degree from Pearl River College, Miss., and has nearly completed courses for a bachelor's degree in business administration. From Hattiesburg, Miss., he and his wife, Karen, have two children, Crystal and Mark, Jr.

SMSgt. Ralph E. Swift and son, Ralph, Jr., with marksmanship medals. An electronics communications expert with the 2063d Communications Squadron, Lindsey AS, Germany, Sergeant Swift supports secure voice and encryption systems serving more than forty organizations, including one of the largest intelligence communities in Europe. A twenty-year veteran, Sergeant Swift and his wife, Virginia, also have a daughter, Roberta. Sergeant Swift is a native of Salisbury, Md.

CMSgt. Glenn H. Woody with wife, Cynthia, and daughter, Catherine. Chief Woody is a security police inspector with Hq. ATC, Randolph AFB, Tex., where he oversees security police operations at fifteen ATC bases. A twenty-four-year veteran, he holds a bachelor's degree in police administration. A recent graduate of the USAF IG Inspection School, Chief Woody also implemented the largest security police Warskill program in the Air Force. He hails from Universal City, Tex.

MSgt. Larry J. Smith and wife and daughter, Kimiko and Florence, browse at an open marketplace on Crete. Chief of the standardization and evaluation section, 6931st Electronic Security Squadron, on the Greek island, Sergeant Smith, from Carnation, Wash., is responsible for the job certification and evaluation of 319 people in four Air Force specialties. He is a twenty-one-year veteran.

Sgt. Kathy A. Walls, from Lanett, Ala., is an aircraft maintenance repairman with the 479th Component Repair Squadron, Holloman AFB, N. M. She has been cited by area civic organizations as one of the outstanding military members in the Southwest. Active in the community, she has also participated in the recruiter helper program. Her husband, SrA Kenneth Walls, is also stationed at Holloman.

THE OUTSTANDING AIRMEN FOR 1980

TSgt. David L. Butler
351st Security Police Gp. (SAC)
Barksdale AFB, La.

Sgt. Caren E. Calvin
1st Tac Recon Sqdn. (USAFE)
RAF Alconbury, UK

Sgt. Clifton S. Diaz
2851st Security Police Sqdn. (AFLC)
Kelly AFB, Tex.

CMSgt. Raymond F. Enright
Directorate, Plans & Resources (AFTEC)
Kirtland AFB, N. M.

SMSgt. John A. Norris
3d Tac Fighter Wing (PACAF)
Clark AB, R. P.

Sgt. Gary R. Y. Shafovaloff
Headquarters Sqdn. (USAFA)
Colorado Springs, Colo.

MSgt. Larry J. Smith
6931st Electronic Security Sqdn. (ESC)
Iraklion AS, Greece

SMSgt. James F. Spears
1550th Tech Training Sqdn. (MAC)
Kirtland AFB, N. M.

SMSgt. Ralph E. Swift
2063d Communications Sqdn. (AFCC)
Lindsey AS, Germany

Sgt. Kathy A. Walls
479th Component Repair Sqdn. (TAC)
Holloman AFB, N. M.

A1C Mark A. Watts
Directorate of Administrative Services, JCS
Washington, D. C.

CMSgt. Glenn H. Woody
Base Supervisory Div. (ATC)
Randolph AFB, Tex.

Aerospace Industry Roll of Honor

Companies Represented at the 1980 Aerospace Development Briefings and Displays

Avco Corp.
Strategic and Tactical Systems for the '80s

Bell System
Information Management Systems to Meet Specific Applications

Bendix Corp., Aerospace-Electronics Group
Advanced Aerospace Technology on Stage

Boeing Aerospace Co.
The MX Missile System

British Aerospace
Aircraft Group
Advanced European Fighters—Tornado-V/STOL
Dynamics Group
Rapier and Skyflash Missiles. Sortie Support System Pallet

Brooks & Perkins, Inc.
Airflex, Long-Term Storage and Preservation Solution

Canadair
The Challenger Meets Key Air Force Requirements

Computer Sciences Corp.
Computer Sciences Corp. and Today's Air Force

E-Systems, Inc.
Command Control Communications and Intelligence (C^3I) in Today's Air Force

Fairchild Industries Inc.
Current Diverse Activities and the A-10 in the NATO Environment

Falcon Jet Corp.
The Falcon Family of Aircraft-USAF Applications

Ford Aerospace & Communications Corp.
Tactical Missiles, Electro-Optical and Operations Support Systems

Garrett Corp.
Train with Garrett Power

Gates Learjet Corp.
Learjet: The True Companion

General Dynamics Corp.
Tactical Cruise Missiles for the Air Force
USAF's F-16 Fighting Falcon

General Electric Co.
Aerospace Group
Fighter Aircraft Gun Systems of the Future and Ground-Based Air Defense Radars
Aircraft Engine Group
A Modern Approach to Developing Durability and Reliability in a Jet Engine

Grumman Aerospace Corp.
Technology Into the 21st Century

GTE Products Corp.
Fiber Optics Capabilities/MX C^3

Honeywell, Inc.
Spectrally Agile Sensors for Smart Systems

Hughes Aircraft Co.
Hughes Liquid Crystal Projector for Command and Control Requirements

IBM Corp., Federal Systems Div.
IBM: Total Systems Performance

Israel Aircraft Industries
Westwind for B-52 Companion Trainer
Aircraft Mission/IAI's Capability to Overhaul USAF Equipment

Itek
Defense Electronics Operation
Modern Threat Warning Systems and Training/Validation
Itek Optical Systems
Real Time Reconnaissance at Itek

ITT Gilfillan
ITT Gilfillan—Systems Capability for Tactical Air Surveillance

Lear Siegler, Inc.
Lear Siegler Black Box Magic

Litton Industries, Aero Products
Litton Aero Products Inertial and Omega Navigation System

Lockheed Corp.
Technology on the Move

Loral Corp.
Electronic Warfare and Aircraft Survivability

Martin Marietta Aerospace
Denver Aerospace
MX—Our Newest Land-Based ICBM
Orlando Division
Aircraft Avionics/Integration

McDonnell Douglas Corp.
Douglas Aircraft Co.
KC-10 Advanced Tanker/Cargo Aircraft Status Report
McDonnell Aircraft Co.
The F-15 Eagle
McDonnell Douglas Astronautics Co.
The US Air Force Laser Communication Systems
McDonnell Douglas Electronics Co.
The New VITAL IV Systems

Northrop Corp.
Aircraft Div.
The F-5G Multi-Role Tactical Fighter
Tactical and Electronics Group
Capabilities of Tactical and Electronic Systems Group

Raytheon Co.
Developments in Phased-Array Radar Technology

Rockwell International
Autonetics Strategic Systems Div.
Advanced Targeting Systems and Sensors
North American Aircraft Div.
Strategic and Advanced Fighter Systems Programs
North American Space Operations
DoD Navstar GPS Satellite Program and the Space Shuttle Program

Rolls-Royce Inc.
The Bright Future for Vectored Thrust

Sanders Associates, Inc.
Airborne Self-Protection Jammer

The Singer Co.
Kearfott Div.
State-of-the-Art Guidance and Navigation
Link Div.
Air Force Simulation Update

Sperry Flight Systems
Avionics for the '80s

Teledyne CAE
Teledyne Trainer Turbofan Engine Model 444

Texas Instruments, Inc.
Airborne Forward-Looking Infrared (FLIR) Systems and FLIR Common Modules

TRW Defense and Space Systems Group
Deep Space Surveillance
MX Operation

United Technologies Corp.
Hamilton Standard Div./Norden Systems
Electronic Systems for the Air Force
Pratt & Whitney Aircraft/Chemical Systems
Readiness for the Modern-Day Air Force
Sikorsky Aircraft
The Sikorsky Combat Search and Rescue H-60

Westinghouse Electric Corp.
Westinghouse Systems and Technology for Defense

Williams Research Corp.
Small Turbofan-Powered Cruise Missile

The following companies displayed but did not hold briefings

AGA Corp.
Infrared Imaging Equipment

Alkan U.S.A. Inc.
Low Drag, Semi-Automatic Ejector Rack Units, and Twin Store Carriers

Aviation Week and Space Technology
Introducing a new publication: *Defense Budgets, A Progressive Analysis*

Beech Aircraft Corp.
USAF's C-12A Aircraft

Brunswick Corp.—Defense Div.
Air-Launched Tactical Systems

Davis Agency Inc.
Special Worldwide Travel Arrangements

Emerson Electric Co.
Emerson's Fire-Control Radar

Gould Government Systems Group
TACAN Beacon and Airborne TACAN Equipment

Gulfstream American Corp.
Gulfstream American Products Highlighting the Gulfstream III

Jane's/Franklin Watts, Inc.
Featuring the twelve annual *Jane's Yearbooks* and nine new military history and defense reference books

Litton Industries, Guidance and Control Systems
LN-39 Standard Inertial Navigation Unit

Lockheed-California Co.
Intra-Service/NATO Standardization for Flight Training Equipment

Lockheed Electronics Co.
Capabilities Related to Space Recorders, Antennas, Automated Test Equipment, Air Traffic Control, and Weapons Control Systems

Lockheed-Georgia Co.
Various Load Capabilities of the C-5A

Lockheed Missiles & Space Co., Inc., Advanced Systems
CADM (Clustered Airfield Defeat Munition)
TRAAMS (Time Reference Angle of Arrival Measurement System)
BOSS (Ballistic Offensive Suppression System)

Lockheed Missiles & Space Co., Inc., Space Systems
PLSS (Precision Location Strike System)

Marconi Avionics
Advances in Head-Up Displays, Flight Control Electronics, Power Plant Supervisory Systems, Fuel Management, and Automatic Power Plant Testing Systems

Martin Marietta Aerospace
MMU Display, MX, Pave Penny, LANTIRN, and SSLD

Mönch Publishing Group
Mönch publications including NATO's *Fifteen Nations, Aerospace International,* and *Military Technology*

Olympus Corp. of America
Fiberscopes, Borescopes, and Accessories

Panavia Aircraft GmbH
Tornado, the European All-Weather Strike Attack Aircraft

Rockwell International, Collins Government Avionics
State-of-the-Art VHF/AM, FM Communications Radios

Rockwell International, Missile Systems
GBU-15 Cruciform Wing Weapon (CWW) and HELLFIRE Modular Missile System

Rockwell International, Rocketdyne
Space Shuttle Main Engine, Missile X-Stage IV Program

Sermetel Inc., a Subsidiary of Teleflex, Inc.
Process 5375: The Fuel Saver

Sierra Research Corp.
Advanced Electronic Systems

Talley Industries, Inc., Government and Technical Products Group
Aircraft Ejection Seat Systems, Anti-Armor Plastics, and Advanced Electronic Devices for Many Applications

Vought Corp.
New Generation Trainer Concept

Aerospace Development Briefings and Displays

THE Aerospace Development Briefings and Displays, the most successful in AFA Convention history, included briefings and exhibits from eighty-six aerospace firms and company divisions from the US and abroad *(see complete list on p. 85)*.

The new Sheraton Washington Hotel provided more than 100,000 square feet of exhibit space, forty percent more than that of previous years, and the space was totally utilized.

Close to 6,000 guests toured the displays, including senior Air Force, Defense, and other officials from some forty government agencies, members of Congress, and of congressional committee staffs, generals, admirals, and other senior officers of all the services, military attachés, and other distinguished guests from foreign countries.

Close to 6,000 guests toured the displays, including military DoD and other officials from more than forty government agencies and Congress.

Displays included aircraft and aeronautical technology, propulsion systems, ballistic and cruise missiles, as well as the latest technology in lasers, electronic warfare, armament, communications command and control, guidance systems, simulators, infrared devices, radar, fiber optics, and satellites to name only some of the subject matter on display.

The Briefings and Displays program—a unique concept pioneered by the Air Force Association—offers military and civilian officials an opportunity to review and discuss, with aerospace engineers and scientists, the present state of aerospace technology and future developments and their military application in one place and at one time.

—By Patricia Teevan

The briefings offer military and civilian personnel a unique opportunity to learn firsthand the latest developments in aerospace technology.

The Air Force Chief of Staff, Gen. Lew Allen, Jr., was among the VIPs who visited the exhibits and talked with industry engineers and scientists.

One of the many senior Air Force officials who attended the Briefings and Displays was Gen. Robert C. Mathis, USAF Vice Chief of Staff.

The Aerospace Development Briefings and Displays offer military and civilian leaders an opportunity to meet and discuss, with their counterparts in industry on a one-to-one basis, the application of aerospace technology.

The exhibit program attracted VIPs from the US and abroad, including military attachés and other senior international leaders.

AFA's Seventh Annual Salute to Congress

THE seventh annual Salute to Congress, held September 16 at the Longworth House Office Building on Capitol Hill, was the best attended to date. More than 500 convention delegates and AFA leaders met with congressional delegations and staffs during the two-hour evening event. AFA's Salute has proven effective in bringing together AFA and congressional leaders for informal discussions. On these two pages are a sample of the hundreds of photographs taken at this year's Salute to Congress.

The Salute to Congress gives Air Force officers and AFA members a chance to meet with their elected representatives. Pictured here are (from left): Maj. Gen. Guy Hecker, Director of Legislative Liaison; Rep. Don Mitchell (R-N. Y.); Air Force Chief of Staff Gen. Lew Allen, Jr.; and Jim Kane, President of New York State AFA's Colin P. Kelly Chapter.

AFA President Victor R. Kregel, left, greets Rep. Phil Gramm (D-Tex.).

Rep. Floyd Spence (R-S. C.), left, greets Delegate Worth Allen from AFA's Columbia Chapter.

Rep. Geraldine Ferraro (D-N. Y.), center, stops to chat with fellow New Yorkers Irene Keith, left, President of the Queens Chapter and a WW II Army Air Forces veteran and Dorothy Wadsley, President of the Gen. Daniel "Chappie" James, Jr., Memorial Chapter and also a WW II Army Air Forces veteran.

Chief of Air Force Reserve Maj. Gen. Richard Bodycombe, left, and Rep. Elwood Hillis (R-Ind.) talk with retired Col. Marjorie Hunt. Colonel Hunt is President of AFA's James H. Straubel Chapter.

The state of Texas was represented in force at the Salute. Pictured here (from left): James Long, Vice President of Texas State AFA; Edward Fox, President of the Heart of the Hills Chapter; Rep. Tom Loeffler (R-Tex.); and AFA National Director E. F. "Sandy" Faust.

Indiana State AFA President Roy Whitton, left, greets Judy Clark from Sen. Birch Bayh's office and fellow Indiana AFAers D. E. Bradford, Vice President of the Central Indiana Chapter, and Richard DeLong, Secretary of the South Bend Chapter, far right.

Rep. Jerry Lewis (R-Calif.), second from left, stops to chat with fellow Californians (from left): Evlyn Wilcox, President-elect of the San Bernardino Chapter; David Noerr, President of the San Bernardino Chapter and AFA Man of the Year; Edie Moneymaker; and San Bernardino Chapter Secretary Gene Moneymaker.

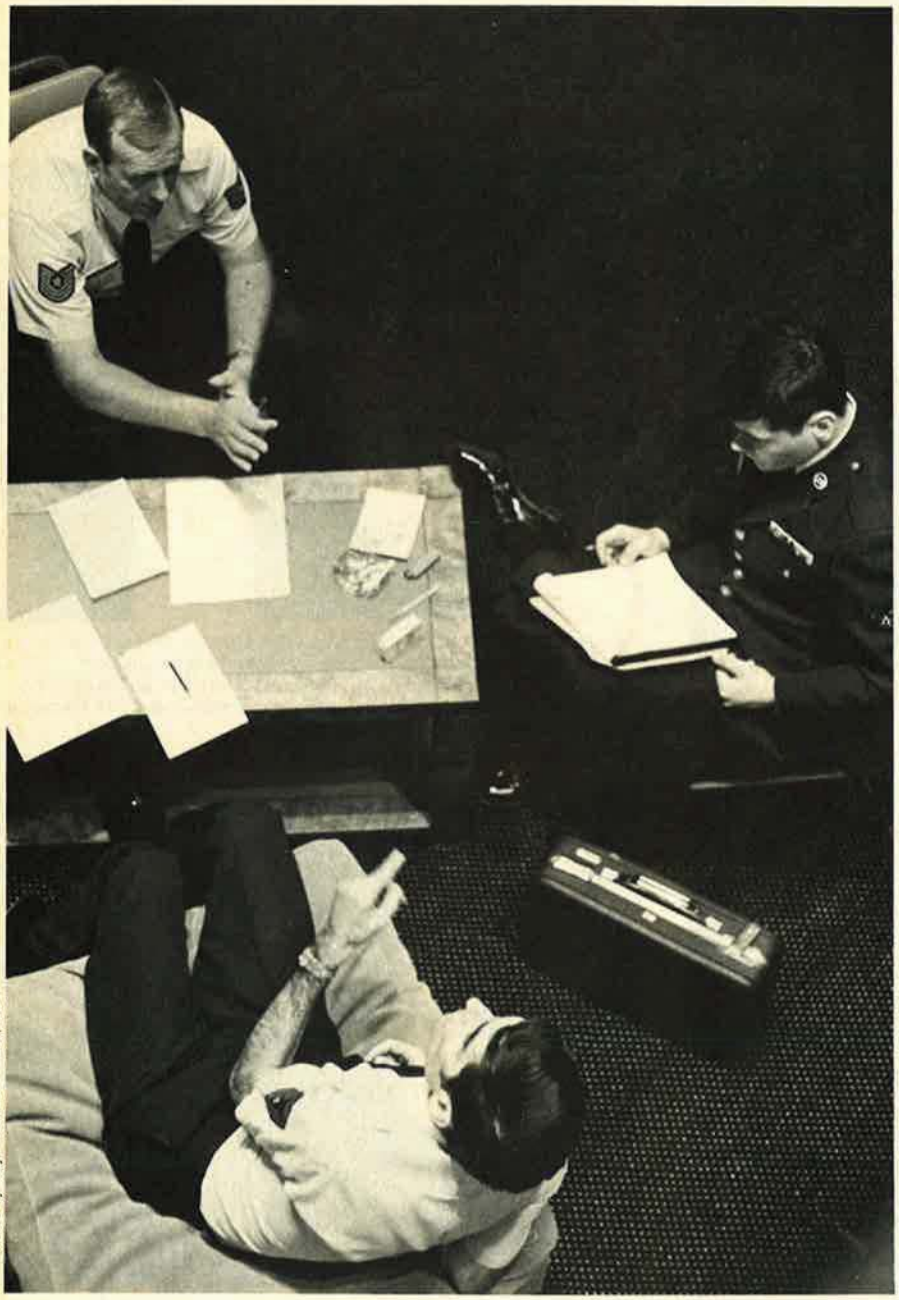
Sen. Sam Nunn (D-Ga.), center, visits with Jack Maret, left, President of the Middle Georgia Chapter, and Leland Wolfe, President of the North Georgia Chapter.

The Tennessee State AFA contingent had the opportunity to talk with Sen. Jim Sasser (D-Tenn.) during the Salute. Pictured (from left) are Tom Bigger, AFA National Vice President for the South Central Region; Polly Murphy, Tennessee State AFA President-elect; Senator Sasser; and Pat Maxwell, Delegate from the Nashville Chapter.

A week before the AFA Convention, President Carter signed legislation improving military compensation. AFA's Junior Officer Advisory and Enlisted Councils and the Senior Enlisted Advisors discussed it with Air Force leaders and among themselves. They recognized that challenges and opportunities lie ahead, but through it all . . .

The Mood Was Optimistic

BY MAJ. THOMAS L. SACK, USAF, CONTRIBUTING EDITOR



—Photos by Maj. Thomas L. Sack, USAF

Three members of the AFA Enlisted Council talk about Professional Military Education. Council members also discussed using the Outstanding Airmen as spokesmen about personnel matters among Air Force members and to assist recruiters. Pictured here are CMSgt. Eugene Barnes, MSgt. T. V. Chambers, and Sgt. Walter Koltys.

PAY and compensation and their ability to attract and retain quality people dominated discussions among Air Force junior officers, young airmen, and senior enlisted advisors gathered during this year's Air Force Association Convention at the Sheraton Washington Hotel.

The Senior Enlisted Advisors, chaired by CMSAF James M. McCoy, were meeting for the fourth year. The Junior Officer Advisory Council (JOAC) convened its eleventh meeting, and the Enlisted Council came together for the seventh time. Capt. (Maj. selectee) Bob Murdock of Military Airlift Command ran the JOAC, and CMSgt. Robert Carter of the Air Force Military Training Center headed the Enlisted Council. Each group combined formal meetings among its members with AFA's professional update seminar featuring talks by senior Air Force leaders and civilians. These men and women were on the go from early morning to late evening satisfying demanding schedules.

The Keynote

Air Force Director of Personnel Plans Maj. Gen. William R. Usher gave the keynote address. Like the many speakers to come after him, he sounded the optimistic note generated by President Carter's signing on September 8 of the pay raise and benefits packages. But the General also reminded everyone of the work remaining. Calling the audience "advisors," he told them they would affect policy at the highest levels by their influence on the Air Force Association and ultimately at the Air Staff level.

Both the Junior Officer Advisory

and Enlisted Councils hold charters to study matters related to their segments of the Air Force and make recommendations to AFA. The Senior Enlisted Advisors work under the authority of AFR 39-20. This year they met for two days of briefings with senior officers at the Pentagon before coming to the Sheraton. The SEAs are a link between the enlisted force and commanders. As one person put it, "They want to know what drives the policies that govern the force, air their concerns, and make recommendations about enlisted matters."

Capt. Tim Timmons chaired this JOAC discussion that considered how the council can work more effectively through AFA. As a member of the JOAC Executive Committee, Captain Timmons helped coordinate much of this year's agenda. He works in the Air Force Directorate of Personnel Plans.

The Speakers

Other first-day speakers included Lt. Gen. Andrew P. Iosue, Deputy Chief of Staff for Manpower and Personnel; Maj. Gen. Guy L. Hecker, Jr., Air Force Director of Legislative Liaison; and Col. Richard F. Abel, Air Force Director of Public Affairs. Air Force Chief of Staff Gen. Lew Allen, Jr., and Republican Sen. William Armstrong of Colorado highlighted the second day's presentations. Dean Phillips, Special Assistant to the Administrator of the Veterans Administration, talked about veterans' preferences, and Maj. Gen. Murphy A. Chesney, Air Force Deputy Surgeon General, discussed medical service recruiting and retention.

The Issues

Major points covered in the Professional Update Seminar and discussed in council sessions include:

- International events have made national security and a strong defense important concerns to most Americans. The changing attitudes of citizens are reflected in Congress's overall voting record about defense issues, including the new pay and compensation packages. General Allen called the pay and benefit packages a reflection of the American public's renewed appreciation of the armed forces.
- Nunn-Warner represents the most important compensation decision in the last decade. But legislation alone won't do it. The Air Force needs to foster leadership at all ranks if it expects to bring in and retain the best people.
- Air Force people need to return to placing more emphasis on institutional values than on occupational ones. The Air Force must continue to be recognized as a quality institution in which service to country remains a worthy calling.
- It's time for people to play up the positive aspects of Air Force life and renew their commitment and loyalty to it. General Usher challenged the three councils to rekindle the feelings of patriotism, camaraderie, professionalism, and belonging among Air Force members.
- With pay and compensation improvements under way, the Air Force will begin looking internally for ways to continue improving life among its members. Assignments is one such area under consideration. Fewer volunteers for overseas, working spouses, and the cost of living are pushing the Air Force to stabilize tours of duty. Other initiatives include limited decentralization of promotion authority and new proposals to recognize people for their work.
- Air Force leaders will continue to work hard on other initiatives needed to improve retention and recruiting. Per diem equity is pending as a rider on the DOPMA Bill. Adequate compensation for PCS moves, dependent dental care, noncontributory education benefits, improving CHAMPUS, and even minor irritants such as military parking fees are some of the issues Air Force and civilian leaders are dealing with.

AVF Support

Senator Armstrong describes himself "not as a hawk but a dove." He just wishes "to be a heavily armed dove." The Senator praised the new legislation for having stopped the slide in military benefits, but he feels that Congress must reestablish the viability of the All-Volunteer Force. He talked about the three bills he has introduced, described key elements in each, and what he hopes each will achieve.

The National Defense Compensation Act will ensure consistent pay raises for the military. It calls for a nine percent catchup pay raise over the cost-of-living increases for junior enlisted and officers. Higher ranks would receive an eighteen percent pay increase, and every-

AFA Enlisted Council members listen to CMSAF James M. McCoy outline recruiting and retention concerns. They considered initiatives to help spread the word among Air Force members about the improvements being made in Air Force life.

thing is to be phased in over three years. The Senator proposes the GI Bill of 1980 as a basis for attracting quality people who may not want to make the military a career. Anyone giving two years of honorable service would receive 100 percent tuition to a maximum of $3,000 annually plus a $300 monthly living allowance for four years. The Strength in Reserve Act is designed to encourage enlistment in the Reserve and National Guard forces. Senator Armstrong stressed how important it is to keep resurfacing issues that don't at first succeed. This year he failed to get a provision passed that would exempt military from parking fees but said he would continue to pursue the issue.

Medical Issues

General Chesney said the Air Force medical service "can see the light at the end of the tunnel" in procuring, training, and retaining physicians. He outlined other work the Surgeon General's Office is doing to bring better medical care to Air Force members. Modernization of medical facilities, although hampered by tight funding, is necessary to introduce newer technology into Air Force medicine. More than half of the Air Force facilities are more than twenty years old. Legislation of dependent medical care as an entitlement is another concern. General Chesney also detailed efforts being made to raise medical readiness in time of war.

The Councils Meet

During the council sessions, Generals Iosue and Usher paid individual visits among the groups to answer questions and expand on some of the issues raised in the seminar. Saying that "many still don't realize what the Air Force has accomplished in the last year," General Usher encouraged the Senior Enlisted Advisors to "talk to our people and get the word out." Both he and General Iosue emphasized the Air Force's intention to pursue the compensation plan. In return, the Air Force hopes people will change their attitudes; they owe it to the country.

On the first day of the Professional Update Seminar, General Usher closed his prepared remarks by encouraging each person to take home one new idea to improve his or her unit and command. Amid the discussions obviously generated by the Seminar speakers, the three councils also addressed a wide array of issues. Typically, the JOAC worked on one specific project. The recruiting brochure they designed last year will soon be published. This year they put the finishing touches on a guide for young officers. Both the junior officers and the enlisted advisors evaluated their working relationships with AFA. The Enlisted Men's Widows Home was another concern of the SEAs, and the Worldwide Enlisted Council Conference broke into small groups to study issues of concern to the enlisted force.

Most important, though, was the interaction and exchange of ideas that took place among these council representatives. One person concluded the best part was sharing ideas about and learning how other major commands handle the same issues he deals with in his job. ■

AIR FORCE MAGAZINE PROUDLY PRESENTS THE

Keith Ferris Military Aviation Calendar for 1981

Following the success of its 1980 calendar, and the pleasure it has given to thousands of purchasers, AIR FORCE Magazine has again commissioned aviation artist Keith Ferris to produce twelve original paintings for the 1981 calendar.

Paintings, such as "Solo Student Over the Numbers" shown above, measure 12" x 9" and are suitable for framing.

These twelve new Ferris paintings have been executed exclusively for this purpose. Each painting depicts a noteworthy event in military aviation. They span military aviation history, both in time and geography, and depict a variety of air forces and aircraft missions.

Aircraft depicted in the 1981 calendar are: T-37 jet trainer; P-51 Mustang fighter; Russian MiG-21 fighter; Japanese "Betty" bomber; C-123 Provider transport; B-57 Canberra bomber; German Ju-87 Stuka dive bomber; FF-1 US Navy fighter; Sopwith Camel carrier launch; F-106 Delta Dart interceptor; Tornado multirole combat aircraft; B-10 bomber.

Keith Ferris, son of an Air Force officer, grew up around airplanes, and has been painting them for more than twenty-six years. He is an AFA member, belonging to the Union-Morris (New Jersey) Chapter. Ferris's aviation paintings are renowned for their technical accuracy and depiction of events as seen through the eyes of a pilot.

The descriptive commentary accompanying each painting is written by Jeffrey L. Ethell, expert aviation writer, and also the son of an Air Force officer. Ethell's research not only contributes to the veracity of Ferris's paintings; it enhances the enjoyment and appreciation of the events painted.

Each full-color reproduction is appropriate for framing. In fact, persons ordering two copies can have one for calendar use and frame the other right away.

The 1980 calendars — the first offered by AIR FORCE Magazine — are already collectors' items; the 1981 calendars are certain to continue the tradition. They make a perfect gift for aviation enthusiasts everywhere.

Orders received now will be filled in early November, plenty of time for Christmas mailing, even overseas.

Quantity discounts are available on request.

The Keith Ferris Calendar
% AIR FORCE Magazine
1750 Pennsylvania Ave., N.W.
Washington, D.C. 20006

Please send me _____ copies of the 1981 KEITH FERRIS Military Aviation Calendar at $7.95 each for AFA members ($8.95 for non-AFA members), postpaid.

☐ Enclosed is $_____
I am ☐ am not ☐ an AFA member.
☐ Charge my credit card as follows:
☐ MasterCard ☐ American Express ☐ Visa

Card # _____

My card expires on _____

Signature _____

Name (PRINT) _____

Address _____

City _____

State _____ ZIP _____

Meeting during the AFA Convention, the Aerospace Education Foundation reported another successful year. In taking stock of its past and present, members and friends realized that the Foundation's success was in large measure . . .

"All Because of Jim Straubel"

BY ROBIN L. WHITTLE, AFA DIRECTOR OF COMMUNICATIONS

THE fourth annual Aerospace Education Foundation luncheon, held September 15 during the AFA Convention, was a fitting final tribute to retiring AFA and Foundation Executive Director Jim Straubel.

More than 400 distinguished guests, among them key congressional, Air Force, and aerospace industry leaders, packed the Washington Room of the Sheraton Washington Hotel to pay tribute to Mr. Straubel and to recognize Foundation achievements during the year.

"Just think for a moment," said George D. Hardy, Foundation Treasurer and master of ceremonies, to the luncheon audience at one point, "millions of youngsters throughout the world have and will continue to benefit from knowing a trade and having a livelihood all because of Jim Straubel. Now try to put a dollar value on that."

The luncheon master of ceremonies was referring to the Foundation's work since 1956 in providing technical Air Force training courses to civilian schools at cost. The idea had been Straubel's from the beginning. He figured that if Air Force training was any good, it ought to be available to civilians, too, since they pay for it with their tax dollars.

Lt. Gen. Stanley Umstead, Commander of Air University, honors retiring AFA and Foundation Executive Director Jim Straubel, right, with a plaque for his many years of personal and professional support of Air Force education.

Making It Possible

Mr. Hardy noted that fifty-eight occupational courses, fourteen home-study courses, and seven special publications are currently available to schools and training centers for the cost of reproduction and distribution. This has been made possible through the Foundation's successful fund-raiser, which allows individuals and corporations to affiliate as "Jimmy Doolittle Fellows" for a $1,000 or $15,000 contribution. The donor receives a walnut plaque with a bronze medallion bearing General Doolittle's likeness. The 204 individuals and one corporate Fellow to date have enabled the Foundation to adapt the Air Force courses for civilian use.

The Foundation's ten newest Fellows were then honored with plaques presented by Foundation President Dr. William L. Ramsey, who is also President of the Milwaukee Area Technical College in Wisconsin *(see box on facing page for list)*.

The Fellow presentations were briefly interrupted by a telephone call from the Chairman of the Board of the Foundation, Sen. Barry M. Goldwater (R-Ariz.), who was unable to attend the luncheon because "I've got to go out and hustle some votes," he told luncheon guests.

Senator Goldwater greeted his friends in the audience and had this

to say to retiring Foundation Executive Director Jim Straubel:

"I don't mind telling you that I don't think there's a man in the Air Force Association or the Air Force who has done more for the Air Force and the Association than Jim . . . I'm really going to miss you, Jim."

Senator Goldwater welcomed his old friend Gen. Russell E. Dougherty, USAF (Ret.), incoming AFA Executive Director, and told the audience, "If I win reelection, you're stuck with me at every convention for at least the next six years or until you get tired of me."

The next order of business was the presentation of seven Certificates of Appreciation to individuals and organizations that have consistently supported the Foundation *(see box on p. 96).*

Mr. Hardy then asked Jim Straubel to come forward to receive four special presentations in recognition of "the tremendous work he has done in behalf of these organizations," Mr. Hardy told the audience. Presentations were made by AFA's James H. Straubel Chapter, the Arnold Air Society, Civil Air Patrol, and Air University.

THE LATEST JIMMY DOOLITTLE FELLOWS

INDIVIDUAL FELLOWS	SPONSORS
George M. Skurla	Grumman Aerospace Corp.
Donald W. Steele, Sr. (in memoriam)	Michigan AFA and nine chapters
Capt. Eddie Rickenbacker (in memoriam)	Capt. Eddie Rickenbacker Chapter
Capt. Joyce K. Stouffer	Self-sponsored
118th Tactical Airlift Wing, Tenn. ANG	Middle Tennessee Chapter
Ray Ellison	Texas AFA and Alamo Chapter
Victor R. Kregel	Vought Corp.
Gen. Bennie L. Davis	William Spruance
Dr. William L. Ramsey	William Spruance
James H. Straubel	William Spruance

Kregel Presents Awards

Also during the luncheon, AFA National President Victor R. Kregel, who was reelected to a second term the following day, presented three of AFA's highest awards. Citations of Honor went to MSgt. Wayne A. Sturdevant, Superintendent of OJT Advisory Service, Sheppard AFB, Tex., for superior leadership of a team responsible for developing mobile training for the Egyptian Air Force; and to Capt. Kathy LaSauce-Arlington, C-141 pilot at Norton AFB, Calif., for exceptional public speaking in behalf of the armed forces.

In addition, the Association's Hoyt S. Vandenberg Award for the most outstanding contribution in aerospace education was awarded to the Air Force Institute of Technology at Wright-Patterson AFB, Ohio. Accepting the award in behalf of the Commander was the Commander of Air University at Maxwell AFB, Ala., Lt. Gen. Stanley M. Umstead, Jr.

The final luncheon highlight was the presentation of the first prize to the winner of the Foundation's annual Air Force Junior ROTC contest. Once again, Clearfield High School in Clearfield, Utah, won the contest with an exceptionally well done videotape on the theme: "AFJROTC—For the Cadet, the School, and the Community."

"You know, Utah has a fix on these awards. They've won a bunch of them," Senator Goldwater said in congratulating the winning unit over the telephone.

Clearfield High won the contest in 1976, was a runner-up in 1977 and 1978, and received an honorable mention in 1979.

Now in its eighth year, the contest is designed to supplement the AFJROTC Aerospace and Leadership course. Cadets are encouraged to examine and analyze the contest theme and project their findings to the public through presentations the cadets themselves prepare. The format is up to the unit and has run the gamut from essays and audio tapes to sound/slides and video productions.

Mr. Hardy introduced retired CMSgt. John Deroian, Assistant Aerospace Education Instructor at Clearfield, Principal Lawrence Cook, and two former cadets who represented the unit: Paula Bourke, who started at Auburn University this fall and hopes to be accepted at the Air Force Academy next year, and John Bly, who is attending West Point and plans to pursue a military career. Mr. Hardy presented the cadets and their instructor with the $2,000 first prize award and a plaque.

Sergeant Deroian asked that the Foundation do everything possible to keep the contest since he'd heard that it might be terminated. (Foundation officials plan to sponsor the contest at least for one more year.)

The former cadets expressed their deep sense of pride in their AFJROTC unit and the videotape they did together. Both met with their senators and congressmen during the week.

Before adjourning the luncheon, Mr. Hardy announced a new fund-raising venture. Two limited-edition lithographs from paintings by aviation artist Bill Reynolds will be sold to the first 500 individuals. Each will be numbered and signed by the artist. The lithos depict "The Last Aerial Combat of WW II" and "Approaching the Initial Point." *(See ad, p. 116.)*

Foundation Board Meets

Each year, the Aerospace Education Foundation's Board of Trustees meets during the AFA Convention.

First order of business this year was the presentation of $37,000 to the Foundation by Mrs. Dorothy Welker, AFA Iron Gate Chapter Secretary and coordinator of the Chapter's 1980 Air Force Salute. Mrs. Welker noted that $22,000 of the total was for twenty-two Jimmy Doolittle Fellows yet to be named.

"The Iron Gate Chapter is by far the greatest single contributor to our Foundation, apart from AFA's General Fund," Dr. Ramsey, Foundation President, noted. Iron Gate contributions total $452,500, and the Chapter is credited with fifty-eight Fellows, the most of any organization.

Dr. Ramsey also presented six Certificates of Appreciation *(see p. 96)* and announced two special

Foundation President Dr. William L. Ramsey, right, presents a plaque and $2,000 check to this year's Foundation contest winners from Clearfield High School, Utah. Pictured from right are retired CMSgt. John Deroian, Assistant Aerospace Education Instructor, and former cadets Paula Bourke and John Bly. Foundation Treasurer and luncheon emcee George Hardy, left, applauds.

presentations to retiring Foundation Executive Director Jim Straubel. As President of the Milwaukee Area Technical College, Dr. Ramsey presented him with a portrait and a plaque designating him an honorary Doctor of Aerospace. Maj. Robert Heyart, Commander, 191st Combat Support Group, ANG, at Selfridge ANGB, Mich., honored Mr. Straubel with a tapestry he had created.

Mr. Straubel then discussed the Foundation's major project—distribution of Air Force courses to civilian schools.

"During the past eight years, more than 3,000 course packages have been purchased by more than 800 schools and training systems in all fifty states, the District of Columbia, and thirteen foreign entities," Mr. Straubel told trustees.

In addition, the Foundation, under agreement with the US Naval Institute to edit, reproduce, package, and promote the sale of US Navy courses, plans to mail a catalog of Navy courses with its 1980–81 course catalog later this fall, Mr. Straubel said.

Plans are also under way to evaluate courses at the Air Force Institute of Technology and the Air Force Academy for possible reproduction and, when funding is available, to review Air Force courses translated into Spanish at the Inter-American Air Force Academy in Panama.

Recognizing that the Foundation's success was due in large measure to the Doolittle Fellow program, from which all funds go directly to adapting more courses, Mr. Straubel said that this year's goal would be to obtain more Corporate Fellows.

The Foundation Executive Director said this year's strong support from AFA leaders and members was unprecedented and expressed particular thanks to the Curtis E. LeMay, Central Oklahoma (Gerrity), and Blue Barons Chapters, and to the New York, Mississippi, Tennessee, California, and Pennsylvania State AFA organizations. He noted that the AFA response to President Kregel's request for help in revitalizing AFJROTC units in certain states had resulted in a surge of new interest.

Final order of business was the election of officers and trustees. Reelected were Sen. Barry Goldwater, Foundation Board Chairman; Dr. William L. Ramsey, Foundation President; and George D. Hardy, Foundation Treasurer. Dr. Don C. Garrison, President of Tri-County Technical College, Pendleton, S. C., was elected Foundation Secretary, replacing Dr. Charles Boehm, who stepped down because of health problems. Before adjourning, trustees elected thirty-four to Board membership. ■

AEROSPACE EDUCATION FOUNDATION CERTIFICATES OF APPRECIATION

Presented at Luncheon

Iron Gate Chapter
William Spruance
Wright Memorial Chapter
Sen. Barry Goldwater
General Dynamics Corp.
Vought Corp.
Grumman Corp.

Presented at Board of Trustees Meeting

Col. Harry Hagenbrock
Capt. Hal Smarkola
Dr. Fred Tuttle
Mrs. Mary Jo Knouff
Noel A. Bullock
Dr. Charles Boehm

With a ringing challenge to the Convention to let America know that we must "pay our dues" to maintain our freedom, the keynote address called for adequate compensation for military personnel . . .

Who Can Blame Them for Leaving?

BY MSGT. WAYNE L. FISK, USAF

I THINK an enlisted speaker is most appropriate. For years, AFA has been regarded as something of an "Officers' Club," and I think this is unfortunate. Eighty-two percent of military people in the United States Air Force are enlisted personnel whose experience can contribute immensely to this dynamic Association.

No other organization has such a recognized impact on the men and women of the United States Air Force as the Air Force Association. You are to be soundly congratulated and applauded for your determined and persistent efforts on our behalf.

The enlisted folks, with their wealth of information and experience, are an integral part of this Association, and their membership must be recognized more than it has in the past. The adage of "strength through unity" is one we cannot ignore. So let's intensify our efforts to recruit enlisted personnel into our ranks. I think you will find that those who join are top-notch airmen.

My credentials to stand before you today are those simply of an American citizen and a member of the United States armed forces. However, I think I'm a pretty good airman, and I do my job well. But then I should; my nation has given me a great heritage of patriots and heroes to follow. I revere those millions who answered the call in nine wars since 1775 to protect America and the values and high ideals she stands for. I bask in their glory simply because I have the privilege of wearing this uniform of the United States Air Force and serving my country in the Military Airlift Command—the backbone of deterrence. I was born to serve my country, and I can think of no other career that would have been one iota as fulfilling and rewarding as this one is.

MSgt. Wayne L. Fisk addressed the delegates during opening ceremonies of the Convention as the keynote speaker. His experience as a highly decorated combat veteran of Southeast Asia and humanitarian service in the Philippines helped provide a unique perspective of military service.

During a recently completed five-year tour of duty in the Asia-Pacific theater, I witnessed the downfall of South Vietnam, Cambodia, and Laos—events which 50,000 Americans died trying to prevent. . . .

I also saw peace in the Pacific theater—three and a half years of it in the Philippine Islands, where I was able to enjoy the friendship of scores of Filipino families who allowed me to enter their lives. In exchange for what I was able to provide in medical assistance, and financial help, I received their friendship, trust, and love. I discovered for myself the stark difference between peace and man's inhumanity to man, which is war.

I think it is important you understand that I present myself to you this morning armed with that kind

of personal experience. I love peace—not war—and my job is preserving life. . . .

Declining Capabilities Dangerous

In the forefront of our nation's struggle for survival, it has been the military—the determined few—who have stood between war and peace, between victory and defeat. This is a simple fact that often escapes the attention of the average American citizen.

In our quest to retain our technological edge and acquire weapons superiority, it is easy to lose focus on the reality that all the sophisticated machinery in our inventory is useless without dedicated, well-trained, and experienced people.

Our armed forces have been hemorrhaging skilled people, especially pilots, enlisted specialists, technicians, and superintendents, because of low pay and eroding benefits and an associated loss of prestige. Some of our elected national leaders have seemed slow to respond to this increasingly unacceptable situation. Others have gotten the message.

You know that a free commodity will escape from one point to another if enough pressure is exerted. As the pressure increases, more of the commodity escapes, and at a faster rate. We all know that a massive hemorrhage is not conducive to life. Ultimately, the body dies if not properly treated. To date we have found no adequate substitute for blood.

This is the way I view the military retention problem. Too much pressure is being exerted on the men and women of our Air Force. They're leaving, and I don't know who is going to replace them. To date we have found no substitute for people.

The loss of our skilled, highly trained personnel is resulting in an ever-weakening armed force, and at a time when we can ill afford it. We are less than twenty-five minutes away from the threat of Soviet ICBMs, and the Soviets have but one goal and that is to bury us—make no mistake about that! How will we respond to that or any other Soviet military threat when we no longer have an adequately trained and dedicated armed force?

Psychic Rewards

Our people in the Air Force do reap the psychic rewards of service to this nation, an exciting and vital undertaking. Our airmen have voluntarily offered a period of their lives so that all Americans may continue to enjoy the freedoms we have all grown quite accustomed to.

Without question, retention in the All-Volunteer Force is among the biggest problems that face America today. We can help fight inflation by spending less, and we can assist in overcoming the energy crisis by using less of our vital resources. But we cannot overcome the military retention problem by continuing to restrain compensation, and there is just no backing away from that reality.

In my opinion, those who say our military people are already lavishly compensated must be ignorant of the facts. Unfortunately their rhetoric is often accepted as truth. What concerns me is their impact on the thinking of Americans who just do not know the facts.

If our life styles are so lavish, why do thousands of Air Force enlisted members have to participate in social welfare programs? Why is there a retention problem? Why did the Air Force lose 83,000 experienced enlisted people last year—about a third of those from the career force?

Is it because the AVF won't work? No. It's because the AVF won't work if American leaders continue to require our military members to absorb a disproportionate share of the sacrifices necessary to curtail inflation.

Even the Congressional Budget Office concludes that military pay is terribly inadequate to keep the AVF up to strength, and you know how those folks rub two pennies together!

I need not recite the statistics on the number of Air Force members who moonlight, and the spouses who work to make ends meet. You have heard these repeatedly.

Turnaround Starting?

But we are making *some* progress. Next month, we will receive our first substantial pay hike since 1972—11.7 percent. But the decline in real purchasing power for Air Force personnel since 1972 has been as much as twenty-five percent, depending on grade. While I am not unmindful of the courageous uphill battle fought by the Air Force Association and some of our outstanding senior leaders and legislators to get us this far, the 11.7 percent just won't eliminate the problem. I believe it won't stop the hemorrhaging of our most vital commodity—people. A minimum of 17.6 percent is needed just to make up the losses since 1972, and, I do not hesitate to add, we need every penny of it—right now!

I can painfully recall an incident years ago at a Laotian Army outpost near the North Vietnamese border. A platoon of Laotian soldiers was ambushed by a North Vietnamese raiding party. The casualties were numerous. The dead and wounded were helicoptered to our position, a small hilltop fortress overlooking one of those strategic valleys that always seems to demand an extravagant price in human lives for its defense.

Our "hospital" was a bunker consisting of earth-filled fifty-five-gallon drums stacked one on top of the other and reinforced with logs and empty artillery cases. The floor was packed earth. Beds were made of bamboo driven into the ground.

The dead were stacked outside the entrance and the wounded were strewn everywhere. I came across an older man with a sucking chest wound. He was struggling for breath, and his vital signs were dangerously low. I listened to his chest and discovered he had already

lost one lung and the other was failing rapidly. A few minutes later, there was a sudden realization in his eyes as though he knew it was all over. He died immediately afterward.

Looking at the rapid exodus of our military people today, is there not a shocking similarity?

Who Can Blame Them?

Each and every day we see more and more of our people walking out the door and into the national job market where they secure higher paying jobs and greater compensations—often performing the same skills.

Who can blame them? Isn't it to the benefit of every industry to provide for its employees through a decent standard of living and self-esteem to ensure and increase job productivity? Why not the military, then?

Haven't the American people, whose government has surely made enough surveys of the problem, come to realize that military people share the same aspirations as their civilian counterparts? What other segment of our society has taken an oath, as a precondition to employment, that they will give their lives, if necessary, to defend our nation? That is precisely the reason why those who *have* taken that extraordinary oath deserve the extraordinary care and attention of those Americans whom they defend.

Why do those of us who stay in the Air Force do so? Travel and adventure? What other segment of our society moves as often as we do, and frequently with short notification? My peers and I are reassigned on the average of every two to three years, which not only costs us money, but also limits second-income careers within the family, and puts us at the mercy of an ever-inflating real estate market. What's worse, we are forced to pay much of the cost of moving out of our own pockets. That is patently unfair. PCS moves have affected our people's pocketbooks second only to generally low pay.

In 1862, the first permanent statutory authority for a mileage allowance fixed the maximum rate at six cents per mile except when PCS travel required crossing the Rocky Mountains. In that case, ten cents per mile was allowed. Today, 118 years later, we are still receiving ten cents per mile! Fortunately, the Nunn-Warner bill will help remedy that. . . .

At some military installations and government agencies, Air Force people, working to fulfill national defense requirements, are forced to pay automobile parking fees, and next year their fees will increase one hundred percent. These people, who must go where they are ordered, have had their purchasing power continually reduced due to inflation and pay caps. . . . This is grossly unfair, and these are not subtle messages from our national leaders. . . .

We Deserve Better

Perhaps the whole problem can best be summed up by quoting part of a letter that Colonel Ebenezer Huntington of the Continental Army wrote to his brother in 1780: ". . . The rascally stupidity which prevails, the insults and neglects which the Army have met with, beggars all description. It must go no farther. They can endure it no longer. I am in rags, have lain in the rain on the ground for forty hours past, and only a chunk of fresh beef and that without salt to dine on this day, received no pay since last December, and all this for my cowardly countrymen who flinch at the very time when their exertions are wanted, and hold their purse strings as though they would damn the world, rather than part with a dollar to their Army."

I believe those who have remained in the military services of this nation today are your patriot's patriots, and, darn it, we deserve better treatment than our fellow citizens have been providing. . . .

We have all the components necessary for an undefeatable military power. Our young people are the very best this nation has ever produced. We have a young, willing, intelligent generation of men and women who can satisfy our every need for a strong, All-Volunteer Force.

We have the most professional and capable military leaders in the world today who, when given the chance to do their job, are capable of guiding us through any crisis envisioned. But it's going to take more than the efforts of just us in uniform. It's going to take an entire citizenry dedicated to preserving our way of life to make all of our elected leaders recognize the magnitude of the problem. You of this great Air Force Association are in the forefront of that effort. . . .

The Greatest Challenge

In my opinion, the greatest challenge facing this Association is the enlightenment of all of our elected leaders through their constituents who are America at large. You must make them realize the precarious situation we have put ourselves in. You must be absolutely candid.

You know, there are two lies in life: the one we tell other people . . . and the one we tell ourselves. America needs neither; America can afford neither. . . .

We in the Air Force are paying our dues for living in freedom in America. We are serving, and we shall continue to serve. You of the AFA must inform and educate all our citizens that they, too, must pay their dues by maintaining a fighting force capable of protecting our freedoms. We Americans have always had a great resiliency to adversity and an ability to respond appropriately when threatened. Now is the time for such a response. . . .

If we are to guarantee that our children will grow up with freedom, we must act now. We must recoup our losses. We can hemorrhage no longer. ■

A Salute to Straubel

AFA's 1980 Convention: An Emphasis on People

From the inspirational keynote speech to the recognition and awards given recently retired AFA Executive Director Jim Straubel, the 1980 National Convention stressed the primary element of AFA's and the nation's strength.

BY VIC POWELL, AFA AFFAIRS EDITOR

James H. Straubel, left, retired Executive Director of AFA, received the Air Force Exceptional Civilian Service Award during ceremonies at the Secretary's luncheon. The award, presented by Secretary of the Air Force Dr. Hans Mark, is in recognition of Mr. Straubel's distinguished career with AFA.

THE 1980 AFA National Convention was dedicated to James H. Straubel, in tribute to his thirty-three years of dedicated and dynamic leadership as AFA's Executive Director. Mr. Straubel had earlier this year announced his retirement date of September 30, 1980. The theme of the Convention, "A Salute to Jim Straubel," was reflected in many meetings and ceremonies attended by delegates.

Opening Ceremonies

The keynote speech was given by MSgt. Wayne L. Fisk, a pararescueman with the Aerospace Rescue & Recovery Service. He called for improvement of incentives and compensation to increase the attractiveness of military service. He noted that, compared to the inducements offered in civilian life, the military is increasingly finding itself at a disadvantage in attempting to keep experienced personnel. Patriotism may be the main reason many join the All-Volunteer Force, he said, but reliance on patriotism to retain highly trained and skilled members could prove to be insufficient. *(See p. 97 for excerpts.)*

Sergeant Fisk earned two Silver Stars during his five combat tours in Southeast Asia. He developed new procedures for helicopter tactical assault, served as a primary member of the Apollo-8, -9, and -10 Air Force rescue recovery teams in Bermuda, and during 1976–79 provided life-sustaining medical aid to Filipino tribespeople, spending his own money in the effort. The Jaycees honored him as one of the ten most outstanding young men in America in 1980, the first Air Force enlisted man to receive the award. AFA presented him its Citation of Honor last year in recognition of his achievements.

Rev. Msgr. Rosario L. U. Montcalm, AFA National Chaplain from Holyoke, Mass., delivered a memorial tribute to aviation and AFA leaders and supporters who died during the past year *(see accompanying list)*. The tribute was followed by a moment of silence and the Air Force Hymn, sung by the Singing Sergeants.

National President Victor R. Kregel, assisted by Board Chairman Dan F. Callahan, presented awards to seventy-one individuals and units of AFA and the Air Force *(see boxes on pp. 104 and 105)*. Medal of Merit winners for 1980 were asked to stand and be recognized.

President Kregel announced that the annual Convention was dedicated to Jim Straubel. He said that Mr. Straubel built AFA from a small organization into a national defense association that is highly respected across the country and around the world. He noted that under Mr. Straubel's leadership AFA has for many years been an active, healthy, and influential organization.

President Kregel introduced to the delegates Russell E. Dougherty, chosen by the Board of Directors to succeed Jim Straubel on October 1, 1980.

Military guests seated at the head table were: Gen. Bryce Poe, Commander, Air Force Logistics Command; Lt. Gen. Billy Minter, Deputy Chief of Staff, Logistics and Engineering; Lt. Gen. George Sylvester, Vice Commander, Air Force Systems Command; Maj. Gen. William Usher, Director of Personnel Plans; Brig. Gen. Keith McCartney, Commander, Recruiting Service; Brig. Gen. Robert Rosenberg, Assistant Chief of Staff for Studies and Analyses; Brig. Gen. Sloan Gill, Deputy to the Chief, Air Force Reserve; Brig. Gen. John B. Conaway, Deputy Director, Air National Guard; and Brig. Gen. Archer Durham, Commander, 76th Airlift Wing at Andrews AFB, Md., military host.

The 1980 AFA Man of the Year is David C. Noerr, of San Bernardino, Calif. Presenting the award plaque is National President Victor R. Kregel, right. Mr. Noerr will join the AFA staff on January 5, 1981, as Assistant Executive Director for Operations.

Business Sessions

Delegates from forty states and territories unanimously adopted the annual Statement of Policy *(p. 8)* and two major policy papers: "Force Modernization and R&D" *(p. 71)* and "Defense Manpower Issues" *(p. 75)*. These documents set the direction of AFA support and action for the year ahead.

Delegates amended AFA's National Constitution and Bylaws to allow the Chairman of the Board to appoint two Board members to the Executive Committee and the President to appoint three Board members; to require the Executive Director to consult with the President and Chairman of the Board prior to employing senior staff members and consultants; and to place James H. Straubel on the Board of Directors as a permanent National Director.

President Kregel announced that he will appoint an ad hoc committee to review and make recommendations regarding the structure of AFA's Board of Directors. The committee will report to the President.

During the second business session delegates were briefed on the Air Force Recruiting Service by Brig. Gen. Keith McCartney, Commander, Recruiting Service. General McCartney thanked AFA for establishing and supporting the Recruiting Team of the Year program.

Delegates approved a motion to express appreciation to newly retired John F. Loosbrock, former Deputy Executive Director and Editor in Chief and Publisher of AIR FORCE Magazine, for his twenty-nine years of outstanding service to AFA.

Election of Officers

Delegates reelected AFA's top four national officers. They are: Victor R. Kregel, President; Daniel F. Callahan, Chairman of the Board; Earl D. Clark, Secretary; and Jack B. Gross, Treasurer.

Mr. Kregel is an industry executive in Dallas, Tex. He entered the Air Force in 1942, received an Air Force commission and pilot's wings in 1943, and completed Navy flight training in 1944. He served in the southwest Pacific, and later as an exchange officer with Fighter Command, Royal Air Force. A graduate of several service schools and the University of Maryland, he was a member of the Air University faculty, and prior to his retirement in 1965 served as Business Manager of Athletics at the US Air Force Academy. He has served as an AFA National Vice President for the Southwest Region, an elected Na-

NAMED IN MEMORIAL TRIBUTE

These are the names of the USAF and AFA leaders and supporters and aviation pioneers who died during the last year: Cecilia **Assaf,** Maj. Gen. Joseph H. **Belser,** Thomas **Betheny,** Gen. Orval **Cook,** Maj. Gen. Frederick J. **Dare,** Clyde D. **Ferris,** William **Ferro,** William G. **Fey,** Thomas K. **Finletter,** Lyle W. **Ganz,** Wilmer L. **Goodrich,** Clifford E. **Griffin,** Samuel M. **Hecht,** Maj. Gen. Donald J. **Keirn,** Jean M. **Kossarides,** Lt. Col. H. A. **Leamon,** Esther **Manning,** J. S. **McDonnell,** Lamond J. **Miller,** Gregory A. **Moreira,** Jacqueline **Cochran Odlum,** Cam **Orr,** Younger A. **Pitts,** Jr., Lt. Col. John A. **Powers,** Herman **Salmon,** Gen. Frederick H. **Smith,** Flores **Sparks,** Maj. Frank A. **Spinka,** Jr., Ruth **Stearn,** Capt. James **Whetstone,** Constance **White,** James **Wilkins,** and Brig. Gen. Millard C. **Young.**

tional Director, State and Chapter President, a member of the Organizational Advisory Council, and a member of the Board of Trustees of the Aerospace Education Foundation. He is a Life Member of AFA.

Dan F. Callahan, of Nashville, Tenn., is an engineering and management consultant. He is a graduate of the US Military Academy and the University of Michigan. He retired from the Air Force as a major general after more than thirty years of service. While on active duty he served as chairman of the Permanent Working Staff, NATO Military Production and Supply Board; Alternate US Representative, NATO Defense Production; Chief, US Military Assistance Advisory Group, United Kingdom; and as Director for Logistics (J-4), the Joint Chiefs of Staff. He is a Command Pilot. Honors include the Distinguished Service Medal, Legion of Merit, Air Medal, and the Chinese Air Medal of Merit. He has served AFA as an elected National Director, State and Chapter President, and a member of the Board of Trustees of the Aerospace Education Foundation. He is a Charter Member and Life Member of AFA.

Earl D. Clark, of Kansas City, Kan., is President of the Collins Construction Co. and the Earl D. Clark Architectural Firm, and serves as a bank director. He is an Air Force colonel in the Retired Reserve. He has served AFA as a National Vice President, an elected National Director, a member of the Organizational Advisory Council, and as a State and Chapter President. He is a Life Member of AFA.

Jack B. Gross, a prominent civic leader and businessman in Hershey, Pa., was elected to an unprecedented twentieth term as AFA Treasurer. A colonel retired from the Air Force Reserve, he has served AFA as Chairman of the Board of Directors, an elected National Director, State and Chapter President, and as a member of the Board of Trustees of the Aerospace Education Foundation. He is a Life Member of AFA.

1980 AFA MEMBERSHIP ACHIEVEMENT AWARDS

STATE WINNERS	**PRESIDENTS**
Oklahoma	William N. Webb
Utah	William C. Athas
CHAPTER WINNERS	**PRESIDENTS**
***Admiral C. E. Rosendahl (N. J.)	Elmer R. Jensen
Airport #1 (Pa.)	Leroy W. Niehaus
Anchorage (Alaska)	Adam D. Johnston, Jr.
Blue Ridge (N. C.)	Martin R. Maurer
*******Central Oklahoma (Gerrity) (Okla.)	Gaylord E. Giles
**Chautauqua (N. Y.)	John H. Householder
****Col. Stuart E. Kane, Jr. (Pa.)	Francis H. Brown
Coosa Valley (Ga.)	William T. French, Jr.
**Denton (Tex.)	Henry Hays
Flying Yankees (Conn.)	Russell D. Lose
Fran Parker (N. M.)	Bruce C. Koegler
Garden State (N. J.)	Phyllis Gajdos
Gen. D. "Chappie" James, Jr., Memorial (N. Y.)	Dorothy Wadsley
General Robert F. Travis (Calif.)	Don W. Disbrow
**Gold Card (Utah)	Verl Williams
Greater New Orleans (La.)	Richard H. Kliemann
**Heart of the Hills (Tex.)	Edward J. Fox
**High Desert (Calif.)	H. Bruce Shawe, Jr.
James H. Straubel (Mich.)	Marjorie O. Hunt
John C. Meyer (Fla.)	Jim Sunderman
Leigh Wade (Va.)	George Aguirre
Lubbock (Tex.)	Mabry J. Brock
Lynchburg (Va.)	James L. Ford
Middle Georgia (Ga.)	Jack Maret
**Middlesex (N. J.)	Frederick Bell
Mid-Ohio (Ohio)	Roy Haberlandt
**Mifflin County (Pa.)	Charles A. Hall
New Jersey AFA Information (N. J.)	Nicholas A. Manocchio, Jr.
New York Air Reserve and CAP (N. Y.)	Ruth Leibold
Northern Connecticut (Conn.)	Raymond E. Choquette
Panama City (Fla.)	William M. Gowan
Pasadena Area (Calif.)	Tom Valenzuela
Richard (Va.)	George W. Davis, Jr.
Rocky Mountain (Utah)	Lorene Walker
Sal Capriglione (N. J.)	John Cifelli
South Bend (Ind.)	Norman Muller
Spudland (Me.)	Alban E. Cyr
Steel Valley (Ohio)	Clair J. Smith
**Tallahassee (Fla.)	Ronald G. Fisher
Taunton (Mass.)	Charles Antonuccio
Tulsa (Okla.)	L. S. Allen, Jr.
*****Union Morris (N. J.)	Robert B. Stiastny
Ute (Utah)	Bruce Hampel
Wasatch (Utah)	James H. Della Silva

**Award winner for 2 consecutive years
***Award winner for 3 consecutive years
****Award winner for 4 consecutive years
*****Award winner for 5 consecutive years
*******Award winner for 7 consecutive years

Vice Presidents

Four new Vice Presidents were elected to head activities in AFA regions; eight others were reelected. The new Vice Presidents are: J. Deane Sterrett, of Beaver Falls, Pa., Northeast Region; Lyle O. Remde, of Omaha, Neb., Midwest Region; Edward J. Monaghan, of Anchorage, Alaska, Northwest Region; and Liston T. Taylor, of Lompoc, Calif., Far West Region.

The eight reelected Vice Presidents are: Joseph R. Falcone, New England Region; Jon R. Donnelly, Central East Region; Thomas O. Bigger, South Central Region; John H. deRussy, Southeast Region; Robert J. Puglisi, Great Lakes Region; Ernest J. Collette, North Central Region; Francis L. Jones, Southwest Region; and James H. Taylor, Rocky Mountain Region.

Directors

Four new National Directors were elected to the Board. They are: Robert L. Carr, of Pittsburgh, Pa.; George H. Chabbott, of Dover, Del.; Arthur L. Littman, of Vacaville, Calif.; and Margaret A. Reed, of Seattle, Wash.

Fourteen directors were reelected. They are: David L. Blankenship, Oklahoma; William P. Chandler, Arizona; Hoadley Dean, South Dakota; R. L. Devoucoux, New Hampshire; E. F. Faust, Texas; Alexander C. Field, Illinois; Alexander E. Harris, Arkansas; William V. McBride, Texas; J. Gilbert Nettleton, Maryland; William C. Rapp, New York; R. Steve Ritchie, Colorado; Edward A. Stearn, California; Herbert M.

West, Jr., Florida; and Sherman W. Wilkins, Washington.

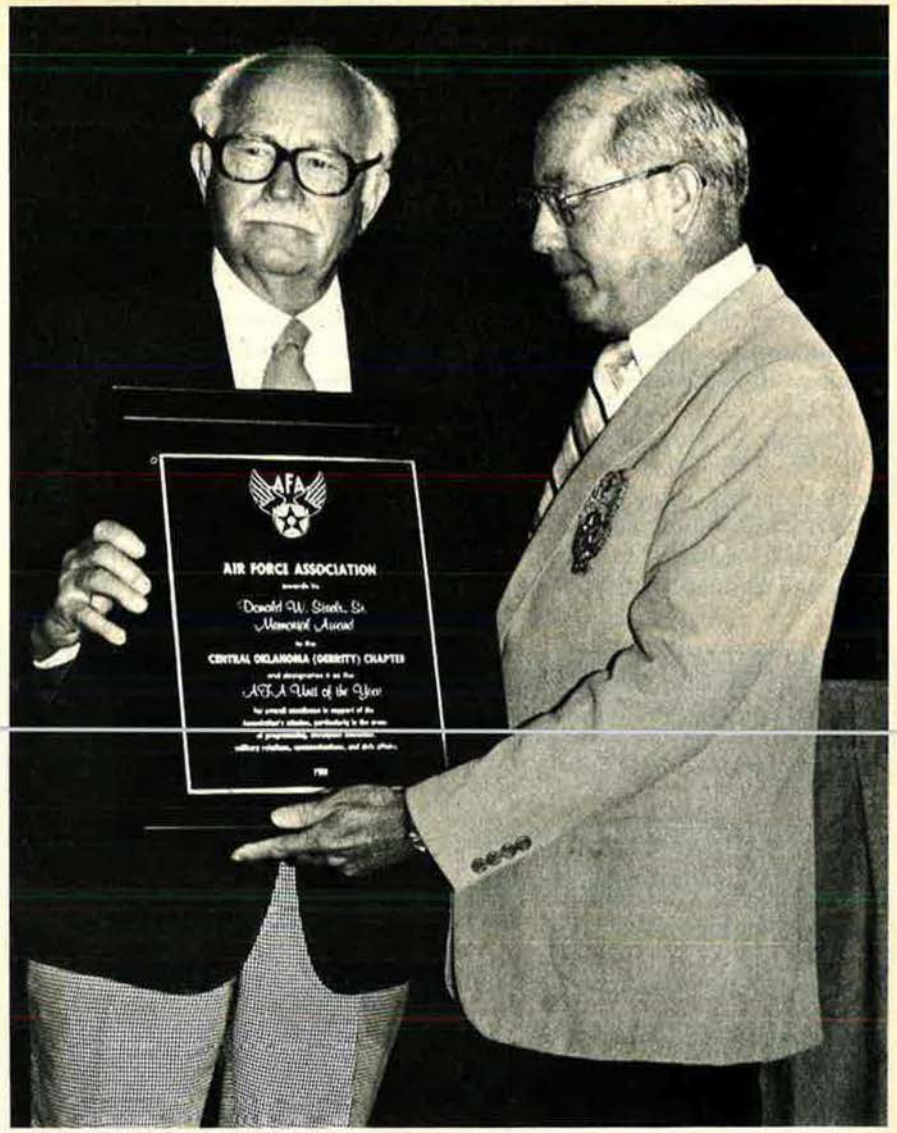
These eighteen Directors join four Directors who are under forty years of age as members of the Board of Directors. Other members of the Board are permanent National Directors, National Officers, National Vice Presidents, the immediate past Chief of Staff of the Air Force, the immediate past Chief Master Sergeant of the Air Force, National Chaplain, National Commander of the Arnold Air Society, Chairman of AFA's Junior Officer Advisory Committee, Chairman of AFA's Enlisted Council, and the AFA Executive Director. Complete Board membership appears in "This Is AFA," on p. 106.

Tributes to Jim Straubel

A number of tributes and awards were presented to Jim Straubel at meetings of the Aerospace Education Foundation (AEF). Mr. Straubel long served as Executive Director of the AEF. Dr. William Ramsey, AEF President, and President of the Milwaukee Area Technical College, presented a plaque designating Mr. Straubel as a Doctor of Aerospace at the college. Maj. Robert A. Heyart, Commander of the 191st Combat Support Squadron, Air National Guard, Selfridge AFB, Mich., presented a tapestry of Mr. Straubel that included the logo types of the AEF and AFA. AFA National Director Herbert M. West presented a plaque from Florida State AFA organization recognizing Mr. Straubel's dedicated service.

At the AEF Luncheon, Marjorie O. Hunt, President of the James H. Straubel Chapter, represented the Michigan State AFA in presenting a portrait of Mr. Straubel to the retiring Executive Director, and she presented a ceremonial sword of the Air Force Academy from the Academy liaison office in Michigan. The National Commander of the Arnold Air Society, Cadet Brig. Gen. Steven D. Vick, of the University of Nebraska in Lincoln, presented Mr. Straubel the Arnold Air Society Gold Medal Award.

The Deputy Chief of Staff for Aerospace Education and Cadet Programs of the Civil Air Patrol, John V. Sorenson, presented him the Civil Air Patrol Plaque. The Commander, Air University, Lt. Gen. Stanley M. Umstead, presented the institution's highest honor, its Air University Award, to Mr. Straubel. And Dr. Ramsey presented Mr. Straubel an AEF Jimmy Doolittle Fellow sponsored by William W. Spruance, a member of the AEF Board of Trustees.



AFA's highest unit award, the Donald W. Steele, Sr., Memorial Award, was won by the Central Oklahoma (Gerrity) Chapter. The award designates the Chapter as the AFA Unit of the Year. Accepting the plaque from National President Victor R. Kregel is the Chapter's immediate past President, Gaylord Giles, left.

Other events at the Convention included AFA-sponsored meetings of the Arnold Air Society, Angel Flight, Junior Officer Advisory Council, Enlisted Council, Eleventh Worldwide Junior Officer Conference, Seventh Worldwide Enlisted Conference, Fourth Worldwide Senior Enlisted Advisor Conference, AFJROTC Aerospace Education Instructor Workshop, annual meeting of the Air Force Historical Foundation, twenty-fifth annual reception and dinner honoring the Air Force Outstanding Airmen *(p. 82)*, receptions and luncheons honoring the Secretary and the Chief of Staff of the Air Force, Salute to Congress held in the Longworth Building of the House of Representatives *(p. 88)*, and the AFA reception in the Exhibit Halls.

Anniversary Dinner Dance

The highlight of the Convention, the Air Force Anniversary Reception and Dinner Dance, brought the National Convention to a close. During the evening program, the prestigious H. H. Arnold Award was presented to Gen. Richard H.

Ellis, Commander in Chief of the Strategic Air Command. The award designated him as AFA's Aerospace Man of the Year in recognition of his outstanding contributions in the field of aerospace activity. *(See p. 56 for a summary of all awards.)*

The Dinner Dance featured the USAF Concert Band and Singing Sergeants, conducted by Col. Arnald Gabriel, in a musical presentation honoring country music. Joe Higgins, show business personality and AFA's 1973 Man of the Year, was master of ceremonies. Dancing to the Steve Lesieur Orchestra followed the formal program.

AFA's top individual award, the Gold Life Membership Card, was presented to Jim Straubel during the evening program by President Kregel. The card is awarded in rare instances to an AFA member whose record, production, and accomplishments on a national level have been outstanding over a period of years, reflecting highest credit to the AFA mission. Mr. Straubel is the tenth recipient of the award; the first was presented in 1957 to Gill Robb Wilson.

In citing some of the contributions Jim Straubel has made, President Kregel told the audience of approximately 2,000 people, "Some thirty-nine years ago, a young second lieutenant hailing from Green Bay, Wis., reported for duty with the Army Air Corps. General Hap Arnold quickly gave him the job of establishing and editing what became the official journal of the Army Air Forces. It was called AIR FORCE. It remains today, with many thanks to him, the finest military-aerospace publication in the world. It is the glue that holds our Air Force Association together.

"After the war . . . the Air Force Association ran into trouble. . . . But National AFA President C. R. Smith, backed by our first National President, Jimmy Doolittle, talked this same young fellow into signing on as AFA's Executive Director. [AFA's] turnaround was dramatic, from near-bankruptcy into widely known effectiveness, respectability, and solvency.

"As Executive Director he conceived the series of Jet Age Conferences that dramatized the impact on

Air Force Association's 1980 Activity Awards

INDIVIDUAL RECIPIENTS

AFA Gold Life Membership Card

James H. Straubel, Virginia

AFA Man of the Year

David C. Noerr, California

Presidential Citations

Thomas O. Bigger, Tennessee
David L. Blankenship, Oklahoma
Daniel F. Callahan, Tennessee
Hoadley Dean, South Dakota
Donald W. Disbrow, California
Jon R. Donnelly, Virginia
Gaylord E. Giles, Oklahoma
Francis L. Jones, Texas
Richard D. Kisling, Maryland
Frank Manupelli, Texas
Bryan L. Murphy, Jr., Texas
Jack C. Price, Utah
Margaret A. Reed, Washington

Exceptional Service Awards

Thomas W. Anthony, Maryland
Edith E. Calliham, South Carolina
CMSgt. Robert Carter, Texas
George H. Chabbott, Delaware
Charles H. Church, Missouri
Richard C. Doom, California
John B. Flaig, Pennsylvania
Lt. Gen. John P. Flynn, Florida
Henry C. Newcomer, New York
Robert J. Puglisi, Ohio
Marvin Resnick, Oklahoma
Leonard Schiff, New Jersey
John S. Sparks, Texas
P. D. Straw, Texas
Lynn S. Summers, Utah
Fran Thompson, Arizona
William N. Webb, Oklahoma
A. A. West, Virginia
Roy P. Whitton, Indiana
Leonard R. Wilf, New Jersey

Medals of Merit

Kaye H. Biggar, Texas
Arthur R. Brannen, Arkansas
Henry Coffin III, Pennsylvania
James A. Davidson, California
Carey Deckard, Texas
Frank De Phillipo, California
Roy E. Ditterline, Jr., Georgia
Richard D. Duckworth, Pennsylvania
Don Edmands, Tennessee
Robert D. Eisenhart, Illinois
MacLean Elliott, California
Edward J. Fox, Texas
Francis S. Gabreski, New York
Walter T. Galligan, Texas
(Posthumously) Wilmer L. Goodrich, Virginia
David Graham, California
Elroy M. Haberlandt, Ohio
Bruce F. Hampel, Utah
John L. Hay III, Arizona
Allen S. Hedgecock, Delaware
John Hinton, California
Kenneth H. Holloway, Mississippi
John B. Howard, California
Jack E. Ingles, Colorado
Thomas C. Jacobs, Ohio
Beverly Jacobsen, Texas
James T. Kane, New York
Vernon V. Keck, Missouri
Gene Kent, Texas
Virginia M. Leitch, Washington
Capt. Philip J. Loeback, Kansas
Frank M. Lugo, Alabama
Jack Maret, Georgia
William V. McBride, Texas
Peggy Mohler, Utah
Samuel B. Moody, Florida
William R. Morris, Colorado
Capt. Robert M. Murdock, Illinois
Vincent F. O'Connor, New York
Daniel A. K. Proctor, Texas
Col. William Reynolds, Maryland
William P. Ridenour, California
James J. Rocco, Arkansas
James G. Sandman, California
Ronald T. Sconyers, Texas
Mary Ann Seibel, Missouri
James Shutt, Texas
Anthony D. Skufca, Ohio
Gilbert G. Smith, Jr., Tennessee
Marvin G. Spallina, Oklahoma
Richard A. Stitch, South Dakota
Howard C. Strand, Michigan
Willis A. Stribling, California
Charles W. Swindell, Arizona
James O. Trew, Michigan
Arthur F. Trost, California
Walter G. Vartan, Illinois
Larry J. Waller, South Dakota
Ronald N. Wallis, Oklahoma
Lorene Walker, Utah
Miles H. Watkins, Texas
Jule Zumwalt, California

Special Citations

Col. Fred D. Barnes, Texas
Lois Braymes, New Jersey
Brig. Gen. Duane H. Cassidy, California
Capt. Samuel Crow, Illinois
Ellison Industries, Texas
Joyce Flood, Texas
Lt. Col. Peter L. Henderson, Alabama
Naomi Henion, California
Rev. Msgr. Rosario L. U. Montcalm, Mass.
Maj. Gen. John J. Murphy, Utah
Col. Thomas J. Phillips, New Hampshire
Maj. Willie Register, Tennessee
Kenneth A. Rowe, Virginia
Tom Steed, Oklahoma
Col. Roger F. Strand, Iowa

John F. Loosbrock, recently retired from AFA as Deputy Executive Director and Publisher and Editor in Chief of AIR FORCE Magazine, received the Air Force Exceptional Service Award from Air Force Chief of Staff Gen. Lew Allen, Jr., during ceremonies at the Chief's luncheon.

our lives of the advent of jet-propelled aircraft. Then followed the World Congress of Flight, with fifty-one nations taking part. . . .

"We salute him for his imaginative, innovative direction of AFA's Aerospace Education Foundation . . . and . . . the tremendous educational value of the AFA Industry Briefings and Displays. . . . This, too, was his creation, along with AFA's highly successful Industrial Associate Program.

"Twenty-five years ago, he created the Air Force Association's annual Outstanding Airmen program. . . . As for awards, he has twice received the Air Force's Exceptional Service Award, twice received the Aviation Space Writers Association Award . . . more awards than he can count, including another fistful this week [and] many other organizations are waiting in the wings to recognize him over the next few weeks. . . . We would not be here at all except for his thirty-three years of dedicated service," President Kregel said.

Acknowledgments

H. B. Henderson, President of Virginia State AFA, served as Sergeant at Arms. Martin H. Harris, Chairman of the Constitution Committee and former AFA National Secretary, served as Parliamentarian. Credentials Committee members were National Director John G. Brosky, Chairman; John H. deRussy, Vice President, Southeast Region; and Joseph H. Turner, President of New Mexico State AFA. Inspectors of Election were: Oklahoma State AFA President William N. Webb, Chairman; Henry C. Newcomer, President of New York State AFA; Ellis T. Nottingham, Under-40 National Director; and Martin M. Ostrow, National Director and former National President and Chairman of the Board.

With deep gratitude, AFA acknowledges the important contributions to the success of the Convention by the following individuals: Cecil Brendle, Barbara Barnes, Evie Dunn, Olive Felty, John Gray, Dave Hubah, Helen Jeffrey, Phil Loebach, Chuck and Mary Lucas, Betty Nelson, Irene Robertson, and Wanni Spence. They donated their time and effort to help ensure that the AFA Convention functioned smoothly.

Our appreciation also goes to AFA leaders and delegates who attended the Convention and whose diligent efforts contributed toward making it one of the most enjoyable, productive, and interesting National Conventions. Our thanks also go to all registrants for their cooperation with security arrangements. We are grateful to the many AFA leaders in the field whose personal contributions of time, effort, and finances have helped to enhance AFA's continued growth and prestige through the past thirty-four years.

AFA's 1981 National Convention will be held at the Sheraton Washington Hotel in Washington, D. C., September 14–17. ■

Air Force Association's 1980 Activity Awards

UNIT RECIPIENTS

Donald W. Steele, Sr., Memorial Award
AFA Unit of the Year

Central Oklahoma (Gerrity) Chapter, Oklahoma

Outstanding State Organization

Pennsylvania State Organization

Outstanding Chapters

Middle Georgia Chapter, Georgia (more than 500 members)
Union-Morris Chapter, New Jersey (101–500 members)
South Bend Chapter, Indiana (20–100 members)

Exceptional Service Awards

Alamo Chapter, Texas (Best Single Program)
Pennsylvania State Organization (Aerospace Education)
Mid-Ohio Chapter, Ohio (Communications)
Tucson Chapter, Arizona (Community Relations)
San Bernardino Area Chapter, California (Overall Programming)

THIS IS AFA

The Air Force Association is an independent, nonprofit, aerospace organization serving no personal, political, or commercial interests; established January 26, 1946; incorporated February 4, 1946.

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 for all mankind.

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The next Commander in Chief must confront a period of great peril for the United States, armed with a shrunken military and facing a turbulent and increasingly unfriendly world. With time short, the key to survival is to remain . . .

Standing on National Interest

By Gen. T. R. Milton, USAF (Ret.)

THINGS are moving too fast for me and too fast as well, I suspect, for our leaders, whoever they have now turned out to be. It is a curious, even frightening, time for a nation that has never before had such good reasons to be frightened.

The Mideast, after years of threatening to do so, is giving signs of coming apart. Libya, rich, backward, and thoroughly irrational, is joined in some sort of union with the troubled regime in Syria. It is a union that does not have our best interests in mind. The attempted hostile intercepts by Libya of our reconnaissance flights in September were ominous signs of real trouble to come in a Mediterranean that was once, not very many years ago, an American lake.

The war between Iraq and Iran has threatened the oil supply, and thus the very life, of Japan and Western Europe, while the nearby presence of twenty-seven Soviet divisions on the Iranian border makes our own corporal's guard of Marines floating around the Indian Ocean scarcely even a symbol of American resolve and power. It is not beyond imagining the Soviets, with those divisions, emerging as guarantors of a stable oil flow through the Strait of Hormuz. It would be an effective way of hastening the disintegration of free-world cohesion.

The fact that the Turkish generals, their patience at an end, have taken over to halt Turkey's slide toward anarchy is one small plus for our side, but the desperate circumstances that brought about that takeover are yet another gloomy omen. Turkey cannot survive without massive transfusions of money and intelligent advice on how to cure its economic ills. While the money is on the way, a frustration to any such program would be scarcity of oil, or almost as bad, runaway oil prices. That still leaves the problem of intelligent advice, a commodity in short supply in recent years.

Then there is Africa, with its essential treasures of cobalt, titanium, and other metals without which we could not make jet engines or even function as an industrial society. If we have an African policy geared to our own national interests rather than to some hare-brained theories, it has been cleverly concealed. The realities of life might suggest, perish the thought, a military arrangement with white South Africa.

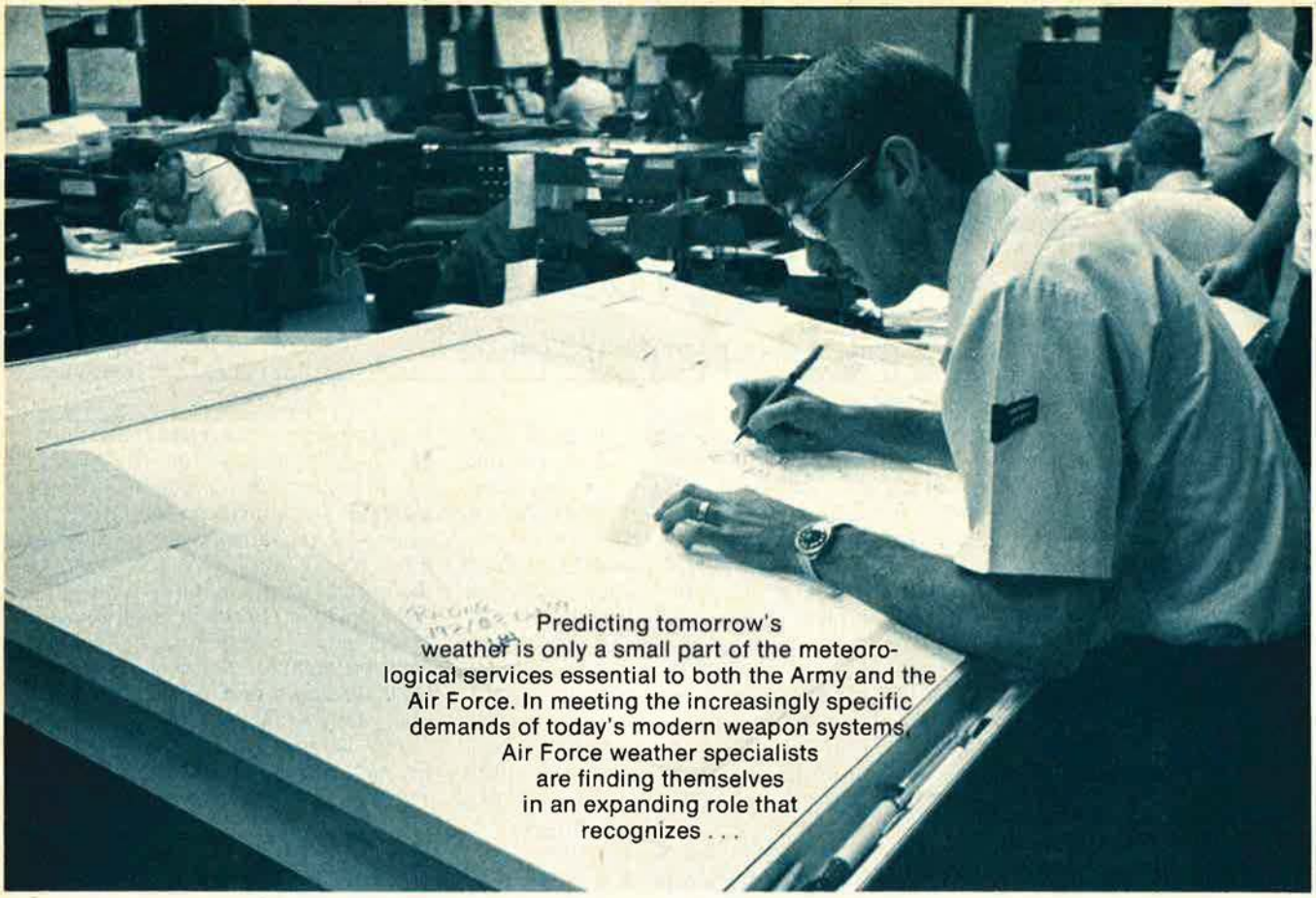
Meanwhile, we are threatened in a way we have never been threatened before. Pearl Harbor was a national humiliation, and it crippled the Navy for a spell, but its main effect was the positive one of awakening and unifying the country. Pearl Harbor resulted in bond drives, patriotic songs, Rosie the Riveter, and unquestioned support for national defense. And yet, in retrospect, we were not in nearly so much danger as we are now. Then, it was just a question of time until we got rolling, and we had the time.

The Commander in Chief is facing perilous years. He is facing them, moreover, with questionable military assets, our most lasting relic of Vietnam. There is, first of all, the growing disparity in strategic weapons between the USSR and ourselves. John Kennedy made political capital out of what proved to be a mythical missile gap in 1961. There is nothing mythical about the gap that will appear in the mid-eighties, nor is there much that can be done about it, even with the most determined effort, before the late eighties. Any new bomber, no matter what its priority, will not be operational before the latter part of this decade.

The shrunken Navy, already badly overcommitted and undermanned, cannot resemble the US Navy of the past for years to come. The Marines, with their three light divisions, are already promised to more situations than they can possibly handle. Our twenty-six Air Force tactical wings have some exciting new airplanes, but munitions, skilled people, spares, and thus readiness, are all lacking. As for the Army, the reports on the readiness and general quality of our present soldiers are discouraging. The reserves, of course, with the notable exception of the Air National Guard and some Air Reserve units, are essentially nonexistent.

The Commander in Chief has the toughest job facing him that anyone wearing that particular hat has had perhaps since Abraham Lincoln, and how he handles matters in the years just ahead may well have as much influence on our future as did Lincoln's performance in the 1860s.

It is too late or, if you like, too early, for us to start throwing our weight around everywhere we are challenged. Too late with the forces now at our disposal and too early, no matter how fast we rebuild those forces, for several years to come. Still, there remains the matter of vital national interests. Where these are in danger we seemingly must react. If, in defending those interests, we begin to think of ourselves first and everything and everyone else second, then hooray for us. For unless we make our stand on the basis of our own national interests, there isn't going to be anyone around to worry about, let alone defend, the democratic ideal. ■



Predicting tomorrow's weather is only a small part of the meteorological services essential to both the Army and the Air Force. In meeting the increasingly specific demands of today's modern weapon systems, Air Force weather specialists are finding themselves in an expanding role that recognizes . . .

Air Weather Service As A Force Intensifier

BY MAJ. THOMAS L. SACK, USAF, CONTRIBUTING EDITOR

A MILITARY Airlift Command aircrew receives its computer flight plan providing estimated fuel loads and how much cargo it can safely carry to its next destination. During an operational readiness inspection, a staff weather officer predicts thunderstorms over a low-level route, causing the Strategic Air Command Deputy Chief of Staff for Operations to postpone the mission for twenty-four hours. A weapon-system operator in Europe uses the weather information he receives to determine when and where he could strike a particular target, from what altitude, and even what type ordnance he should use.

These, Brig. Gen. Albert J. Kaehn says, typify some of the day-to-day ways Air Weather Service meets its primary job of weather support to both the US Air Force and the US Army. General Kaehn commands AWS, headquartered with its parent, Military Airlift Command, at Scott AFB, Ill.

No one is more aware than General Kaehn that what Air Weather Service does and how it is perceived are two different things. As one officer put it, "I go home at night and my neighbors ask me what the weather's going to be tomorrow. People have very little understanding of what we do." His reflection sums up in microcosm a problem that affects AWS—its image.

While observing and forecasting the weather are obviously the principal activities of the command, few people know or recognize the important role it plays as a force intensifier—a role that continues to expand as technology brings advancements both to weapon systems and to Weather's ability to help put them on target.

The Federal Program

Meteorology is a large, complex business administered principally by the US Department of Commerce's National Oceanic and Atmospheric Administration. NOAA, through the National Weather Service, provides the daily forecasts, and warnings if necessary, to the general public—what people in Weather refer to as the golfing, picnic, or washday forecasts.

The Department of Defense is one of six other federal agencies holding unique meteorological charters within the federal government. It is here, along with the Naval Oceanography Command, that Air Weather Service fulfills its

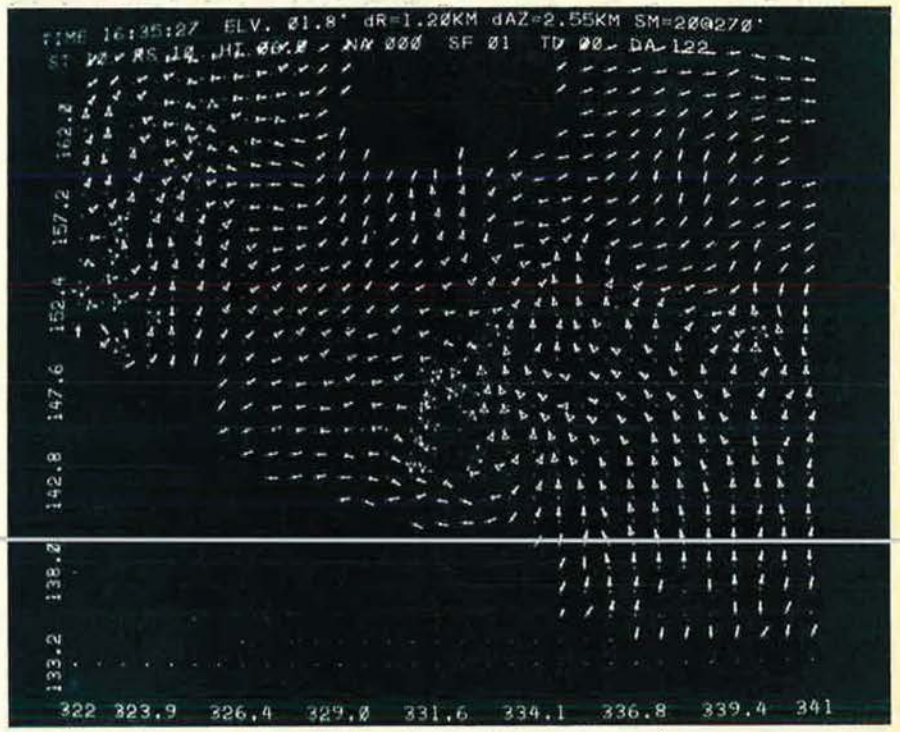
role. While the Navy is responsible for fleet weather support, AWS gathers meteorological information to support military air and ground operations. In peacetime, commanders use this to help protect their resources, promote flying safety, and increase the effectiveness of weapon systems. AWS provides decision assistance to improve weapon-system design, tactics, and the effectiveness of combat forces. In war, weather plays a critical role in how commanders decide to employ their combat forces.

Others holding special weather charters include the Departments of Agriculture, Energy, and Transportation, the Environmental Protection Agency, and the National Aeronautics and Space Administration. In 1963, a public law was passed that prohibits duplication of programs among these agencies. It established under NOAA the Office of the Federal Coordinator, which systematically reviews all activities to ensure that everyone is using as many common services as possible. However, in Fiscal Year 1980, when the combined budgets of the federal weather programs approached $1 billion, covering operational and R&D activities, Air Weather Service found itself facing its eighteenth investigation in seventeen years.

Through it all, Air Weather Service has managed to survive, because civilian agencies don't go to war. The National Weather Service, for instance, meets common public needs, while Air Weather Service forecasts only for military applications. The NWS may forecast for a 100-mile radius, but variations can occur within that area, a thundershower in one part, sunshine in another. AWS forecasters, on the other hand, are concerned about the weather as it affects a specific runway or target, specific routes flown by military aircraft, and how it will influence an Army maneuver.

Symbiotic, Not Redundant

Lt. Col. George Frederick, Jr., heads the Technical Plans Directorate and coordinates the inquiries Air Weather receives from other agencies. He describes the relationship to other meteorological organizations as more symbiotic than redundant. "Where Air Weather Service may be producing a similar product," he said, "the reason may be due to the reliability or timeliness needed to support a special strategic or tactical program." AWS, in fact, arranges portions of its military weather support through NOAA and other government agencies to ensure there is little or no duplication of services.



Facing page: Weather specialist A1C Lorin Johnson plots radar reports during an outbreak of severe weather in the Great Lakes region. Above: This Joint Doppler Operational Program photo shows the field of arrows on Doppler radar's multimoment display. It detects the cyclonic rotation of tornado activity by using information gathered from radar reflectivity, radial velocity, and spectrum width data. Representatives from NOAA, DoD, and FAA make up the JDOP.

If the National Weather Service's National Meteorological Center experiences power failure, Air Force Global Weather Central backs it up. Active-duty and AFRES hurricane tracking units at Keesler AFB, Miss., fly WC-130s into the centers of hurricanes and tropical storms. NOAA's National Hurricane Center in Miami uses the information these airmen collect to issue warnings to the public about a storm's current location, intensity, and direction of movement. The 54th Weather Reconnaissance Squadron on Guam provides a similar service to the Joint Typhoon Warning Center, a Navy and Air Force operation.

Mission and Organization

The foundation of AWS support is its worldwide collection of weather observations. AWS analyzes these data, and communicates specific weather information anywhere Air Force and Army units are operating. Upholding this effort are more than 4,700 people assigned among two wings geographically aligned overseas; three functionally aligned Stateside wings; Air Force Global Weather Central (AFGWC) and its Environmental Technical Application Center; and more than 270 squadrons, detachments, and operating locations around the world.

Overseas Units

The 1st Weather Wing, Hickam AFB, Hawaii, supports the Pacific. It has eight detachments and two operating locations directly under it in Hawaii, Guam, the Philippines, and Australia. The Wing's 30th Weather Squadron at Yongsan, Korea, supports operations in that country and in Japan. The 2d Weather Wing, Kapaun Barracks,

Federal Republic of Germany, is responsible for Europe. In July, the 28th Weather Squadron was formed at RAF Mildenhall, UK, to support the Third Air Force. The 7th Weather Squadron at Heidelberg provides all Army support in Europe, and the 31st Weather Squadron at Rhein-Main supports Sixteenth and Seventeenth Air Forces. *(See box, p. 114, which outlines support responsibilities of overseas and Stateside units.)*

Stateside Units

One-third of the 3,400 forecasters and observers under the three Stateside wings and Global Weather Central are committed to deploy overseas.

AFGWC, at Offutt AFB, Neb., is a wing-equivalent organization. A computer-based operation, it serves as Air Weather Service's manager for collecting and disseminating aerospace environmental data. Products and services are tailored to individual users. They include aviation, terminal, and target forecasts; severe weather warning; computer flight planning; and support to ballistic missile and missile warning systems. The Environmental Technical Applications Center at Scott AFB collects, summarizes, and stores climatological data for weapon-system development, intelligence activities, military planning, and to meet the requirements of other federal agencies.

Also located at Offutt is the 3d Weather Wing. Three of its squadrons support strategic military operations while the other supports air training activities. The 5th Weather Wing at Langley AFB, Va., has four squadrons dedicated to Tactical Air Command, air defense, and Army tactical support. Another squadron supports the US Readiness Command and the Joint Deployment Agency and Rapid Deployment Joint Task Force.

The 7th Weather Wing at Scott has two squadrons supporting logistics and airlift activities. The wing's 6th Weather Squadron is a special unit prepared to deploy anywhere in the world to provide upper air observations. In 1979, it responded to the nuclear accident at Three Mile Island. Officials there needed local observations of the winds to determine the path of the radiation escaping from the crippled reactor. The 6th was the only unit able to provide that help on short notice.

AWS Commander Brig. Gen. Albert J. Kaehn began his meteorological career as a detachment forecaster in Korea.

Combined Forces Support

Air Weather Service is working closely with its counterparts in Europe to improve observing and forecasting for combined operations. Currently, each NATO country's armed forces is responsible for its own weather mission. This lack of dedicated service to combined forces allows potentially conflicting weather guidance to go to operational commanders.

In August, two AWS officers were assigned to the German Military Geophysical Office, the result of an invitation from the GMGO and negotiations that began in 1978. The office is a five-story underground facility at Traben-Trarbach, southwest of Wiesbaden. It houses a forecast center performing functions similar to Global Weather Central on a regional basis.

In conjunction with this effort, Air Weather Service and the NATO community recognize that there needs to be a single source unified planning forecast that would go daily to the NATO central region. Air Weather Service hopes representatives from other countries will soon get involved, and, if agreement can be reached, the forecast will be issued from Traben-Trarbach. This will eliminate the need for commanders to shop around for the same information. Air Weather's teaming up with the Germans has provided an essential first step in this program.

AWS would like to see a similar combined forces weather operation established in the Republic of Korea. Still in the early stages of negotiation, the current idea would blend products generated by Global Weather with the Koreans' knowledge and experience of local weather effects.

Technology Aids Performance

A growing concern to General Kaehn is how to retain skilled people and distribute them to meet a wide range of requirements. He looks upon his finite resources as increasingly taxed by the advent of high-technology weapon systems for both the Air Force and the Army. The result has been more and increasingly specific statements of requirements for weather support from both services. Technology, however, is also allowing Air Weather Service to do more with less. Three new programs on the horizon are the Automated Weather Distribution System, Advanced Weather Radar, and the Prestrike Surveillance Reconnaissance System.

Automated Weather Distribution System

Base weather station people have developed every conceivable form of lazy Susan to cope with filing and retrieving the massive amounts of paper used in their jobs. Today's forecaster spends about twenty-five percent of the time, and observers forty percent, in such manual activities as decoding and hand-plotting weather data, tending teletype and facsimile machines, hanging and posting charts, tearing and filing. The Automated Weather Distribution System is being developed to fully automate the base weather station. It will encompass two systems, one to take observations and the other to process, disseminate, store, and display the data.

Weather officials picture a suite of sensors along the runway gathering information the observer now takes from gauges and interpolates from charts. The sensors

will provide all of the information. It will be processed and disseminated through a small computer displaying it in easily readable formats. AWDS will also include alarms to go off automatically when any portion of the weather turns so bad as to interfere with the mission.

The Air Force will require a tactical AWDS for forward operations. Also, technology has not yet devised a way to fully automate taking weather observations, so Air Force Systems Command is studying this part of the problem. Air Weather Service people remain enthusiastic about what is available. Just by eliminating the processing and collating of information, they feel AWDS can reduce by one-half hour the time it takes to routinely prepare a forecast, thus permitting the base weather station to be more productive.

General Kaehn sees the funding of AWDS development as an indication that the Air Force is more aware now than it has been in the last ten years of Weather's importance as a force intensifier. "When you're dealing with a limited number of aircraft, you've got to be able to pick the right number, the right weapons, and the right delivery techniques to achieve the maximum effectiveness from each sortie. Weather has a role to play in making those decisions, and with the Automated Weather Distribution System, the weather data base will be more accurate. The data used will be less than one hour old instead of three, and forecast products will be more reliable and more effectively delivered to command and control decision points," he said.

AWDS could be operational at fixed bases in the US by 1987 and overseas by 1990. The tactical AWDS is still being designed and may follow in the late 1980s. When fielded, AWDS will result in consolidation of observer and forecaster jobs, saving the Air Force about 400 manpower spaces.

The AN/FRR-95 Radio Solar Telescope System monitors solar activity. Sun bursts can adversely affect HF propagation, satellite systems, and manned space flights.

Advanced Weather Radar

Replacement of the current weather radar is being driven on one hand by the old age and fatigue of the present equipment and its high cost of maintenance and repair, and on the other hand by recently available technology. When Air Weather Service first stated its need for advanced weather radar, it got involved in a three-year test of a Doppler radar system. The test brought together Doppler technology from the Air Force Geophysics Laboratory and the National Severe Storms Laboratory.

AWS joined National Weather Service in evaluating the new system at Norman, Okla. If the Doppler radar detected a storm that threatened a military installation in Oklahoma or northern Texas, weather officers in Norman would alert the weather detachment at the base being threatened by the storm and set up an exchange of information.

As Colonel Frederick tells the story, "In the spring of 1979, severe thunderstorms threatened Vance AFB, Okla. The joint Doppler folks contacted the local weather detachment, which put out a warning. They tracked it on the radar and noticed it was slowing down and intensifying. So the detachment extended the warning to include the possibility of a tornado and large hail. The tornado passed within two miles of the base. Two-inch hail and wind gusts to seventy knots occurred on the flight line and in the housing area.

"But with two hours of lead time in the warning, the wing had hangared fifty-two of its T-38s and suffered not one dollar's worth of aircraft damage."

The colonel described the Vance incident as a convincing demonstration of the Doppler radar's ability. "Current radar can only tell you when you have a storm. You can

An Air Weather Service solar analyst enters an operational command into the Solar Optical Telescope System as it monitors the sun.

watch a suspicious echo build, but you only know its a very strong echo with a lot of heavy rain. There's also the famous hook echo that you might see on today's radar, sometimes but not always an indicator of a tornado. When you're thinking severe weather and looking at weather radar you can see a lot of hooks.

"Doppler radar gives us the diagnostics of what is going on inside a strong radar echo, and thus significant advance warnings of severe storms. With Doppler you can see circulations, called mesocyclones, in the upper atmosphere within a thunderstorm before a tornado forms. The effect of this circulation isn't felt at ground level for some thirty minutes. We've found in sixty percent of all cases where storms have had this circulation that a tornado formed." In ninety-five percent of all cases the results were at least a severe storm, three-quarter-inch hail or larger, or winds higher than fifty knots, or both.

Doppler radar offers such potential it has become a joint program in which Air Weather Service, the National Weather Service, and the Federal Aviation Administration will fund percentages of the buy. About 100 radar antennas are planned to be sited around the US and overseas.

PRESSURS

The third element in the Air Weather Service future, the Pre-Strike Surveillance/Reconnaissance System (PRESSURS), is only a concept right now. US commanders want to know the weather on the enemy side of the battle area. Weather satellites can't see through high cloud cover. So they can't always give the detailed kind of information commanders need to plan a strike. Yet this has become critical, especially with precision-guided munitions.

Tied closely to this is the Air Force's effort to relate weather parameters to these weapons. Decision aids are being developed that, based on weather observations, will help determine which delivery system and tactics will best aid lock-on to a target.

PRESSURS could turn out to be sensors implanted some way in enemy terrain or some other sensor approach. Research and development is under way with Rand Corp., evaluating areas in which research should concentrate. The prototype could come in the next five years.

Knowing weather's relationship to the munitions, combined with PRESSURS and AWDS automated assistance, will eventually permit Air Weather Service to give commanders target-by-target probabilities for their weapon systems under various weather conditions.

Defense Meteorological Satellite

Where technology advances the Air Weather Service mission, major system failures can also disrupt it. Global Weather Central relies heavily on the Defense Meteorological Satellite Program, which consists of two satellites in sun-synchronous orbits. DMSP provides information about global cloud cover to AFGWC in support of DoD. Secondarily, it offers real-time information about local area weather to nineteen key Air Force and Navy locations. Its high-quality imagery has enhanced the ability of commanders to select targets under varying weather conditions, and DMSP contributes to locating tropical storms in the Western Pacific and Indian Oceans.

Failure of a DMSP satellite launch in July has degraded Air Weather's ability to do its job. Without elaborating, weather officials say it hurts their capacity to support contingencies around the world. The replacement satellite is due up within a year. Until then, AWS is relying on older satellites still in orbit.

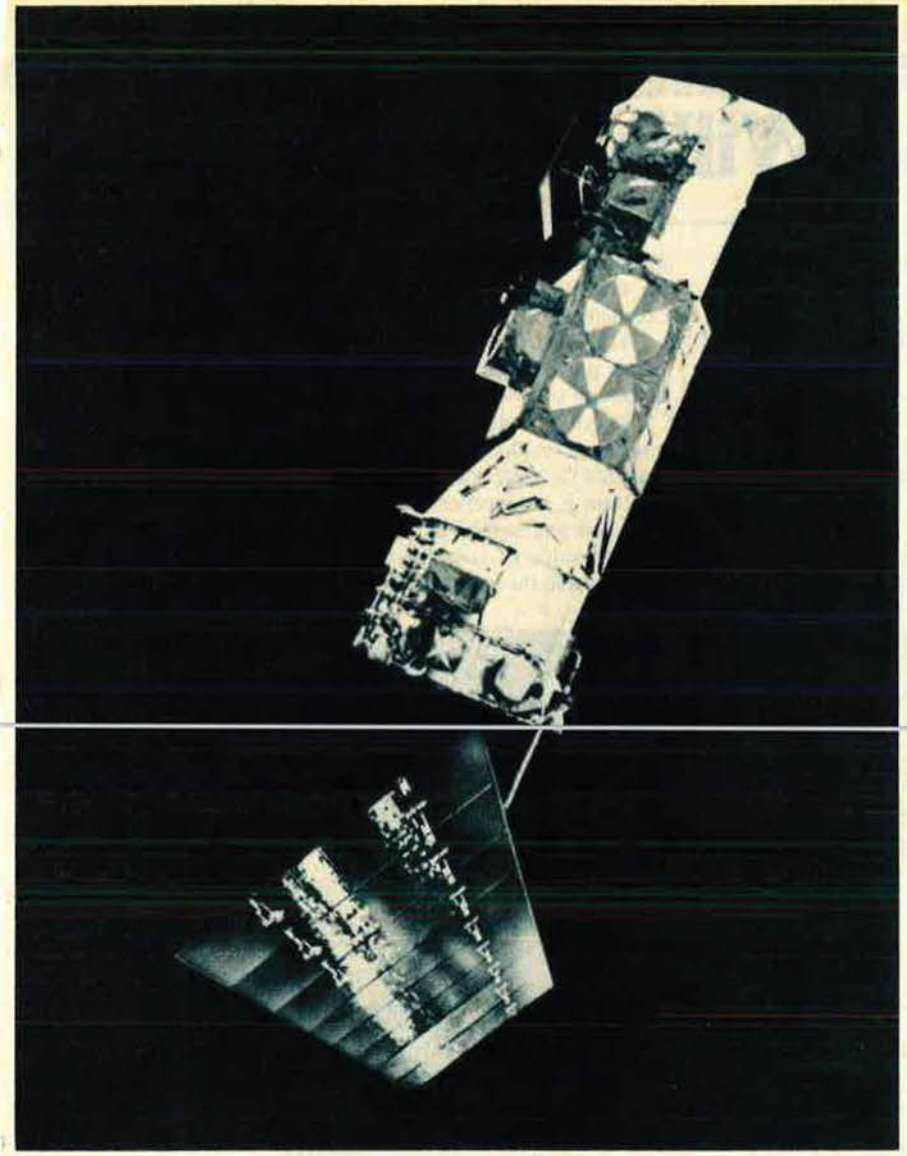
Space Support System

International events can also influence Weather programs. The sun drives all weather, and Global Weather Central has kept it under constant surveillance since 1965 through its satellite- and ground-based observing network called the Space Environmental Support System. Scientists study how military systems are affected when operating in the ionosphere and near earth space. They look at the effects of the sun on radio communications and of space on the ionosphere where density changes affect the drag on satellites orbiting the earth.

Air Weather Service operates ground-based solar optical and radio-telescopes in six locations around the world to support SESS. They are spaced to give a twenty-four-hour view of the sun. When the upheaval in Tehran forced the closing of that site, AWS reopened its Athens observatory even though

Air Weather Service Wing Support Responsibilities

Wing	Air Force	Army	Joint and Combined Commands
1st WW	Pacific Air Forces (5th AF, 13th AF)	Western Command 8th Army	United Nations Command US Forces, Japan US Forces, Korea
2d WW	USAFE (3d AF, 16th AF, 17th AF)	US Army, Europe	US European Command North Atlantic Treaty Organization
3d WW	Strategic Air Command Air Training Command Alaskan Air Command	Forces Command	Joint Strategic Target Planning Staff
5th WW	Tactical Air Command Air Defense Center US Air Force Atlantic	Forces Command Training & Doctrine Command US Army Forces Atlantic US Army Development & Research Center	North American Air Defense Command US Readiness Command US Southern Command
7th WW	Military Airlift Command Air Force Logistics Command Air Force Communications Command	None	US Forces, Azores



DMSP imagery is used to form the three-dimensional cloud analysis, which is the principal ingredient in computer simulation of various weather conditions.

its equipment is outdated. AWS hopes to replace the Tehran location with a new permanent one in the Middle East.

Army Comm Support

Air Force Communications Command, also headquartered at Scott AFB, owns, operates, and maintains AWS's principal communications network, the Automated Weather Network.

Five hundred Air Weather people attached to support the Army also rely on the Army for communications support. Both Army and Weather people in the field experience periods of poor communications. The Army's multichannel radios aren't mobile enough to keep up with a rapid force movement and the high-frequency radios that are mobile have a well-known fade problem under certain atmospheric conditions.

Colonel Frederick supported the Army at Fort Hood, Tex., for four years and recalls exercises where only a telephone kept him in touch with weather updates. He called it "a problem you learn to live with" but indicated the Automated Weather Distribution System may help get around it. Where present communications requires a continuous circuit, AWDS may reduce that requirement to just a few minutes each hour to acquire the information.

Practice in Peacetime

People, not organizational structures, fulfill the mission, and AWS is not an exception. General Kaehn emphasized, "Our job is to practice in peacetime what we need to do in wartime." Shortly after taking command of AWS, he reversed a decision which required Global Weather Central to provide portions of the local twenty-four-hour forecast to base weather stations. Each base is again responsible for its own local forecast. Keeping meteorology in the weather station contributes to the proficiency of these weather specialists, and their ability to do their wartime jobs.

General Kaehn also explained, "In a base weather station, we normally designate one officer as the wing weather officer. He works with the wing to understand its weapon systems as well as he understands his own weather technology, and marries them. He works with the operations planner, understands the wing's tasking in the operational plans, and when the wing deploys, he goes with it.

"During the Zaire airlift, for instance, four wing weather officers went into Africa; to Lubumbashi, Kinshasa, Dakar, and Rabat. They relied on weather information from indigenous sources and were supported by reports from Global Weather Central."

Another important link in Weather's mission is the staff weather officer. The 7th Weather Wing Commander, for example, is the staff weather officer for MAC. If he needs to coordinate weather support in a MAC plan, he functions as an auxiliary staff member under the Command's Deputy Chief of Staff for Operations. If he is coordinating weather support for MAC aircrews at TAC bases, he works directly with his counterpart, the 5th Weather Wing Commander. The staff officer concept enables AWS to coordinate decisions at just about any level among its own units as well as among the corresponding Air Force, Army, and other government agencies it supports.

During the war in Southeast Asia, Air Weather Service had 11,000 people assigned to it. Although a much smaller organization today, through technology and its people AWS continues to meet the expanding requirements of the Air Force and Army, thereby fulfilling its role as a force intensifier. ■

Superb Special-Edition Prints of Two Paintings By William J. Reynolds

As part of its continuing fund-raising efforts, the Aerospace Education Foundation — an affiliate of the Air Force Association — has arranged with artist William Reynolds to produce special-edition prints of his two most recent oil paintings, shown below.

The print "Last Aerial Combat of World War II" (B-32) measures 21¾" by 26½", including border and legend. The print "Approaching the Initial Point" (B-17) measures 21¾" by 24", including border and legend. These special, limited-edition lithographs will be struck on fine heavy paper.

Each print will be numbered and accompanied by a Certificate of Authenticity, will have a description of the action depicted by the painting, and will have the artist's authenticating signature. The finished prints are being offered at a price of $75 each, postpaid, to the first 500 individuals to reserve their copies. They will make excellent Christmas gifts.

The artist drew heavily on his experience as a World War II fighter pilot and on his other flying experiences for the accuracy in detail and situation.

To preserve the exclusivity of each print, when the 500 lithographs are sold, no more copies will be struck from the plates prepared for these special editions.

Here is an excellent way to add unique works of art to your collection and support the Foundation at the same time. Remember that the value of your lithographs is assured by individual print numbers and the artist's authenticating signature.

Approaching the Initial Point

The B-17 crewman with the best seat in the house during World War II was the bombardier. His station was the "greenhouse," the unprotected Plexiglas nose of the aircraft. The bombardier's station gave him an unparalleled opportunity to watch incoming enemy fighters. That's the situation shown in this fine Bill Reynolds painting "Approaching the Initial Point." The Initial Point (IP) was the place where the bomb run to the target began. After the IP, the fighters usually left the area because of the volume of antiaircraft fire from the ground. It was the bombardier's job to keep the aircraft on a constant course and heading so he could synchronize his Norden bombsight on the target. Since the bomber's nose area was a prime target for incoming enemy fighters, bombardiers needed not only technical skills but also a special measure of courage and dedication.

The oil painting was specially commissioned for the 9th Biennial Reunion of the Bombardiers Alumni Association held in Washington, D.C., in August 1980.

Last Aerial Combat of World War II

This is believed to be the last aerial combat of World War II, fought on August 18, 1945. A pair of B-32 Dominator aircraft were flying a photo-reconnaissance mission over Tokyo when they were attacked by an estimated fourteen Japanese fighters — Zekes and Tojos. The B-32 shown in the painting had its number three engine shot out. One of its two photographers was killed, and the other photographer and the top-turret gunner were wounded. The B-32s fought their way clear and returned to base in Okinawa. The Dominator, originally intended as a backup to the B-29 Superfortress, was one of the less well-known aircraft of the war. Of the 1,706 ordered, only 118 were built, and only 15 saw action. The flurry of combat over Japan on August 18, 1945, earned the B-32 a footnote in the history of US aerial combat.

This painting appeared on the cover of the September 1980 issue of this magazine.

Order These Limited-Edition Prints from the Aerospace Education Foundation

1750 Pennsylvania Ave., N.W., Washington, D.C. 20006
Phone: (202) 637-3370.

AIRMAN'S BOOKSHELF

Swath Through the Confederacy

Sherman's March, by Burke Davis. Random House, New York, N. Y., 1980. 335 pages with photographs. $12.95.

Burke Davis has researched the impressions and observations of hundreds who served under and with, fought against, or simply witnessed Sherman and his 62,000 troops cut a thousand-mile-long, eighty-mile-wide path of destruction through the Confederacy.

The book begins on a November evening in 1864 as Sherman watched Atlanta burn. The march began the next day, and Davis details the account of foragers (called "bummers") who mercilessly relieved Southern families of food and possessions while others burned and plundered the towns and cities. Yet, interspersed are tales of individual kindnesses by some Union soldiers and the herosim of Southern women who repulsed the depredations of the Union's Western Army.

The book does more than just chronologically document the march. The author captures the intensity of Sherman's feelings about the war and how he developed a strategy "that the most humane way to end the war was to destroy the South's power to resist by cutting off supplies and manufacturing and making the civilian's lot so miserable as to break the morale of Confederates at home and in the field."

Sherman's arbitrary nature manifests itself frequently. Officially, all destruction was to be confined to those public buildings and businesses that contributed to the Confederate war effort. (Foraging, since the Army lived off the land, was to be limited to official parties under command of discreet officers.) But, Sherman, known as Uncle Billy to his men, rarely stopped the robbing of Innocent civilians, though he himself interceded many times to save a home or feed a family. The burning of Columbia, S. C., in February 1865, described in detail, was considered by Southerners as Sherman's most brutal act.

The author also reconfirms lessons learned long ago about the Civil War. "Many of the [Union] troops bore deep resentment toward Negroes and the agitators whom they blamed for causing the war, for the virus of race prejudice was nationwide."

Readers will learn about the important innovations communicators and engineers brought to the Union Army, and the competence and incompetence, heroism and cowardice displayed by Confederate and Union soldiers alike.

Throughout his military career, Sherman remained a controversial figure. Above all else, he was the supreme strategist, without peer in planning campaigns.

On May 24, 1865, after the war had ended and Lincoln had been assassinated, Sherman's forces paraded before President Andrew Johnson in Washington. As various elements of the Army passed in review, the German Ambassador was first heard to remark, "An army like that could whip all Europe." Then, "An army like that could whip the world." Finally, "An army like that could whip the devil."

—Reviewed by Maj. Thomas L. Sack, USAF, Contributing Editor.

Moral Guidelines for the Military

War, Morality, and the Military Profession, edited by Malham M. Wakin. Westview Press, Boulder, Colo., 1979. 531 pages. $24.50 clothbound; $12.50 paperback.

This book contains two collections of thought-provoking essays, the first dealing with the values and ethics of the profession of arms and the other treating questions concerning morality and war. The former is more interesting to active officers. The work is required reading for Air Force Academy cadets taking Colonel Wakin's core philosophy course.

Wakin provides a foundation for understanding the singular qualities and conditions of the military vocation. He believes that the armed forces must capture the full dedication of the morally and intellectually competent if the military is to remain healthy. He knows that the armed services will surely experience hard times if they fall short of providing a fulfilling life's work for the most talented. He fears the trend toward occupationalism and away from professionalism, signs of which abound. Because Wakin believes that the line between incompetence and immorality is a thinner one in the military profession than in almost any other human calling, his demands are high. He warns: "In the hands of the mediocre or the morally insensitive, the vocation of arms could find its noble purposes distorted with tragic consequences for all humanity."

Wakin has chosen insightful papers from the best authors in this field—Samuel Huntington, Morris Janowitz, Charles Moskos, Sir John Winthrop Hackett, and other scholars—to support his thesis that the military is unique.

Hackett says it best, and Wakin has wisely chosen three of the British General's most thoughtful articles. Hackett writes that the "essential basis for the military life is the ordered application of force under an unlimited liability. It is the unlimited liability that sets the man who embraces this life . . . apart." Hackett realizes that the military vocation demands people with courage, fortitude, and loyalty, and while one may hope to meet these virtues in every walk of life, in "the profession of arms they are functionally indispensable."

One can be "selfish, cowardly, disloyal, fleeting, perjured and morally corrupt in a wide variety of other ways and still be good in pursuits in which other imperatives bear than those upon the fighting man . . . [but] the bad man cannot be . . . a good sailor, soldier, or airman." Enlist, writes Hackett, because the military life gives much, "enriching freely anyone prepared to give more than he gets."

Working professionals, trapped in

their in-baskets, can refresh themselves by adding *War, Morality, and the Military Profession* to their bookshelves and imbibing from time to time.

—Reviewed by Lt. Col. Alan L. Gropman, Hq. USAF.

New Books in Brief

A Palestinian Agenda for the West Bank and Gaza, edited by Emile A. Nakhleh. This book is a thoughtful view of Palestinian development written by Palestinians and based on the assumption that the West Bank and Gaza will become an independent entity founded on the right of self-determination. The essays cover such diverse and largely nonpolitical topics as housing and employment, education, agriculture and population, local municipal codes, and Palestinian attitudes toward Israel, the PLO, and the Camp David accords. Pragmatic in tone, this volume should prove educational to Americans interested in a resolution of the Palestinian question, essential for a comprehensive peace in the Middle East. Tables, notes, bibliography. American Enterprise Institute for Public Policy Research, 1150 17th St., N. W., Washington, D. C. 20036, 1980. 127 pages. $5.25.

Aviation Psychology, by Stanley N. Roscoe *et al.* Aviation psychology is a relatively recent field, emerging during the years of World War II and continuing with ever greater sophistication to this day. This comprehensive and well-researched text may prove to be one of the definitive works on this young science. The book is divided roughly into two areas of study: behavioral engineering of aircraft; and the selection, training, and evaluation of pilots and the technology that supports them. This book should prove of value to concerned aviation professionals. Appendices, references, indices. Iowa State University Press, South State Ave., Ames, Iowa 50010, 1980. 304 pages. $15.50.

Battle of the Bulge 1944, by Napier Crookenden. This large-format book examines Hitler's desperate last gamble to stave off defeat in the West. The text is extensive and detailed, and complemented by many contemporary photographs and drawings. Bibliography, index. Charles Scribner's Sons, New York, N. Y., 1980. 160 pages. $17.50.

Fifth Army at War, by George Forty. The US Fifth Army holds the record for being the unit with the longest continuous period of action against the enemy in World War II. Fifth Army also holds the distinction of being the first American unit to land on "Fortress Europe" (though it also included among its ranks men and women from approximately fifteen other nations). This well-illustrated account of combat and bravery is told by Forty with details of individual acts of heroism. Photos, bibliography. Charles Scribner's Sons, New York, N. Y., 1980. 144 pages. $17.50.

AIRMAN'S BOOKSHELF

The New Imperialism: Cuba and the Soviets in Africa, by Phillip Abbott Luce. "By enlisting Castro, through a combination of monetary bribery and ideological persuasion, to act as the agent of Communist imperialism in Asia and Africa, the Soviet Union has managed to turn the island of Cuba into a new variety of imperialist agent." Working from this premise, the author catalogs and studies the seventeen-year history of Cuban involvement in Africa at Soviet instigation. Luce, a former Maoist and admirer of Castro who split with the Left in 1965, argues that "the United States has become the willing patsy of this new imperialism." With tables, notes, and appendices. Council for Inter-American Security, 305 Fourth St., N. E., Washington, D. C. 20002, 1979. 71 pages. $4.

Revolutions and Revolutionaries, by A. J. P. Taylor. Each new book by the eminent British historian is certain to receive high acclaim, and this book should prove no exception. Here Taylor returns to his first love, the French Revolution, and the other European revolutions that followed in its wake. He underlines how, beginning with the French Revolution, and ending with the Russian, these upheavals attempted to transform fundamental social and political orders rather than merely exchanging one ruler for another. Adapted from a series of television lectures by the author, this book will appeal to the academic and the layman alike. Illustrations, index. Atheneum Publishers, New York, N. Y., 1980. 165 pages. $12.95.

Shape Up! by Donald P. Loren. The cramped quarters aboard most naval vessels are not conducive to exercise, but USN Lt. Donald Loren has created a program of shipboard exercises designed to overcome the lack of facilities and equipment and small space on ships (or confronting the sedentary office worker). The exercises are laid out in a five-week program and use simple isometric and isotonic techniques. Included is a section on the importance of proper diet. Photos. Naval Institute Press, Annapolis, Md., 1980. 73 pages. $11.

Soviet Armed Forces Review Annual, Vol. III, edited by David R. Jones. This book is a diverse collection of articles by leading academics on Soviet military and political affairs—from reviews of such topics as the Soviet Strategic Rocket Force to a biography of Marshal Grechko. Particular emphasis is given to doctrine and theory and historical subjects. Of special interest to military scholars will be the three bibliographic articles completing the book. Academic International Press, Box 555, Gulf Breeze, Fla. 32561, 1979. (Specify vol. when ordering.) 364 pages. $36.

Strategy and the MX, by Colin S. Gray. In this study of the proposed new ICBM, the author argues that the case for deployment of the MX should be based solidly on strategic considerations and not become sidetracked to issues of basing area or alternative "quick fixes." Dr. Gray argues that MX would, in the extreme case of failure of deterrence, "contribute vitally to the ability of a U.S. President to wage the military war, in militarily intelligent ways, for identified sensible political ends." Dr. Gray, a frequent contributor to AIR FORCE Magazine, also makes a persuasive argument for the deterrent value and escalation control of the "MX firebreak." The Heritage Foundation, Dept. G, 513 C St., N. E., Washington, D. C. 20002, 1980. 66 pages. $2.

U.S. Bombers: 1928 to 1980s, by Lloyd S. Jones. The third edition of this catalog of American bombers, from the XB-1 of 1928 to the present FB-111 and B-1, is sure to delight the enthusiast with its detail, illustrations, and coverage of all types. Included are entries on such wonders as the gargantuan Douglas XB-19 "Hemisphere Defender," with its 212-foot wingspan, and the unusual Northrop YB-49 "Flying Wing." A chapter on color schemes will be valuable to model builders. Aero Publishers, Inc., 329 West Aviation Rd., Fallbrook, Calif. 92028, 1980. 271 pages. $14.95.

—Reviewed by Hugh Winkler, Associate Editor.

PERSPECTIVE
Comment & Opinion

By James F. Cumber, Jr.

The Curious Case of the Vanishing Megatons

Ever since the debate on the SALT II Treaty began (and it began long before the Treaty was signed), the unclassified literature has been the source of some amazingly accurate data on Soviet and American strategic missiles.

However, some of the most recent unclassified data shows changes in the Soviet figures (the American figures are unchanged) in a mysterious degradation of Soviet capabilities that can be called the "Case of the Vanishing Megatons."

As long ago as the mid-1960s, some of our top nuclear scientists claimed that the Soviet test series of 1960 to 1963 had (based partly on the documentation of Soviet Col. Oleg Penkovskiy) given them a large lead in multimegaton nuclear weapons technology. In short, the Soviets can get more kill for the kilopound than we can.

However, if one reads the popularly published data on US and Soviet strategic missiles, it may occur to you that something in the most recent figures is not quite right. "The Military Balance" of the International Institute for Strategic Studies (IISS) of London is normally considered one of the best sources. The figures for US missiles are considered to be particularly valid and so are useful as a baseline in any computations. The IISS data for the US "Poseidon C-3" SLBM (the latest deployed US strategic missile—1971) reports a warhead carrying ten MIRV warheads at fifty kilotons each and a 2,000-pound throw-weight.

The mysterious part is that between the 1978–79 and 1979–80 issues, the IISS has reduced their estimate of Soviet nuclear warhead potential, in yield per MIRV on their ICBMs. In the earlier edition, the Soviet RS-20 (SS-18) Mod 2 has a throw-weight of 16,000 to 20,000 pounds (7,250 to 9,100 kilograms) and carries eight two-megaton MIRVs. In the later edition the same throw-weight and number of warheads are reported for the same missile, but the yield per warhead has been reduced to only 600 kilotons.

Likewise, the Soviet RS-18 (SS-19) Mod 1 was reported in the earlier edition as having a throw-weight of 7,000 pounds (actually 3,200 kilograms or 7,055 pounds) and having six one- to two-megaton MIRV warheads, while the 1979–80 edition lists the same throw-weight but reduces the six warheads to only 550 kilotons each. Apparently, the IISS was too close to press time with the 1979–80 "Military Balance" to integrate the fact that the SALT II Treaty uses the RS-18 (SS-19) as the baseline (but at a throw-weight of 3,600 kilograms or 7,937 pounds) for limiting future ICBMs.

These discrepancies prompted me to analyze the quoted figures both for US and Soviet ICBMs through the use of Walsh's Law (AIR FORCE Magazine, February '77, pp. 35–39) and an HP-67 calculator to determine the actual state of affairs. When applied to the US Poseidon, the computations (after half the throw-weight is subtracted for the post-boost vehicle or MIRV "bus," and 150 pounds is set aside for penetration-aids) show that each of the ten warheads weighs eighty-five pounds, and the nuclear packing density is 1.597 megatons-equivalent to the kilopound (MTE/kp).

At 9,000 kg of throw-weight, the Soviet RS-20 (SS-18) Mod 2 RVs (using the same rule of half for PBV and no pen-aids . . . since the US has no ABM defenses to penetrate) exhibit 0.574 MTE/kp at 600 kilotons each, which is ridiculously low. Even at 7,250 kg, the density is only 0.712 MTE/kp at 600 kt each. Acceptance of either figure is to indulge in "three-foot Russian" syndrome, since it implies that Soviet nuclear technology is more than ten years behind that of the US—a condition in direct contradiction to the claims of our own nuclear scientists. As a matter of fact, either figure would actually indicate a lead by the US of more than twenty years in this field.

The RS-18 (SS-19) Mod 1 figures are no better: 3,200 kg of throw-weight and 550 kt per warhead gives only 1.142 MTE/kp . . . again, an impossible ten-year US lead, though not quite as bad as the RS-20 figures. The original 1978–79 figures for the RS-20 (8 × 2MT MIRV) exhibit a more realistic (but still too low) 1.280 MTE/kp at 9,000 kg and a much more realistic 1.589 MTE/kp at 7,250 kg. The RS-18 (SS-19) at 6 × 1MT and 3,200 kg yields 1.701 MTE/kp, which is still reasonable, while the 6 × 2MT at 3,200 kg produces a very doubtful 2.700 MTE/kp. Now, if the SALT II weight of 3,600 kg is accepted, then 6 × 1MT produces a realistic figure (though probably too low) of 1.512 MTE/kp, while 6 × 2MT yields the still doubtful 2.400 MTE/kp.

The 1979–80 figures are far off the mark. The question to be answered is where did the IISS get its figures?

James F. Cumber, Jr., is a member of the Air Force Association who is pursuing a degree in Interdisciplinary Social Science in Florida.

Here is the IISS's reply:

"Sometimes changes result from a reevaluation of old evidence, sometimes from new evidence presented.

"In this particular case, we revert this year to the assessment of two years ago that the SS-18 has 8 × 2MT warheads, rather than the smaller 600 kt variant. In other words, we now think that we were probably wrong. Last year, it seemed to us that a move to a somewhat more selective warhead was logical for counter-silo targeting, and we received information from a number of sources that there had been a reduction in yield. We now think the information to have been false.

"IISS would refute the contention that this was something to do with trying to make SALT more palatable, and a reduction in yield from 2MT to 660 kt would not in any case alter in any fundamental way the threat to American silos. The SSKP (Single Shot Kill Probability) resulting from the reduced yield would be small, but, more significantly, it would be more than compensated for by improvements in accuracy, which IISS duly recorded last year."

SPEAKING OF PEOPLE

The New Mood of Congress

BY ED GATES, CONTRIBUTING EDITOR

NOT only did the service community come out a winner with the various new and improved benefits in the Nunn-Warner and FY '81 Authorization measures, but more improvements are on the horizon. These include such items as dependent dental care, enlisted per diem equity, optional BAQ for bachelor E-7s and above, and incentive pay for certain critically needed enlistment members who extend overseas. At the very least they are good possibilities.

A slightly improved survivor benefits plan at press time was not far from enactment. Still another improvement the services want, and may soon secure, is an extension of the GI Bill's December 31, 1989, termination date *(see details in the October "Bulletin Board")*. Air Force officials are lobbying for the extension, feeling it will deter experienced members from hanging up their uniforms.

And there's more pleasant news coming from—of all places—the House Appropriations Committee. Readers may recall that this purse-strings panel, in its endless quest for saving federal dollars, for years has given the services funding fits. It has curbed funds for bachelors overseas, officer education, travel, recruitment, etc. Last year, in continuing its tight-fisted ways, it hit USAF's physician's assistant program by refusing to give future PAs commissioned status. It placed ceilings on military dependents abroad and even tried to force the Air Force to appoint some of its pilots as warrant officers.

Fortunately, the WO pilot ploy was foiled later in the legislative process. Nor does it reappear in the FY '81 military appropriations bill that was recently reported by the committee and shortly thereafter approved by the full House.

More importantly, the committee recommended and the House approved funding of the 11.7 percent pay raise and the other new benefits without quibbling. And the lawmakers got downright enthused about improving retention through a heavy application of selective reenlistment bonuses (SRB).

The committee, silent on reenlistment bonuses a year ago, now acknowledges that the "cost, both in terms of dollars as well as military readiness, can be extremely high when a skilled enlisted journeyman must be replaced by an inexperienced and costly-to-train apprentice." The services have been saying that for years.

At any rate, the committee this time approved a thumping $155.5 million in SRB money over and above what the services had asked for. Army and Navy, with their poorer re-up records, will receive the lion's share, but USAF is earmarked for $59.7 million, or $32.2 million more than it got last year and $22 million above its FY '81 budget request. Extra millions like this are rare.

Another good move developed when the House, agreeing to another Appropriations Committee recommendation, raised in-service tuition aid from seventy-five to ninety percent of course costs for E-4s and higher with less than fourteen years of service. With off-duty study costs on the rise, this can strengthen the skilled middle enlisted ranks, which have been depleted with separations.

There were some negative actions. The committee, for example, again failed to provide the COLA sought for US troops living in barracks overseas. They called the request a "back door pay raise" that is unnecessary in view of the general pay hike and the other new benefits. Air Force also came up short on variable housing allowance funds. Also serious was the House's decision to reduce USAF's military personnel projected unexpended balances by $183 million. If the move is sustained by the Senate, the Air Force says it will lose 16,900 man-years and suffer a "devastating" impact on its "ability to accomplish the mission." Accordingly, USAF officials are appealing to the Senate for restoration of the cuts in the unexpended balance funds as well as those in the COLA and VHA.

Also, the House cut out $6 million in USAF enlistment bonus money and deleted 356 recruiting spaces. These moves, if upheld by the Senate, will hurt Air Force recruiting in the year ahead, according to Hq. USAF authorities who are seeking relief in the Senate.

Overall, however, the House Appropriations Committee members have sheathed some of their knives. Their improved treatment is in line with the general congressional acceptance of the "benefits for people" campaign waged so successfully by the military community and service leaders.

As one key Hq. USAF official observed, "The House Appropriations Committee, in its FY '81 report, has been generally receptive to the new mood of Congress in supporting Defense personnel programs."

That's got to be good news. ■

CORRECTION

USAF's recent priority compensation goal was a 17.6 percent across-the-board pay raise, not a 15.2 percent raise as reported in last month's "Speaking of People" column. This compares with the government's 11.7 percent hike.

THE BULLETIN BOARD

By James A. McDonnell, Jr., MILITARY RELATIONS EDITOR

PCS "Initiatives" Mount

The Air Force in recent months has developed a score of "PCS initiatives" designed to reduce the problems and expenses that transferring members and their families have long endured. In addition, the seven-day permissive TDY plan recently approved for house hunting in conjunction with a PCS has just been expanded to include two more groups—members taking an unaccompanied overseas tour and those going to a long tour abroad where the wait for housing exceeds nineteen weeks.

Due out soon is a list of discount motels for USAF family travelers and a change that will provide relief for utility company deposits during moves. The Military Manpower and Personnel Center is working on these, Hq. USAF said.

Other travel initiatives recently approved do the following:

The nine members of Flight A, 3531st Recruiting Sqdn., Gunter AFS, Ala., and their spouses enjoy a river barge dinner in San Antonio, Tex. The event was part of a visit to the city earned by winning a special recruiting drive, Operation Blue Suit II. The tour was sponsored by Texas State AFA, the Alamo Chapter, Chamber of Commerce, business leaders, and the Recruiting Service.

Let families stay ninety days in quarters at the old base; ensure ninety days' assignment notification; enhance the role of Housing Referral Offices by putting home buyers and sellers together and providing advance information on housing in the new base's area; provide a more liberal tour extension policy; establish ways to help PCSers move second cars; allow up to sixty days' delay in reporting to the new base.

Allow PCSing families to use visiting and temporary lodging quarters at both old and new bases; encourage families to travel via government transportation requests; increase base legal services for private sale of houses between USAF members; allow family use of dining facilities during PCS; eliminate the dining hall surcharge for PCS families; give PCS families priority for drop-in care at child-care centers; limit IG and other management inspections during peak PCS periods to free temporary quarters; provide a moving expense check-list for tax-deduction purposes; reimburse certain TDYing members for travel-to-airport expenses; and expand MAC travelers' counter service at JFK Airport in New York City.

The recent increase in the PCS mileage allowance to 18.5 cents per mile and rise in the per diem scale have helped improve the poor travel circumstances inflicted on military members and their families. The Air Force's drive for equity for its people (with civil servants and the private sector) also includes pushing for househunting money; broader temporary lodging entitlements; reimbursement for members for travel from the port of entry to their dependents' designated location, then on to their new duty station; and for giving members an extra year to reinvest any profit from the sale of a home without capital gains taxation.

The service also supports a House-passed bill to increase pay credit for volunteers at undesirable locations. The measure would establish a new special pay ($50 a month) or permit one of three R&R options for enlisteds in CONUS-overseas imbalanced skills who agree to extend overseas for at least one year.

Meantime, Hq. USAF officials say they will continue to search for new ways to ease travel burdens.

New Benefits Labeled "First Steps"

Air Force leaders, while welcoming the numerous new military benefits recently approved by the government, have made clear that their campaign to win necessary improvements won't stop. The place was the Air Force Association Convention in the nation's capital, where Chief of Staff Gen. Lew Allen, Jr., said the new benefits provide "encouraging evidence that the nation and its political leaders are coming to understand the plight of military members and their families."

Approval of the Nunn-Warner and Fair Benefits packages, plus the 11.7 percent pay raise, Allen continued, "represent important first steps . . . in restoring an adequate standard of living."

Air Force Secretary Hans Mark echoed Allen's theme when he told another Convention audience that "the Chief and I will continue to argue as persuasively as we can to enhance the material rewards" of service life. *(The full texts of these speeches may be found elsewhere in this issue.)*

The specific gains General Allen referred to include the increase in flight pay, the variable housing allowance, subsistence and sea pay raises, the rated officer bonus, the new 18.5 cents per mile PCS allowance, "save pay" feature for certain members, enlisted and reenlistment bonus expansion and increases, CHAMPUS improvements, family separation allowance for junior enlisteds, Reserve enlistment and re-up bonuses, and improved trailer moving allowance.

AFA Convention delegates, meanwhile, approved a long list of benefits demands in the Association's manpower policy paper. Included are full travel benefits for all personnel, elimination of the overseas depen-

dent ceiling, a fifty percent boost in flight pay, a permanent flight pay system for flight nurses, lifetime CHAMPUS coverage, without regard for Social Security, adequate housing for all personnel, ninety instead of seventy-five percent subsidy for off-duty tuition aid courses, and many more. *(The full text of this paper may also be found elsewhere in this issue.)* The House at about the same time approved the ninety percent figure *(see "Speaking of People," p. 120).*

Also at the Convention prominent Hq. USAF officials, starting with the Chief of Staff and the Chief Master Sergeant of the Air Force, met with members of AFA's Enlisted Council, Senior Enlisted Advisor Council, and the Junior Officer Advisory Council. Lt. Gen. Andrew Iosue, the Hq. USAF DCS/Personnel, told the groups that his office is zeroing in hard on the movement-of-people issue, searching for ways to curb moves and reduce moving costs for transferees. Complicating the problem, he said, is the decline in numbers of members volunteering for overseas duty.

Reducing transfers, of course, has been tried often before without much success, and General Iosue acknowleged that the service "lacks flexibility" in battling the problem. He presented figures showing that Civil Service employees receive far more in travel reimbursements than service members.

General Iosue also disclosed that Headquarters has approved a new package of decorations for which many younger troops will qualify and 200 extra promotions for exceptional enlisted performers. The latter is a test under which commanders can pin the stripes on virtually any E-3 through E-6 they wish.

Other Hq. USAF officials addressing the Councils included Maj. Gen. William R. Usher, Director of Personnel Plans; Maj. Gen. Guy Hecker, Director of Legislative Liaison; Maj. Gen. Murphy A. Chesney, Deputy Surgeon General; and Col. Richard F. Abel, Director of Public Affairs.

Earnings Statement Ordered

"Do military personnel generally understand the full value of their pay and benefits, whether received in cash or in kind?" The House Appropriations Committee, in a report accompanying the FY '81 military appropriations bill, asked the question and promptly answered it with a resounding "no." The full House then directed Air Force to develop, by next March 31, a total benefits statement for each military member.

The Air Force, which strongly opposes the idea, is developing what it calls a "self-appraisal retention brochure" it wants instead. USAF is appealing the House order to the Senate.

The House called for a statement that includes "the entire range of compensation" starting out with pay, allowances, federal and state tax advantages, an estimate of each member's retirement equity, followed by a "pro-rata cost" of such in-kind benefits as "subsistence, medical care, sick leave, Social Security accrual, education benefits, commissaries, exchanges, recreation activities, dependent schooling, legal assistance, career planning, personal and financial planning assistance, child-care facilities, space-available flights, annual leave, etc."

The House doesn't want a mere revision of the Leave and Earnings statement already provided service members. In ordering the new project, the House cited a General Accounting Office report claiming that service people undervalue their compensation. It also said that "a great many" private firms provide such statements each year at low cost, eighty cents per employee in some cases. The committee report spoke of "potentially enormous" savings that might be obtained by the military.

THE BULLETIN BOARD

Outstanding Airmen Alumni

Sergeants Doyle A. Webb and Wesley Gleason were two of the nineteen Outstanding Airmen honored at the 1956 Air Force Association Convention, the first year of the program's existence. This year the pair, both retired Air Force, returned to the recent 1980 AFA Convention in Washington, D. C., receiving the plaudits of the throng attending the Outstanding Airmen Dinner.

Both are AFA members and have been successful in business and prominent in civic affairs in their respective communities. Webb, sixty-nine, who retired as a Chief Master Sergeant and was the Outstanding Air Force Reservist in 1956, lives in Marshall, Tex., where he has been active in veterans organizations. In 1977, he was National President of 40 et 8, an adjunct of the American Legion.

Gleason, fifty-six, retired from the USAF as a master sergeant in 1962 at Pease AFB, N. H. He represented what was then called the Air Proving Ground Command, Eglin AFB, Fla., when named an Outstanding Airman. He resides in North Conway, N. H., where he is in the automobile business and is a past President of the Rotary Club.

In future issues, under a new "Where Are They Now" heading, AIR FORCE Magazine will update the careers of some of the past 402 Outstanding Airmen.

VA Disability, DIC Checks Upped

The 2,300,000 veterans drawing compensation for service-connected disabilities are getting a thirteen percent raise if their ailments are rated forty percent or smaller. The increase is 14.3 percent if the disability is fifty percent or higher. The 341,000 widows drawing Dependency-Indemnity Compensation will get the same percentage increases. That's

Kari J. Fielder was awarded AFA's $500 Arno H. Luehman scholarship by former AIR FORCE *Magazine Publisher and Editor in Chief John F. Loosbrock, right, during the Public Affairs personnel luncheon at the AFA National Convention. Assisting in the presentation to Ms. Fielder is the award's namesake, Maj. Gen. Arno H. Luehman, USAF (Ret.).*

A1C Charles Smith (left) and A1C Eric Myers, members of the Air Base Defense Team of the 435th Security Police, Rhein-Main AB, West Germany, patrol the base's perimeter during the initial phase of the recent Exercise Reforger 80/Crested Cap. More than 17,000 US-based airmen and soldiers were airlifted to bases in Europe to participate in these Strategic Deployment Exercises.

the way Congress, after much jockeying around, finally approved the legislation.

Though effective October 1, the raises aren't showing up in checks until early this month.

The pay raise measure also (1) provides specially adapted housing for blinded veterans and certain other seriously disabled service-connected vets; (2) provides headstones for family members buried in state cemeteries; (3) increases the VA maximum home and trailer loan guarantees from $25,000 to $27,500 and $17,500 to $20,000, respectively; and (4) allows for the refinancing of VA home loans.

The VA earlier acknowledged that the numerous mortgage interest rate changes "have surprised" veterans who thought they had a mortgage rate nailed down only to be faced with a higher rate at settlement. "Many of them blame VA," the agency said.

It reminded the unhappy vets that VA doesn't make housing loans; it merely tells lenders it will guarantee part of a loan at the prevailing rate when the loan is closed. The agency went on to cite "a number of advantages" VA home loan participants enjoy.

ASTRA—First Step to Stars

The annual ASTRA board will meet next month at the Manpower and Personnel Center, Randolph AFB, Tex. Its mission: Pick young officer volunteers willing to serve a year at the Pentagon or at the Center early in their careers. There are also a few ASTRA slots located at Norton AFB, Calif.

It also, in a very real sense, may be earmarking some of the selectees for general officer stars two decades or so down the road. For the objective of ASTRA—Air Staff Training—"is to develop a potential resource of future Air Force leaders by stimulating the early growth of some of the more promising young officers. This is done by the early exposure of selected officers to the complexities of Hq. USAF decision-making activities," the service says.

Lieutenants are a rarity in the Pentagon and captains also are scarce, the high living costs in the Washington, D. C., area scaring off most of them. According to some officials, however, completing the ASTRA program and getting it on the record may pay off handsomely years later in the form of stars.

"Well Done," Hq. USAF Says

Hq. USAF gave itself a pat on the back recently when it sent the following message to all commands and separate operating agencies announcing that there would be no reallocation of any part of the 11.7 percent pay raise:

"The President could have provided different basic pay raise percentages for different grade and longevity groupings. We believe that the decision against any reallocation this year is directly attributable to the strong and repeated urgings of top service leaders, especially Secretary [Hans] Mark and General [Lew] Allen, that all military members had rightfully earned a full share of the 11.7 percent pay raise."

FSOs Get New Personnel Package

Military officers and US Foreign Service officers have often worked together in embassies and foreign lands and faced similar problems with foreign living conditions, kids' schooling, etc.

So the military should find the Foreign Service Act of 1980 of more

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than passing interest. It makes changes in assignments, promotions, retirement, compensation, and just about everything else that affects the lives of the 10,000 FSOs and their families. The Act reaffirms the FS "up-or-out" system and establishes a Senior Foreign Service, something akin to the military's general officer corps.

And the measure, the first overhaul of the FS laws since 1948, contains some rewards unheard of in military circles—such things as "performance pay," "within class" salary increases, "special differential pay" (essentially pay for overtime), "danger pay," "incentive pay," and "separate maintenance allowance." The latter provides, under certain conditions, an average of $35,000 to an FSO family if the wife and children don't join the officer at his new foreign post.

All these, according to the House Foreign Affairs Committee, are needed to strengthen the FS establishment and improve recruiting of new FSOs which, the committee says, has nose-dived in recent years.

A controversial section of the Act, the "spouse" proviso, provides ex-wives of FSOs a portion of their retirement pay. Many military members fear the government will soon adopt similar rules.

The Foreign Service Act at press time had passed both Houses of Congress in slightly different form. Final congressional and presidential approvals were expected in early October.

Short Bursts

The services take **too long processing** the some 75,000 members being kicked out each year for **"adverse reasons."** If they speeded things up, millions of dollars could be saved. That's the nub of a recent General Accounting Office report that urges a tightening up of procedures. The report said that 75,711 military people were discharged for marginal performance, unsuitability, misconduct, and in lieu of court-martial during FY '79. Of these, **14,258 belonged to USAF.** Army led with 35,472, Navy booted out 17,184, and the Marine Corps turned loose 8,797. That's a lot of manpower and dollars down the drain. The House, meantime, has directed the Pentagon to expedite exit processing of such persons.

An old WW II Norden bombsight was recently dusted off and put back to work at the August 1980 ninth biennial convention of the Bombardier's Alumni Association. Here, the Managing Director of the Aerospace Education Foundation, Mike Nisos, is shown preparing to "lock-in" the Norden bombsight on the "target." Also pictured are the "instructor," on the stand, Peter Komlenich, and below from left to right: Littleton W. Simpson, who designed the bombing trainer; Frederick Bauer, chairman of the reunion; and Maj. Gen. "Rocky" Triantefellu, USAF (Ret.), a former bombardier. All pictured are also members of the Air Force Association. The President of the Bombardier's Alumni Association is Wilbur H. Burmester (not pictured).

To **help fill officer shortages,** the Air Force has just picked **517 retirement-eligible line Reservists** to stay on active duty for two more years. Not too long ago almost no non-Regular officers were permitted to serve beyond twenty years, a rule that angered many Reservists and Reserve groups.

CHAMPUS does not pay for breast reconstruction following mastectomy, although most private health insurance plans do. Nor does it pay for a wig to conceal the effects of chemotherapy for cancer. This may change soon, for the House recently voted to include both in CHAMPUS coverage. The Senate is expected to go along.

CHAMPUS officials, meantime, say they are planning **claim form changes** designed to reduce the number of claims that have to be returned. Service people have heard such talk before, but they will become believers only when they see some solid results.

Aircrew members using contact lenses can expect to be removed from flying status, USAF reminds in a recent TIG Brief. The ban on contacts—except in certain "specifically selected" cases—is an old, but apparently an oft violated, one. The Brief says there is "particular concern" that new flying trainees don't know about the curb or are receiving false information.

The **Eglin AFB, Fla., Air Force Association Chapter** sponsored the Bob Hope Show scheduled for October 8 at Fort Walton Beach, Fla. The event was staged to raise funds for the planned construction of **Bob Hope Village,** a facility of the Air Force Enlisted Men's Widows' Home Foundation at that city. Chairman of the Joint Chiefs of Staff Gen. David C. Jones was slated to speak at the show.

"A modest number" of **full colonels** must continue to cross-train from the operational areas into the following fields: communications-electronics, procurement, comptroller, civil engineering, data automation, public affairs, intelligence, supply, aircraft maintenance, and research, development and acquisition, Hq. USAF announced recently.

Military people and DoD civilians in California receive a much larger piece of what the Pentagon calls "personnel compensation" than do similar people in other states. In new DoD charts listing by state "where military dollars are spent," **California leads by wide margins** in all categories—active-duty pay, Reserve-Guard pay, retired military pay, DoD civilian pay, and procurement contracts. In FY '79, for example, the "total compensation" for Californians was $6.3 billion. Texas was a distant second with $3.8 billion.

Senior Staff Changes

PROMOTIONS: To be **Major General:** Lawrence D. **Garrison;** John T. **Randerson;** Marc C. **Reynolds;** Davis C. **Rohr.**

To be **Brigadier General:** William J. **Breckner,** Jr.; James C. **Dever,** Jr.; William L. **Doyle,** Jr.; Harley A. **Hughes;** Leland K. **Lukens;** Bernard P. **Randolph;** Larry N. **Tibbetts;** Wilma L. **Vaught.**

RETIREMENTS: B/G Tommy I. **Bell;** B/G Charles B. **Knudson;** M/G James E. **McInerney,** Jr.

CHANGES: B/G Charles J. Cunningham, Jr., from Cmdr., 57th Ftr. Wpns. Wg., & Cmdr., USAF Ftr. Wpns. School, TAC, Nellis AFB, Nev., to Dep. Dir. of Programs, DCS/P&E, Hq. USAF, Washington, D. C. . . . **B/G John F. O'Donnell,** from Asst. DCS/Ops. for Ops. & Trng., Hq. TAC, Langley AFB, Va., to Dep. Dir., J-3, & Inspector General, Hq. PACOM, Camp Smith, Hawaii. ■

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Insured's Attained Age	STANDARD PREMIUM: $10 per month Basic Benefit*	HIGH OPTION PREMIUM: $15 per month Basic Benefit*	HIGH OPTION PLUS PREMIUM: $20 per month Basic Benefit*
20-29	$85,000	$127,500	$170,000
30-34	65,000	97,500	130,000
35-39	50,000	75,000	100,000
40-44	35,000	52,500	70,000
45-49	20,000	30,000	40,000
50-54	12,500	18,750	25,000
55-59	10,000	15,000	20,000
60-64	7,500	11,250	15,000
65-69	4,000	6,000	8,000
70-74	2,500	3,750	5,000
Aviation Death Benefit*			
Non-war related	$25,000	$37,500	$50,000
War related	$15,000	$22,500	$30,000
Extra Accidental Death Benefit*	$12,500*	$15,000*	$17,500*

*The Extra Accidental Death Benefit is payable in addition to the basic benefit in the event an accidental death occurs within 13 weeks of the accident, except as noted under AVIATION DEATH BENEFIT (below).

*AVIATION DEATH BENEFIT: The coverage provided under the Aviation Death Benefit is paid for death which is caused by an aviation accident in which the insured is serving as pilot or crew member of the aircraft involved. Under this condition, the Aviation Death Benefit is paid in lieu of all other benefits of this coverage. Furthermore the non-war related benefit will be paid in all cases where the death does not result from war or an act of war, whether declared or undeclared.

OTHER IMPORTANT BENEFITS

COVERAGE YOU CAN KEEP. Provided you apply for coverage under age 60 (see "ELIGIBILITY") your insurance may be retained at the same low group rates to age 75.

FULL TIME, WORLD WIDE PROTECTION. The policy contains no war clause, hazardous duty restriction, combat zone waiting period or geographical limitation.

DISABILITY WAIVER OF PREMIUM. If you become totally disabled at any time prior to age 60 for at least a 9-month period, your coverage will be continued in force without further payment of premiums as long as you remain disabled.

FULL CHOICE OF SETTLEMENT OPTIONS. All standard forms of settlement options, as well as special options agreed to by the insured and United of Omaha, are available to insured members.

CONVENIENT PAYMENT PLANS. Premium payments may be made by monthly government allotment (payable to Air Force Association), or direct to AFA in quarterly, annual or semi-annual installments.

DIVIDEND POLICY. AFA's primary policy is to provide maximum coverage at the lowest possible cost. Consistent with this policy, AFA has provided year-end dividends in all but three years (during the Vietnam War) since the program was initiated in 1961, and basic coverage has been increased on six separate occasions.

ADDITIONAL INFORMATION

Effective Date of Your Coverage. All certificates are dated and take effect on the last day of the month in which your application for coverage is approved, and coverage runs concurrently with AFA membership. AFA Group Life Insurance is written in conformity with the insurance regulations of the State of Minnesota. The insurance will be provided under the group insurance policy issued by United of Omaha to the First National Bank of Minnesota as trustees of the Air Force Association Group Insurance Trust.

EXCEPTIONS: There are a few logical exceptions to this coverage. They are:

Group Life Insurance: Benefits for suicide or death from injuries intentionally self-inflicted while sane or insane will not be effective until your coverage has been in force for 12 months.

The Accidental Death Benefit and Aviation Death Benefit shall not be effective if death results: (1) From injuries intentionally self-inflicted while sane or insane, or (2) From injuries sustained while committing a felony, or (3) Either directly or indirectly from bodily or mental infirmity, poisoning or asphyxiation from carbon monoxide, or (4) During any period a member's coverage is being continued under the waiver of premium provision, or (5) From an aviation accident, either military or civilian, in which the insured was acting as pilot or crew member of the aircraft involved, except as provided under AVIATION DEATH BENEFIT.

ELIGIBILITY

All members of the Air Force Association are eligible to apply for this coverage provided they are under age 60 at the time application for coverage is made.

*Because of certain restrictions on the issuance of group insurance coverage, applications for coverage under the group program cannot be accepted from non-active duty personnel residing in either New York or Ohio. Non-active duty members residing in Ohio, however, may request special application forms from AFA for individual policies which provide coverage quite similar to the group program.

OPTIONAL FAMILY COVERAGE
(new benefit schedule effective 6/30/80)
PREMIUM: $2.50 per month

Insured's Attained Age	Life Insurance Coverage for Spouse	Life Insurance Coverage for each Child*
20-39	$20,000.00	$4,000.00
40-44	15,000.00	4,000.00
45-49	10,000.00	4,000.00
50-54	7,000.00	4,000.00
55-59	5,000.00	4,000.00
60-64	3,000.00	4,000.00
65-69	2,000.00	4,000.00
70-75	1,000.00	4,000.00

*Children under six months are provided with $250 coverage once they are 15 days old and discharged from the hospital.

Upon attaining age 21, and upon submission of satisfactory evidence of insurability, insured dependent children may replace this $4,000 group coverage (in most states) with a $10,000 permanent individual life insurance policy with guaranteed purchase options.

Please Retain This Medical Bureau Prenotification For Your Records

Information regarding your insurability will be treated as confidential. United Benefit Life Insurance Company may, however, make a brief report thereon to the Medical Information Bureau, a nonprofit membership organization of life insurance companies, which operates an information exchange on behalf of its members. If you apply to another bureau member company for life or health insurance coverage, or a claim for benefits is submitted to such a company, the Bureau, upon request, will supply such company with the information in its file.

Upon receipt of a request from you, the Bureau will arrange disclosure of any information it may have in your file. (Medical information will be disclosed only to your attending physician.) If you question the accuracy of information in the Bureau's file, you may contact the Bureau and seek a correction in accordance with the procedures set forth in the federal Fair Credit Reporting Act. The address of the Bureau's information office is P.O. Box 105, Essex Station, Boston, Mass. 02112. Phone (617)426-3660.

United Benefit Life Insurance Company may also release information in its file to other life insurance companies to whom you may apply for life or health insurance, or to whom a claim for benefits may be submitted.

ALL AFA MEMBERS (under age 60)

APPLICATION FOR
AFA GROUP LIFE INSURANCE

United of Omaha

Group Policy GLG-2625
United Benefit Life Insurance Company
Home Office Omaha Nebraska

Full name of member _____
Rank Last First Middle

Address _____
Number and Street City State ZIP Code

Date of birth (Mo. / Day / Yr.)	Height	Weight	Social Security Number

This insurance is available only to AFA members

☐ I enclose $13 for annual AFA membership dues (includes subscription ($9) to AIR FORCE Magazine). Please send membership application.

☐ I am an AFA member.

Name and relationship of primary beneficiary

Name and relationship of contingent beneficiary

Please indicate below the Mode of Payment and the Plan you elect:

Plan of Insurance

Mode of Payment	Standard Plan		High Option Plan		High Option PLUS Plan	
	Member Only	Member And Dependents	Member Only	Member And Dependents	Member Only	Member And Dependents
Monthly government allotment (only for military personnel). I enclose 2 month's premium to cover the necessary period for my allotment (payable to Air Force Association) to be established.	☐ $ 10.00	☐ $ 12.50	☐ $ 15.00	☐ $ 17.50	☐ $ 20.00	☐ $ 22.50
Quarterly. I enclose amount checked.	☐ $ 30.00	☐ $ 37.50	☐ $ 45.00	☐ $ 52.50	☐ $ 60.00	☐ $ 67.50
Semi-Annually. I enclose amount checked.	☐ $ 60.00	☐ $ 75.00	☐ $ 90.00	☐ $105.00	☐ $120.00	☐ $135.00
Annually. I enclose amount checked.	☐ $120.00	☐ $150.00	☐ $180.00	☐ $210.00	☐ $240.00	☐ $270.00

Names of Dependents To Be Insured	Relationship to Member	Dates of Birth Mo. Day Yr.	Height	Weight

Have you or any dependents for whom you are requesting insurance ever had or received advice or treatment for: kidney disease, cancer, diabetes, respiratory disease, epilepsy, arteriosclerosis, high blood pressure, heart disease or disorder, stroke, venereal disease or tuberculosis? Yes ☐ No ☐

Have you or any dependents for whom you are requesting insurance been confined to any hospital, sanatorium, asylum or similar institution in the past 5 years? Yes ☐ No ☐

Have you or any dependents for whom you are requesting insurance received medical attention or surgical advice or treatment in the past 5 years or are now under treatment or using medications for any disease or disorder? Yes ☐ No ☐

If YOU ANSWERED "YES" TO ANY OF THE ABOVE QUESTIONS, EXPLAIN FULLY including date, name, degree of recovery and name and address of doctor. (Use additional sheet of paper if necessary.)

I apply to United Benefit Life Insurance Company for insurance under the group plan issued to the First National Bank of Minneapolis as Trustee of the Air Force Association Group Insurance Trust. Information in this application, a copy of which shall be attached to and made a part of my certificate when issued, is given to obtain the plan requested and is true and complete to the best of my knowledge and belief. I agree that no insurance will be effective until a certificate has been issued and the initial premium paid.

I hereby authorize any licensed physician, medical practitioner, hospital, clinic or other medical or medically related facility, insurance company, the Medical Information Bureau or other organization, institution or person, that has any records or knowledge of me or my health, to give to the United Benefit Life Insurance Company any such information. A photographic copy of this authorization shall be as valid as the original. I hereby acknowledge that I have a copy of the Medical Information Bureau's prenotification information.

Date _____, 19 ____ _____
Member's Signature

FORM 3676GL App. REV. 10-79

Application must be accompanied by a check or money order. Send remittance to:
Insurance Division, AFA, 1750 Pennsylvania Avenue, NW, Washington, D.C. 20006

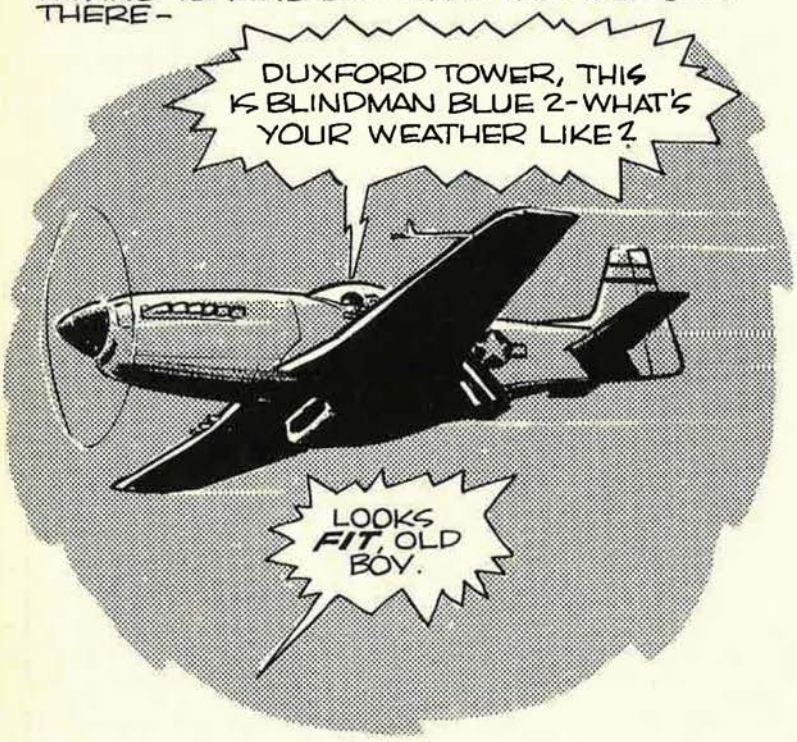
11/80

Bob Stevens'

"There I was..."

AIR TRAFFIC CONTROLLERS CAN BE A RATHER DETACHED LOT--- ESPECIALLY WHEN YOU'RE SLOPPING ABOUT IN THE SOUP SEVERAL MILES ABOVE THEM (AFTER ALL, THE FURTHEST *THEY* CAN FALL IS OFF THEIR CHAIRS).

THIS LITTLE STORY INVOLVES A TACITURN BRITISH TOWER CONTROLLER *and* A YANK TRYING TO FIND OUT WHAT IT'S LIKE DOWN THERE-



THANKS TO M/GEN FRED HAEFFNER

TRAFFIC WATCH *

* FROM NASA'S ASRS "CALLBACK" Bob Stevens

Nostalgia Quiz Corner

WHAT DID THIS MEMORY PHRASE MEAN IN WWII TRAINING?

"WHEN UNDERTAKING VERY HARD ROUTES KEEP DIRECTIONS BY VERY GOOD METHODS"

answer ⊥

THE FIRST LETTERS WERE MORSE CODE IDENTIFIERS FOR US AIRWAY "LIGHT LINE" BEACONS USED FOR NIGHT PILOTAGE. THE LINE STARTED WITH W.

Bell's XV-15 goes full tilt.

On July 24, 1979, the NASA/Army XV-15 TiltRotor aircraft passed a major milestone in aviation history—its first in-flight conversion to airplane mode.

In more than 230 hours of ground runs, wind tunnel and flight tests, the XV-15 is proving the TiltRotor to be the ideal concept for many high-speed V/STOL missions.

Bell's TiltRotor offers *twice* the speed and range of present-day helicopter systems on the *same* amount of fuel. Projected cruise speeds of over 300 knots open up new operational capabilities never before possible in tactical profiles...and it's self-deployable worldwide. With excellent hover, low-speed performance and handling qualities, there's nothing like it for long-range rescue, ASW, AEW, troop transport, escort, reconnaisance, offshore, and oil support. Bell's TiltRotor: The best qualities of helicopter and airplane... combined in one aircraft, and it's ready for prototype development now.

Imagine what one could do for you.

Combat proven.

Among the new generation of supersonic fighters, only one has undergone the ultimate test, combat, and come out a winner. The F-15 Eagle.

The F-15 hunts down targets with its advanced guidance and tracking systems at mach 2.5 speeds. Any foe that dares oppose it faces an awesome arsenal of the latest weaponry. With unprecedented maneuverability and sophisticated countermeasures, it eludes enemy attack.

The F-15 Eagle. The winner.

F-15 Eagle

MCDONNELL DOUGLAS