NOVEMBER 1976/$1

AIR FORCE

PUBLISHED BY THE AIR FORCE ASSOCIATION

MAGAZINE

Rollout of Space Shuttle Orbiter 101

What's our mild-mannered civilian turbofan engine doing in a tough bird like this?

Just proving a point, just proving a point

The bird is the new CASA C-101 trainer/light attack aircraf

The engine, Garrett's TFE 731 turbofar

And the point is this

Our TFE **731 has** what it takes to perform as efficiently and reliably i the **combat** environment as it does in the world of the business je

The C-101, being developed by CASA (Construcciones Aeronauticas S.A.) for the Spanish Air Force, is a basic and advanced trainer, with ar air-to-air and air-to-ground weapons delivery capability. Armed recon ECM and photo recon missions are also planned because of the CASA's maneuverability and long endurance at low level

Its Garrett engine will be **essentially** the **same fuel-saving**, low-pollution turbofan now used by **four leading business jet builders**— Dassault, Israel Aircraft Industries, **Learjet** and **Lockheed. The** TFE 731 is also the conversion engine for AiResearch Aviation's 731 JetStar

The CASA 101. As the forerunner of a new breed o economical, virtually smokeless combat aircraft, it makes sense to power it with the turbofan that powers the economical clean-flying business jets.

GARRETT

The Garrett Corporation One of The Signal Companies

GARRETT'S TFE 731 TURBOFAN

The only one in its clas

Northrop Corp. and Messerschmitt-Boelkow-Blohm (MBB) are partners in the development of the C

AIR FORCE MAGAZINE
PUBLISHED BY THE AIR FORCE ASSOCIATION

NOVEMBER 1976
VOLUME 59, NUMBER 11

This Month

ABOUT THE COVER

A major milestone in the US's development of the Space Shuttle system was passed in September with the rollout of the first prototype Orbiter spacecraft, a key element. For details on plans and prospects, see item on p. 14.

Departments

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When you need the strength to move giants, Bendix can provide the muscle.

When Douglas Aircraft Company needed a tough, dependable landing gear and braking system for the DC-3, they came to Bendix. What they got helped that airplane become a legend.

Today, Bendix provides the brawn that brings the 747 to safe, smooth stops—thirty-two hundred Bendix Cerametalix brake pads mounted on sixteen wheels.

Our landing gear struts are on another giant of the skies—the Air Force C-5A. On the Navy's F-14, too. And you'll find our wheels and brakes on commercial airliners like the 707, 727 and 737, among others.

But Bendix doesn't just stop airplanes. We also provide the muscle to help them straighten out and fly right. Bendix electro-hydraulic servo actuators provide aerodynamic control for a wide variety of commercial and military aircraft, including the DC-10, 747, F-111 and F-14.

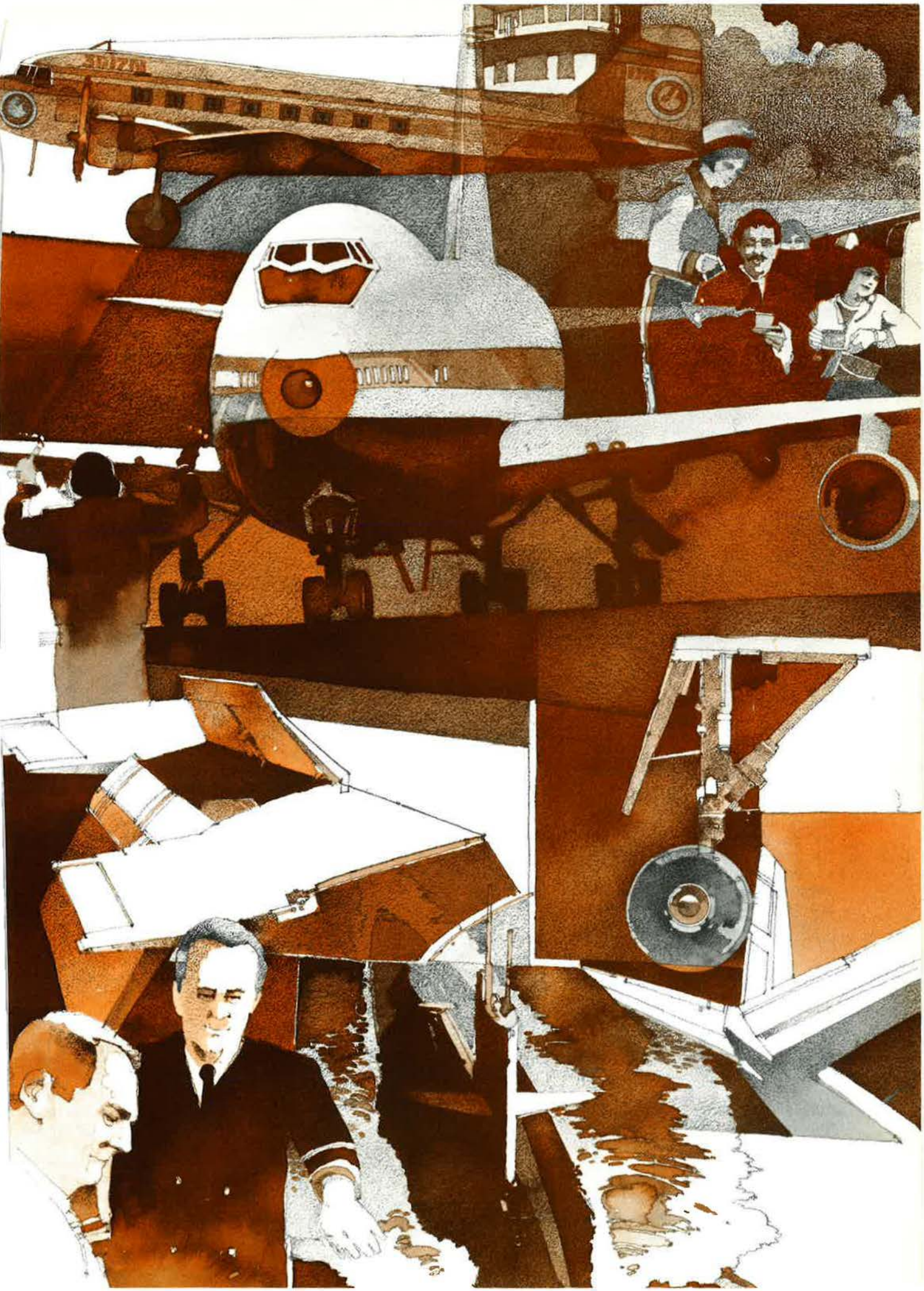
Our technology has found its way under water, too. Bendix hydraulic valves are part of the Navy's latest submarines, the 688 and Trident.

For the future, we're producing new systems and components like carbon brakes—to reduce weight and extend brake life on aircraft. And advanced technology hydraulic valves that greatly increase the life and reliability of the servo mechanisms.

These are products of the Bendix Aircraft Brake & Strut and Bendix Electrodynamics divisions. And they're just two of the many divisions which combine technological expertise through our Aerospace-Electronics Group.

For more information, write for our brochure, "Worlds of Creativity." The Bendix Corporation, Aerospace-Electronics Group, Dept. 110-B, 1911 North Fort Myer Drive, Arlington, Virginia 22209.

Bendix



Airmail

Airman Looks at NCOs

Reference your article "Revamping the Enlisted Structure," August '76 issue, I do not find it surprising that CMSgt. of the Air Force Barnes endorses the new changes. He is, as you noted, management. . . .

I really wonder how many of the bottom three grades were asked their feelings on the changes before such changes were made effective.

Things are going fairly well for the mid- and upper-level NCO, but recent changes have not all helped the lower-level enlisted person. It would be helpful if a few more people in the upper grades would remember that a vast majority of the physical work of the Air Force is performed by the bottom three. That fact—allowing NCOs to supervise and handle paperwork—increases NCO prestige, at least in this country's values, just by the existence of the lower three.

The new blue star stripes do not increase NCO prestige; they merely detract from the already low prestige of the airman grades. Increase generally means to add to, not to remove.

It often seems that only NCOs and officers belong to the Air Force. At least the lower-level enlisted person other than Airman of the Month seems to be ignored until he reaches NCO grades.

I hope to stay in the Air Force for a career. But I find many things about my present and for the next two years, future, grade frustrating.

Thanks for letting me get things off my chest a little.

Amn. Glenn F. Dunaway
Mountain Home AFB, Idaho

Cartographic Corrigendum

Your AIR FORCE Magazine map (p. 33, August 1976) is not accurate pertaining to "Territory now occupied by Israel." For instance, it does not reflect the return of the Abu Rudeis oil fields and the United Nations buffer zone, including the Giddi and Mitla Passes, established in the interim Sinai peace agreement of 1975.

Your August 1976 issue contains several high-value articles, especially in the area of intelligence. We really appreciate the *Jane's* "All the World's Aircraft Supplement" as an authoritative reference.

Col. Richard W. Bagnard, USAF
Barksdale AFB, La.

• *We slipped up on the Israeli map. Thanks for calling the error to our attention. Thanks, too, for the kind words about the Jane's Supplements.*—THE EDITORS

The Civil Defense Balance

You are to be congratulated for your August editorial "Soviet Civil Defense: Upsetting the Strategic Balance" and the dramatic way in which you present the fallacy of our doctrine of "assured destruction" as our hope for survival in this age of nuclear giants. . . .

I do, however, take exception to your fatalistic thought that "for economic, social, and political reasons we may as well forget about duplicating the Soviet Civil Defense systems . . ." which I interpret as saying "forget civil defense efforts." History has always found the American people willing to do what was necessary to maintain our military posture when they understood what the real need was.

If as you say "civil defense is as much a part of strategic balance as are missiles and bombers. That crucial fact must no longer be ignored," then what leads you to the conclusion that our nation should or would hesitate to do what is necessary to maintain its military position, which requires this new element of civil defense?

Higher ceilings on offensive weapons is not an acceptable answer. Our real problem is not a lack of offensive capability, but rather the absence of defensive means of mitigation of loss of human lives.

As I read the folk wisdom and common sense of the American people, we do not need to match Soviet Civil Defense but we are, as citizens, entitled to required Civil Defense in America. . . .

If a strong required civil defense is, as your editorial implies, our only hope for survival in a nuclear confrontation then, no matter what the cost, we cannot and we must not settle for less.

John E. Bex
Director, Region Two
Defense Civil Preparedness Agency
Olney, Md.

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 interests of space or good taste. Names will be withheld on request, but unsigned letters are not acceptable.

Keep Your Copies

I used my extensive back issue library of AIR FORCE Magazines as the main reference source when I wrote the required papers for the Air War College correspondence course. . . . I am not saying that I always found myself in agreement, but review of back issues gave me a base for further development along the lines of my inquiry for the Air War College. I most heartily recommend AIR FORCE Magazine as a research resource and reference to current Air War College students.

I will continue to refer to AIR FORCE Magazine as I progress in my doctoral studies at the University of Pittsburgh. I have also found value in many articles while teaching in Aerospace Education workshops in my Air Force Reserve assignments.

Lt. Col. Roger L. Owens, AFRES
Somerset, Pa.

Attention, Flying Tigers

The 2d of October 1942, I escaped from Hanoi in occupied Indochina to Yunnan in China, piloting a Potez 25 (airspeed about 100 mph). On arriving at Mongtze, I was received by a radio communication unit of the American volunteers in China led by a captain named, I believe, Williams. From there I was taken to the American air headquarters at Kunming, where I met Major Alloway, the operations officer, and Lieutenant Bertrand T. Courtnoyer, who was my host for several days before I was taken to General Stilwell's headquarters in Chungking.

By chance, I have recently found papers which recalled for me the names of these Americans. After

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In accordance with the provisions of this statute, I hereby request permission to mail the publication named in Item 1 at the phased postage rates presently authorized by 39 U. S. C. 3626.

SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER
John F. Loosbrock Editor

nore than thirty years I finally have ne opportunity to thank them for neir hospitality. I should be most nankful for the help of any readers f AIR FORCE Magazine who might e able to provide me with any in-ormation about the welfare and whereabouts of my American riends.

Gen. Pierre Pouyade
(then Captain, French Air Force)
Les Quinets
78270 Bonnières, France

t. Col. Gil Bright

m researching the fascinating tory of Lt. Col. John "Gil" Bright, JSAAF, a former Flying Tiger who vent on to serve with the USAAF n China, North Africa, and Italy.

I know Bright served with the 7th Fighter Squadron, 14th Fighter Group (P-38s) of the Northwest frican Air Forces, based in Algeria nd Tunisia in the period February–ugust 1943. I very much need to ontact anyone (preferably another ilot) who flew with him in that unit t that time.

Mike Minnich
32 Woodycrest Ave.
Toronto, Ont. M4J 3A7 Canada

istory of the Back Seaters

am presently compiling a short istory of the role of the back seater n the Vietnamese conflict and wish o interview aircrew members that ew as RIOs, WSOs, and GIBs in ne following aircraft: F-4, A-6, and -105F during 1965–1971 in South-ast Asia.

John March
Airtite Publishing
Box 2366
San Francisco, Calif. 94126

2d Bomb Wing Commanders

he 22d Bombardment Wing Infor-ıation Division here is gathering hotographs for a memorial to be edicated to the wing's former ommanders but is unable to locate ddresses for five of them.

Persons knowing the addresses f, or the next-of-kin of, Col. John Moore, Col. Alvin J. H. Mueller, ol. Ross F. Cole, Maj. Louis M. errick, or Lt. Col. Payne Jennings re urged to write to the 22d BW formation Division, March AFB, alif. 92508 or call (714) 655-2183.

Colonel Moore commanded the 2d from April 1940 to February 941, Coloney Mueller from January October 1947, Colonel Cole from ebruary to April 1940, Major Mer-rick from February to October 1941, and Colonel Jennings from June 1948 to August 1949.

Researchers need to contact the former commanders or their next-of-kin to obtain photographs of them about the time they were in command of the 22d BW.

Maj. Brian T. Daly
Chief, Information Division
22d Bombardment Wing
March AFB, Calif. 92508

Memorabilia

As a twenty-five-year reader of AIR FORCE as well as one whose profession and hobby has been aviation for more than twenty years, I am writing in hopes that some of your readers might be able to assist me. My interest has resulted in a small collection of USAF insignia. I am looking for anything worn now or in the past on the USAF-USAAF-AAC uniform, old or new, cloth or

Airmail

metal. I am also looking for pilot's flight manuals for any type of military aircraft.

Any assistance that you can offer will be greatly appreciated.

Kent Kistler
918 Georgia Dr.
DePere, Wis. 54115

To the Hawk Hill Gang

A history of AFROTC Detachment 750 at Saint Joseph's College is being compiled. Former staff and cadets from "Hawk Hill" are urged to mail any information, personal contributions, and mementos to:

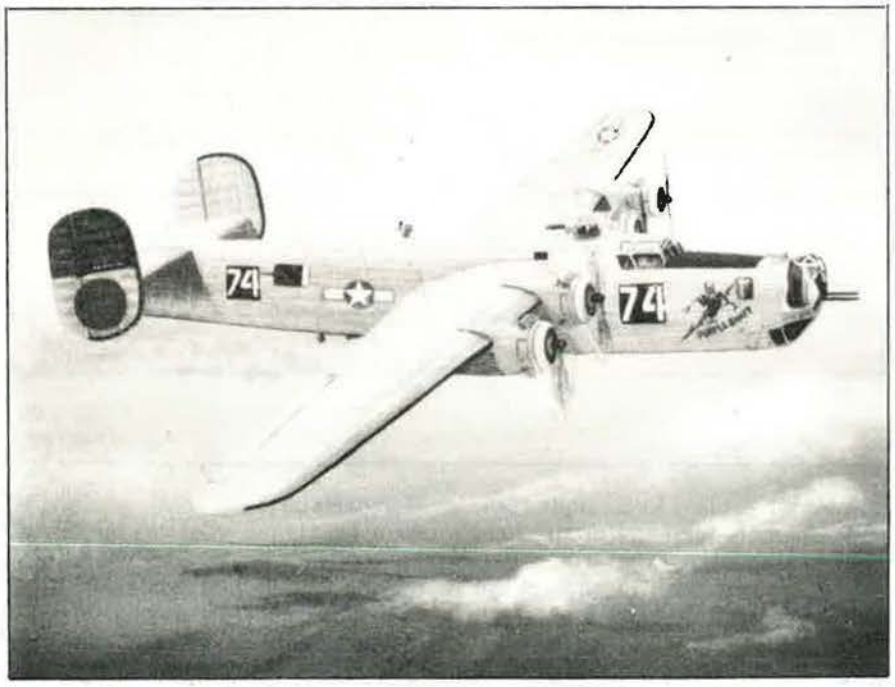
Cadet Capt. John P. Leofsky
AFROTC Special Projects Officer
Detachment 750
Saint Joseph's College
54th and City Line
Philadelphia, Pa. 19131
Phone: (215) 879-7335
or
(Autovon) 444-2579

B-58 Buffs

I am a collector of photographs of United States military aircraft, and I would like to request the assistance of your readers in a certain area. I have encountered some difficulty in obtaining photos of the B-58 Hustler, medium bomber aircraft of the 1960s. If any of your readers have extra photos of this aircraft that they would be willing to part with, I would appreciate it very much. I offer in trade a wide selection of Air Force, Navy, Marine, and Coast Guard aircraft photos and slides that I have duplicates of.

1st Lt. M. J. Kasiuba
2435 McKinley, #35
El Paso, Tex. 79930

At right: Maj. Gen. John G. Albert, Commandant of the Defense Systems Management College, Fort Belvoir, Va., who—through an inadvertance —was left off the listing on p. 63 of the September issue of this magazine, headed "Major Generals and Above Serving Outside USAF." General Albert has served at Fort Belvoir since June 1974. AIR FORCE Magazine regrets the omission of his name.



This B-24, nicknamed "Purple Shaft," served during World War II with the Italy-based Fifteenth Air Force, as part of the 724th Bomb Squadron of the 451st Bomb Group (H). The Liberator's tail gunner was named Lloyd Jenkins. Mr. Jenkins is now anxious to hear from his old crewmates. He can be addressed at P. O. Box 7007, Charleston Heights, S. C. 29405.

UNIT REUNIONS

Pilot Class 47-C

USAF Pilot Class 47-C "Guinea Pigs 30th Annual Reunion at Harlingen, Te in 1977. All graduates and former mem bers contact

Bob Campion
P. O. Box 88
Richardson, Tex. 7508

1st Strat. Support Sqdn.

I am trying to locate members of th 1st Strategic Support Squadron, Stra tegic Air Command, who were stationed at Biggs AFB, Tex., in the late 194(and early 1950s for a roster and po sible reunion. Members please writ

Leon E. Hooten, Jr.
803 1/2 Baylor
Wichita Falls, Tex. 7630

Pilot Class 54-N

I'm trying to locate members of USA Pilot Training Class 54-N to organiz an up-to-date roster and plan a re union. Members please write

Leon E. Hooten, Jr.
803 1/2 Baylor
Wichita Falls, Tex. 7630

57th Fighter Group

Pilots who flew the Jug met in San Jua recently. If you didn't know about send me your name and address so w can get information to you about o next reunion.

Wayne S. Dodds
P. O. Box 10428
Glendale, Calif. 912(

358th Fighter Sqdn.

Former members of the 358th Fight Squadron, of the 355th Fighter Grou from 1942 to 1945, stationed in Steepl Morden, England, are requested to co tact the writer relative to organizing reunion and the development of history.

Gordon H. Hunsberge
75 Congo Road
Gilbertsville, Pa. 195

WHO HAS AN EDGE ON TOMORROW'S SPACE TRAVEL?

Each time the NASA Space Shuttle reenters the atmosphere, a special material we developed for the leading edge protects the wings and nose section from blazing temperatures. Not for just one mission like previous spacecraft. But to last through each of a Space Shuttle's 100 projected missions.

We're even building a unique space radiator system designed to provide proper temperatures for Space Shuttle crewmen, equipment and experiments.

Finding a hard-working solution to a tough problem. It's something we're also doing in a lot of other areas. Missile development. Major subcontracts. Ground transportation. Aircraft design and manufacturing.

Of course, we're not the only ones working on the Space Shuttle. But we have the edge.

VOUGHT CORPORATION/An LTV Company

Our ugly duckling

From drawing board to first flight, Boeing's YC-14 jet transport has been a unique solution for the Advanced Medium STOL Transport (AMST) program.

It may look squat and dumpy. But innovative design and advanced technologies should enable the YC-14 to readily meet all AMST program requirements.

Its main mission: a military transport plane that will give ground force commanders greater mobility and quicker response time in combat situations than they ever had before.

The ability to take off and land on a 2,000-foot unimproved runw carrying a payload of 27,000 pounds means that more airfields are available. Forces can be deployed closer to the conflict are And with more airfields to choose from, vulnerability to enemy attack is decreased.

ust turned into a swan.

With a cargo box that carries
% of all Army field equipment,
e YC-14 allows faster buildup of
en and material with fewer
rties than any other transport.
For example. The YC-14 can
lift an entire mechanized
fantry battalion to its assembly
ea in just half the time it would
take any existing tactical transport.

What makes the YC-14 different from any other transport is the application of new technologies. Upper surface blowing, which takes advantage of the Coanda Effect, provides powered lift. Long-stroke landing gear takes up the shocks of primitive airfields. And there's a triply-redundant digital electronics system for flight control.

The YC-14. A new level of tactical mobility in a beautiful new bird.

BOEING YC-14

Airpower in the News

By Claude Witze, SENIOR EDITOR

Think Tank, in Action

Washington, D. C., Oct. 4

It is unlikely that anyone called it to your attention, but this year the President signed the defense appropriations bill a comfortable two weeks before the beginning of Fiscal 1977. It is not because Congress displayed unusual speed in its deliberations, but because the start of the fiscal year was moved from the first of July to the first of October. (Nearly $22 billion had been provided to run the Pentagon during the three-month transition quarter.)

Of greater import is the fact that the Administration's request for the Defense Department suffered a cut of only 3.3 percent, the lowest in many years. The Fiscal 1976 budget, for example, was slashed more than 7.5 percent. For all the wrangling, it now appears that Defense Secretary Donald Rumsfeld, who had requested $107.9 billion, and argued that he needed every penny, had a good case. He was helped by the Russians, whose conduct in building up their own armaments is accompanied by new adventures in Africa and the Middle East.

On top of this, it is acknowledged that Ronald Reagan, seeking the Republican nomination on a strong-defense platform, uncovered support that startled both Democrats and Republicans. It has just been disclosed where Mr. Reagan found much of that support. A poll taken by Potomac Associates in May found seventy-one percent of the American people want military spending increased or kept at the present level. The figure in 1972 was forty-nine percent. The percentage of those favoring reduced spending, which is endorsed in the Democratic platform this year as it was in 1972, has fallen from thirty-seven percent to twenty percent. Concluded the survey: "Americans have become significantly more sympathetic toward overall military and defense spending."

The bill signed by President Ford on September 22 appropriates $104.3 billion for the year just started. The chief executive said he was not completely satisfied, but the pattern of increased spending for the military "must and will be sustained in future years." The figures had been approved by the Senate on a voice vote. In the House, a tally was taken and the bill passed, 323–45.

The Air Force's share of the Fiscal 1977 money is nearly $30.8 billion. USAF manpower will be maintained at the present level of 571,000, as requested. The other services are scheduled for modest reductions. From the standpoint of industry, an important feature of the law is the provision of $19.3 million for "productivity enhancement." This money is to help defense contractors buy more modern equipment, which will cut costs by cutting factory payrolls.

The triad of strategic weaponry will continue to provide our nuclear deterrent. There is $1,037 million for work on the first three USAF-Rockwell B-1 bombers, $948 million of it for procurement. There is a restriction: USAF can spend no more than $87 million a month of the procurement allocation, until next February 1.

The request for $317 million to buy sixty more current Minuteman missiles was approved. Another $69 million is included for research on new ICBMs, including the M-X. The request was for $84 million. The Navy likewise was given all it sought—$720.3 million—for procurement of the first forty-eight Trident missiles, plus money for further development and procurement of a fifth Trident submarine. There also is $119.8 million for development of Navy cruise missiles. Most massive hardware buy will be 886 M-60 tanks for the Army. It is the current front-line weapon, not to be confused with the projected XM-1, which has been delayed by Secretary Rumsfeld.

USAF sought funding to procure the first sixteen General Dynamics F-16 lightweight fighters. The final bill provides $151.5 million for early procurement of components, because the Senate Armed Services Committee argued that actual purchase of the aircraft cannot occur in Fiscal 1977. The biggest USAF aircraft buy will be 108 McDonnell Douglas F-15 fighters ($1,378 million) and 100 Fairchild A-10 ground attack aircraft ($575.9 million). There is funding for six Boeing AWACS aircraft ($474.7 million). Another $28.8 million is earmarked for advanced procurement of a new tanker/cargo plane based on a wide-body commercial jet transport.

If President Ford is right, and military spending is increased in future years, it is inevitable that the debate of a few years ago, about our national priorities, will be resumed with added heat. There is a new handbook on the subject. It is the annual review, *Setting National Priorities—The Next Ten Years*, published by the Brookings Institution. The 618-page study by economists and foreign-policy specialists was released in Washington about a week before the defense money bill was signed. It reads like a text in support of our military programs.

Russia, the editors say, "will remain a totalitarian, heavily armed state, determined to continue to dominate Eastern Europe and to extend its influence in the world, whatever we may do." They view that part of the world with alarm, but say that conflict in the Middle East "is the most imminent and trouble some risk of all." The editors feel that Europe, Japan, and the Middle East are areas where America has vital interests. Outside of those areas, they feel, we would "waste our substance and divide our people" to press policies that could lead to confrontation.

Much of the book is a sober treatise on domestic issues. It finds little confidence in our government

apacity to manage the economy. here is this quote:

"A substantially increased por-on of the public now sees govern-ent as too large, its budget as rowing too fast, and its deficits s a major cause of persistent in-ation.

"The social programs of the reat Society, launched only a de-ade ago to remove poverty, up-rade education, and restore urban uality, are now looked on largely s a failure or, at best, as deliver-ng far less than originally promised. nstead of a safeguard against haz-rdous products, dangerous work laces, and monopolistic practices, overnment regulations are increas-ngly perceived as generators of red tape, obstacles to efficiency, and intrusions on freedom."

Against this domestic portrayal, a scene repeatedly given to the US public in daily dispatches about government foulups and the reckless handling of money voted for social programs, the new Brookings report is blunt about national security, the most important area of federal concern:

". . . the most serious, though not most likely, threat to our well-being will continue to be what it has been in decades past: the possibility that US armed forces might be drawn into large-scale war with those of the USSR. If US foreign policy accomplishes nothing but averting this threat during the coming decade, it will have served the nation well."

In another chapter, the book is more specific:

"In the space of twelve years, Soviet long-range nuclear armed missiles have been transformed from a primitive force grossly inferior to that of the United States into a sophisticated and potentially devastating force. In conventional armaments, Soviet forces also are much improved. . . .

"The continuing Soviet military buildup is proof of the importance the Soviet leadership attaches to military power. The Soviet Union devotes perhaps fifteen percent of its national output to the military. This is a burden that no other coun-

The Wayward Press

A month's observations on press performance:

Item: At a regular Pentagon press briefing on September 14 there were about 160 questions put to the Assistant Secretary of Defense, Alan Woods. More than a third of them, fifty-five to be exact, were in search of details about how food is served, and priced, in the Defense Department's cafeterias and dining rooms. From the transcript, these examples will illustrate the level of performance:

Q. On the Delmonico steak that you're charging $2.50 for, what is the actual cost of serving that steak, if you include heat, light, and servants?

A. I do not know what the cost of the Delmonico steak is except to know that the cost of the Delmonico steak itself is substantially less than $2.50.

Q. Would it not be fair to assume that the cost is substantially more than $2.50 to the government?

A. Well, that depends on how you wish to calculate those costs.

Q. [Rep. Les Aspin] sometime ago came forward with—

A. I believe he used cheeseburgers.

Q. Well, let's take cheeseburgers as a common denominator. What are you now charging for cheeseburgers?

A. I don't know the cost of producing a cheeseburger in the cafeteria. That depends on what you wish to calculate as cost.

Q. Can you say that the cheeseburger served in the executive dining room is of comparable quality as the cheeseburger served by the cafeteria?

A. I can tell you that the cheeseburger served in the executive dining room comes no place near my wife's. Having had cheeseburgers also in the cafeteria, I can't really say that I can tell a lot of difference between one cheeseburger and another.

This intellectual exercise, bringing the Pentagon press conference down almost to the level frequently displayed at the White House, was carried out while a host of genuine national security issues were worthy of examination.

Item: On September 23, the major television networks had a record audience at hand to hear the first of three scheduled "debates" between the presidential candidates. Actually, it can be argued it was not a debate, but a highly structured press conference, putting three reporters in the position of making news, rather than transmitting it. Near the end of the program, a defective element of the sound system collapsed and millions of listeners heard nothing. The basic fault, as every mechanic knows, was that there was no backup system to ensure the broadcast.

Now, it is in the interest of reliability that almost all critical components of weapon systems are redundant. Editorial writers, TV commentators, news analysts, and reporters commonly refer to this redundancy as "gold plating." While candidates Ford and Carter stood before defunct microphones, the press had twenty-eight minutes to comprehend why a backup system is a good investment.

Item: Currently, the press is making headlines of a small nature with reports about President Ford's golfing companions of a few years back. Some of them came from big corporations. Mr. Ford says they were old personal friends and that there was "substantial reciprocity" in bearing the expense of their golf dates. The New York *Times*, in a typical editorial clucking, says there was at least a violation of the ethical code proclaimed by the House of Representatives.

Well, early this summer the Olympic Games Organizing Committee spent about $10 million providing "amenities" for more than 8,000 news media representatives in Montreal. Our source is the usually reliable *Editor & Publisher*. According to our calculator, the average reporter at the Olympics sponged on his hosts for $1,250 worth of freebies.

What did he enjoy? Golf is not mentioned in the *E&P* account. But there were 180 hostesses on hand, 300 limousines for free transportation, free helicopter services, gourmet meals at cut prices, free motor-scooter messenger service. Thirty restaurants and thirty bars were set aside for journalists only. Reporters were met at rail stations and airports and chauffeured to their hotels at no charge. If they wanted to ride on the subway, there was no need to put fifty cents on the expense account because tickets were free.

A man named Michel Labrosse, the press director, said, "We're trying to make things as easy as possible for journalists." He quickly learned that among those eager to take advantage of this generosity were about 1,000 freeloaders who were not sports reporters. These included food editors, travel editors, television editors, "and the like," according to *E&P*.

So far, no newspaper editorial has pointed out that the acceptance of this largess is a violation of the ethical standards set up by the Society of Professional Journalists and the American Society of Newspaper Editors.

Airpower in the News

try—except those, like Israel, living under the threat of imminent conflict—is willing to bear. The corresponding figure for the United States is less than six percent. This unmistakable signal of Soviet priorities emphasizes the need for a careful evaluation of the implications of the growth in Soviet military capabilities."

In a look ahead, the Brookings report says:

". . . it must be recognized that the process of reducing the share of US resources devoted to defense has more or less run its course. Additional savings are possible in some areas, but other sectors of the defense budget should receive more emphasis. In general, this means that defense spending will have to increase in real terms for at least the next five years, but probably more slowly than the expected growth in national output."

All these things having been said, and quoted, the record must include some facts about their source, the Brookings Institution. A few months ago, the Institution published a study on the strategic bomber force that rejected USAF's B-1 project in favor of the Air-Launched Cruise Missile concept. The report, authored by Alton H. Quanbeck and Archie L. Wood, was an immediate best seller among constituents of the Stop the B-1 Bomber effort and the Members of Congress for Peace Through Law. Its doctrine was cited as the final argument for wiping out the B-1 project. USAF itself spent a great effort refuting the Brookings argument, including an elaborate response from the Air Force Secretary, Thomas C. Reed.

In *Setting National Priorities,* the authors acknowledge the earlier Brookings study, but do not accept its conclusion, out of hand. They view the Quanbeck-Wood treatise as simplistic, and discuss, at length, the complexities of the deterrent problem, with emphasis on the future of SALT. The new volume has not been singled out for exploitation by advocates of defense retrenchment the way the B-1 study was exploited, and it is not the only Brookings study to be overlooked in this argument about priorities. Last year, Martha Derthick, another Brookings fellow, published a volume called *Uncontrollable Spending for Social Services Grants.* It received almost negligible attention in the press and was greeted with silence on Capitol Hill.

Ms. Derthick's thesis was that the federal government has exercised no control over grants-in-aid to the states for social services under the public assistance titles of the Social Security Act. Spending for these grants jumped from $354 million to nearly $1.7 billion between 1969 and 1972. It was a ripoff by state governments, made possible by what the chairman of the House Ways and Means Committee called "the worst loophole that has ever been written into the law on the financing of government." Ms. Derthick's conclusion is that because appointed policy-level officials made the wrong decisions, social services grants were turned into a "runaway giveaway."

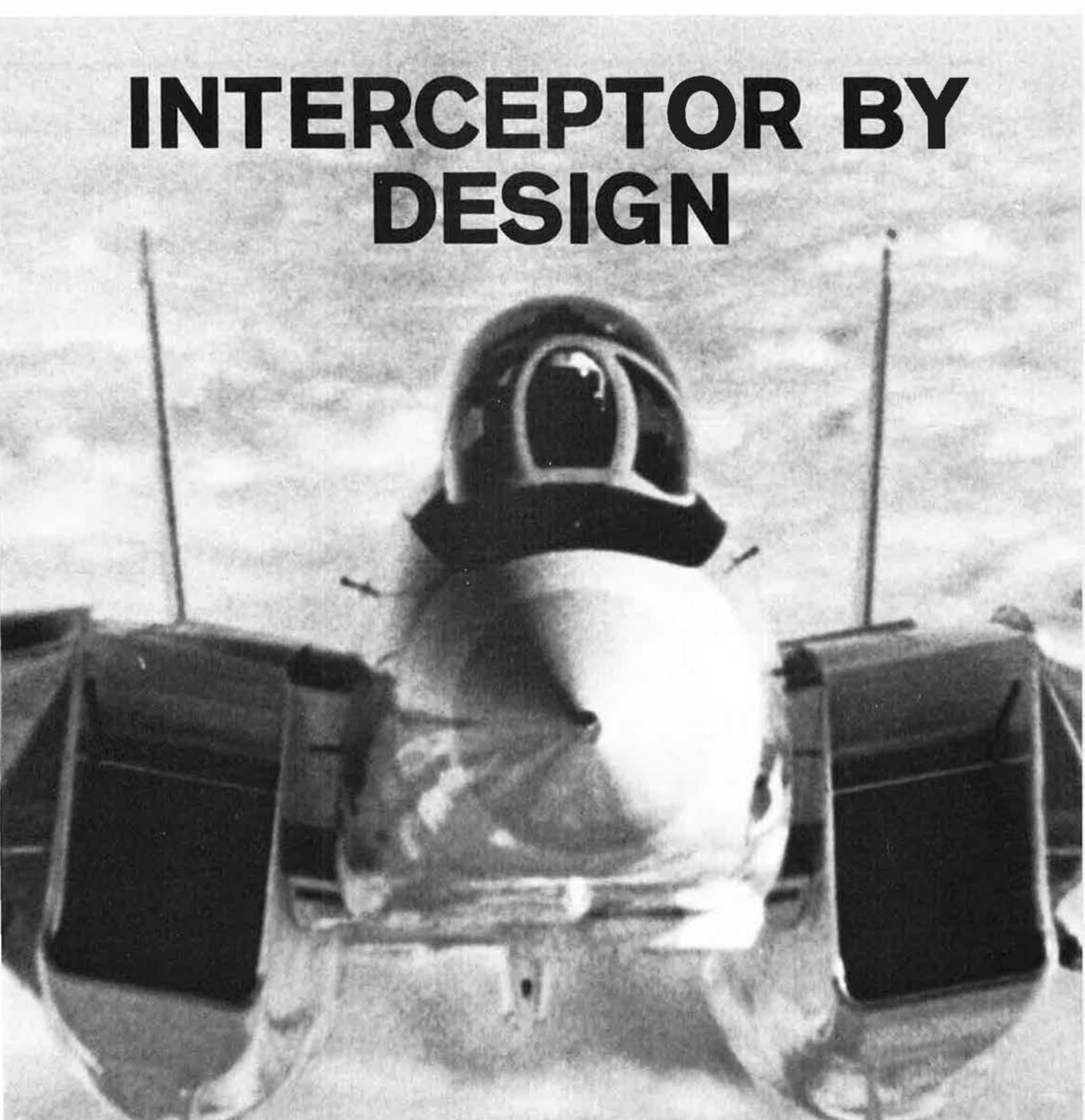
The Brookings Institution frequently is described as a liberal think tank, sometimes as a Democratic administration in exile. Both labels are inaccurate. The Institution does not take a position, and a disclaimer to this effect is in all the publications. The authors are given freedom, and it is true that most of them are of a liberal persuasion.

There were reports, a month ago that Jimmy Carter, the Democratic candidate for President, was leaning heavily on Brookings Institution counsel in the area of national security. Brookings, wrote columnists Rowland Evans and Robert Novak "is clearly calling the tune on Carter defense policy." Well, yesterday, James R. Schlesinger, the Secretary of Defense who was ousted by President Ford presumably because he favors a tough approach, was the guest of honor at Plains, Ga. It is unlikely that Mr. Schlesinger was able to show how $7 billion can be cut from the defense budget, any more than it can be demonstrated by the Brookings Institution. ■

—WIDE WORLD PHOTO

Presidential candidate Jimmy Carter points to an area on the globe as he talks with former Secretary of Defense James Schlesinger at Mr. Carter's home in Plains, Ga., on October 3. Mr. Schlesinger paid the visit to Plains to brief the former Governor of Georgia on defense and foreign policy matters in preparation for Mr. Carter's debate with President Ford in San Francisco on October 6.

INTERCEPTOR BY DESIGN



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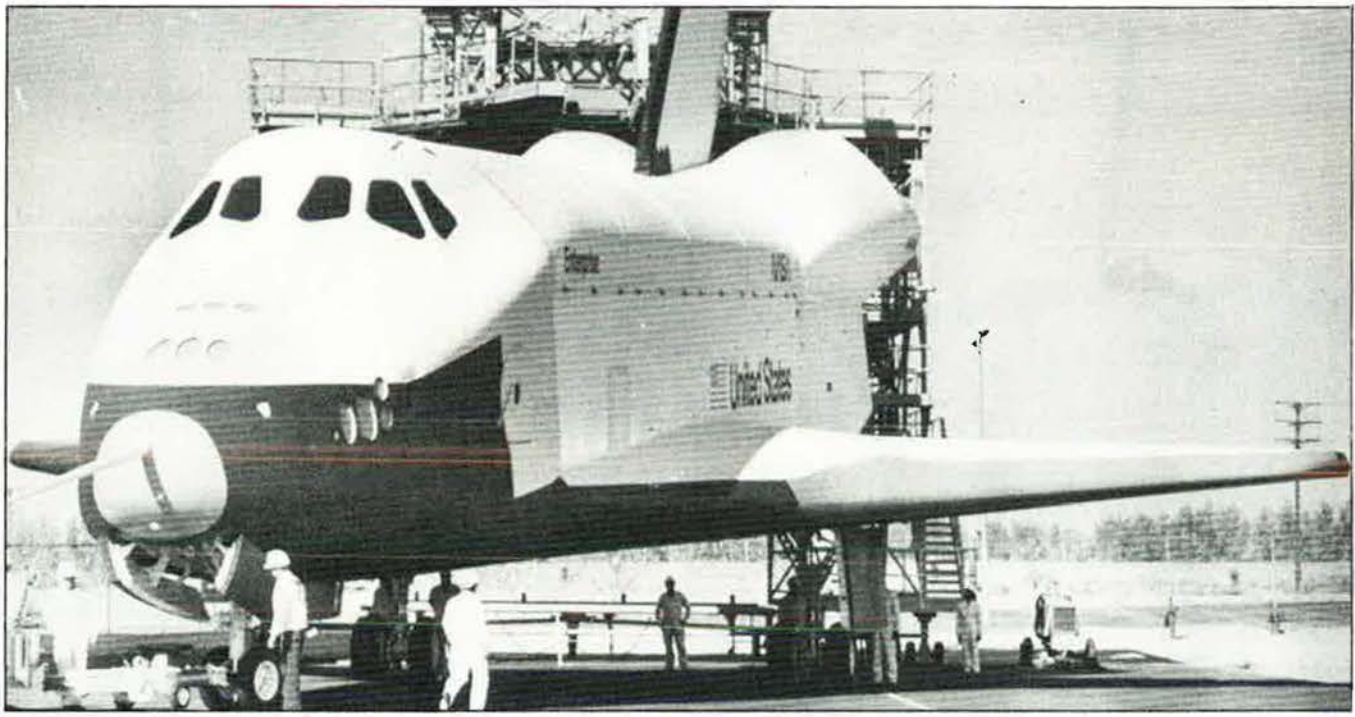
Aerospace World News, Views & Comments

By William P. Schlitz, ASSISTANT MANAGING EDITOR

Orbiter 101 will initially engage in a series of test flights in 1977, launching from the top of an in-flight 747 Boeing jetliner especially modified for the task. These manned flights, at Edwards AFB, Calif., are to verify the Orbiter's aerodynamic and flight-control (fly-by-wire) characteristics. Then, in 1978, it will take part in extensive ground vibration tests at NASA's Marshall Space Flight Center in Huntsville, Ala.

The plan calls for a second Orbiter to undertake initial earth orbital flights from the Kennedy Space



Washington, D. C., Oct. 5 ★ Spacecraft *Enterprise* was rolled out on September 17. No, not the famous spaceship of *Star Trek* TV series fame, but Orbiter 101—the key element in the development of the US's Space Shuttle system (*see front cover*).

The size of a commercial transport, the Orbiter weighs in at 150,000 pounds (68,040 kg). It is 122 feet (37.2 m) long and has a wingspan of seventy-eight feet (23.8 m).

Dubbed *Enterprise* by President Ford, acting on public suggestions,

Other views of the Shuttle Orbiter rollout (see also cover). *Right: interested observers were crewmen of TV's* Star Trek. *From left, Leonard Nimoy, minus Mr. Spock's ears; George Takai (Mr. Sulu); and DeForest Kelly (Dr. McCoy).*

Center, Fla., in 1979. (*For an in-depth review of Space Shuttle program aims, see September '76 issue, p. 98.*)

The Orbiters are designed to carry up to 65,000-pound (29,484 kg) payloads into low earth orbits of about 100 miles (161 km) altitude.

In a related action, NASA has named three firms to compete for a contract to assemble, check out, conduct launch operations, and refurbish the Shuttle's solid rocket boosters. (The boosters are to be recovered and reused after launch. The external fuel tank feeding the Orbiter's three internal engines will be jettisoned by Orbiter and not recovered.)

The three firms: Boeing Aerospace Co., McDonnell Douglas Astronautic Co., and a United Technologies Corp. subsidiary—United States Boosters. The boosters' solid rocket will be returned to manufacturer Thiokol facilities in Utah for refueling after each mission.

★ The first of a broad series of tests to evaluate the B-1 bomber's conventional bombing capability took place at Edwards AFB, Calif., in mid-September.

And if you think that conventional bombing is now outdated, made obsolescent by advances in anti-aircraft and other weapons technology, listen to Air Force Chief of Staff Gen. David C. Jones:

"By the time the B-1 enters the active inventory in force during the 1980s, we will have in hand a family of precision-guided conventional munitions that can be delivered from outside terminal defenses, be guided to targets with pinpoint accuracy, and destroy or seriously damage all but the most super-hardened point targets.

"The 'single-shot kill' probabilities represented by modular glide bombs, a variety of precision, terminal guidance alternatives, and even an air-launched cruise missile (ALCM) variant with conventional application will tend to blur the customary distinction between conventional and nuclear point targets."

According to General Jones, the upcoming weapons technology will "radically alter" the calculus of cost-effectiveness in regard to stockpiles, number of sorties required, aircraft losses, and crew survival.

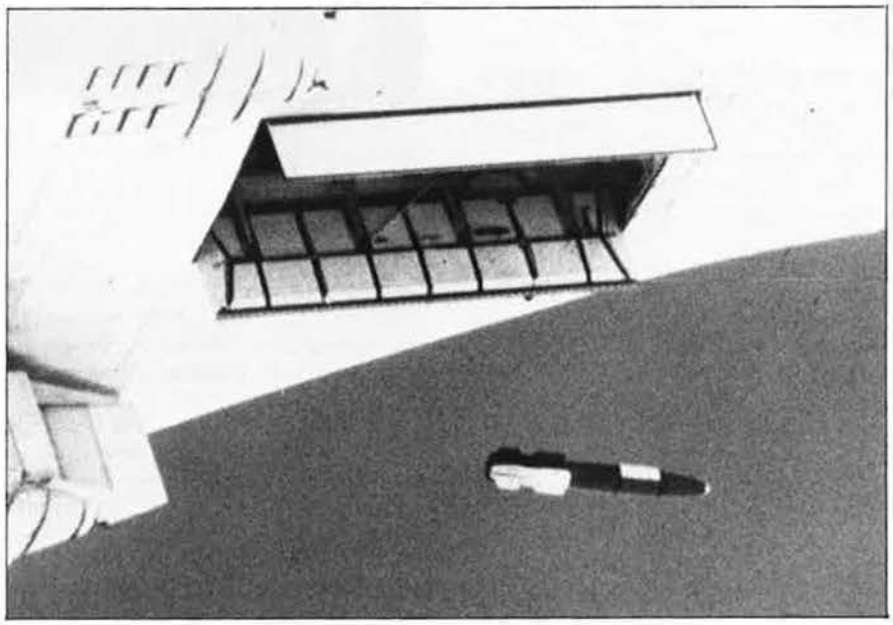
In delineating the B-1's conventional role, General Jones cited its intercontinental range, ability to operate from large numbers of bases around the world, and its 75,000-pound (34,020 kg) payload as making the aircraft "uniquely capable for a wide range of land and maritime" missions.

★ This fall, as in previous years under the Reforger reinforcement concept, elements of US-based air and ground units crossed the Atlantic to participate in European field training exercises.

Called Autumn Forge, two major exercises took place in the Bavarian and Hessian regions of West Germany. They marked the first time that sizable elements of a US air assault unit—the 101st Airborne Division—engaged in large-scale field training on the Continent.

Besides transport and other support, a number of USAF combat aircraft types took part: AC-130 gunships from the 1st Special Operations Wing, Hurlburt Field, Fla., operated from Zweibrücken AB, Germany; A-7Ds from the 354th Tactical Fighter Wing, Myrtle Beach AFB, S. C., flew from Lechfeld AB, Germany; F-105s from the 35th TFW, George AFB, Calif., were stationed at Spangdahlem AB in Germany; F-4s from the 4th TFW, Seymour-Johnson AFB, N. C., were stationed at Flesland AS in Norway; and F-105s from the ANG's 192d TFG, Byrd Field, Va., were hosted at RAF Lakenheath, Great Britain.

According to USAF, the deployments demonstrated the high degree of integration and cooperation that exists among the national air forces that make up NATO's air arm, as well as familiarizing US-based crews and support personnel with the unique aspects of flying in Europe. Also, officials said, the exercises allowed allied air force personnel to gain experience in handling aircraft they normally don't service.



The first of two Mk 82 high-explosive 500-pound (227 kg) bombs leaves the center bay of a B-1 bomber over Edwards AFB bombing range. If need be, officials said, the B-1 can deliver a variety of precision-guided conventional weapons.

In a related matter in September, USAF's new close air support aircraft, the A-10, following an appearance at the Farnborough Air Show in England, toured nine allied installations in Europe—its first appearance outside the US.

★ In October, DoD initiated an immunization program for all active-duty and selected Reserve personnel, their dependents, authorized beneficiaries, and DoD employees.

In accordance with Department of Health, Education and Welfare guidelines, the aforementioned groups were to be inoculated to protect against the A-type New Jersey swine virus. Active duty and selected Reserve personnel were to also receive shots for A-type Victoria and B-type Hong Kong influenza viruses.

Aerospace World

Three permanent consulting advisors to the Arnold Air Society enjoy a lighter moment at AFA's Convention with, from left, Brig. Gen. Harry J. Dalton, Jr., USAF Director of Information, and Medal of Honor recipient Col. George E. Day. The three, from center right, 2d Lts. Danny Marrs and Philip Loebach, and Capt. Dana Spears are former members who contribute their leave time to assist AAS.

Military health officials said that they recognized the enormous task facing state and local medical facilities in implementing the national swine flu immunization program and would assist wherever possible. DoD military and civilian personnel were also being encouraged to participate in local programs as volunteers.

★ The USSR will train cosmonauts from eight Communist-ruled countries for flights aboard Soviet spacecraft between 1978 and 1983.

The eight—Bulgaria, East Germany, Hungary, Poland, Cuba, Mongolia, Romania, Czechoslovakia—with the Soviet Union make up Intercosmos, a group that has cooperated in the orbiting of unmanned satellites.

The cosmonaut candidates will train at the Yuri Gagarin Space Center near Moscow, site of Soviet cosmonaut training.

And, in what was billed as a joint East German-Soviet venture, the USSR orbited yet another pair of cosmonauts during an eight-day mission in mid-September.

According to Soviet news agency Tass, a key piece of equipment aboard the Soyuz-22 capsule was a sophisticated East German-built camera that was used by Soviet Air Force Col. Valery F. Bykovsky and engineer Vladimir V. Aksenov to photograph areas in the USSR and East Germany. The Soviets have previously publicized (but as usual with few details) their use of space vehicles in geological and geographical research.

The photography was in addition to experiments concerned with the effects of weightlessness on life in space, Tass said.

A number of Western observers believe that the emphasis on joint space activity is part of a broad Soviet determination to shore up Russian domination of the Eastern bloc, fallen into some disarray in recent years.

The second prototype YC-14 short-field aircraft built by Boeing Aerospace Co. for an Air Force test program made its maiden flight in early October. In the background, prototype No. 1, which first flew on August 9.

★ USAF's new BGM-34C multimission remotely piloted vehicle *(see October '76 issue, p. 15)* made its first free flight in late September over a test range at Hill AFB, Utah.

The Teledyne Ryan-developed RPV covered 300 miles (483 km) at moderate altitudes and hit a maximum speed of 440 knots (506 mph). Launched from a DC-130E, the vehicle was recovered by helicopter after a forty-four-minute flight.

The BGM-34C is designed for the interchange of nose-cone modules so that it can perform a variety of tasks, including electronic warfare, reconnaissance, and strike missions. The test program—consisting of thirty-two flights—is to continue through April of 1977.

★ In other RPV news, USAF picked Boeing Aerospace Co., Seattle, Wash., for the preproduction development of the Compass Cope High Altitude, Long Endurance remotely piloted vehicle.

Under the agreement, Boeing will design, develop, fabricate, and test three Compass Cope prototypes for the program to include associated ground-based command and control facilities, support data, and spares.

SidewinderAIM-9L. In production and way out front in performance.

Raytheon has received the production release for the Sidewinder AIM-9L missile under a joint U.S. Navy/U.S. Air Force program. Sidewinder AIM-9L is the free world's most advanced, short-range, infrared, air-to-air missile.

Designed by the Naval Weapons Center, Sidewinder AIM-9L features marked improvements in maneuverability, accuracy, and lethality, combined with the addition of an all-aspect capability. As a prime industrial support contractor since 1964, Raytheon's experience with the Sidewinder series includes more than 15,000 tactical guidance and control sections delivered to date.

Configured for easy installation on a broad range of modern, tactical aircraft, Sidewinder AIM-9L has an extremely versatile deployment potential.

For details on Sidewinder AIM-9L, write to Raytheon Company, Government Marketing, 141 Spring Street, Lexington, Massachusetts 02173.

Sidewinder AIM-9L approaches head-on intercept of target drone at Naval Weapons Center, China Lake, California.

RAYTHEON

Aerospace World

Boeing edged out Teledyne Ryan Aeronautical, San Diego, Calif., to win the Compass Cope contract. Both companies had previously flown Compass Cope vehicles in feasibility demonstrations. Boeing received some $2.75 million of an estimated total of $77.2 million for the Compass Cope project.

The Compass Cope preproduction phase is to take about fifty-two months, USAF said. It is being directed by AFSC's Aeronautical Systems Division, Wright-Patterson AFB, Ohio.

Aim of the program is development of an RPV that can operate from conventional runways and perform a number of operational missions with a minimum of configuration changes. The vehicles are to operate at altitudes above 55,000 feet (16,764 m) for periods up to twenty-four hours.

★ Prime management responsibility for acquisition of the Advanced Tanker Cargo Aircraft (ATCA) has been switched from AFSC's Aeronautical Systems Division to AFLC's new Air Force Acquisition Logistics Division.

The new organization, activated on July 1, is charged with paring the costs of operating and supporting USAF weapon systems. Both are located at Wright-Patterson AFB, Ohio.

The ATCA, aimed at boosting DoD's mobility, will be an "off-the-shelf" wide-body cargo aircraft of the Boeing 747 or McDonnell Douglas DC-10 variety, modified as an aerial refueler with airlift capabilities *(for a detailed look at the potential of the ATCA program, see April '76 issue, p. 20).*

★ Aeronautical Systems Division recently set up a new organization—the Deputate for Propulsion—to manage all ASD engine development and acquisition activities.

To be directed by Col. Daniel W. Cheatham, Jr., the Deputate for Propulsion is designed to strengthen and centralize engine management within ASD, serving as an "associate contractor" to the various system program offices (SPOs) and ASD's Deputate for Development Planning. Colonel Cheatham will report directly to the ASD commander on engine management matters.

With the temporary exception of the F-15/F-16 engine (the F100) and that of the B-1 (F101), all ASD personnel engaged in engine activities will be reassigned to and located with the new office.

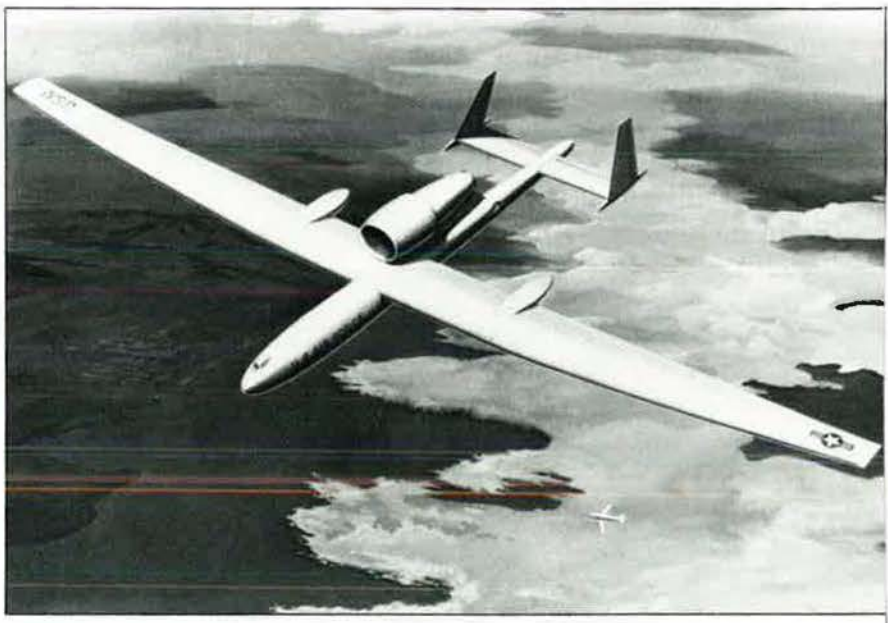
★ William A. Patterson, a prominent figure in the nation's air transport industry for more than forty years, has been named recipient of the 1976 Wright Brothers Memorial Trophy.

The award is in recognition of Mr. Patterson's "significant contributions in the advancement of commercial aviation," the National Aeronautic Association said.

Mr. Patterson, who had an abiding concern for aviation safety during his long career, was instrumental in the appropriation of federal funds for the installation of landing and navigation aids at major airfields in the US. He also pushed for creation of a single agency—the Federal Aviation Administration—for national authority over air traffic control.

In 1930, Mr. Patterson hired the first flight stewardesses.

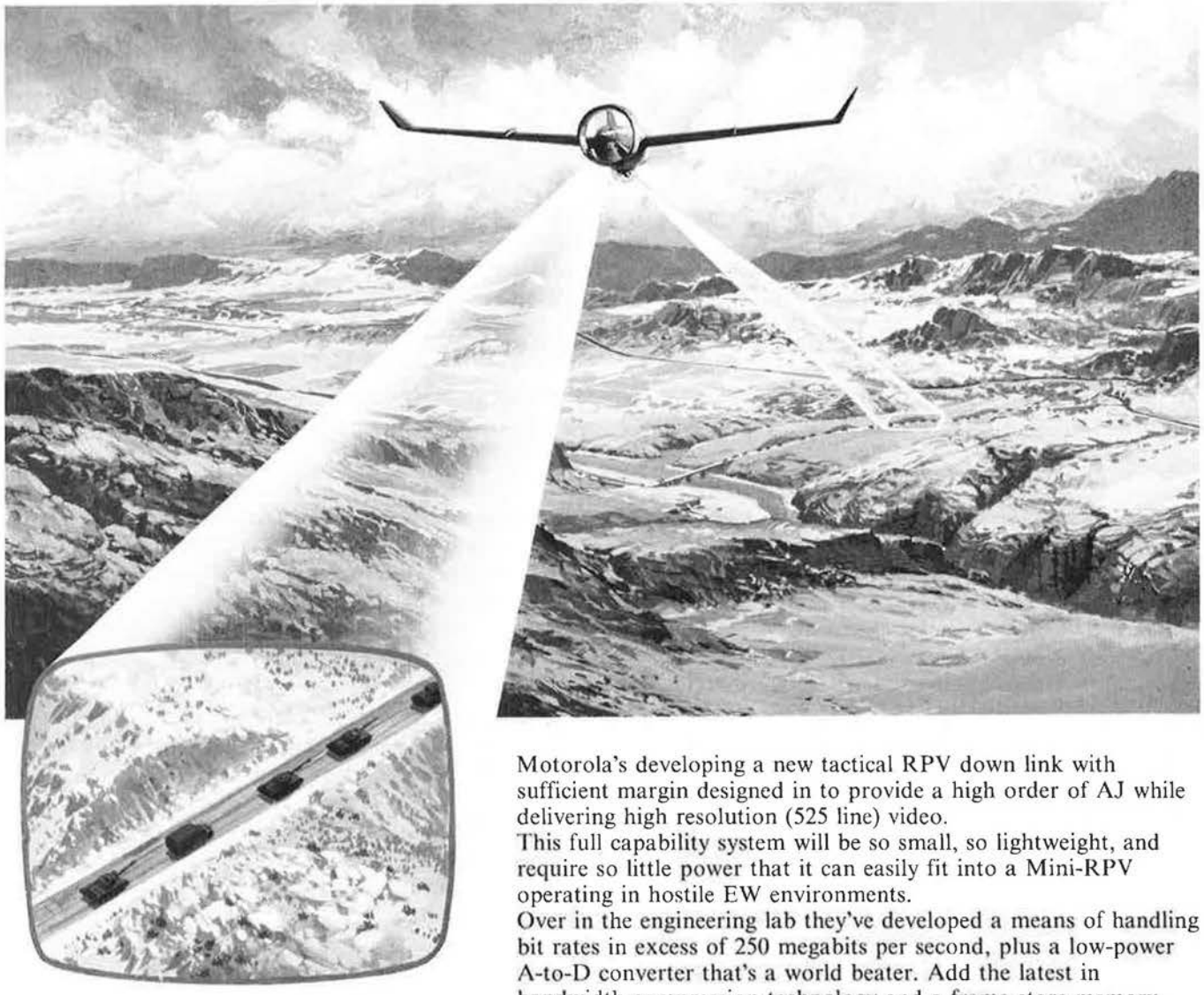
Mr. Patterson, who retired from United Airlines as Board Chairman



Artist's rendition of Boeing's Compass Cope remotely piloted vehicle. (See item beginning on p. 16.)

Index to Advertisers

A secure RPV down link that delivers high-resolution video.



Motorola's developing a new tactical RPV down link with sufficient margin designed in to provide a high order of AJ while delivering high resolution (525 line) video.

This full capability system will be so small, so lightweight, and require so little power that it can easily fit into a Mini-RPV operating in hostile EW environments.

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We think they have thought of everything. . . even EIA standard RS-170 plug-to-plug compatibility in this easily transportable system that's built for quick set-up and knock-down.

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After a grueling nine-month test of 30 Collins AN/GRC-171's under simulated field operating conditions, the actual mean time between failure rate was 17,200 hours — more than 10 times what the Air Force contract called for.

This means that instead of servicing four times a year, the Air Force can expect up to two years, on an average, between repairs. The maintenance savings for the U.S. Tri-Service AN/GRC-171 program will amount to about $7-9 million over the life of the equipment.

The Collins AN/GRC-171 has been selected for airfield and shipboard applications by government and commercial customers in over a dozen nations worldwide. It provides AM communication on 7,000 channels in the 225-400 MHz range, with superior collocation capability, and excellent receiver sensitivity and cross-modulation performance.

More details on the Collins AN/GRC-171 UHF transceiver are available. Contact your Collins representative. Or Collins Government Telecommunications Division, Rockwell International, Cedar Rapids, Iowa 52406. Phone 319/395-2315.

Rockwell International

Aerospace World

in 1963, has remained active as a director and is currently honorary chairman and director emeritus of both United and parent UAL, Inc. Mr. Patterson, seventy-seven, was inducted into the Aviation Hall of Fame in Dayton, Ohio, in August.

The F-5F fighter/trainer is the two-seat companion to Northrop Corp.'s F-5E single-place tactical air defense fighter. Initial deliveries of the F-5F have begun and orders for the versatile aircraft now exceed ninety worldwide, the company reports.

And USAF's Maj. Gen. Thomas P. Stafford has been awarded the National Geographic-sponsored General Thomas D. White Space Trophy for 1975. The veteran pilot and astronaut distinguished himself through outstanding contributions in the Apollo/Soyuz Test Project, work that "proved that the United States is the acknowledged leader in space exploration."

General Stafford is currently Commander of the Air Force Flight Test Center, Edwards AFB, Calif.

★ **NEWS NOTES**—Navy **Capt. Pauline M. Hartington** has assumed the position of **Secretary, JCS,** at the Pentagon, the first woman ever to hold the key administrative post. The **first female Naval officer** to attend the Naval War College, she served previously as JCS Deputy Secretary. Captain Hartington's Navy career spans twenty-three years.

Col. John C. Rich is the new **Deputy Director** of the Air Force Avionics Laboratory, Wright-Patterson AFB, Ohio. He replaces **Col. J. R. Krause,** now special assistant to the Commander of Air Force Wright Aeronautical Labs, also Wright-Patterson AFB.

Beginning in January 1977, the **US passport** will be of smaller size, measuring 4.92 by 3.47 inches (12.5 x 8.8 cm). Beside being more convenient to carry, the new passport will **save $200,000** yearly in printing costs, the Passport Office said.

The **nuclear explosion in China** in late September is said by observers to be directly related to the **death of Mao Tse-tung**—as a signal to the Soviet Union—and perhaps the US—that China means to continue toward a goal of **major military strength.** A similar demonstration occurred in January, fifteen days after the death of **Chou En-lai.**

In preparation for the possibility of a **major earthquake** at any time, California TV and radio stations are now voluntarily broadcasting spot messages on what and what not citizens should do.

Air University has established a centralized service to provide **transcripts** and **certificates of course completion** to former resident students at Air War College, Air Command and Staff College, Squadron Officer School, and the USAF Senior Non-Commissioned Officer Academy. Students completing the Air War College Associate Program or the Air Command and Staff College Seminar Program will also be provided the service. The documentation will be supplied to agencies and institutions at a student's **written request and at no charge.** For details, write: Registrar Division, 3825th Academic Services Group, Maxwell AFB, Ala. 36112.

Maj. Gen. Thomas P. Stafford, astronaut and test pilot, has been awarded the 1975 General Thomas D. White Trophy.

Died: Brig. Gen. Richard C. Sanders, USAF (Ret.), who attained star rank at age twenty-nine during World War II and was elected a charter member of the Aviation Hall of Fame in 1969, in Bethesda, Md., in September. He was sixty-one.

Died: Maj. Gen. Albert Boyd, USAF (Ret.), AFA charter member who was known as the father of modern flight testing, in Florida in September. Awarded AFA's David C. Schilling Award in 1951 as "soldier, pilot, and scientist," General Boyd was sixty-nine. ■

Above: USAF Chief of Staff Gen. David C. Jones visits one of the fifty displays of advanced aerospace technology. Left: Air Force Secretary Thomas C. Reed says that two special panels will reevaluate the Joint Strategic Bomber Study.

THE Thirtieth Annual National Convention of the Air Force Association, held September 19–23 in Washington, D. C., was a "working" convention. By far this year's largest "family reunion" of Air Force people and other supporters of US aerospace power—with some 7,000 in attendance—the 1976 meeting was more than nostalgia and *esprit de corps.*

There were long and productive business sessions that probed every facet of Air Force life, from commissaries to retired pay, and culminated in an innovative, comprehensive AFA policy paper on "Defense Manpower Issues" *(see p. 31).*

There was sharp focus on human factors in the Air Force of the future during a series of hard-working sessions of the AFJROTC Instructors, AFA's Enlisted Council, Junior Officer Advisory Council, the Arnold Air Society's and Angel Flight's Executive Boards, and the Aerospace Education Foundation.

Most importantly, there was dialogue, interaction, and inspiration in informal contact between the newcomers and the battle-tested, the senior and the junior ranks, from which all learned and gained.

There was a Statement of Policy *(see p. 26),* presented to the Convention after lengthy deliberation by AFA's Board of Directors and accepted unanimously by the delegates, which warned that the price of meeting the Soviet drive toward military superiority with fragmented will and purpose may be "political and military impotence" on the part of the United States.

There was Air Force Secretary Thomas C. Reed warning of the "ominous trends we see in the military balance. . . . In the twelve years since he took over, [Soviet Party Leader] Brezhnev has allocated ever-growing resources to defense with an annual growth rate that now approaches six percent." *(The complete text of the Secretary's address begins on p. 34.)*

AIR FORCE
NOVEMBER 1976

Climaxing three decades of successful support of adequate national defense capabilities—especially in the aerospace medium—the Air Force Association staged a "working" convention to commemorate thirty years of service to the nation and the United States Air Force . . .

AFA's 30th Anniversary Convention—

A Window on USAF's New Challenges

BY EDGAR ULSAMER, SENIOR EDITOR

There was USAF Chief of Staff, Gen. David C. Jones, asserting at the Convention luncheon in his honor that "all signs convince me that the Soviet Union is presently carrying out an explicit design to seize superiority in strategic weaponry as well as conventional superiority in certain strategic areas of the world. . . . This disparity could reduce many of the constraints on Soviet expansionism and provide them significant leverage in an eyeball-to-eyeball confrontation." *(Complete text begins on p. 38.)*

There was AFA's Policy Paper on "Force Modernization and Readiness," *(p. 28)* that argued for modernization of the strategic triad from the premise that "the Soviet Union does not consider nuclear war unthinkable, does not accept the premise of mutual destruction, and consequently can no longer be deterred through the threat of assured destruction alone. . . . Subordinating force modernization to the budget demands of domestic causes could, over the long run, lead to a fatal shortchanging of both."

And there were the Aerospace Development Briefings and Displays, once again the *pièce de résistance* of AFA's National Convention, where US and foreign government and military leaders, from Defense Secretary Donald H. Rumsfeld on down, obtained broad "hands-on" knowledge of important advances in aerospace technology. Prominently covered by the briefings and displays were many of the weapon systems and capabilities termed essential to meeting the increasing Soviet threat by the delegates and in policy speeches by Air Force leaders before the Convention. Included here were the B-1, the Air-Launched Cruise Missile, revitalized air defense capabilities in the form of a follow-on interceptor (FOI), and M-X, USAF's proposed new ICBM.

The Convention delegates asserted in two policy papers the need for "accelerated engineering development and early production of M-X," a view seemingly shared by Secretary Reed who said: "In my judgment, the Air Force should begin full-scale development of such a modernized ICBM—the M-X—next year if we are to even *start* redressing the growing Soviet advantage in ICBM size and payload [and] the determined Soviet attempt to achieve strategic dominance. . . ."

In order to provide a hedge against Soviet advances in ICBM capabilities in the near future, before M-X will be available, USAF is engaged in "serious studies of a mobile Minuteman force," Secretary Reed disclosed before the AFA Convention. He explained that three benefits are to be derived from this action: A practical lesson in how to transport, operate, and maintain a complex intercontinental weapon system in a mobile mode; the ability to deploy such a system quickly if that becomes necessary; and valuable experience toward the design and concept of M-X.

Secretary of Defense Donald H. Rumsfeld told the "Salute to Congress" audience that ". . . freedom is not automatic."

Army Chief of Staff Gen. Fred C. Weyand (center) received an AFA Life Membership for his help in making the total force policy work. Making the presentation was General Jones.

Sen. Barry Goldwater, shown here being congratulated by AFA President George Douglas, received the H. H. Arnold Award as "National Security Man of the Year."

Modernization of the Bomber Force

Modernization of USAF's strategic bomber fleet was the *leitmotif* of the Convention, from its exhibits to its policy papers and policy speeches. "A viable bomber force is fundamental to credible, flexible deterrence and can be attained most cost-effectively through a mix of B-1, B-52, and FB-111 aircraft, [including] fitting the newer [B-52] models with the versatile Air-Launched Cruise Missiles," in the language of the delegates.

"We have conducted extensive studies seeking the best, most cost-effective aircraft to maintain the strategic triad through this century. Those studies confirm that the B-1 is the right solution. . . . We are ready to start production, but we remain cautious," Secretary Reed said. In addition to the routine reviews of the B-1 program called for by DoD procedures, two special review panels are being convened, he announced. These panels of respected experts from outside the Defense Department include former Deputy Secretary of Defense (under President Johnson) Paul Nitze and Professor Courtland Perkins, President of the National Academy of Engineering. Purpose of these B-1 program reviews is "independent reevaluation of the assumptions, results, and alternatives presented in the Joint Strategic Bomber Study" presented to Congress in 1974. Earlier in the proceedings, the Convention delegates underscored the "right and duty" of the Administration taking office next January to reexamine critically all national policies, including the B-1 program, and then asserted: "We are confident that the B-1 program can and will stand up under the most rigorous, objective review."

General Jones linked the future security of the US to the "imperative" of an array of versatile, flexible, and reliable military capabilities which, in the near term, means "pressing ahead with the production of the B-1 bomber."

Michael Collins, Director of the newly opened National Air and Space Museum, was presented the Gill Robb Wilson Award for the most outstanding contribution to arts and letters.

Secretary Rumsfeld Addresses "Salute to Congress" Program

Following a detailed inspection of the Aerospace Development Briefings and Equipment Displays, Defense Secretary Rumsfeld spoke before the Convention's "Salute to Congress" program as "an ex-aviator and ex-congressman myself." He was, he said, not only saluting Congress but also the Air Force Association. Freedom in its perpetuation, the Secretary told the audience of luminaries, "is not automatic. It takes effort, it takes diligence, it takes vigilance, and there's a cost to it; and anyone who suggests that it is free, is wrong."

The pages of history are filled with accounts of "nations and free people who have erred, who have forgotten the lesson that weakness can be provocative, and [who] have suffered as a result," Secretary Rumsfeld said. He expressed confidence that through the contributions of groups and individuals such as those in the audience the US will continue to be determined "to remain strong . . . and not make the error that other free people, other nations have made. . . . I am convinced the

American people are willing to support national defense that will, in fact, contribute to peace and [will] contribute to stability."

Briefing at CIA Headquarters

Contributing to the informative, "working" character of AFA's Thirtieth Anniversary Convention was a two-hour briefing of the delegates at the Headquarters of the Central Intelligence Agency in Langley, Va., featuring several senior members of the CIA. A range of topics related to national security was dealt with in a formal briefing and a subsequent question-and-answer session on a "background-only" basis.

Another Convention highlight was a tour of the Smithsonian's new National Air and Space Museum, arranged exclusively for AFA's delegates and guests.

Capping the 1976 Convention was a gala black-tie dinner dance commemorating the founding in September 1947 of the United States Air Force as an autonomous service. Highlight of that program was the presentation of the Air Force Association's highest tribute, the H. H. Arnold Award, to Sen. Barry M. Goldwater and his consequent designation as "National Security Man of the Year." *(See p. 42 for list of all AFA national awards.)*

Standing out among the many memorable Convention activities dealt with elsewhere in this issue were:

- General Jones's presentation of an AFA Life Membership Card to the Chief of Staff of the United States Army, Gen. Fred C. Weyand, to signify the close working relationship between the two services within the total force policy.
- Presentation of AFA's Theodore von Kármán Award—for the outstanding accomplishment of the year in the field of science and engineering to the NASA-industry team responsible for the "superlative" execution of the Viking I Mars mission. The presentation was made in the presence of NASA Administrator Dr. James C. Fletcher and J. Donald Rauth, President of Martin Marietta Corp., the chief Viking contractor.
- And this admonition by Secretary Reed to all members of AFA:

> If ever there was a need for the Air Force Association, it is now. . . . Go out and recruit another member. NOW. He or she doesn't have to be a former blue-suiter, or be in the aerospace business, or live near an air base. All that's required is a serious concern for the future. . . . The next generation is counting on you.

This strikes us as a fitting prologue for the coming AFA year. ■

The NASA-industry team responsible for the successful landing of Viking 1 on Mars received the coveted Theodore von Kármán Award for scientific and engineering excellence.

Secretary Rumsfeld and General Jones informally discuss defense issues with Jack B. Gross, AFA National Treasurer. The discussion took place at AFA's "Salute to Congress."

Secretary Rumsfeld Describes New Soviet SLBMs

At a press briefing on Soviet ballistic missile programs in the week following the Convention, Defense Secretary Donald H. Rumsfeld elaborated on several new Soviet weapon systems highlighted by AFA's policy papers. The advanced MIRVable, submarine-launched ballistic missiles (SLBMs) cited in AFA's Statement of Policy were described in detail by Secretary Rumsfeld. The SS-NX-18, he said, is being developed as a follow-on to the 4,200-nm-range SS-N-8 and is the first Soviet SLBM to be MIRVed: "We believe that this missile may be capable of carrying as many as three reentry vehicles." Another new SLBM, designated the SS-NX-17, is the first Soviet missile of this type to use solid propulsion technology, he disclosed. Current trends indicate that by the early 1980s, all or most of the Soviets' existing 1,500 ICBMs and, by the late 1980s, all or most of the existing 800 SLBMs could be replaced with new missiles that, in the case of the ICBMs, "have substantially greater throw-weight and are significantly more accurate . . . the Soviets appear to be on a steady building program which could carry them toward a capability in excess of that needed merely to deter nuclear war."

Adopted at the Washington Convention

AFA's STATEMENT OF POLICY FOR 1976–77

Following is the text of the Air Force Association's annual Statement of Policy, as unanimously adopted on September 20, 1976, by delegates to AFA's thirtieth National Convention, meeting in Washington, D. C.

As the SALT I accords enter their fifth year and as the national political cycle emphasizes the need to rethink the nation's foreign and defense policies—and the linkage between them—misconceptions about security issues abound. There is widespread misreading of the meaning of limited accommodations with the USSR. And there is a woeful lack of information, understanding, and concern regarding Soviet efforts to develop and acquire the means for surviving and winning nuclear war. As a result, inadequacies in US national policies and military capabilities—and in the national resolve to oppose aggression—are developing. In time, they could lead to political and military impotence.

The United States confronts the Soviet drive for military superiority with fragmented will and purpose. The majority of Americans who support strong defenses is opposed by vocal minorities advocating limited deterrent forces, isolation, or reliance on the goodwill of the Kremlin. We do not question the right or the motives of those who hold these views. But we assert our own right and responsibility to challenge misstatements, misunderstandings, and false economies that jeopardize national security.

We see *no* evidence that SALT has caused the Soviet Union to slow its prodigious program of arms development and deployment. Nevertheless, the SALT negotiations should be pursued vigorously for reasons of morality and self-interest. But they must be shielded from the pressures of political expedience and political deadlines.

We *do* see clear-cut evidence that new weapons to bolster the USSR's strategic offensive, strategic defensive, and theater war capabilities are being developed, and many of them are being deployed. Second-generation Soviet intercontinental ballistic missiles (ICBMs)—the SS-16, SS-17, SS-18, and SS-19—are being introduced into the inventory at a rate of some 200 a year. This family of missiles is about three times as accurate and has throw-weights up to four times greater than the ICBMs they are replacing. Hopes that the SALT I Interim Agreement would freeze Soviet deployment of destabilizing weapons have proved false. To the contrary, Soviet counterforce capabilities that threaten our ICBMs are being developed through larger, more accurate, MIRVed missiles at a steadily accelerating rate that permits but one interpretation: The USSR seeks a first-strike posture and is willing to stretch the SALT terms to the breaking point. SALT I ambiguities provided the Soviets vast advantages and facilitate the USSR's present maneuvers. Now a third generation of Soviet strategic missiles is emerging, consisting of at least six distinct designs, some or all of which can be expected to reach operational status within two or three years.

Equally destabilizing, and a circumvention of at least the spirit of SALT, is the deployment of the SS-20 mobile missile. Ostensibly of intermediate range and hence not counted against the number of strategic offensive weapons permitted by SALT, it is clearly capable of intercontinental range and is, in fact, the world's first operational mobile ICBM. In the NATO area, that system also extends Soviet regional nuclear force superiority, described by the US Arms Control and Disarmament Agency as growing "like a towering, dark cloud over Europe and Asia."

We also are concerned by Soviet activity in antiballistic missile (ABM) defense that stretches, if it does not break, the SALT I ABM accord by deploying key ABM elements that might be combined rapidly to achieve full operational status. The relentless Soviet drive toward comprehensive military superiority is manifest also in the flight-testing of new advanced MIRVable, submarine-launched, ballistic missiles that have even more range and throw-weight than the 4,200-nm-range SS-N-8, which recently became operational. Under construction in the Soviet Union are several ballistic-missile submarines of a new type that may be larger than the Trident, the newest US SSBN now under development.

Soviet strategic offensive capabilities in space are being refined through improved, quick-reaction killer satellites that could destroy essential US space-based systems while they are out of sight of US tracking stations. These space interceptors can be launched, can rendezvous with, and can destroy US spacecraft in less than one orbital revolution.

Soviet strategic air defenses, consisting of some 555,000 troops, more than 5,000 early warning and ground control intercept radars, some 2,600 fighter-interceptors, and almost 12,000 strategic surface-to-air

missiles, dwarf those of the US. These massive defenses lessen the superiority of the US strategic bomber force over that of the USSR.

Among the most destabilizing strategic gaps between the USSR and US is the survivability of people, industry, and the national command structure. The Soviet lead is awesome, and it is widening.

Industrial operations essential to survival are dispersed and hardened. Grain stored in hardened underground silos is to provide reserves to feed the entire Soviet population for about a year. The Russian people, protected by an elaborate civil defense system, are told that a US nuclear attack would kill "only" from seven to eleven million Soviet citizens—half the Soviet losses in World War II. There is a massive hardening program for the Soviet command and control structure.

Capping the Soviet drive for nuclear superiority is a research and development program of unprecedented size and staggering cost. Its emphasis is on achieving technological breakthroughs, such as ballistic missile defense with laser and charged particle beam weapons. Unless countered by expanded US R&D and acquisition programs the Soviets could achieve dominance of deployed military technology within four or five years, according to senior Defense Department officials. Our strategic nuclear forces could then be unable to deter a counterforce strike by the Soviets; unable to provide minimum retaliation against Soviet attacks on our cities; unable to deter limited nuclear attack; and unable to support US military operations against conventionally armed forces.

The picture is equally grim in terms of theater warfare capabilities, with the Soviet Union developing a range of new tactical nuclear weapons from the MIRVed SS-20 ballistic missile down to one-tenth-kiloton artillery shells. At the same time, the production and stockpiling of biological and chemical warfare weapons are at extraordinary levels and increasing.

Soviet tactical aircraft production is close to twice that of all US military services. The USSR's tactical aviation is undergoing a marked shift toward offensive capabilities with the introduction of several new, nuclear-capable fighter-bombers that have twice the range and greater speed and payload than the aircraft they replace, and include such advanced features as terrain-avoidance radars, laser rangefinders, and comprehensive hardening against nuclear effects.

Soviet airlift capabilities have increased manyfold over the past decade and now, because of shorter distances, roughly match the tonnage that US airlift could deliver to such potential trouble spots as the Mideast and Southern Africa.

This Association believes that the unparalleled Soviet military buildup, especially in the strategic sector, mandates nonpartisan reassessment of the geopolitical and military threats facing this nation and how we must respond in terms of national policy in general, and defense policy in particular.

The starting point must be the US position at current and future Strategic Arms Limitation Talks. A nonnegotiable minimum is the principle of "balanced capabilities" for both parties, defined in terms that are unambiguous, capable of verification, and that reduce "breakout potential"—meaning intrinsic advantages to one party in case a SALT accord is either abrogated or permitted to expire. The principle of "balanced capabilities" also requires that SALT eventually be broadened to take into account all capabilities and weapons that affect the strategic balance to preclude imbalances developing outside of narrowly negotiated areas.

We believe it is imperative to modernize the strategic triad. We must develop capabilities at least equal to those of the Soviet Union—from limited options to assured destruction—and with reliable provision for adequate survivability and the ability to penetrate advanced defense systems. Key elements are deployment of the B-1 and Trident and accelerated engineering development and early production of the M-X large-throw-weight ICBM and the Air-Launched Cruise Missile. These actions, in concert, are necessary to prevent the Soviet Union from attaining a credible first-strike posture.

To support these central actions, secure and survivable command and control capabilities must be developed in space, air, and on the ground by exploiting all available technological opportunities to provide rapid, unmistakable warning and attack assessment to our national leaders in a form that can be acted on intelligently and quickly. Providing such capabilities, and signaling their existence by exercising them, presents formidable evidence to the Soviets that a surprise attack is neither possible nor profitable. We see this as a means for buying effective deterrence at bargain-basement prices.

Two glaring deficiencies in US strategic capabilities are air defense and civil defense. In the case of the latter, we view as a minimum essential the development of civil defense capabilities to provide protection against fallout where major population centers are near concentrations of strategic targets. Growth of the Soviet's Backfire strategic bomber inventory makes indispensable the rapid revitalizing of continental US air defenses.

The key to keeping the nuclear threshold high are US and NATO general-purpose and theater warfare capabilities. We take pride in the family of superb new USAF aircraft that is entering the inventory and that will revolutionize this nation's tactical air capabilities. Two factors are essential if the full potential of these aircraft is to be realized. They must be acquired in the programmed quantities and manned, maintained, and supported by an adequate number of the world's top aerospace professionals—the men and women of the United States Air Force. This force, reduced to barebones levels, cannot sustain further cuts without major impact on readiness and basic effectiveness, conditions that apply equally to USAF's strategic, tactical, airlift, and other forces.

We deplore congressional actions that tend to deepen cracks in the vital southern flank of NATO, and we urge both the Administration and the Congress to take all possible steps to heal those rifts and shore up this area. Similarly, we urge that no effort be spared to resolve the Panama Canal issue, without either compromising fundamental US defense interests or good relations with our Latin American neighbors.

In our kind of democracy, the dedication and excellence of our military forces and the superiority of the arms they bear cannot alone provide national security. Our strongest bulwark is, and always will be, America's national will to bear the burdens of freedom. We believe it is time to lay before the American people all the facts about the threats they face. Given the facts, this great nation, today more than ever mankind's last best hope, will respond as it always has in past moments of grave danger. ■

AFA POLICY PAPERS

The following two policy papers were unanimously adopted by delegates to AFA's thirtieth annual National Convention in Washington, D. C., on September 20, 1976.

Force Modernization and Readiness

COMPARED to potential adversaries, this country's population is limited and the costs of maintaining its military manpower are high. It is our creed that wars involving American forces must be waged with the lowest possible loss of American lives. It follows, then, that we must rely on technical superiority to make up for what we lack in numbers, be that people or equipment. Force modernization—both the acquisition of systems needed now and research and development for the weapons of tomorrow—and force readiness—to permit the effective, sustained use of these weapons—clearly are the dominant needs.

Failure to provide for these twin requirements would give the Soviet Union a decisive lead in military capabilities that could be exploited aggressively. The primary measure of the adequacy of US force modernization is whether or not there is broad equivalence with Soviet capabilities and forces. Subordinating force modernization to the budget demands of domestic causes could, over the long run, lead to a fatal short-changing of both. Congressional actions to date that have reduced the Defense Department's RDT&E and acquisition accounts by some $2.7 billion for FY '77 point up this danger.

In acquiring and developing strategic systems, the governing factors, in our view, are these: The Soviet Union does not consider nuclear war unthinkable, does not accept the premise of mutual destruction, and consequently can no longer be deterred through the threat of assured destruction alone.

The SALT agreements now in effect give the Soviet Union major quantitative advantages in intercontinental ballistic missiles, including more than a fifty percent lead in sheer numbers and a throw-weight advantage as high as four to one. This combination of factors creates a number of urgent needs in terms of USAF's strategic and general-purpose systems.

B-1

First, the B-1 strategic bomber must be produced and put into operational service. A viable bomber force is fundamental to credible, flexible deterrence and can be attained most cost-effectively through a mix of B-1, B-52, and FB-111 aircraft. The strategic bomber continues to be the least destabilizing, least provocative US deterrence tool and the best antidote to rapid, irreversible escalation of crises.

The central element of this bomber mix must be the force of 244 B-1s, tailored to penetrate future, advanced air defenses around Soviet high-value targets. The B-1 is optimized for this mission through improved payload, unequaled electronic warfare systems, reduced radar cross-section, high penetration speed at low altitude, and high survivability through shorter takeoff, faster escape speed, and high structural and electromagnetic hardness.

Progress of the B-1 program has been highly satisfactory so far. To date, the B-1 has passed more development and preproduction analyses and tests than any previous military or civilian aircraft at a comparable program phase. There are no technical reasons that justify delay. At best, the first B-1 will not enter SAC's operational inventory until 1980, and the entire force will not be operational until a decade from now. It is the right and duty of any incoming Administration to reexamine critically all national policies—including the commitment to triad that has provided effective nuclear deterrence during the past sixteen years. We are confident that the B-1 program can and will stand up under the most rigorous, objective review.

Cruise Missiles

Modernization of the nation's strategic bomber force must, in addition to the B-1, extend the utility of the B-52 by fitting the newer models with the versatile air-launched cruise missiles now being developed and tested. These new weapons—small, hard-to-find, cost-effective, and with a range of more than 1,000 miles—can expand the B-52's target coverage and increase its survivability. We see compelling reason for developing cruise missiles employing integral rocket ramjet propulsion technologies to provide great range with high supersonic speed essential for the penetration of advanced air defense systems.

These versatile strategic weapons are made possible by technologies in which this country clearly leads the Soviet Union; thus they contribute to perceived equiva-

lence with our principal adversary for some time to come. This US advantage must not be bargained away for anything short of an unequivocal concession of equal value.

Advanced ICBMs

The intercontinental ballistic missile (ICBM)—with its speed, accuracy, low operational cost, constant high readiness, and short flight time to target—represents this nation's principal means for exercising flexible strategic options, especially against time urgent, hardened targets, and, thereby, a means for terminating nuclear conflict below the level of assured mutual destruction. But this option remains open only as long as these weapons can cope credibly with the increasing threats that advancing Soviet technology and proliferation of warheads bring to bear on them. The need, therefore, is to move resolutely toward full engineering development and subsequent deployment of the M-X, an advanced ICBM that provides both the increased throw-weight and accuracy required to deal with hard Soviet targets and the intrinsic option of fixed silo basing plus an alternate, more survivable basing mode. The M-X program schedule is conservative. But the speed-up of Soviet ICBM development and deployment programs that underlies the need for M-X militates against slowing or halting the M-X effort because of budgetary politics.

This Association is particularly concerned about the tendency in the Congress to specify basing modes for the system without full coordination with the Defense Department and the Air Force.

Minuteman Upgrading

Programs to upgrade the Minuteman force must be continued, including deployment of the improved-yield MK 12A warheads and the option to increase the number of Minuteman IIIs beyond the current total of 550.

Warning and Attack Assessment

While the strategic forces continue to be the central factor of our national defense capabilities, the ability to control these forces in real time and in step with changes in the battle situation also is of pervasive importance. Essential here are programs to improve that part of the national Early Warning System known as attack assessment, encompassing rapid detection and transmission of information about impending attacks by Soviet ICBMs, SLBMs, and bombers, and involving sufficient precision and detail to permit immediate formulation of counteraction by the National Command Authorities. Cobra Dane, Pave Paws, OTH-B, and the Joint Surveillance System rank high on this list of program priorities.

We see an urgent need to improve our warning systems and their associated command control and communications systems to obtain comprehensive raid characterization information leading to appropriate and controlled responses, retargeting, and the ability to selectively execute or withhold strikes to control escalation. Such a capability, of itself, constitutes persuasive deterrence by quashing a potential aggressor's hopes of staging a successful first strike against USAF's ICBMs; no matter how great the attacker's warhead accuracy or their number, he must reckon with the high probability that his weapons will be attacking empty silos. Equally vital are command control and communications systems that permit rapid and reliable execution of responses to enemy attack, even when exposed to the effects of nuclear weapons and countermeasures.

E-4 and AFSATCOM

Primary here are the E-4 Advanced Airborne Command Post, the World Wide Military Command and Control System and its subnets, and the Air Force Satellite Communications System (AFSATCOM I and II). Together, improved early warning, attack assessment, and survivable command control and communications capability multiply the effectiveness of our strategic forces to a degree not attainable by other means. We see a pressing need to maintain a strong R&D program within DoD to preclude technological surprise in ABM defenses.

The Soviet Union's modernization of its strategic bomber force through the introduction of Backfire warrants reassessment of this country's extremely limited air defense capabilities. Some sixty Backfire supersonic intercontinental bombers, the most modern operational bombers in the world, are now in the inventory of Soviet Long Range and Naval Aviation. We endorse USAF's recognition of the need to modernize and improve US air defenses, particularly as the Backfire threat increases, and we believe that the time to begin is now.

USAF's Collateral Mission

Other crucial elements of US deterrence, and probably the most likely to be tested in future conflicts, are

forward-based nuclear and conventional theater forces. The effectiveness of both, in case of sustained engagements, is impaired by limitations in available airlift and jeopardized by increasing Soviet threats to the US Navy's ability to keep the sea-lanes open. The Air Force's collateral mission of supporting the Navy in the sea-control mission thus takes on added urgency. USAF's intrinsic ability to assist in maritime search and identification; electronic warfare; attack against hostile naval surface and air units; and aerial minelaying must be developed fully and rapidly.

Airlift Enhancement

Full implementation of the Air Force's multifaceted Airlift Enhancement Program, including improvements of the C-141 and C-5 aircraft, and modification of the aircraft of the Civil Reserve Air Fleet (CRAF), must not be delayed further. We also endorse acquisition of the Advanced Tanker/Cargo Aircraft (ATCA) as well as development and eventual acquisition of the Advanced Medium Short Takeoff and Landing aircraft (AMST) to modernize tactical airlift in the 1980s.

New Tactical Aircraft

Nowhere are the erosive effects of declining USAF purchasing power more evident than in the procurement of Air Force aircraft, which plummeted from a Korean War high of more than 8,000 aircraft per year, and an annual rate of more than 1,000 at the peak of the Southeast Asian war, to fewer than 200 for each of the past five years. The FY '77 buy sought by the Air Force is for 239 aircraft, reflecting a modest recouping of lost ground. The Soviet tactical aircraft fleet now exceeds the equivalent US force by some thirty percent. This condition is exacerbated by the increasing offensive capabilities and higher quality of Soviet late-model aircraft, able to perform deep strikes against NATO targets without prior forward deployment. Since 1968, the tactical aircraft of the Warsaw Pact forces (mainly Soviet) available for deployment against NATO have increased by 1,300, to an overall total of about 5,000. The danger, then, is that we soon may lose our qualitative lead while at the same time suffering the consequences of aircraft age creep, obsolescence, and an ever shrinking force structure.

Coming into the Air Force inventory now are aircraft and capabilities of unparalleled scope and versatility, *i.e.,* the F-15, F-16, A-10, EF-111, F-4G Wild Weasel, AWACS, etc. The need is to acquire these weapons in the necessary quantities and on schedule to assure maximum return on these investments. As these aircraft enter the Air Force's active inventory, other, still-capable aircraft, such as the F-4 and the A-7 as well as some production A-10s, must replace obsolescent combat planes in the Air National Guard and Air Force Reserve forces to improve the combat capability of the Total Force.

Tactical combat forces must be trained and exercised under realistic, warlike conditions. Improvement and development of tactical training ranges in accord with relevant Air Force programs are of vital importance to the combat readiness of this nation's tactical airpower.

Foreign Military Sales

In this context, the Air Force Association notes with concern the impact on legislative policy of poorly reasoned and doctrinaire opposition to Foreign Military Sales. Judicious export of US weapon systems to allies under the direct control of the appropriate US government agencies is beneficial to the nation in a number of ways. Foreign sales of USAF weapon systems reduce unit costs to the Air Force and sustain the vital defense industry at a time when the profitability of defense business is marginal. Equally important, every efficient weapon system in the arsenal of our allies contributes directly to the Free World's total force strength, fosters equipment standardization, broadens USAF's logistics support base, and thus adds to force readiness.

Research and Development

This Association recognizes the impracticality of matching the Soviet Union aircraft for aircraft and missile for missile. But as the Soviets get bigger and bigger, we must be smarter. US exploitation of defense technology must concentrate on high payoff areas, exemplified by systems that multiply the effectiveness of the existing force, such as AWACS, the NAVSTAR Global Positioning System, and the Space Shuttle. Most important, we must be ready with concepts and technologies that can neutralize the massive Soviet investments. But this will not happen if we let our technology continue to slip. This year USAF's budget allocates only four percent of its total funding to advanced and basic technology programs.

Basic research, combined with exploratory and advanced development, form the bedrock of future US national security years hence. There is a clear need, for example, to pursue vigorously such programs as the X-24C hypersonic research aircraft. Our technological bedrock began to erode in the late 1960s and early 1970s when the USSR pulled ahead of the US in level of effort, a lead she has been permitted to maintain ever since. This imbalance, until recently, was aggravated by the tendency to pay for unforeseen, immediate R&D needs out of funds allocated to maintain the national technology base. Either of these trends represents a mortgaging of the nation's future, primarily in the sense of national defense and survival, secondarily, in terms of lowered productivity and industrial capability and, indirectly, through reduction of the US standard of living.

The level of *net* effort supporting the military tech-

nology base dropped by almost forty percent between FY '67 and FY '75 even though the range of technological options burgeoned during that period. As a result, innovative projects involving higher risks and high payoffs were either canceled or deferred in favor of conservative, low-risk undertakings. Yet during this period the Soviet Union changed her R&D direction toward high-risk, high-payoff areas until now some advanced Soviet programs are beyond the ken of US science and technology, a condition that can be expected to become more prevalent. Of itself, the clearly stated Soviet goal of technological superiority over the US probably represents the single most ominous external threat this country faces; if the danger is multiplied by our inability to understand the specifics of that threat, and thus the ability to counter it, the consequences become intolerable. Consequently, we categorically oppose the transfer of US and other Free World technologies that expand the USSR's technology base, especially in the areas of guidance systems, high-speed computers, and advanced aircraft engines.

The central need is for a sustained commitment to assure the adequacy of the military technology base over the long pull. We see as a minimum requirement a real, net increase in the overall level of research effort by ten percent per year through FY '80. Continuity of effort at a moderately increasing level is more productive, and far more economical, than spasmodic crash programs, conceived and executed in haste. Neither the national security nor the national economy deserves any less than the RDT&E funding requested in DoD's five-year budget proposal. ■

Defense Manpower Issues

WE SENSE a pervasive uneasiness among military people who fear erosion of benefits to which they feel they are entitled. More and more men and women of the armed forces question whether the axiom "We take care of our own" is losing its meaning. The threat of piecemeal hacking at the complex system of compensation is cited to justify their concern.

Interest in a military union is a visible manifestation of the current disquiet. We already have expressed our "unalterable opposition to unionization of the military" by calling upon the Administration to "exercise its authority and prohibit it." Our opposition to unionization of the military remains solid.

Yet, we recognize the underlying—and potentially undermining—dissatisfaction which breeds talk of such action. And we believe it must be addressed quickly and fairly by leadership at all levels.

We join the Defense Manpower Commission in its recommendation that military compensation be examined and dealt with as a system. Tampering with it part by part will, in our opinion, only tend to increase apprehension.

Because people in uniform have no firm contractual claims to specific benefits, we endorse the concept of the Defense Manpower Commission's proposed "Bill of Rights" for military people. As the Commission noted, "Removal of real or perceived benefits, regardless of the reason, can and frequently does produce service reactions out of proportion to the savings involved. . . . The Commission believes that a 'Bill of Rights' should be enacted specifying the benefits that accrue from military service. The Bill of Rights would provide that such benefits would only be changed or eliminated prospectively and changes would not apply to those already in the service."

We endorse this concept because we feel it will provide an essential sense of stability for those in the armed services. But we also caution that military life is, by its very nature, unstable. Changes over which no leader has control must be accepted as part of military life. The military profession always has been marked by sacrifice and a sense of cause before self.

We do not question that the lot of the military person is significantly better than it was ten years ago. Indeed, we take great pride in the fact that the Air Force Association was at the fore in achieving a reasonable level of compensation for our citizens in uniform—particularly lower-ranking officers and enlisted people.

But military service is not just another job. Few

civilians are called upon to uproot their families involuntarily every few years . . . to endure twenty-four-hour alert duty assignments . . . to work overtime without additional compensation . . . to serve in remote and isolated areas . . . to forfeit certain freedoms and rights . . . to risk injury, personal disability, even death in battle.

One union official has said of today's volunteer force, "People are selecting a military career as a means of livelihood, and not for patriotic reasons."

If this is true, then the nation must reconsider the draft or universal military training.

Today's social and economic environment places a great burden on our military leaders and those they lead. The pinch on the defense budget is severe at a time when it is essential that we modernize our strategic and tactical forces. The increasing portion that manpower costs are taking from the budget cannot be ignored.

This, then, is the twin challenge: To maintain freedom and security through dedicated and selfless efforts by our citizens who serve in our armed forces; and through courageous and articulate leadership that demonstrates a sincere concern for human values.

Against this background, the Air Force Association adopts the following positions:

COMPENSATION

Pending the results of the Quadrennial Review of Military Compensation and other current studies on this subject, we support the present system of military and federal employee compensation.

We oppose a military and federal employee "pay cap" in the fear that such action again will put military and other government people behind the cost-of-living curve.

We support:

- Travel reimbursement for dependents of junior enlisted people.
- Increased per-diem allowances for enlisted people.
- Repeal of the restriction that prohibits enlisted band members from the same off-duty employment opportunities available to all other members of the armed forces.
- Variable allowance to equalize compensation for military and civilian people assigned to high cost-of-living areas.
- Enlistment and reenlistment bonuses for members of the active force, Air Force Reserve, and Air National Guard.
- Tuition assistance for members of the Air Force Reserve and Air National Guard.
- Amendment of the DoD Joint Travel Regulations (JTR) to eliminate discrimination against mobile home owners.
- Removal of the tax on reimbursement to military people for the cost of moving their household goods.
- Federal employee reimbursement of moving/travel expenses, upon retirement or death, to home-of-record (or equal distance) if the move was for the convenience of the government.

SPECIFIC BENEFITS

Commissaries

While urging improved management to reduce military base commissary store subsidies, we oppose any action that would reduce the benefits of this service to active military people and their dependents, retirees, eligible widows, and disabled veterans.

Medical Health Care

We support:

- A medical health care system that will fully serve the needs of active and retired military people, and their dependents.
- Bonuses for military physicians.
- Upgrading Air Force Physician and Dental Assistants to at least equal status with their counterparts in the other military services.
- Dental care for dependents of all military personnel.
- A change in the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), which would provide lifetime coverage for the military retiree; remove current nonavailability certificate requirements; and restore original procedures of determining allowable reimbursements.

Survivors' Benefits and Insurance

We support amendments to the current Survivors' Benefit Plan (SBP), which would:

- Remove the provision requiring a military retiree to continue paying for this coverage for life, even if the designated beneficiary dies.
- Remove the provision whereby survivors eligible for Social Security benefits must have their SBP benefits offset by proportionate amounts of their earned Social Security benefits.
- Establish a provision that would permit survivors of Reservists and Guardsmen who die before reaching the established retirement age to receive a proportionate amount of the retirement annuity the Reservist or Guardsman would have received at retirement.

We support:

- An amendment to the Veterans' Special Life Insurance (VSLI) program which would permit Reservists who are in a nonpay but active status to participate fully in the program.

• An amendment to the Federal Employees Group Life Insurance (FEGLI) program which would permit federal employees to contribute after retirement, with continued coverage.

• The goals of the Air Force Enlisted Men's Widows and Dependents Home Foundation.

Retirement

We believe that any new nondisability retirement plan must guarantee no reduction in benefits for military and federal employees serving at the time of enactment.

We support:

• A new nondisability retirement plan on a reduced annuity basis for Reservists and Guardsmen.

• A reduction in the retirement penalty for federal employees under age fifty-five to one percent for each year.

• Lump-sum payments immediately upon retirement for those federal employees retiring for disability.

• A lifting of the sixty creditable training point ceiling for retirement purposes for Reservists and Guardsmen.

• Recomputation to provide equalization of retired pay.

• Removal of dual-compensation limitations for retired regular officers.

PERSONNEL POLICIES

We support:

• Enactment of the Defense Officer Personnel Management Act (DOPMA).

• The Airmen Education and Commissioning Program.

• Direct commissioning of qualified enlisted people.

• Graduate education for officers, and more efficient use of these graduates.

• Award of E-3 rank to Junior ROTC graduates entering the active Air Force, Air Force Reserve, or Air National Guard.

• The same tax advantage for federal employees who sell their homes when assigned to overseas duty as that provided military personnel.

• Retired pay for federal civilian employees who continue service that is at least equivalent to those who have retired earlier in the same grade and with the same years of service.

• A proposal for the testing of rescheduling working hours of federal employees in place of statutory eight hours per day, five days per week schedule.

We continue to oppose arbitrary end strength restrictions placed upon the civilian manpower structure.

RESERVE OFFICER TRAINING CORPS (ROTC)

In our support of vigorous and stable Air Force ROTC programs (Junior and Senior), we urge an increase in the number of USAF Junior ROTC units, equitable with that of other services.

COMMUNITY COLLEGE OF THE AIR FORCE

We support the mission of the Community College of the Air Force (CCAF) and its goal of granting Associate Degrees to qualified Air Force enlisted people.

CIVIL AIR PATROL

We support Civil Air Patrol and we favor increasing CAP's capability to perform its search and rescue mission.

SELECTIVE SERVICE

We are alarmed at the virtual dismantling of the Selective Service System. We support a viable system that retains at least the essential elements at federal and state levels, and that can deliver draftees within thirty days.

AMNESTY

We oppose blanket amnesty or pardon for those who unlawfully avoid military service; and we endorse the principle that each case should be examined and adjudicated individually according to existing laws and regulations.

MIAs/POWs

(Southeast Asia)

We urge the government to vigorously pursue its attempt to resolve, as quickly as possible and to the maximum attainable degree, the status of all Americans identified as Missing in Action or Prisoners of War in Southeast Asia. We support and urge a US veto to admission of Vietnam in the United Nations until such accounting has been satisfactorily accomplished.

DISABLED VETERANS

We support:

• The tax exemption applied to military disability retired pay.

• Continuation of the "sick pay" exclusion from federal income tax, without a reduction based on adjusted gross income, for federal retirees receiving disability retirement benefits.

• Passage of legislation allowing disabled veterans, who are retired from the service on a longevity basis, to receive full military retired pay and VA disability compensation. ■

Air Force Secretary Thomas C. Reed described for an Air Force Association luncheon audience USAF's current and projected modernization programs that are an essential balance to the Soviet drive for qualitative as well as quantitative superiority . . .

Modernization and the Military Balance

BY THE HON. THOMAS C. REED
SECRETARY OF THE AIR FORCE

THIS year carries forward the tradition of excellence that began with the first AFA Convention in Columbus, Ohio, in 1947. Then, as now, we were faced with a complex world. On one hand, there were bright spots. The United States enjoyed a secure place in the world, due in part to an absolute monopoly on nuclear capability. We also possessed the only truly intercontinental delivery system in the world—our first production model of the B-36 bomber had flown the month before the convention. In addition, we were preparing for man's first flight through the sound barrier.

On the other hand, there were major challenges. Negotiations over the postwar future of Korea had broken down. Greece was threatened by Communist guerrillas. Many governments seemed unstable in the wake of what was called a "chain reaction of political crises."

In this atmosphere, there was a sense of growing danger from the Soviet Union. There was also a strong commitment to counter any aggressive action against our national interest. That commitment was reflected in this Statement of Policy from that first AFA Convention: "We have banded together as the Air Force Association with this in common—a steadfast belief in a strong United States as the best insurance for world peace, and in airpower as the key to our strength."

Good words—words that AFA has fully supported ever since. For the most part, the nation as a whole also has acknowledged the need to maintain our military strength. As a result, we have avoided both nuclear war and coercion by our adversaries. During my travels in this Bicentennial year, I have sensed a new recognition of the value of a strong defense and a determination to protect our interests around the world. That determination is essential because of the ominous trends we see in the military balance.

In 1964, Leonid Brezhnev replaced the mercurial Nikita Khrushchev as leader of the Soviet world. Since then Brezhnev has worked with a cool determination to expand the Soviet military machine. In the twelve years since he took over, Brezhnev has allocated ever-growing resources to defense with an annual growth rate that now approaches six percent.

Despite a vastly inefficient economic system with a gross national product only one-half of ours, the Soviet Union is now spending almost one-sixth of that GNP on defense.

During those same years, since 1964, the USAF aircraft inventory is down by more than a third. Even worse, the Air Force budget is down forty percent in purchasing power.

The Congressional Budget Office, very much an arm of the Congress and independent of the Administration, recently reviewed the Soviet defense effort. In July they described the Soviet missile buildup as "an unprecedented modernization program of the Soviet intercontinental ballistic missile force." They then concluded that "earlier estimates [of Soviet defense spending] may have been off by nearly 100 percent. . . . [This buildup] clearly raises questions concerning the ultimate intentions of the present regime."

Our hopes of peaceful Soviet intentions are further clouded by their lack of restraint in nuclear testing. We are concerned by the appearance of the Backfire bomber in areas that clearly indicate its intercontinental range. We are disturbed by Soviet support of conflict and instability in Africa. We are concerned by their new ability to project airpower beyond their borders through development of the *Kiev*-class aircraft carriers. Soviet efforts to build a first-class blue-water Navy during the last decade are well known. Yet one NATO Defense Chief recently told me: "The next decade could be one in which they seek air superiority in Europe." We are concerned about the substantial differences between the US and USSR that have hindered our efforts to achieve an acceptable SALT II agreement.

For the lifetime of this Association, we have avoided nuclear war and coercion because we have maintained our strength. Since the early 1960s, that strength has had, as its foundation, a triad of strategic nuclear forces: submarine-launched ballistic missiles, land-based ICBMs, and manned bombers.

Submarine-launched ballistic mis-

Following his discussion of Air Force modernization plans, Secretary Reed paid tribute to USAF's leadership, which he characterized as "young, bright, and dedicated to the best interests of this nation."

siles have been a significant factor in American defense planning since construction of the first missile-carrying submarines began in 1959. But those submarines are growing old. They are expected to reach the end of their service lives within a decade. By then, problems of corrosion, age, and the growing Soviet antisubmarine warfare threat will require modernization of our submarine-launched ballistic missile force.

We have, in fact, begun that process. Production funds for the first Trident submarines were approved by the Congress in 1974, and the keel for the first boat was laid in April of this year.

Land-based ICBMs make up another leg of the triad. These systems play a major role in our strategic posture. Their unique characteristics make ICBMs especially suitable for use either in total war, if it comes to that, or in limited strategic attack options.

The decisions to develop and deploy Minuteman and Titan were made in the 1950s. The technology, at best, is early 1960s.

In contrast to our aging, relatively small ICBMs, the Soviets are today deploying at least three new missile systems, threatening us with a staggering throw-weight and ICBM warhead imbalance in the 1980s. And the character of the Soviet target structure is changing rapidly. They are hardening command facilities and communications nodes, industrial facilities, and civilian shelters. As [USAF's Chief of Staff, General Jones] discussed yesterday [*see p. 38*], there is a massive Soviet civil defense effort.

To meet these increased risks, we are proceeding with several important efforts in ICBM modernization.

For the near term, we are improving the survivability of our deployed missiles by upgrading the hardness of our silos against blast, shock, and electromagnetic pulse. We plan to

complete this program by 1979. To improve the responsiveness and flexibility of the Minuteman III, we are adding Command Data Buffer equipment. This will allow rapid retargeting in response to real-time information. Further, it will widen the envelope of options available during crises and contingencies.

We also are upgrading the effectiveness of the Minuteman III by improving guidance-system accuracy through changes in computer software. These accuracy improvements should be completed by 1978.

As a hedge against Soviet breakthroughs in the near future, we are beginning serious studies of a mobile Minuteman force. We expect to learn a great deal about the problems and advantages of transporting, operating, and maintaining a complex weapon system in a mobile mode. This may allow us to deploy the system quickly if necessary; it will certainly provide valuable experience for an advanced mobile ICBM system.

For the longer term, we have been considering a follow-on ICBM for the 1980s. Activities in support of this planning have concentrated on studies and component developments grouped under the heading of Advanced ICBM Technology. However, the determined Soviet attempt to achieve strategic dominance has convinced me that we must now move beyond the basic technology stage.

It is now time to fully modernize the ICBM leg of the triad. US advances in technology over the past ten years will allow a significant increase in missile payload, improvement in accuracy, and gain in survivability under attack. In my judgment, the Air Force should begin full-scale development of such a modernized ICBM—the M-X—next year if we are to even *start* redressing the growing Soviet advantage in ICBM size and payload.

The manned bomber constitutes the third leg of our strategic triad. It is a valuable asset because it provides the most in flexibility, controllability, and mobility.

The manned bomber involves human judgment throughout its mission, from launch to final weapons delivery. It has been tested and proven in combat. Over half of America's strategic megatonnage is allocated to the bomber force.

But our bombers are also aging, and the Soviet air defense systems gain in sophistication every year.

We saw a first-hand demonstration of that in the Mideast War of 1973—and they have progressed since then.

As a result of this projected threat and the aging of our bomber force, we have conducted extensive studies seeking the best, most cost-effective aircraft to maintain the triad of strategic deterrence through this century. Those studies confirm that the B-1 is the right solution.

I am glad that Congress has finally completed action on the defense authorization and appropriation bills. All the funds requested by the Department of Defense to initiate production of the B-1 aircraft, $1.049 billion, were appropriated by the Congress. There was understandable concern that the Air Force might obligate all of these funds immediately upon the turn of the fiscal year next week. As such, the Conference Committee agreed on a cumulative obligation limit of $87 million per month until February. While that constitutes incremental funding contrary to Congress' own policy, it poses no unacceptable burden on the B-1 program. The Air Force in any event plans to obligate funds at a far lower monthly rate.

With congressional action complete, then, the responsibility for sound management lies squarely in our lap.

The flight-test program is proceeding well. Earlier in the program, we set 250–300 hours of flight testing as our goal prior to production. As of today, the three aircraft have logged more than 335 hours in the air. We have begun flying operational profile missions, using the terrain-following radar system in the automatic mode—at an altitude of 200 feet at 0.85 Mach.

We are ready to start production, but we remain cautious. Prior to a contract decision, the Defense Systems Acquisition Review Council—DSARC—chaired by the Deputy Secretary of Defense, will review the program for production readiness. That procedure will assess the results of an independent cost analysis, the Air Force production readiness reviews, and negotiations for a production contract satisfactory to the government. It will also review for approval the Logistics Support Plan. A full review of the developmental and operational tests, the engine production verification tests, and the static and fatigue tests will also be conducted.

Secondly, we are assembling an independent group to review the technical aspects of the B-1 development program in parallel with the DSARC. The group will be chaired by Professor Courtland Perkins, President of the National Academy of Engineering, and will report directly to me on any technical risks they find in entering production.

Third, the Secretary of Defense and I have asked three respected outsiders to serve as an alternatives review panel. They are Dr. Michael May (a former SALT negotiator), the Hon. Paul Nitze (former Deputy Secretary of Defense), and the Hon. Edward David (former Science Advisor to the President and now Chairman of the National Security Council Ad Hoc Strategic Panel). We have asked them for an independent reevaluation of the assumptions, results, and alternatives presented in the Joint Strategic Bomber Study originally prepared for Congress two years ago.

Finally, I intend personally to examine the fatigue test articles, the low-altitude, high-speed performance of a flight vehicle, and the other details of the test program that seem appropriate.

Production of the B-1 will require expenditure of a significant portion of our national resources. Such a commitment is a great responsibility. I take that responsibility seriously, and I expect the Air Force and industry to do likewise.

Now that the congressional debates on the B-1 are over for the

year, I've had a chance to reflect on them a bit.

We have debated facts and policies on which reasonable men could disagree. We have tried to make clear the steady, massive Soviet buildup that within a few years could put us in a real corner. We have discussed the pros and cons in the press, on the air, and in both Houses of Congress.

'The manned bomber . . . provides the most in flexibility, controllability, and mobility . . . . Over half of America's strategic megatonnage is allocated to the bomber force.'

In all this rhetoric, however, one statement really sticks in my mind. One Senator repeatedly claimed the B-1 was just a "toy." In particular, he said, "The Air Force is dominated by pilots from World War II. . . . Without the B-1 bomber, the Air Force might not be able to justify so many positions for Generals. . . ."

What nonsense!

I'd like to tell you something about general officers that I've found since becoming Secretary of the Air Force.

They are young—new brigadiers are in their mid-forties, and four-stars retire by their mid-fifties. They're bright—most have earned graduate degrees. They are intelligent, athletic, and mature professionals.

The Air Force is fortunate—and I have been extremely fortunate personally—to have as our Chief an officer who represents the very best of those qualities. Dave Jones has been the kind of partner that would make any Secretary look good.

The Air Force may be a lot of things, but there is one thing we are not and that is "dominated by pilots from World War II." By the end of next year, only four of today's full generals who saw overseas duty during World War II will be left:

George Brown, who commanded a bomb squadron; Bob Dixon, who commanded a photo-recon squadron; Dick Ellis, who commanded a bombardment group; and Mike Rogers, who commanded a fighter squadron.

That's it among the top Air Force leadership.

In 1982, when the B-1 achieves its initial operational capability, we will have *no* general officers who served in World War II. None. They all will have retired.

In case there remains some concern about our desk-bound World War II generals, let me tell you about one who just retired.

Airplanes have been Maj. Gen. Tom Rew's life. In 1942, he entered the Army Air Forces as an aircraft mechanic. Thirty years later, he was commander of the 72d Bombardment Wing on Guam.

By December of 1972, it was clear that the Paris negotiations with the North Vietnamese were at a standstill. On the fifteenth of that month, the President directed the Strategic Air Command to start bombing the Hanoi-Haiphong area, one of the most heavily defended areas in the world, and to keep it up until we had an agreement in Paris.

Three days later, it was time to start. General Rew led the way, in the first B-52, in the first cell, with the first time on target over Hanoi. General Rew flew again from Guam, as he had done three times before in the "Arc Light" attacks. On the thirtieth of December the President announced an end to the bombing. We had an agreement.

A lot of senior officers didn't come back from those raids. A lot of young kids didn't either. We lost fifteen B-52s. But regardless of the political merits of that war, or that decision, when the President said, "Go," General Rew went. So did the others up and down the line.

When I asked him later why, he seemed rather surprised that I would ask. He and his men had drawn their pay for years training for that possibility. When the time came to really risk their lives and earn their pay, they understood what duty meant. Especially that World War II veteran.

For a US Senator—who voted "Yes" on the Tonkin Gulf Resolution to authorize his President to proceed with escalation of that war; whose lack of foresight contributed to those grim nights over Hanoi—to complain about men like General Rew is an act of political flimflam.

I would like to correct the Senator. The Air Force is led by general officers who are young, bright, and dedicated to the best interests of this nation.

If ever there was a need for the Air Force Association, it's now. At the AFA Convention in 1947, our first Chief of Staff, General Spaatz, said that the Air Force would look to AFA "as a major link with the people of the United States, through which it will be possible to insure that the roots of airpower are firmly established and maintained."

No one could say it better. We still look to AFA as that major, vital link. Go out and recruit another member. NOW. He or she doesn't have to be a former blue-suiter, or be in the aerospace business, or live near an air base. All that's required is a serious concern for our future.

Go home and recruit that key local leader who can help maintain our civilian roots. The next generation is counting on you. ■

In remarks delivered at the Convention luncheon in his honor, the Air Force Chief of Staff expressed growing concern over the emphasis the Soviets are placing on military expansion and discussed the implications of US strategic posture alternatives . . .

The Soviet Threat and US Strategic Alternatives

BY GEN. DAVID C. JONES
USAF CHIEF OF STAFF

IT IS A privilege to be with you today in this, the thirtieth year of AFA's great service to our nation. On behalf of the Air Force, I want to thank all of the top Air Force Association leadership and all the members for another great year of support for the cause of national security and the mission of the United States Air Force. I also want to congratulate the award recipients for your exceptional achievements and to extend my thanks to the Outstanding Airmen who were recognized last night. You are indeed the "best of the best."

Those of you who heard my remarks last year will recall that my address conveyed a tone of optimism. I spoke of our Air Force being the best in the world and, in my judgment, we're still number one in the quality of our systems and our people. However, across the broader sweep of total military capability of the US and the USSR, the trends which have become more evident in the past year have me deeply concerned. Although the FY '77 Defense Budget showed some growth and arrested some unfavorable downward trends, such as declining aircraft procurement, an overall perspective of the strategic balance presents a picture with serious policy implications for the future of our country.

The Growing Threat

My report to you this year must begin with a warning I will express in stark terms: I believe the momentum and the direction of growth in Soviet power represent the greatest potential threat to our survival as a nation since the Civil War. I don't imply an imminent danger of attack, for I consider that highly unlikely and, in any event, unnecessary if the Soviets can achieve their aims through indirection. The danger is more subtle than that and is composed of many elements only now beginning to come into sharper focus.

The most visible element is the inexorable buildup of the most potent strategic arsenal in history, exceeding ours in sheer destructive power by a factor of two to one. Compounding the hazards of such a margin is the greater vulnerability of our highly concentrated population and industrial centers, compared to the more dispersed pattern in the USSR.

Earlier this year, I reported to Congress that not since Germany's rearmament in the 1930s has the world witnessed such a single-minded emphasis on military expansion by a major power. Despite repeated agricultural shortages, a chronically underdeveloped consumers' goods industry, and an economic base roughly half the size of our own, the Soviet drive for military preponderance shows no signs of slackening.

We have long been justifiably proud of the great industrial capacity of the US, both in terms of peacetime output and in terms of our potential to switch rapidly to defense production in wartime. But we ought to recognize two facts about relative industrial capabilities. First, Soviet industry has been concentrated so heavily in turning out implements of war that, even today, they are outproducing the US in modern weapon systems by a wide margin in a number of key areas. Second, with this "head start" in weapon production capacity, it would be difficult to match their capacity in wartime without a lengthy period of mobilization and conversion. In a crisis, therefore, our larger but more diversified industrial base might not be as decisive a factor as the conventional wisdom calculates.

To these observations must be added two additional dimensions which have been receiving increased attention in the past year. The first is greater awareness of the wide gulf between Soviet civil defense preparations and our own. Many experts believe this program bears out in practice the long-standing rhetorical position in Soviet policy that nuclear war is both thinkable and survivable—even capable of producing a

The Chief of Staff told a luncheon audience that he believes strategic superiority, or at the least equivalence, is the only course for the US to follow.

victor. The USSR annually spends more than $1 billion equivalent in this area. The Soviet Civil Defense Ministry has a permanent organizational staff of some 72,000 people.

Civil defense is an integral component of all their national urban-industrial planning. Through such measures as dispersion of population and factories, bomb-resistant construction, food stockpiling and rudimentary training for the population beginning in grade school, the USSR has moved light-years ahead of the United States in their potential for withstanding attack and an equivalent effort by the US, particularly in the near term, would be impractical.

Some experts have calculated that these measures could reduce Soviet casualties and damage from a retaliatory strike to a level below those suffered during World War II. Whether or not the calculations are valid, the point is that, if the Soviet leadership accepts them as fact, and the stakes were high enough, this disparity could reduce many of the constraints on Soviet expansionism and provide them significant leverage in an eyeball-to-eyeball confrontation.

Although strong civil defense measures are entirely consistent with Soviet history, experience, and policies, a second historically less characteristic feature of their military forces is becoming ever more evident, namely an increasing emphasis on offensive capability to include an unprecedented ability to project forces beyond her shores. Most military forces contain a mix of offensive and defensive elements. The Soviets have long stressed mass, armor, and firepower in their doctrine; however, their air and naval forces have traditionally been devoted to national airspace and coastal defense.

In the past several years, however, we have noted a profound shift in the character of Soviet systems—

tactical air, reconnaissance, long-range aviation, and strategic airlift—toward greater range, payload, and sophisticated avionics. These are features required of an air force designed for projection and employment outside national airspace. Moreover, you have all read of the "blue water" naval capability, which also shows steady growth. The Soviet Navy has already deployed the first of several aircraft carriers under construction. Their antiship capability from on, over, and beneath the sea could pose a serious challenge to our ability to maintain our sea lines of communication. Finally, this expanded projection capability is being further strengthened as the tentacles of an active air and naval support base structure gradually begin to take hold beyond the Eurasian land mass.

Taken individually, these signs would not necessarily be cause for deep concern. However, as recent manifestations of a broader pattern of attempts to extend Soviet influence, combined with the dramatic growth in Soviet strategic offensive power, they serve as persuasive evidence that we are witnessing a nation whose governing ideology presupposes world domination and whose military capability is being structured to back up this aim.

This strategic buildup has been progressing at a muted but steady pace for years. In the 1960s, many apologists for Soviet ambitions claimed the USSR was not trying to match the US in strategic capability, only trying for an assured destruction posture for deterrence purposes. Later, in the early '70s, many of these same observers argued that the Soviets were only seeking parity with the US. Some went so far as to suggest that the US was somehow responsible for an "arms race," and that if we showed "restraint," the Soviets would do likewise.

My reading of the evidence differs sharply from this view. I believe the US has exercised remarkable restraint, both in its deployment of strategic weapons systems and in its use of the power those weapons supported. Our present status of rough equivalence is partially a consequence of several self-imposed, as well as negotiated, limitations. However, in a comparative sense, the Soviets were in high gear while, until recently, we were slowing down.

'... all the signs convince me that the Soviet Union is presently carrying out an explicit design to seize superiority in *strategic weaponry,* as well as local conventional superiority in certain *strategic areas* of the world.'

While I recognize the impossibility of gauging intentions with a high degree of certainty, all the signs convince me that the Soviet Union is presently carrying out an explicit design to seize superiority in *strategic weaponry,* as well as local conventional superiority in certain *strategic areas* of the world. Arguments to the contrary by wishful thinkers are growing increasingly threadbare as the patterns of Soviet deployment and behavior become clearer.

I would reemphasize that the major peril as I see it is not a "bolt-from-the-blue" attack, but an increasing boldness and, backed by the might of the military force, an increasing willingness to take risks in direct proportion to the Soviet leadership's perception that the risks are small and our capability to respond circumscribed.

It is this backdrop of clear and present danger to the future security of our country which, in my view, lends an Alice-in-Wonderland sense of unreality to much of what passes for "strategic debate," centered on the need for the B-1 bomber and other strategic weapons systems. Arguments ricochet around without ever coming to grips with what I consider the core question: What strategic posture do we as a nation consider appropriate for our desired world role? My greatest concern is that the search for a cheaper defense could "back us into" a strategic posture that we really don't want—and wouldn't select if the options were laid out for conscious choice.

The Strategic Choices

The United States has a choice of three clear-cut alternatives in selecting a strategic posture—superiority, equivalence, or inferiority. Each carries its own distinctive set of benefits, risks, opportunities, costs, and force structure. Most of the debate, however, centers on costs in general and specific weapon systems in particular, both of which ought to be the products rather than the determinants of which option we choose. Let me lay out in simple terms the choices as I see them.

First, **strategic superiority.** The US held a strategic monopoly at the

close of World War II and maintained superiority for a number of years thereafter. Although this preeminence by itself couldn't solve all our security problems, this period of strategic superiority was the era of greatest international influence in US history. The US has both the technology and the industrial base to reestablish superiority if that became a national goal. I emphasize that this superiority should not be taken to imply a disarming first-strike capability, for neither side has that potential.

The second option, **strategic equivalence,** has been national policy for a number of years and is the explicit basis for SALT. Many different terms are used to express the current balance: rough (or essential) equivalence, equilibrium, balance of power, parity, and so forth. The underlying principle of current policy is not to maintain precise parity in every category of strategic weaponry, but to keep an aggregate balance. Equivalence between such dissimilar strategic arsenals is much harder to judge than either superiority or inferiority. It has been compared to keeping your end of the teeter-totter level, rather than at either extreme.

Finally, **strategic inferiority.** Some people believe that maintaining parity is not required or even relevant. We need only an assured capability under all circumstances to kill X percent of the Soviet population and destroy Y percent of their industrial capacity—anything beyond this is "overkill." Often called Minimum Assured Destruction, this strategy is neat, simple, and seductively appealing.

Advocates of this strategy believe that you can calculate quite precisely what is required, and that the smaller force requirements save money. Supposedly, you don't have to worry about what the enemy is doing except to ensure that he can't destroy your "assured weapons."

Recall that during the 1962 Cuban missile crisis, the Soviets had what amounted to an assured destruction capability, for they could have wrought devastating loss of life and property in a nuclear exchange. But in the face of overwhelming US strategic (and local conventional) superiority, *they* were the ones to "blink." Advocates of a minimum assured destruction strategy generally overlook the likely consequences if these roles were reversed in any future crisis, particularly one involving a distant challenge to a vital US interest where the Soviets well could have a local advantage.

Even if you take an optimistic view of where the current balance *stands,* there can be little question of how it has *shifted.* Depending on the weight one attaches to various elements in the equation, reasonable and well-informed people can disagree about today's equilibrium. If you believe throw-weight and megatonnage are more important, you'll see it one way; if you put greater stock in accuracy and numbers of deliverable warheads, you'll come to a different conclusion.

However, regardless of how you appraise the balance as seen in a snapshot view at this moment, I believe our main concern must be with the future. The main reason is that most of our advantages rest heavily on perishable "betters"; theirs lie heavily on the more durable "mores." For example, the large Soviet throw-weight advantage means they can deploy more warheads than we can, and they may well be moving in this direction.

We should bear in mind that in defense, as in nature, there are no rewards or punishments—only consequences. The decisions reached in 1976 will have consequences extending far into the future, consequences which ought to be examined, judged and, insofar as possible, controlled. A democracy has a perfect right to select whatever course it wishes—superiority, equivalence, or inferiority.

In my judgment, superiority, or at least equivalence, is the only rational course for this nation to follow. American strategic inferiority would pose too many destabilizing political and military risks, and, if history is any guide, would remove *any* incentive for the Soviets to negotiate reciprocal reductions in strategic arms.

This year's budget has arrested the trend of ever-declining resources for national defense. However, the nation cannot regain lost momentum in a single year or with a single budget. If we are to remain committed to maintaining at least strategic equivalence, we must increase the pace at which we modernize our position of unassailable strength. I believe this audience shares my view that our future security depends on combining negotiations with readiness, backed by an array of forces with great versatility, flexibility, and reliability. This imperative is the principal basis for the Air Force's continued advocacy of modernizing all legs of the strategic triad and, in the near term, pressing ahead with the production of the B-1 bomber.

Although my message today has been one of concern, I've never been an alarmist and I don't equate storm warnings with abandoning the ship. The future is ours to shape if we as a nation have the vision, the will, and the constancy to discern and act on the right choices. Our destiny can be shaped by people such as you and I, groups and organizations and governments, acting with clear purpose and unshakable resolve that our values of freedom will not be permitted to lapse into whispered memories. Our contributions must be not as the pebble dropped into the pail, which causes ripples for a time, but changes the water level only marginally. Rather, it must be as drops of ink which, though small, diffuse and change the complexion of the medium permanently.

I thank the members of the AFA for your magnificent record of success in this endeavor and look forword to your continued support in the days ahead. ■

AWARDS AT THE 1976 AIR FORC

AFA's AEROSPACE AWARDS

The H. H. Arnold Award (AFA's highest annual award)—To the Hon. Barry M. Goldwater, for his leadership, above and beyond his responsibilities as a member of the Senate Committee on Armed Services, in applying his knowledge to maintaining a viable military posture; for articulation of national security requirements to the Congress and the American people; and for his commitment to the status and well-being of military men and women.

The David C. Schilling Award ("The most outstanding contribution in the field of Flight")—To Capt. Donald R. Backlund, 1551st Flying Training Squadron, Kirtland AFB, N. M., and Capt. Roland W. Purser, Hq., Aerospace Rescue and Recovery Service, Scott AFB, Ill., for superior leadership and airmanship as aircraft commanders of helicopters participating in the Marine assault on Koh Tang Island and in repeated rescue missions, despite intense ground fire, during the recovery of the S. S. *Mayaguez* off the coast of Cambodia.

The Theodore von Kármán Award (The most outstanding contribution in the field of Science and Engineering")—To the NASA/industry team represented by NASA Viking team leader James S. Martin, Jr., and Martin Marietta Corp.'s Thomas G. Pownall, for one of the most striking technological achievements in the history of science—design of the Viking I, its landing on Mars eleven months after launch, and examination of the planet's chemical composition and geological history.

The Gill Robb Wilson Award ("The most outstanding contribution in the field of Arts and Letters")—To Michael Collins, Director, National Air and Space Museum, Washington, D. C., for imaginative and innovative leadership in making the nation's new Air and Space Museum truly a work of art and an inspiration to all Americans.

The Hoyt S. Vandenberg Award ("The most outstanding contribution in the field of Aerospace Education")—To the Hon. David P. Taylor, Assistant Secretary of Defense (Manpower & Reserve Affairs), for invaluable leadership, as Assistant Secretary of the Air Force for Manpower and Reserve Affairs, in achieving degree-granting authority for the Community College of the Air Force, thereby enhancing educational opportunities for enlisted members of the Armed Services *(to be presented at an AFA function at a later date).*

The Thomas P. Gerrity Award ("The most outstanding contribution in the field of Systems and Logistics")—To Col. James A. MacDougald, Deputy Commander for Maintenance, Air Defense Weapons Center, ADCOM, Tyndall AFB, Fla., for leadership and professionalism in logistics management to enhance aircrew training while Deputy Commander for Maintenance, Air Defense Weapons Center.

AFA CITATIONS OF HONOR

Air Force Human Resources Laboratory, AFSC, Brooks AFB, Tex., for the development and application of new educational procedures for undergraduate and aircrew flight training to increase operational effectiveness and improve the utilization of human resources (accepted by Col. Dan D. Fulgham, Commander).

TSgt. Larry E. Bryant, Range Group, Nellis AFB, Nev., for comprehensive research and design, accomplished on his own time, for the production of equipment that has increased significantly the training capability of the Nellis Range Complex at minimum cost.

Robert G. Carr, San Angelo, Tex., for dedicated service to advancing the cause of airpower, culminating in the establishment of a substantial endowment for Air Force ROTC cadets at Angelo State University *(to be presented at an AFA function in Texas at a later date).*

James E. Hoffman, Personnel Computer Systems Analyst, AFMPC, Randolph AFB, Tex., for significant improvements to the Advanced Personnel Data System, for which AFA has named him Air Force Civilian of the Year.

Maj. Larry J. Hudack, Space and Missile Systems Organization, Los Angeles, Calif., for outstanding individual effort as Chief of the Design Technology Branch, SAMSO, in directing a broad range of research programs on nose-tip design of reentry vehicles leading to the application of new concepts and use of new materials.

The Judge Advocate General's Department, Washington, D. C., for creating and implementing the first major preventive law program in the nation (accepted by Maj. Gen. Harold R. Vague, Judge Advocate General).

Ishmael W. Lowe, Manager, Ent AFB, Colo., Officers' Club, for outstanding management of Ent's Officers' Open Mess, for which AFA has named him Air Force Club Manager of the Year.

Maj. Gen. Charles F. Minter, Sr., Asst. Deputy Chief of Staff (Systems & Logistics), Washington, D. C., for decisive leadership in directing Air Force participation in Operation Newlife, which brought more than 130,000 persons from Vietnam to the US in one of modern history's largest refugee movements.

Capt. John T. Robertson, 1st Aerospace Communications Group, Offutt AFB, Neb., for exercising initiative, talent, and leadership in improving the reliability and responsiveness of computer software operations within the SAC Automated Command and Control System.

Howard Silber, Military Affairs Editor, *World Herald,* Omaha, Neb., for consistent and effective contributions to public understanding of national defense issues through reporting in print and broadcast *(to be presented at an AFA function in Omaha at a later date).*

Capt. John C. Souders, Jr., School of Engineering, AF Institute of Technology, Wright-Patterson AFB, Ohio, for creative and penetrating nuclear safety analysis of both the Viking and LES space systems, and of advancing the state of the art of nuclear safety analysis by developing a new streamlined methodology for simulating malfunctions.

Hq. TUSLOG, for implementing an internal communications program in Turkey that played a major role in maintaining the morale and stability of US military and civilian personnel during an international crisis (accepted by Maj. Gen. William H. Ginn, Jr., Commander).

The Utah State AFA, for developing and coordinating a statewide program for Utah AFA Chapters, in concert with the national Bicentennial program (accepted by James Taylor, President, Utah AFA).

Capt. Lewis M. Weigand, School of Applied Aerospace Science, Lowry AFB, Colo., for major contributions to the development of ATC's Mission Applications Seminar program, which relates each Air Force job specialty to the role of the Air Force in meeting the Soviet threat.

Sgt. Allen L. Wolf, 48th Combat Support Group, for outstanding performance as Base Career Adviser, Consolidated Base Personnel Office, RAF Lakenheath, UK, for which AFA has named him Air Force Personnel Manager of the Year.

AFA MANAGEMENT AWARDS FOR SYSTEMS

AFA Distinguished Award for Management—To Maj. Gen. Robert C. Mathis, Wright-Patterson AFB, Ohio, for outstanding managerial skill and leadership as Deputy for F-15/Joint Engine Project Office, Aeronautical Systems Division, during 1975, contributing significantly to the military posture of the United States.

AFA Meritorious Award for Program Management—To **Col. William E. Thurman,** Wright-Patterson AFB, Ohio, for exceptionally meritorious service as Program Director, F-16 Systems Program Office, directing the unprecedented and timely development of the Air Combat Fighter from its prototype phase to a multinational, technologically superior fighter aircraft program, contributing immeasurably to the strengthening of NATO ties.

AFA Meritorious Award for Support Management—To **Col. Merton W. Baker,** Vice Commander, AF Contract Management Division, Kirtland AFB, N. M., for exceptionally meritorious service in support management to various major weapon systems program offices of the Department of Defense.

AFA MANAGEMENT AWARDS FOR LOGISTICS

AFA Executive Management Award—To **Col. Kenneth R. Milam,** Kelly AFB, Tex., for outstanding performance as Director of Maintenance, San Antonio Air Logistics Center, providing leadership resulting in USAF naming his Directorate the Most Outstanding Depot Maintenance Service Activity.

AFA Middle Management Award—To **James P. Waltz,** Manager, Civil Engineering Energy Conservation Program, Wright-Patterson AFB, Ohio, for outstanding professionalism and mechanical engineering expertise, particularly evidenced in a highly significant feasibility demonstration of the use of Refuse Derived Fuel, a first of its type in the US.

AFA Junior Management Award—To **Capt. Terence C. Spratlen,** Materiel Safety Officer, Ogden ALC, Hill AFB, Utah, for outstanding employment of his knowledge in logistics maintenance and management, to significantly improve the Materiel Safety Program, resulting in major contributions to logistics support worldwide for both the F-4 and F-101 aircraft.

AIR NATIONAL GUARD AND AIR FORCE RESERVE AWARDS

The Earl T. Ricks Memorial Award—To 1st Lt. Thomas Gorman, 102d Fighter Interceptor Wing, Massachusetts ANG, Otis AFB, Mass., for professional and outstanding airmanship during an F-106 flight on November 5, 1975.

The Air National Guard Outstanding Unit Award for 1976—To the 161st Air Refueling Group, Arizona ANG, Phoenix, Ariz. (accepted by Col. Roy A. Jacobson, Commander).

The Air Force Reserve Outstanding Unit Award for 1976—To the 514th Military Airlift Wing (Associate), McGuire AFB, N. J. (accepted by Brig. Gen. James E. McAdoo, Commander).

The President's Award for the Air Force Reserve—To a crew of the 514th Military Airlift Wing (Associate), McGuire AFB, N. J. (accepted by Capt. James R. Polizzo, Aircraft Commander). The award recognizes the year's outstanding Air Reserve flight crew.

SPECIAL CITATION

USAF Band and Components—For appearing before more than 500,000 US citizens during our nation's Bicentennial celebration and as the first major US military band to have presented concerts in each of our fifty states (accepted by Col. Arnald D. Gabriel, Commander).

Sen. Barry M. Goldwater (R-Ariz.) receives AFA's highest honor, the H. H. Arnold Award, naming him "National Security Man of the Year," from AFA President George M. Douglas.

AFA President Douglas (left) presents the Schilling Award to helicopter pilots Capts. Donald Backlund and Roland Purser for heroism off the coast of Cambodia. In the foreground: AFA Board Chairman Joe Shosid and AF Secretary Thomas Reed.

Michael Collins, Director of the new National Air and Space Museum, accepts the Gill Robb Wilson Award from Mr. Douglas.

Advanced electronics and traditional exhibits of new aircraft and engine technology drew record crowds to AFA's . . .

1976 Aerospace Development Briefings and Displays

THE 1976 version of AFA's Aerospace Development Briefings and Displays, the major running show staged during the 30th Anniversary Convention, was another sellout. New records were set for attendance and industry participation.

Almost 32,000 square feet of display space was used by more than fifty companies (*see accompanying list for names*). Forty-four different briefings were attended by more than 5,000 guests. Almost 400 of these were classified as VIPs, including general officers from all services, distinguished visitors from other countries, and high-ranking civilians. There were representatives from twenty-one government offices and thirty-nine other US government agencies and departments, ranging from the US Army to the Office of Education.

Much of the emphasis this year followed the trends in technological advances. The new electronic wonderworld was unveiled in greater detail than ever before. Guidance, radar, data processing, command and control, navigation, and targeting systems were common subjects for discussion. They vied, of course, with the more traditional exhibits, featuring new aircraft and engine advances.

Both industry and military participants reported a high level of interest. The AFA effort, by now a fixed feature of each annual convention, has become the major showcase for demonstration of aerospace industry progress. ■

The F-15 Eagle was highlighted in both the McDonnell Douglas and Hughes Aircraft areas of the exhibit hall.

A group at the Raytheon Sparrow missile display. Overall briefing attendance was up sharply from 1975.

Visitors to the IBM exhibit saw some of the latest electronic gear used in many advanced USAF aircraft.

El Al Airlines President M. Ben-Ari and Israeli Transportation Minister Gad Yaakobi (left and center in dark suits) examine a model of the F-16 at the Pratt & Whitney display. They were among nearly 400 important foreign visitors to the exhibits.

Aerospace Industry Roll of Honor

Companies Represented at the 1976 Aerospace Development Briefings and Displays

Bell & Howell Datatape Div.
High-Density Digital Magnetic Tape Recording

Bell System
Total Communications/Total Responsibility

Bendix Corp., Aerospace-Electronics Group
Selected Advanced Aerospace Products

Boeing Aerospace Co., Military Airplane Development
U.S. Mobility Enhancement Potential with ATCA and AMST

Bunker Ramo Corp.
The AM/GYO-21(V) Interactive Analysis Systems

Emerson Electric Co., Electronics and Space Div.
APQ-159(v) Improved Radar and Automatic Test Equipment for Avionics

Fairchild Industries, Inc.
A-10 Close-Support Aircraft

General Dynamics Corp.
Status Report on F-16 Air Combat Fighter

Grumman Data Systems Corp.
B-1 Flight Test Data Processing

General Electric Co.

Aircraft Engine Group
GE Transport Engines for the Air Force

Aircraft Equipment Div.
Multibarrel Gun Technology and Redundant Digital Flight Control Systems

Space Div.
Computer Generated Images Update '76

Hoffman Electronics Corp.
Tactical Navigation

Hughes Aircraft Co.
F-15 AN/APG-63 Radar

IBM, Federal Systems Div.
Advanced Aerospace Technology and Systems for the Future

ITT Gilfillan
Air Defense Radar Systems for the Eighties

Israel Aircraft Industries
Services of Israel Aircraft Industries' Bedek Aviation Div.

Lear Siegler, Astronics Div./Instrument Div.
RPV Modular Core Avionics and Navigation/Weapons Delivery Systems

Litton Systems, Inc., Guidance and Control Systems Div.
Standard Inertial Navigation System

Lockheed Aircraft Corp.
Advanced Research and Technology at Lockheed . . . An Investment in the Future

Marconi-Elliott Avionic Systems Ltd.
Proven Advanced Digital Avionics

Martin Marietta Aerospace
Airborne Laser Target Acquisition
Building a Technology Base for Advanced Strategic Air-Launched Missile Systems
The Missile Maker

McDonnell Douglas Corp.

Douglas Aircraft Co.
DC-10 Advanced Tanker Cargo Aircraft and YC-15

McDonnell Aircraft Co.
F-15 Eagle

McDonnell Douglas Astronautics Co.
Air-Launched Cruise Missile (ALCM)

Northrop Corp., Aircraft Div.
F-5E Tiger II Challenges TAC's Best Fighter Pilots

Pratt & Whitney Aircraft Group
Nothing Up Our Sleeves But Dependable Power

Aircraft of West Virginia
The JT15D—The Quiet One

Raytheon Co.
Sparrow AIM-7F—Performance and Reliability

Rockwell International

B-1 Div.
The B-1 Is Production Ready

Collins Radio Group
Collins Airborne and Satellite Systems

Los Angeles Aircraft Div.
NASA HiMAT, HAC, Advanced Bonding and Forming Technology

Missile Systems Div.
GBU-15 Modular Guided Weapon System and Remotely Piloted Vehicles

Space Div.
DoD NAVSTAR GPS Satellite Program and the Space Shuttle

Strategic Systems Div.
MICRON Strapdown Inertial Navigator Nuclear Hardened B-1 Plated-Wire Memory

Rolls-Royce Aero Engines, Inc.
Engine Development Progress Report from Rolls-Royce

Rosemount Inc.
The Evolution of Air Data Sensors

The Singer Co., Kearfott Div.
Advanced Fighter Terminal for Application to JTIDS

Sperry Flight Systems
Avionics for Today's Air Force

TRW Defense & Space Systems Group
What's Out There in Space?

Westinghouse Defense and Electronic Systems Center
The Evolution of Airborne Radar Technology

Williams Research Corp.
Turbofan Powered Air-Launched Cruise Missile

The following companies displayed products, but did not hold briefings:

Aerospace Education Foundation
USAF Training Systems Modified for Use in Civilian Settings and Applications

AGA Corp.
Realtime Infrared Imaging Systems of FLIR Type

Beech Aircraft Corp.
Missiles, Targets, and Aircraft Supporting USAF

Bell Helicopter Textron
Helicopter Concepts Applicable to Current and Future USAF Missions

Delco Electronics Div., GMC
Navigation and Guidance Equipment, Fire Control Systems, and Stores Management

E-Systems, Inc.
Advanced Airborne Command Post Program (E-4AB), Secure Communications, Telecommunications, TACAN Navigation Systems, Tactical Airborne Radar

Grumman Aerospace Corp.
Composite Structures, Training Systems, Electronic Warfare, and Advanced Tactical Fighter

Honeywell Inc., Government and Aeronautical Products Div.
Ring Laser Gyro Technology

Jane's/Franklin Watts, Inc.
The Internationally Renowned Series of "Jane's" reference books

McDonnell Douglas Electronics Co.
VITAL—Flight Simulation System, F-15 HUD, Data Display Sets for Film Annotation, Radar Homing and Warning Trainers, and Digital Readout Pressure Testing Equipment

Northrop Electro-Mechanical Div.
LATARS, Podded FLIR System, LTDS, Missile Display, Optical Element Display

Olympus Corp. of America/Industrial Fiberoptics Div.
Fiberoptic Inspection Instruments

Sanders Associates
ALQ-137 Airborne ECM System, Defensive Displays for B-1, Lightweight Low-Cost ECM

Sierra Research Corp.
Advanced Electronics Systems for Application in both Government and Industry

Sundstrand Data Control Inc.
Ground Proximity Warning System MKII, A-10 Gunsight, Tape Transport Unit

Tektronix, Inc.
Interactive Graphics System featuring both Ruggedized and Nonruggedized Equipment

Foreign exhibitors drew large crowds during the three-day event.

An attentive audience listens to a McDonnell Douglas briefer as a giant model of the company's new YC-15 STOL transport is refueled overhead.

Boeing Co.'s Advanced Tanker/Cargo Aircraft (foreground) and its YC-14 STOL transport display (rear) drew interested observers from the military.

Gen. David C. Jones, Air Force Chief of Staff, receives a personal briefing by one of the fifty exhibitors.

Lear Siegler, Inc., used the game of tic-tac-toe to simplify the intricacies of avionics for some of the more than 5,000 guests who attended this year's AFA-sponsored briefings and displays.

A highlight of the Convention was the banquet honoring the twelve Outstanding Airmen for 1976, whose all-around excellence established them as . . .

USAF'S FINEST

ONE BY one, the twelve airmen, each dressed in Air Force formal elegance, stepped into the spotlight and strode confidently to the dais. You could tell by looking at them that they were something special. Their beaming faces and proud cadence showed it. The Air Force Association was honoring them, at its annual convention, as the Outstanding Airmen for 1976. For the twenty-first time, AFA thus symbolically paid tribute to the entire USAF enlisted force.

Of the hundreds of thousands of airmen who have served in the United States Air Force since 1955, only 354 have earned the distinction of being named Outstanding Airmen. This year's odds for selection were roughly 50,000 to one.

Master of ceremonies for the banquet, held in the posh Regency Room of the Shoreham-Americana Hotel in Washington, D. C., on September 20, was Chief Master Sergeant of the Air Force Thomas N. Barnes. The USAF's top enlisted man praised the accomplishments of this year's distinguished dozen, both on the job and off duty: "Such dedication and professionalism helped earn these people honors, such as 'Outstanding Airman of the Year,' at squadron, base, command, and Air Force level."

The featured speaker, Air Force Vice Chief of Staff Gen. William V. McBride, lauded the Outstanding Airmen for their "inspiration, dedication, and cooperation." General McBride also recognized the important contributions to the Air Force mission made by parents, and, in particular, spouses. "They are such an important part of our Air Force team," said General McBride, "adding a very special strength to their husbands, and at the same time making great personal contributions."

AFA President George M. Douglas, elected earlier in the day for a second term, summarized the feelings of the audience. "You twelve Outstanding Airmen represent the best in our people. You inspire others because you aspire to do more . . . better . . . than was done before."

The Bicentennial Year Outstanding Airmen represented a cross-section of Air Force major commands and specialty codes. Eight major commands, one separate operating agency, and Hq. USAF were represented, with two airmen each from the Military Airlift Command and Tactical Air Command, and one apiece from Aerospace Defense Command, Air Force Systems Command, Air University, Headquarters Command (now 76th Air Division), Strategic Air Command, USAF Security Service, Air Force Reserve, and Hq. USAF. Security police specialties dominated, with three chosen (*see box for names, ranks, and unit of assignment at time of selection*).

Four of the group have at least a bachelor's degree and one a master's; ten are married and have a total of twenty-six children; and one of the airmen is a woman. Their grade spread is well distributed. There are (or soon will be, due to upcoming promotions) three chief master sergeants, four master sergeants, two technical sergeants, and one each staff sergeant, sergeant, and senior airman.

A combination of professionalism and after-duty dedication to civic and humanitarian projects paved the way to their becoming Outstanding Airmen. One developed programs to support social actions. Another is a nuclear electronics expert who held a position normally filled by an officer. The group included a top F-15 Eagle crew chief who happens to be a woman, and one who actively supported efforts to resettle Vietnamese refugees, even becoming a foster parent to a ten-year-old Vietnamese. Another counseled teenage drug and alcohol users. Still another developed improved security procedures for weapons storage. Another performed unique groundwork in unit communications management that was later adopted for worldwide application. One was heavily involved in directing sports and recreational activities. There was a program manager and project

BY MAJ. TERRY A. ARNOLD, USAF, CONTRIBUTING EDITOR

Sr. Amn. Marno Hansberry discusses her role as an F-15 crew chief with General McBride.

TSgt. Donald E. Miller began his week of VIP tours and special honors at the National Air and Space Museum.

SMSgt. Willard P. Anderson has been an active supporter of Scouting programs at Maxwell AFB. Here he helps with one of this year's many scouting projects.

MSgt. Douglas Chism and his wife Cheryl greet Secretary of the Air Force and Mrs. Thomas C. Reed in the formal receiving line.

Touring the ancient city of Maastricht in the Netherlands is an activity enjoyed by SSgt. David Mickelson and his family.

THE OUTSTANDING AIRMEN FOR 1976

SMSgt. (CMSgt. selectee)
Willard P. Anderson
USAF Leadership and Management Development Center (AU)
Maxwell AFB, Ala.

MSgt. Douglas D. Chism
6510th Security Police Sqdn. (AFRES)
Edwards AFB, Calif.

Sr. Amn. Marno J. Hansberry
57th Organizational Maint. Sqdn. (TAC)
Nellis AFB, Nev.

MSgt. Joseph L. Hardy
605th Military Airlift Sprt. Sqdn. (MAC)
Andersen AFB, Guam

MSgt. Ricardo Inzunza
Off., Dir. of Personnel Planning (Hq. USAF)
Washington, D. C.

TSgt. Ronald J. Krasko
93d Security Police Sqdn. (SAC)
Castle AFB, Calif.

CMSgt. Richard A. Lema
McClellan Central Lab (HQ COMD)
McClellan AFB, Calif.

TSgt. (MSgt. selectee)
Dale A. Lucas
6917th Security Sqdn. (USAFSS)
San Vito dei Normanni AS, Italy

SSgt. David P. Mickelson
753d Radar Sqdn. (ADCOM)
Sault Ste. Marie AFS, Mich.

TSgt. Donald E. Miller
USAF Special Operations School (TAC)
Eglin AFB Auxiliary Field No. 9, Fla.

CMSgt. Wesley H. Smith
AF Armament Lab (AFSC)
Eglin AFB, Fla.

Sgt. Kenneth A. Thompson
436th Avionics Maintenance Sqdn. (MAC)
Dover AFB, Del.

ast and present aerospace developments ere viewed by CMSgt. Wesley H. Smith uring his tour of the Air and Space Museum.

e of this year's Outstanding Airmen, gt. Dale A. Lucas checks communications uipment with a co-worker.

rking with top Air Force officials in devel- ng Hispanic programs is part of MSgt. ardo Inzunza's job in Washington.

engineer who helped develop one of USAF's most sophisticated weapons. All were active in church, youth, or civic activities.

Providing entertainment for the star-studded audience at the Outstanding Airmen dinner was the USAF Band's Strolling Strings. A highlight of the evening was a talented song and dance team called the Young Columbians, from the nearby new city of Columbia, Md., who presented a musical review of American history. Both groups received standing ovations.

In addition to the banquet, the Outstanding Airmen and their families were given VIP tours of Washington, including visits to the new National Air and Space Museum, Capitol Hill, the White House, Arlington National Cemetery, the Pentagon, and the Kennedy Center for the Performing Arts. ■

TSgt. Ronald Krasko takes time out from his normal duties to certify his small-arms proficiency.

Recognized for superior performance, CMSgt. Richard A. Lema is considered an electronics and management expert.

Now a Cadet Candidate at the USAFA Prep School, Sgt. Kenneth A. Thompson tours the new Air and Space Museum.

MSgt. Joseph L. Hardy played a key role in the successful evacuation of thousands of Vietnamese refugees.

Members of Congress and their key staff aides had a chance to discuss pressing defense issues in an informal atmosphere with AFA, government, industry, and Air Force leaders at this year's fourth annual . . .

AFA Salute to Congress

Secretary of Defense Donald H. Rumsfeld, left, guest of honor at the Chief Executives' Buffet and Salute to Congress, confers with AFA National President George M. Douglas.

DESPITE a late evening session on Capitol Hill, more than 100 members of Congress and key congressional aides attended AFA's Annual Chief Executives' Buffet and Salute to Congress on Tuesday evening, September 21, in the Sheraton-Park's Cotillion Room.

With Secretary of Defense Donald H. Rumsfeld as the guest of honor, the Capitol Hill dignitaries joined more than 500 AFA, government, industry, and Air Force leaders at this annual function.

In addition to Secretary Rumsfeld, other Department of Defense guests included Air Force Chief of Staff Gen. David C. Jones, Air Force Vice Chief Gen. William V. McBride, several Air Force assistant secretaries, and a number of major air commanders.

This fourth consecutive stand-up buffet provided AFA national, state, and chapter leaders and their Capitol Hill guests an opportunity to discuss many issues in an informal atmosphere.

Newly reelected AFA President George M. Douglas introduced Secretary Rumsfeld to the overflow crowd. The Secretary's brief but important remarks are summarized on p. 25. ■

Joining USAF Chief of Staff Gen. David C. Jones are AFA National Directors Herbert O. Fisher, left, of Kinnelon, N. J., and Judge John G. Brosky of Pittsburgh, Pa.

Sen. Frank E. Moss (D-Utah) interrupted a black-tie engagement to attend the AFA Salute to Congress. With him are three AFA leaders from Utah, from left, Nathan H. Mazer, an AFA Permanent National Director; James H. Taylor, Utah AFA President; and Jack C. Price, AFA's newly elected National Secretary.

From left are John H. Haire, an AFA National Director from Huntsville, Ala.; Sen. James B. Allen (D-Ala.); Mavis Hicks, Montgomery, Ala., Chapter Secretary; and John Hall, Alabama State Vice President.

Sen. Daniel K. Inouye (D-Hawaii), left, and his host, James Dowling, center, President of AFA's Hawaii Chapter, chat with S. L. Sommer during the Chief Executives' Buffet and Salute to Congress.

From left, Loren Carlson, Administrative Assistant to Rep. Larry Pressler (R-S. D.); Hoadley Dean, Rapid City, S. D., AFA's newly elected Vice President for its North Central Region; and Charles Parkinson, Staff Assistant to Rep. James Abdnor (R-S. D.).

Joining Assistant Secretary of the Air Force (Manpower and Reserve Affairs) Nita Ashcraft are, from left, Martin H. Harris, Winter Park, Fla., outgoing AFA National Secretary and now a Permanent AFA National Director; AFA Director Stanley L. Campbell, San Antonio, Tex.; Air Force Vice Chief of Staff Gen. William V. McBride; and Gerald V. Hasler, Endwell, N. Y., AFA's newly elected Chairman of the Board.

With General McBride are, from left, Bill Roth, President, AFA's Alamo Chapter, San Antonio, Tex.; Alamo Chapter members Jack Kelly, Bev Jacobsen, and Tim Glasgow; and Win Skiles, Administrative Assistant to Sen. John G. Tower (R-Tex.).

AFA's Junior Officer Advisory and Enlisted Councils met at the 1976 AFA Convention to analyze two of the toughest problems facing the Air Force today. The officers tackled the effects of tight budgets on young officers' career progression while the enlisted people conducted research aimed at strengthening communication within their ranks. Both councils worked long and hard . . .

For the Good of the Air Force

BY MAJ. TERRY A. ARNOLD, CONTRIBUTING EDITOR

Chief Master Sergeant of the Air Force Thomas N. Barnes, advisor to the Enlisted Council, listens intently at the opening general session.

THE junior officers and their enlisted counterparts had packed their B-4 bags and headed for home. Conference rooms they had occupied were dark, empty, and quiet. The telltale odor of stale cigarette smoke visibly accented by a few pastry crumbs and coffee spills were mute evidence that someone had been working there. The more than sixty men and women who had been laboring in these rooms for almost five full days were members of the Air Force Association-sponsored Junior Officer Advisory and Enlisted Councils. Both groups had come to work for the good of the Air Force. Their final reports indicate their missions were successfully accomplished.

Held in conjunction with AFA's annual convention in Washington, D. C., and meeting as the Seventh Worldwide Junior Officer Conference, and as the Third Worldwide Enlisted Conference, the councils were put through a gauntlet of work sessions, specialized briefings, tours, and social functions. They had the chance to discuss matters of concern for both young officers and the enlisted force with top Air Force leaders, as well as among themselves. Their main duties, though, were to advise AFA on particular problems confronting their segments of the Air Force and to offer suggestions and recommendations as how best AFA could support solutions. This year's councils tackled two of the toughest problems facing the Air Force. The officers took a hard look at officer career development in an economically stringent environment, while the enlisted council efforts were aimed at strengthening communication within the enlisted ranks.

JOAC's Accomplishments

The Junior Officer Advisory Council (JOAC), formed in 1967 with seven members, has since expanded to include representatives from every major command and separate operating agency. The original seven-person nucleus became the Executive Committee, which serves as the steering committee for the worldwide council meetings. Since its inception, the JOAC has conducted penetrating studies of problems that directly affect young officers. Projects have included developing worthwhile recommendations to improve junior officer status; producing a blueprint for junior officer retention in an all-volunteer force that resulted in forty of the fifty-two recommendations being adopted by the USAF; analyzing patterns for change to make base junior officer councils (JOCs) more responsive to mission-oriented problems; writing a Guide to Effective JOCs; and, along with the Enlisted Council, constructing a slide briefing to tell the Air Force story to civilians, especially those of high school age. Last year's project again teamed the JOAC and the Enlisted Council in an effort to make a good Air Force better by cataloging proven management ideas that had worked well at a local level.

This year, the JOAC analyzed career development by looking at the professional development system, the individual's role in using the system, and his attitudes toward and perceptions of the system. According to JOAC Council Chairman Capt. Monroe S. Sams, each member developed a "position" paper for approval and adoption by the whole membership.

Enlisted Council Progress

The Enlisted Council's emergence closely paralleled the previously established pattern set by the JOAC. This year's council members also were from all major commands and separate operating agencies and

Left: Col. Lyle D. Kaapke explains changes to CCAF policies. Below left: Reviewing position papers was one of many tasks of JOAC conference members. All major commands and separate operating agencies were represented.

came fully prepared to study the selected topic. Earlier in the week, Chief Master Sergeant of the Air Force Thomas N. Barnes said, "I've seen its members grappling with this issue. There are no easy answers, but I am optimistic that the results of their deliberations . . . will lay a solid foundation for alleviating some of the troublesome problems our Air Force faces."

CMSgt. David C. Noerr, Chairman of the Enlisted Council, told AIR FORCE Magazine his group was pretty well ahead of the game when they arrived at the convention. "Each of the members was asked to work on the subject and to submit a report upon arrival for the council sessions. These individual reports," he continued, "were then combined into one overall report for consideration by the council members."

From their discussions, the council recognized that there is a communications problem within the enlisted ranks, that the problem is difficult to quantify and assess, and that it has a direct effect on the mission. NCOs must recognize the existence of the problem before solutions can be identified and implemented. Their report concluded by saying that as the Air Force becomes more complex, a greater emphasis on effective communications is essential to mission accomplishment.

Reports from the two councils were submitted to the Air Force Association for formal consideration and endorsement before forwarding to the Air Force for further study and eventual implementation.

Other Activities

When not working on their projects, both councils received specialized briefings by a battery of top-level Air Force and AFA officials. Briefers included the Honorable Nita Ashcraft, Assistant Secretary of the Air Force for Manpower and Reserve Affairs; Air Force Director of Information Brig. Gen. Harry J. Dalton, Jr.; Director of Air Force Legislative Liaison Maj. Gen. Ralph J. Maglione; AFA President George M. Douglas; and James H. Straubel, AFA Executive Director. Maj. Gen. Bennie L. Davis, USAF Director of Personnel Plans, and Chief Master Sergeant of the Air Force Barnes, advisors to the JOAC and Enlisted Councils respectively, spoke at opening business sessions. The enlisted members also heard a special briefing on latest policy changes at the Community College of the Air Force by its President, Col. Lyle D. Kaapke. The CCAF has recently been authorized to grant associate degrees. Both councils previewed a segment of the Air University's newly developed course at the Leadership and Management Development Center. Briefers were SMSgt. Willard P. Anderson, one of the Air Force's 1976 Outstanding Airmen, and SMSgt. Thomas Wolfe.

The formal 1976 council meetings and worldwide conferences are now part of AFA's history. Members of both councils have returned to their regular Air Force jobs, but they will continue to ferret out and attack problems in an unrelenting effort to make the Air Force an even better place to work and live. ■

JOAC and EC Chairmen Capt. Monroe Sams and CMSgt. David Noerr listen to Brig. Gen. Harry J. Dalton, Jr., discuss USAF information programs.

An exceptionally well done videotape submitted by Clearfield, Utah, High School in this year's AFJROTC contest brought a unanimous decision from the judges, making . .

Clearfield. . . Clearly the Winner

BY ROBIN WHITTLE

CLEARFIELD High School, Clearfield, Utah, was honored at the Air Force Association's September convention as winner of this year's Air Force Junior ROTC contest. For the first time since the contest was begun by AFA's affiliate, the Aerospace Education Foundation, in 1972, final judges were unanimous in selecting the winner of the first-prize $4,000 scholarship.

"The Role of Aerospace in American History" was the contest theme, challenging students to convey to the public through any medium their research and thinking on where the concept and reality of aerospace fits into the American experience. Clearfield submitted a twenty-minute color videotape tracing major aerospace developments "in a clever, highly professional, and very enjoyable way," Foundation President Dr. William L. Ramsey said. "Their use of sophisticated techniques, creative material, and lively, appropriate music showed us they put a good deal of thought, time, and energy into their presentation." The Foundation provided no resource material this year in order to encourage more imaginative thinking and greater flexibility in the way the topic was handled.

Right: Cadet Dianna Sabo has Senator Goldwater's attention as she relates her experiences to luncheon guests. Below: Foundation President Ramsey hands Utah Governor Rampton's message to Cadets Sabo and Flint as Senator Goldwater looks on.

Of eighty-six original entries, twenty-five placed, with one national winner, four runners-up, and twenty honorable mentions. Nationally known experts in pertinent fields weighed the final twenty-five according to content, fulfillment of objective, accuracy of data, ingenuity and originality, excellence and professionalism, technological understanding, and suitability for public education.

Runners-up in the contest used a variety of formats. Choctawhatchee High School, Ft. Walton Beach, Fla., the first runner-up, submitted a sound-slide presentation tracing Lt. Gen. Jimmy Doolittle's famous Tokyo Raid. Their research included an interview with one of the Doolittle raiders. Second runner-up Cambria Heights High in Patton, Pa., entered a sound-slide show that traced major aerospace developments, using original music. West Mecklenburg High, Charlotte, N. C., was third runner-up with a videotape of cadets role-playing famous aerospace leaders from the past such as Charles Lindbergh and Amelia Earhart. Finally, fourth runner-up Lafayette High in Ellisville, Mo., entered an audio presentation tracing man's aerospace adventures from early attempts at flight through the

space age. Dr. Ramsey noted that the Lafayette script was so professionally done "that several of our editors were interested in obtaining the manuscript." All runners-up received plaques, while the twenty honorable mentions received Certificates of Merit.

At a luncheon celebrating the tenth anniversary of Junior ROTC during AFA's national convention, Clearfield Cadet Lt. Col. Dianna Sabo and Cadet Maj. Steven Flint, narrators of the videotape, were honored along with school principal Gayle Stevenson and Junior ROTC instructor Col. Jay Hess. Dr. Ramsey presented the $4,000 check and a plaque suitable for permanent display to Colonel Hess, who made brief remarks, as did Cadets Sabo and Flint, the latter now a student at the University of Utah.

Those attending the luncheon included four of the six final contest judges; representatives from the offices of Sen. Frank E. Moss (D-Utah), Sen. Jake Garn (R-Utah), and Rep. Gunn McKay (D-Utah); members of the Arnold Air Society, an honorary society of ROTC cadets meeting during the Association's convention; members of its auxiliary Angel Flight; AFA's Junior Officer and Enlisted Advisory Councils members; AFJROTC Instructors Conference participants; Army and Navy JROTC guests; CAP guests; members of AFA's National Board and the Foundation's Board of Trustees; and Foundation Board Chairman Sen. Barry M. Goldwater (R-Ariz.). The Hon. Calvin L. Rampton, Governor of Utah, sent congratulations to the Clearfield students.

After Clearfield's winning entry was shown at the luncheon, a standing ovation swept through the audience. Foundation Board Chairman Sen. Barry M. Goldwater (R-Ariz.) then took the podium to congratulate Clearfield. He said America's young people are lucky to be "on the threshold of the greatest era in the history of man." Senator Goldwater, who had been in California for the Space Shuttle rollout, saw in it a challenge to young people. "In the next fifty years," he said, "man will advance more than in all the years in the past." The Senator concluded his remarks by asking the young people to consider the benefit of spending their lives in the blue —in uniform and in the sky.

Colonel Hess and the cadets see aerospace artifacts at the new National Air and Space Museum in Washington, D. C.

During the AFA Convention, the Clearfield cadets toured the new National Air and Space Museum, visited congressional offices, sat in on meetings of AFA's Junior Officer and Enlisted Advisory Councils, and attended luncheons in honor of the Air Force Secretary and Chief of Staff. Their prize-winning videotape, shown continuously during AFA's convention, brought praise from Convention delegates and visitors. ■

AEROSPACE EDUCATION FOUNDATION 1975–76 AFJROTC CONTEST WINNERS

"The Role of Aerospace in American History"

First Place: Clearfield High School, Clearfield, Utah

Award: A $4,000 scholarship and a distinctive plaque for permanent display by the winning unit.

Runners-up (in order):

Choctawhatchee Senior High School, Ft. Walton Beach, Fla.; Cambria Heights Senior High School, Patton, Pa.; West Mecklenburg Senior High School, Charlotte, N. C.; Lafayette Senior High School, Ellisville, Mo.

Award: Plaque for permanent display by the unit.

Honorable Mention:

Upper Heyford American High School, Croughton, England
Vero Beach Senior High School, Vero Beach, Fla.
Belton-Honea Path High School, Belton, S. C.
Berkeley High School, Moncks Corner, S. C.
Unicoi County High School, Erwin, Tenn.
Ottawa Township High School, Ottawa, Ill.
Anderson Union High School, Anderson, Calif.
Ft. Walton Beach Senior High School, Ft. Walton Beach, Fla.
Homewood High School, Homewood, Ala.
S. R. Butler High School, Huntsville, Ala.
Lowell Senior High School, Lowell, Ind.
Midview High School, Crafton, Ohio
Torrejon American High School, Spain
Randolph-Macon Academy, Front Royal, Va.
St. Paul's High School, Covington, La.
General H. H. Arnold American High School, Germany
J. Frank Dobie High School, Houston, Tex.
Del Norte High School, Albuquerque, N. M.
Irmo High School, Irmo, S. C.
Westland High School, Galloway, Ohio

Award: Certificate of Merit

MEETING in the nation's capital at a crucial time in US history, AFA delegates celebrated the thirtieth anniversary of the Air Force Association, analyzed and evaluated many pressing national security issues, and offered recommendations to our leaders in government and in the Congress on action designed to provide our nation with adequate power to maintain world peace.

Entertainment at the Air Force Anniversary Dinner Dance was furnished by the USAF Concert Band and the Singing Sergeants, shown here during the finale of their performance.

AFA's Thirtieth Anniversary Convention opened with the presentation of the colors by the USAF Honor Guard, supported by the USAF Ceremonial Band, both units from Bolling AFB, D. C.

USAF Chaplain (Maj.) Don J. Harlin then conducted a moving tribute to the Air Force and AFA leaders and supporters, and aviation pioneers who had died since the 1975 Convention, namely: Richard **Anderfuren,** retired Lt. Gen. Royal **Baker,** Col. William **Bozeman,** George C. **Brinckerhoff,** Alastair **Buchan,** Bob **Considine,** Richard W. **Darrow,** retired Maj. Gen. James H. **Davies,** Dr. C. A. "Bud" **DeLaney,** retired Col. J. Nicholas **Dick,** retired Maj. Gen. Robert E. **Greer,** C. S. "Casey" **Jones,** William A. **Kutchera,** retired Maj. Gen. E. S. **Ligon,** Grover **Loening,** Maj. W. F. "Bill" **Long,** retired Lt. Col. William J. **Lookadoo,** Jane E. **Marilley,** retired Gen. John C. **Meyer,** Field Marshal Viscount **Montgomery,** Paisley **Nettleton,** Floyd **Odlum,** retired Maj. Gen. Thomas R. **Rampy,** Al **Reno,** George S. **Robinson,** Phyllis **Rockwood,** Buzz **Sadler,** William **Sample,** Leif J. **Sverdrup,** retired Maj. Gen. Robert A. **Taylor,** Maj. Gen. Alfred **Verhulst,** William **Wellman,** retired Gen. Earle G. **Wheeler,** Dr. Clanton W. **Williams,** and retired Brig. Gen. Bernard M. **Wooton.**

The Convention's keynote speaker, Lt. Tom Nelson, a twenty-two-year-old second lieutenant in the Idaho Air National Guard, who served as the 1975–76 Arnold Air Society National Commander, spoke about the youth of our country.

In opening, he said, "The youth of today are not unlike the youth of the mid- and late-1960s. They still dream of peace, of purging inequities out of our many systems, of being truly free. But they have matured faster than the youth of the '60s, and they have had more experiences to judge from and upon which they can base their decisions. They have learned that violence really accomplishes nothing, that our system is still better than that of any other country, and that in America we have what we can call freedom."

Delegates from throughout the nation elected officers, recognized achievements of the past year, and laid down a firm foundation for the Association's activities in the coming year at . . .

AFA'S THIRTIETH ANNIVERSARY CONVENTION

BY DON STEELE, AFA AFFAIRS EDITOR

He told of five "keys," which he, as a parent and a member of the younger generation, believes should be followed by parents. They are: willingness to spend time with their children; a belief in God; a conviction that the Constitution of the United States is ordained by God through wise men and should be protected and its principles studied and followed; a belief that we are subject to our elected officials and magistrates in obeying, honoring, and sustaining the law; and certainty that America is a land of promise, a land choice above all other lands, but that he who would possess it must serve God.

"I firmly believe," he said, "that if these five keys were to be followed by the parents of this country—and I am one—we would no longer have to wonder how the youth will react from decade to decade, and our purpose will once again be unified."

In the final part of his address, Lieutenant Nelson quoted these words of A. B. Guthrie, Jr.:

During the Sunday evening visit to the National Air and Space Museum, a group of AFA National Officers and Directors inspects a space capsule. They are, from left: National Directors Jack C. Price and Gerald V. Hasler, Board Chairman Joe L. Shosid, National Secretary Martin H. Harris, President George M. Douglas, and National Treasurer Jack B. Gross.

"But, alas, thou hast those sons who are ignorant, others who are thoughtless, others still who are false, and these would do thee harm. May we who would be accounted worthier raise about thy feet a strong

wall of defense as did those, our older brothers in thy darkest hour, and, emulating them, may we see to it that thou dost retain thy place in the seats of the mighty." Then, in closing, he said, "We look to you—as AFA leaders—to help America do just that."

Awards Ceremony

During the awards ceremony, some thirty-one individuals and units were recognized for their work in carrying out the Association's mission, and for outstanding management in Air Force assignments; another twelve individuals received their awards at two of the business sessions *(see complete list of award recipients on p. 61)*. AFA National President George M. Douglas presided and presented the awards. Joe L. Shosid, Chairman of AFA's Board of Directors, read the award citations.

At the Opening Ceremonies, retired Army Gen. Michael S. Davison, at the podium, National President of the United Services Organization (USO), told of the work his organization is doing, and presented its Board of Governors' Distinguished Service Award to AFA, "in recognition of Exceptional Service to the Men and Women of America's Armed Forces through United Services Organizations, Inc." President Douglas accepted the award for AFA.

Under a new policy announced earlier, all Medals of Merit, customarily presented during the Convention, will now be presented at a later date at state or local AFA functions.

In recognition of his outstanding leadership at local and state levels, and for giving his time, energies, and talent to the enlargement of public understanding of the Air Force and its mission, Vic R. Kregel, of Dallas, Tex., received AFA's 1976 Man of the Year Award.

The 1976 Unit of the Year Award went to Illinois' Scott Memorial Chapter for its overall excellence in supporting the Air Force mission, particularly in the areas of AFA membership activity, military relations, communications, and civic affairs. The Chapter's award was accepted by its immediate past president, Hugh L. Enyart.

Special Awards went to Edward A. Stearn, and to the USAF Band and its components. Mr. Stearn's award was in recognition of his distinguished leadership at chapter, state, and national levels, and his outstanding contribution to the AFA mission. The USAF Band's award, accepted by its Commander and Conductor, Col. Arnald Gabriel, was in recognition of its appearances before more than half a million United States citizens during our nation's Bicentennial celebration, and as the first major US military band to have presented concerts in each of the fifty states.

In addition, a Citation of Honor went to the Utah State Air Force Association in recognition of its development and coordination of statewide Bicentennial projects for its chapters in conjunction with the National US Bicentennial Program.

Following presentation of awards, President Douglas announced an expansion of AFA's National Awards Program. For a number of years, the program has attracted—especially from the Air Force—many more nominations of qualified contenders than could be reasonably selected for National Convention presentations.

To give greater visibility to AFA's national awards, and to enhance local AFA programming, the Awards Committee accepted the Executive Director's plan to authorize the staff to select up to twenty-five nominees not chosen for recognition at the convention and, after confirmation by AFA's President, to present these national awards at local or state AFA functions or national functions away from Washington.

Business Sessions

In opening the first of three business sessions, President Douglas said, ". . . I am very proud to be your President in this thirtieth year of the Air Force Association—during the Bicentennial—when we look back on our heritage, so we can better look ahead.

"It's sort of mind-boggling, in a way, to realize that our heritage goes back to the advanced thinking of Billy Mitchell, that the idea for an Air Force Association originated in the fertile mind of Hap Arnold, that our leaders have included such great men as Jimmy Doolittle, Tooey Spaatz, C. R. Smith, and George Kenney, to name a few.

"Have we fulfilled the heritage of Billy Mitchell? The visions of Hap Arnold?

"In essence, I think we have.

"From our initial drive—some thirty years ago—for a separate Air Force, to our current Statement of Policy that underlines the threat to our freedoms, we have kept the faith, in terms of mission."

He then reviewed the outstanding national programs of the year, quoted the statements of Air Force Secretary Thomas C. Reed and Chief of Staff Gen. David C. Jones, which were printed in the September Thirtieth Anniversary issue of AIR FORCE Magazine, then warned against building "into our internal political structure a system that

breeds one old-timer succeeding another—from Chapter President to Board Member," and concluded with these words: "We must not shut out the young people, whom we sorely need as future leaders. We must, if we are to survive and prosper, open our political doors to these young people. That, to me, is the most important message I can give to this convention."

1976 Membership Achievement Awards

REGIONAL WINNER	**VICE PRESIDENT**
Southwest	Stanley L. Campbell
STATE WINNERS	**PRESIDENTS**
*Arkansas	Jack Kraras
Connecticut	Margaret E. McEnerney
***Illinois	Charles Oelrich
Indiana	C. Forrest Spencer
Mississippi	Billy A. McLeod
North Carolina	Dozier E. Murray, Jr.
***Oklahoma	David L. Blankenship
Texas	Vic R. Kregel
Utah	Robert D. Walker
CHAPTER WINNERS	**PRESIDENTS**
Abilene, Tex.	Art Smith
AF Mothers', Pa.	Mary Coyne
*Alamo, Tex.	William W. Roth
Alexandria, La.	Norman Gunn
*Altus, Okla.	Aaron C. Burleson
Andrews Area, Md.	Thomas W. Anthony
Ark-La-Tex Belle, La.	Bessie Hazel
Big Spring, Tex.	Ralph L. Brooks
Biloxi, Miss.	Dominic T. Leperi
Blue Barons, Colo.	Noel A. Bullock
**Blytheville, Ark.	John B. McNulty
*Chautauqua, N. Y.	John H. Householder
*Chicagoland, Ill.	Alexander C. Field, Jr.
Colonel D. D. Terry, Jr., Ark.	Gordon Smethurst
Coosa Valley, Ga.	Foster H. Selman
*David J. Price, Calif.	Sherwood D. Johnson
*Everett R. Cook, Tenn.	Frank G. Donofrio
Fort Worth, Tex.	Felix Ankele
Fran Parker, N. M.	Dan W. King
**General T. P. Gerrity, Okla.	Harley A. Main
Golden Triangle, Miss.	Jesse Elkin
**H. H. Arnold, N. Y.	Del Casino
H. H. Arnold Memorial, Tenn.	Thomas O. Bigger
Hudson, N. J.	James P. Grazioso
Igor Sikorsky, Conn.	Kenneth J. Kelly
Illini, Ill.	Kurt Schmidt
Kentucky, Ky.	John B. Conaway
Lake Superior Northland, Mich.	Phillip Thorson
*Mid-Ohio, Ohio	T. D. Griley
†Middle Georgia, Ga.	Herman C. Strawser
Mobile, Ala.	John R. Dyas
*N. J. AFA Information, N. J.	John P. Kruse
N. Y. Air Reserve & CAP, N. Y.	Ruth Leibold
Northern Connecticut, Conn.	Alex Eigner, Jr.
Ogden, Utah	Robert W. Bauter
Pope, N. C.	Wilson F. Yarborough, Jr.
*Robert F. Travis, Calif.	Arthur L. Littman
*Rocky Mountain, Utah	Grace B. Kyle
Rushmore, S. D.	James Anderson
Sacramento, Calif.	James R. Ames
†Sal Capriglione, N. J.	Joseph M. Capriglione
*Salt Lake, Utah	Leigh H. Hunt
San Mateo County, Calif.	Angeline R. Anderson
Scott Berkeley, N. C.	Sanford Korschun
**Scott Memorial, Ill.	Hugh L. Enyart
***Silver and Gold, Colo.	John J. Wehman
**Spudland, Me.	Alban E. Cyr
***Steel Valley, Pa.	Patrick J. Logan
Swamp Fox, S. C.	Sidney W. Crews
Union Morris, N. J.	Amos L. Chalif
Ute, Utah	James H. Taylor
Wichita Falls, Tex.	Jerry D. Page

*Award winner for 2 consecutive years
**Award winner for 3 consecutive years
***Award winner for 4 consecutive years
†Award winner for 7 consecutive years

AFA National President George M. Douglas, right, welcomes Lt. Tom Nelson, Idaho Air National Guard, to the podium. Lieutenant Nelson, the Arnold Air Society's 1975–76 National Commander, was the keynote speaker at the Convention's Opening and Awards Ceremonies.

President Douglas, right, presented a plaque to AFA's Executive Director, James H. Straubel, at a Convention meeting of the Board of Directors. The plaque, on which appear the signatures of AFA's twenty-eight National Presidents and Board Chairmen, pays "tribute to the talent, imagination, and tenacity of purpose which have typified Jim Straubel's service to the Association."

Official delegates from thirty-six states then adopted the annual Statement of Policy *(see p. 26)* and two collateral Policy Papers—one entitled "Force Modernization and Readiness" and the other "Defense Manpower Issues" *(see pp. 28 and 31)*—that set the direction and thrust for AFA for the year ahead.

The three papers reflect a new format through which the Association is addressing critical issues. The traditional format of formal

resolutions, with their many "whereas" and "resolved" clauses, has been replaced with three narrative presentations. Each paper can stand alone, but, when taken together, the three form a comprehensive examination of national defense, and clearly define the Association's position on interrelated defense elements. Much of the Association's activity in the coming year will be based upon the foundation these statements provide.

In other actions, delegates amended AFA's National Constitution and By-Laws as they relate to the structure of the Executive Committee; tabled a revised State and Chapter Rebate Program, as well as a proposed Membership Incentive Program; and adopted a Small Business Affiliation Program.

Election of Officers

The delegates reelected incumbent President George M. Douglas by acclamation, and unanimously elected Gerald V. Hasler as Chairman of the Board and Jack C. Price as Secretary. Incumbent Treasurer Jack B. Gross was unanimously reelected.

Mr. Douglas, of Denver, Colo., is Assistant Vice President/Marketing of Mountain Bell. During World War II, he served with the Army in the Pacific Theater. Currently he is an AFRES major general, with an assignment as the Mobilization Augmentee to the Vice Commander of the Aerospace Defense Command. A Life Member of AFA, he has served as an elected National Director; as Chairman of the Nominating, Awards, and Convention

Air Force Association's 1976 Activity Awards

INDIVIDUAL RECIPIENTS

AFA Man of the Year
V. R. Kregel, Dallas, Tex.

Special Award
Edward A. Stearn, Redlands, Calif.

Presidential Citation
Joe Wilson, Belleville, Ill.

Special Citations
James C. Hall, Aurora, Colo.
Liston T. "Zack" Taylor, Lompoc, Calif.
Herbert M. West, Jr., Tallahassee, Fla.

Exceptional Service Awards
David L. Blankenship, Tulsa, Okla.
Marion Chadwick, St. Petersburg, Fla.
Amos L. Chalif, Chatham, N. J.
William P. Chandler, Tucson, Ariz.
Lucius D. Clay, Alexandria, Va.
Shirley J. Cleland, Denver, Colo.
E. F. Faust, San Antonio, Tex.
Wyverne L. Flatt, San Antonio, Tex.
C. Jay Golding, San Bernardino, Calif.
Jeanne M. Holm, Arlington, Va.
Leigh H. Hunt, Salt Lake City, Utah
Grace B. Kyle, Ogden, Utah
Margaret E. McEnerney, Stratford, Conn.
William R. Sifford, Mobile, Ala.

Medals of Merit
James M. Austin, Riverside, Calif.
Kenneth H. Bashore, San Antonio, Tex.
Frank X. Battersby, Mineola, N. Y.
Robert W. Bauter, Ogden, Utah
Thomas O. Bigger, Tullahoma, Tenn.
Alban E. Cyr, Caribou, Maine
Charles N. Dreier, Reno, Nev.
John R. Dyas, Mobile, Ala.
Hugh L. Enyart, O'Fallon, Ill.
Annamarie Grana, Santa Monica, Calif.
Ronald J. Gray, Redondo Beach, Calif.
SMSgt. Charles D. Hallof, Vandenberg AFB, Calif.
H. B. Henderson, Hampton, Va.
Eddie Holland, Little Rock, Ark.
John H. Householder, Jamestown, N. Y.
William J. Howard, Mt. Holly, N. J.
Robert S. Kelso, Snyder, N. Y.
Kenneth J. Kelly, Fairfield, Conn.
Donald K. Kuhn, St. Louis, Mo.
Arthur L. Littman, Vacaville, Calif.
Tillie Metzger, Pittsburgh, Pa.
Eugene J. Moneymaker, Redlands, Calif.
Charles T. Niblett, Tucson, Ariz.
CMSgt. David C. Noerr, Norton AFB, Calif.
Cathy Obriotti, San Antonio, Tex.
A. Hal Parks, Los Angeles, Calif.
William C. Plott, San Angelo, Tex.
Capt. Monroe S. Sams, Scott AFB, Ill.
C. E. Sevier, Raytown, Mo.
Gordon W. Smethurst, Cabot, Ark.
John S. Sparks, Wichita Falls, Tex.
CMSgt. Jack H. Steed, Robins AFB, Ga.
H. C. "Butch" Strawser, Warner Robins, Ga.
Capt. Alan L. Strzemieczny, Offutt AFB, Neb.
C. W. Swindell, Scottsdale, Ariz.
Charles J. Tanner, Jr., Orlando, Fla.
Robert D. Walker, Clearfield, Utah
Dorothy H. Whitney, Bloomfield, Mich.

UNIT RECIPIENTS

AFA Unit of the Year
Scott Memorial Chapter, Illinois

Exceptional Service Awards
Salt Lake Chapter, Utah (Community Relations)
Colorado State Organization (Aerospace Education)
H. H. Arnold Chapter, New York (Unit Programming)
Middle Georgia Chapter, Georgia (Unit Programming)
Harry S. Truman Chapter, Missouri (Best Single Program)

Citation of Honor
Utah State Organization

Special Citations
Iron Gate Chapter, New York
Riverside County Chapter, California
San Bernardino Area Chapter, California
9010th Air Reserve Information Squadron, Pennsylvania
9014th Air Reserve Information Squadron, Illinois

Site Committees; as a member of the Executive, Finance, and Resolutions Committees; as an ex-officio member of all committees and councils; as a State and Chapter President; and as a member of the Board of Trustees of the Aerospace Education Foundation, an AFA affiliate.

Mr. Hasler, of Endwell, N. Y., is the President and Chief Executive Officer of an architectural design and remodeling corporation. During World War II, he was a B-25 instructor pilot. Immediately following the war, he was with the United Nations Relief and Rehabilitation Administration as its Director for the French Zone of Occupation and Director of Supply and Transport for Austria, with headquarters in Austria. An AFA member since 1963, he has served as an elected National Director; as a member of the Executive, Resolutions, and Awards Committees; as Chairman of the Constitution Committee; as Convention Parliamentarian; as an ex officio (nonvoting) member of the Finance Committee; as Treasurer of the Aerospace Education Foundation; and as a State and Chapter President.

Mr. Price, of Clearfield, Utah, a former Air Force NCO, now is an Air Force civilian executive at the Ogden Air Logistics Center, Hill AFB. A Life Member of AFA, he has served as an elected National Director; as Vice President for AFA's Rocky Mountain Region; as Chairman of the Organizational Advisory Council; as a member of the Finance Committee; and as a State and Chapter President.

Mr. Gross, of Hershey, Pa., was elected to an unprecedented sixteenth term. A colonel retired from the Air Force Reserve, he is a prominent civic leader and businessman. A Life Member of AFA, he has served as Chairman of the Board; as Chairman of the Finance Committee; as a member of the Executive, Resolutions, Awards, and Convention Site Committees; as a State and Chapter President; and as a member of the Aerospace Education Foundation's Board of Trustees.

Airman Darrell O. Pace, winner of the Gold Medal for archery at the 1976 Olympics, with Chief of Staff Gen. David C. Jones, right, and Vice Chief Gen. William V. McBride at the Air Force Anniversary Reception.

AFA's newly elected National Officers for the coming year are, from left, Secretary Jack C. Price, President George M. Douglas, Board Chairman Gerald V. Hasler, and Treasurer Jack B. Gross.

AFA's 1976 Unit of the Year Award went to the Scott Memorial Chapter, and a Presidential Citation to Joe Wilson, Editor of AFA Flier, *the Chapter's newsletter. Chapter Convention delegates shown here are, from left: Betty and Louis Miller, State AFA Secretary and Treasurer respectively; Hugh Enyart, State AFA President and Immediate Past President of the Chapter; Chapter Secretary Robert Eisenhart; President Douglas; current Chapter President C. W. Scott; and Mr. Wilson.*

Seven new Vice Presidents were elected to head AFA activities in as many AFA Regions, joining five others who were reelected. The new Vice Presidents are: R. L. Devoucoux, Portsmouth, N. H. (New England Region); William C. Rapp, Buffalo, N. Y. (Northeast Region); Dr. Dan Callahan, Warner Robins, Ga. (Southeast Region); Toulmin H. Brown, Shreveport, La. (South Central Region); Hoadley Dean, Rapid City, S. D. (North Central Region); Vic R. Kregel, Dallas, Tex. (Southwest Region); and James C. Hall, Aurora, Colo. (Rocky Mountain Re-

This Is AFA

The Air Force Association is an independent, nonprofit, airpower organization with no personal, political, or commercial axes to grind; established January 26, 1946; incorporated February 4, 1946.

OBJECTIVES

The Association provides an organization through which free men may unite to fulfill the responsibilities imposed by the impact of aerospace technology on modern society; to support armed strength adequate to maintain the security and peace of the United States and the free world; to educate themselves and the public at large in the development of adequate aerospace power for the betterment of all mankind; and to help develop friendly relations among free nations, based on respect for the principle of freedom and equal rights to all mankind.

PRESIDENT
George M. Douglas
Denver, Colo.

BOARD CHAIRMAN
Gerald V. Hasler
Johnson City, N.Y.

SECRETARY
Jack C. Price
Clearfield, Utah

TREASURER
Jack B. Gross
Hershey, Pa.

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gion). *(See "This Is AFA," p. 62.)*

Six new Directors were elected to the Board: Stanley L. Campbell, San Antonio, Tex.; Robert L. Carr, Pittsburgh, Pa.; John H. Haire, Huntsville, Ala.; Roy A. Haug, Colorado Springs, Colo.; L. T. "Zack" Taylor, Lompoc, Calif.; and Herbert M. West, Jr., Tallahassee, Fla. The six newly elected Directors join twelve incumbent Directors who were reelected for another year, as well as all the Past National Presidents and Board Chairmen, other permanent Directors, National Officers, the National Chaplain, the National Commander of the Arnold Air Society, and the Chairmen of AFA's Junior Officer Advisory and Enlisted Council Executive Committees, to form a Board of seventy-one. *(The full Board membership appears on the opposite page.)*

Events and Acknowledgments

In addition to the Opening and Awards Ceremonies and the three business sessions, the convention program included the President's Reception for AFA Officers, Official Delegates, and Registrants; the annual Anniversary Reception in the Exhibit Halls; the luncheons honoring the Secretary and Chief of Staff of the Air Force; the annual banquet honoring the Air Force's twelve Outstanding Airmen *(see p. 47)*; the annual Chief Executives' Buffet and Salute to Congress *(see p. 50)*; and the climactic finale of the Convention, the annual US Air Force Anniversary Reception and Dinner Dance, during which AFA's H. H. Arnold Award was presented to Sen. Barry Goldwater, and the US Air Force Band and Singing Sergeants depicted through song and dance the thirty-year history of AFA.

This year, two events were added to the Convention program. First, Delegates and Convention Registrants were treated to an exclusive "after-hours" visit to the National Air and Space Museum, the nation's fabulous new showcase for our treasure of aviation and space artifacts.

The second "special" event was a briefing on the functions of the Central Intelligence Agency by officials of the Agency at their headquarters in Langley, Va.

Martin M. Ostrow, Chairman of the Constitution Committee and former AFA National President and Board Chairman, served as Parliamentarian. The Credentials Committee included Chairman Richard C. Emrich, William P. Chandler, and Andrew W. Trushaw, Jr.—Vice Presidents for AFA's Central East, Far West, and New England Regions, respectively.

Inspectors of Elections were Kenneth Banks, Chairman, Akron, Ohio; James C. Hall, Aurora, Colo.; and Lloyd Nelson, Park Ridge, N. J.

With deep gratitude, AFA acknowledges the contributions made to our program by Barbara Arnold, Evie Dunn, Cecil Brendle, Helen Jeffrey, Sue Johnson, Betty Nelson, Irene Robertson, Fred Sims, and David Van Poznak, volunteers on their own time.

During the Anniversary Reception in the Exhibit Halls, USAF Chief of Staff Gen. David C. Jones, right, visited the Aerospace Education Foundation's exhibit booth where he was briefed on the Foundation's activities by George D. Hardy, left, newly elected Secretary of the Foundation.

Our appreciation also goes to the AFA leaders and delegates who attended the Convention and whose diligent efforts contributed much to making this one of the most productive, and certainly one of the most enjoyable, in the thirty-year history of our Association. We are equally grateful to the many AFA leaders in the field whose personal contributions of time, effort, and finances have contributed much to AFA's growth and prestige over the past thirty years.

AFA's 1977 Convention will be held in Washington, D. C., September 18–21. ■

Official Delegates, together with AFA National Officers and Directors, were special guests at the President's Reception. Shown from left: Vic Kregel, AFA's Man of the Year for 1976; Mrs. Douglas; retired Lt. Gen. Tom McGehee; AFA President George M. Douglas; and Mrs. Kregel.

Delegates attended the Annual Reception in the Exhibit Halls. Shown are, from left: Vic Davis, a Past President of the Alaska State AFA; Lewis E. Zink, of the Boeing Co.; Washington State AFA President M. A. "Peg" Reed; and Dan Crevensten, Alaska State AFA Vice President.

CIA'S SOVIET MARKET FORECAST: MIXED

Short-term prospects of the Soviet economy appear to provide no cause for substantive changes in the balance between military investments and consumer goods, but there is indication that the USSR's economic picture could worsen in the next decade and thus bring on fundamental changes of the system.

BY EDGAR ULSAMER, SENIOR EDITOR

ALTHOUGH marred by declining growth rates and unmet quotas, the Soviet Union's economic and industrial status and prospects appear good enough to support a strong military posture over the next five years. Sizable infusions of Western technology and equipment continue to aid productivity, one of the principal weak spots of the USSR's economy, while continuing grain imports, mainly from the US, will be needed to offset shortfalls in agricultural production. These are conclusions of "Soviet Economic Plans for 1976–80: A First Look," an analysis by the Central Intelligence Agency of the new Soviet Five-Year Plan.

In the CIA's view, the USSR's central planning document for the period 1976–80 differs from past master plans by setting more realistic goals, even though some major targets still are optimistic and probably can't be met. Beyond the new plan's expiration, the CIA's economic analysts see danger signals that may presage a "substantial" decline, if there are no reforms of the incentive system to shore up sagging productivity.

The CIA report asserts that after the "disappointments of the Ninth Five-Year Plan [1971–75], largely caused by two disastrous harvests, the Soviets intend to use the 1976–80 plan period to get back on track and stress quality and efficiency over quantitative goals. As a result, the new plan [whose formal enactment by the Supreme Soviet following submission by the 25th Party Congress is currently pending] is an unusually restrained and realistic one and will make the 1970s by far the lowest postwar growth decade. Major economic policy objectives will remain similar to those of the last Five-Year Plan period: Industry and defense will be the priority sectors, but agriculture and the consumer will retain a prominent place."

Defense requirements, according to the CIA document, have been absorbing an "estimated eleven percent to thirteen percent of Soviet GNP since 1970." (This estimate is lower than the findings of some Pentagon analysts who calculate defense's share of Soviet Gross National Product [GNP] at about twenty percent and the annual growth rate of military investments at six percent.) Exerting a priority claim on the Soviet Union's manpower and economic output, the defense sector "still takes the lion's share of high-grade scientific and technical talent, and, in electronics, defense requirements account for most of the total output of integrated circuits," the CIA finds.

While Soviet leaders often bemoan the depressing effect of defense requirements on general economic growth and consumer interests, military programs "have been generously supported even in periods of economic setbacks, and the follow-through on new programs has been strong. In the future, the problem of lagging economic growth will make steadily rising defense costs an even more painful issue for the leadership," according to CIA.

Nevertheless, decisions on future defense programs are not likely to be influenced appreciably by the burden they might impose on the civilian economy. The truly decisive factors, the CIA suggests, "will be the leaders' view of foreign military threats, the powerful institutional forces that support defense programs, progress in arms-limitations negotiations, and the momentum of technological advances in the defense sector. The annual increment planned for Soviet GNP seems large enough to allow for both increases in defense spending and improvement in living levels. Moreover, the present level of Soviet defense programs is such that modest rates of growth—or indeed even a constant level of defense spending—will allow inventories of military equipment to rise."

The Central Intelligence Agency believes that Soviet leaders rationalize their major problems—a large military burden, rising consumer expectations, and declining growth—as typical of mature economies. This perception, the CIA reasons, militates against any substantive overhaul of the Soviet economic system, at least as long as there is enough vigor to maintain a formidable military posture and the industrial might to undergird it. But this business-as-usual stance might well have to be abandoned in the 1980s if the CIA's prediction of a worsening economic picture materializes. In such an eventuality, fundamental changes of the Soviet economic system are likely to occur.

The Past Five Years: A Mixed Picture

The Soviet GNP grew at an annual rate of 3.8 percent between 1971 and 1975, which is two percentage points below forecast and 1.8 percent below the growth rate recorded during the previous Five-Year Plan, but considerably above the 0.6 percent annual average maintained by the United States during that period. The CIA finds that 1972 was a bleak year for the Soviet Union, with industrial growth falling off to the lowest rate since World War II, due in part to diverting industrial labor and vehicles to farm work.

Agricultural output, instead of growing at a projected 3.5 percent annually, actually declined at a yearly average of 0.6 percent during the past five years, according to the CIA. As a result, the Soviet Union was forced to dip into its limited hard currency reserves to pay for grain and meat imports needed to maintain livestock herds and meet essential consumer requirements.

There was also a conspicuous falling off of growth rates in metal output during the last Five-Year Plan. Only about half the planned growth in steelmaking capacity was achieved, thereby retarding development of other sectors of the economy and necessitating the importation of Western steel which, in 1975 alone, amounted to $2.3 billion.

The *bête noir* of the Soviet Union's economy is productivity, measured by the CIA on the basis of a complex technique and found to have fallen off at an annual rate of 0.2 percent during the past five years. An annual growth of 2.2 percent was called for in the last Five-Year Plan. This decline presumably would have been more precipitous had it not been for imported Western machinery and equipment which, during that period, absorbed somewhere between ten and twelve percent of the total Soviet investment in such items. These record imports of equipment and technology are seen by the Soviet leaders as a shortcut to technical progress and worth the resultant hard currency deficits. Assimilation

of new technologies is slow and difficult, however, because the managerial incentive system is geared to quantitative targets and not to quality or efficiency. But the only concession the Soviet system seems prepared to make is the formation of production associations or "combines," designed to encourage the quicker introduction and mastery of new technology.

The idea behind the industrial combines is that their sheer size permits many kindred research and production functions to be pulled together under one organizational roof, which is touted as a way to encourage technological proficiency. Although first tried in 1961, this concept initially ran afoul of "conservative" interpreters of Marxist-Leninist ideology who kept it on ice for the remainder of that decade. In 1971, the concept was revived at the 24th Party Congress by Party Secretary Brezhnev, who called for making the production association the basic industrial unit. But adoption of the new policy has been slow, according to the CIA assessment, because of bureaucratic inertia and resistance by those functionaries who have to give up power to the new structures. This year's Party Congress was told that the transition to industrial production associations will not be completed until the end of the new Five-Year Plan and that, at present, these groups account for only about twenty-four percent of the USSR's total industrial output.

'... their sheer size permits many kindred research and production functions to be pulled together under one organizational roof ...'

The New Plan

As assessed by the CIA, the Tenth Five-Year Plan proves that the more things change, the more they remain the same: The endemic problems of the Soviet system—inadequate productivity growth, lagging technology, and repressed consumer demands—are changed only in terms of rhetoric, not substance. Military requirements and heavy industry will maintain their prime claim on the nation's resources; improved technology will continue to be viewed as a panacea that assures increased productivity; agriculture will continue to absorb a large portion of the industrial output and about one-fourth of the USSR's total investment; and the consumer industry will continue in the well-established role of a second-class citizen. This is not to say that there are no changes at all. Foreign trade, especially with the West, according to the CIA analysis, will rise even faster than in the past few years, with even greater emphasis on technology and equipment: "How much the Soviets are able to import will depend largely on markets for their export goods, earnings from gold sales, the availability of Western credits, and the amount of grain needed from the West."

Orders placed with Western firms have been largely for "chemical plants, oil and gas field equipment, wood processing equipment, motor vehicle manufacturing equipment, and mining and construction equipment. . . . Large amounts of Western equipment, as well as consumer goods, will be particularly important for developing Siberian raw material deposits and the associated infrastructure," according to the CIA assessment. Many of the Siberian ventures are meant to be self-liquidating, meaning Western technology and equipment are to be paid for with raw materials they produce rather than in hard currency.

This sort of barter is not likely to extend to oil, according to the CIA estimate, because the production quotas set by the new Five-Year Plan for oil and natural gas are optimistic. They presuppose rapid development of West Siberian deposits and substantial improvements in technology, "neither of which [is] likely to be achieved to the extent planned." As in the United States, Soviet energy needs keep rising faster than domestic production rates and consume ever-increasing shares of available domestic gas and oil.

The new plan, in the CIA's view, is optimistic on two counts: estimates of West Siberian oil outputs are significantly above what, on the basis of available information, appears possible; and domestic consumption is assumed to increase at a rate about fifty percent lower than in recent years. Committed to providing the bulk of Eastern Europe's oil and strapped for hard currency that its limited oil exports to the West produce, the Soviet Union, according to the CIA, might seek "to get OPEC [the bloc of oil exporting nations] oil by barter, perhaps for military equipment." The picture is similar for natural gas where attempts to provide equipment and technical know-how for gas pipeline operations have "lagged badly, and no breakthroughs are in sight." Most of the pipeline equipment will have to be imported from the West.

Soviet GNP, according to the Soviet planning information released to date, is to grow at an annual rate of five percent over the next five years. The corresponding rates for industrial output are 6.5 percent, for agricultural output 5.5 percent, for new investment 3.5 percent, and for consumption four percent, according to the CIA assessment. With the exception of new investments, these values are higher than attained in the past five years but lower than targeted in previous plans. In spite of the new Five-Year Plan's lowered sights, the CIA considers many goals "too ambitious. Another two years of poor harvests, highly possible, would again wreak havoc on the Five-Year Plan. Failure to achieve

productivity targets would also retard growth. The fact that the Soviets are planning no major organizational and managerial schemes bodes ill for a rise in productivity substantially above the rates achieved over the last ten years. As a result of these and other factors, we estimate that growth in GNP will proceed at an annual rate of about four percent, compared with the planned rate of five percent."

A noteworthy feature of the new plan is the stress put on Soviet machinery output—key to technical efficiency in general and military hardware production in particular. Within this category, the growth leaders are computer hardware (twelve percent annual growth), metal-forming machine tools (eleven percent), numerically controlled machine tools (at least nine percent but probably much greater in value), and chemical and petroleum machinery (between 8.5 and ten percent). The new plan provides for a conspicuous slowdown in motor-vehicle industry growth, declining to between 1.4 and 2.3 percent annually from a yearly average

SOVIET COMPUTER TECHNOLOGY: CATCHING UP

The Soviet Union trails this nation by a significant margin in key computer manufacturing technologies for the time being, but development of new computer technologies is being pressed at a high rate as is the transfer of Western manufacturing technology. These findings are from an Air Force study "Computers and Strategic Advantage: I. Computer Technology in the United States and the Soviet Union," conducted by R. Turn and A. E. Nimitz of the Rand Corp.

The study recognizes that superior computer technology is likely to spell superior military capabilities in such areas as satellite-based surveillance systems, ABM defense systems, MIRVed ICBMs, and high-performance aircraft. The Rand document, which was made available to AIR FORCE Magazine recently, acknowledges that little "factual information is available on Soviet military computers and their applications. The existence of such systems is obvious, however, in view of Soviet activities in space exploration, development of MIRVed ICBMs, and production of advanced aircraft. It is likely that computers for most of these applications are manufactured at special laboratories and plants, and that they tend to be special-purpose devices [sometimes analog computers] that use proven components and are optimized for a given application."

In the more observable area of nonmilitary computers, the Air Force study finds, the Soviets lag behind the United States by between five and ten years in such fundamental areas as: components, micro- and mini-computers, very high-speed computers, random-access memories, mass memories, and input-output devices. The lag is shorter, however, in theoretical aspects of computer sciences and in programming, where the Soviets tend to use Western programming languages. The key US advantage lies with "a great deal more experience in the ability to produce very large, real-time application programs and to manage such software projects," according to the Rand analysis.

The Soviets are now manufacturing a new family of modern, integrated computer systems, the Ryad line, believed to be "close copies of the medium and small capability computers of the IBM System 360 that were introduced in 1963–64."

The Soviet Union and several Eastern European countries, according to the study, "are now beginning to manufacture mini-computers on a larger scale. Most of these are built under Western licenses, but there are also several domestic designs." US manufacturers are now establishing large-scale computer-communications networks such as the reservation systems of Aeroflot and Intourist, the state-operated airline and tourist bureau, respectively. Joint development agreements with US electronics manufacturers will soon provide the Soviets new hardware, technology, and know-how, ostensibly aimed at establishing statewide networks of interconnected computer centers for centralized economic planning and control, and automated management and production control of industrial enterprises.

The number of installed computers in the Soviet Union is thought to be in the range of 12,000 to 15,000 units (including mini-computers and special-purpose computers), which is roughly the equivalent of the number of computers in use in the US in 1964. The Soviet production rate appears to be increasing by twenty percent annually from the presumed present rate of 3,200 units per year, to give a total of more than 40,000 installed units by 1980, the Rand analysts believe. By 1980, the US computer stock is expected to number about 130,000 general-purpose computers and some 500,000 mini- and micro-computer systems.

Possibly the most telling gauge for relating Soviet to US computer technology is the fact that the US technology is well into so-called fourth-generation systems that utilize large-scale integrated components (actually subsystems); the Soviets stand somewhere between second- and third-generation systems. In terms of computing speed, for instance, such advanced US systems as ILLIAC IV and STAR-100 operate in the range of 100,000,000 instructions per second, or roughly a hundred times faster than the best existing Soviet computer, the Besm-6, according to the Air Force study.

Design of computers in the Soviet Union is the task of research institutes of the USSR Academy of Sciences and of the republics, as well as of the design bureaus attached to manufacturing plants. The latter are under the control of the Ministry of Radio Industry and the Ministry of Instrument Construction, Means of Automation, and Control Systems.

In terms of quality, the study finds that because of the perpetual "seller's market" conditions, the Soviet computer industry "has tended to disregard customer needs. Reliability is poor, high-performance peripheral equipment is lacking," software development is left up to each user, and duplication of effort is rampant, according to the Rand analysis. As a result, in 1973 Soviet computers were operated only an average of 10.7 hours a day, and according to official Soviet critiques, "not more than half" of the output was useful.

The study concludes that "uncontrolled transfer to the Soviet Union of integrated circuit manufacturing plants, machinery, and know-how cannot but improve Soviet military computers. . . . It may thus be in the interest of the United States not to accelerate the Soviet catch-up capability by indiscriminate export of high-speed computers and transfer of integrated-circuit manufacturing technology."

of 16.5 percent during the preceding five-year period.

Prospects for the Soviet consumer are less than titillating: Both total per capita consumption growth and food consumption will be held to the low rates of the past five years, and livestock production growth will be cut almost in half. Party Leader Brezhnev sounded almost contrite at the 25th Party Congress when he talked about the tendency to treat "consumer goods production as something of secondary importance or as a side issue," and in the same breath acknowledged the deleterious effect of scarce consumer goods on workers' incentives and thereby the viability of all economic planning, saying: "Not everyone has yet grasped that this is an issue of enormous political and economic significance and is directly linked with fulfilling the aims of the Party's program."

While the new plan includes some sops for consumers, including such unheard of items as automatic washing machines and self-defrosting refrigerators, a multitude of glaring deficiencies remains: Per capita housing space of nine square meters, promised by the Party in 1928, remains an elusive goal and, at best, could be "nearly" met by 1980, according to the CIA analysis. Everyday services, such as public baths, barbershops, and shoe and clothing repair shops, are to experience an upswing from the present level of about twenty-six rubles per capita or as the CIA calculates matter-of-factly, "only enough for a woman to have her hair washed and set once a month."

The income policy charted by the 1976–80 Five-Year Plan holds wage boosts to about 3.2 percent annually, the lowest growth since Brezhnev came to power and indicating the Soviet leadership's determination to counter inflationary pressures.

The Manpower Question

Because of limited automation and lower skill levels, the Soviet Union requires significantly more workers to perform a given job than Western countries and relies more on a growing labor force to increase GNP. The CIA assessment pegs the annual growth rates of the labor force over the next five years at 1.5 percent, down from a 1.6 percent average of the past five years.

By 1980, the CIA predicts, the USSR will employ approximately three-fifths more workers than the United States, but many of the Soviet workers will be engaged in unskilled activities with little assistance from machinery. Labor productivity, therefore, will continue to lag behind almost all industrialized Western countries. Soviet agriculture, probably the most pronounced case of extravagant use of manpower, can be expected to employ more than 30,000,000 workers, compared with fewer than 4,000,000 in this country.

Diminishing growth in its manpower because of fewer youths reaching working age will not impose an acute manpower shortage on the Soviet Union within the next five years, according to the CIA: "Sufficient workers will be available to man all priority endeavors, including Siberian oil development, construction of the Baikal to Amur railroad, and industrial expansion. If some shortages occur, they will likely be in the service sector, where employment growth has been the most rapid and which is labor intensive."

A fortuitous factor brightening the manpower picture is the anticipated decline in industrial employment, with fewer than 1,500,000 new workers expected to be added during the entire five-year period, which is below the *annual* increase a decade ago. This reduction is predicated on assumptions about increased productivity because of more and better machinery, better educated workers, and improved work scheduling.

The need to increase productivity by means other than expansion of the work force will become even more prominent in the 1980s, according to the CIA's calculations, when a "very sharp" dropoff in manpower growth is expected: "During the 1980s, the labor force will grow at an estimated rate of only about one percent, largely the result of the sharp decline in birth rates in the 1960s." This condition, in combination with problems caused by a dearth in investments and productivity, is likely to produce an economic crunch in the next decade that, the CIA believes, "may well force the leadership to reassess the need for systemic reform."

Whether such a potential crunch might serve as a brake on Soviet military and political aggressiveness and adventurism, the CIA's analysts don't say, which is probably wise. For crunch or no crunch, the Kremlin is committing a staggering $1 billion to a cause far more peripheral to Soviet power than its military muscle: the 1980 Moscow Olympics. ■

'Because of limited automation and lower skill levels, the Soviet Union requires significantly more workers to perform a given job than Western countries . . .'

The C-130 has earned fame in a variety of military missions ranging from reconnaissance to gunship. But in none of its many roles has it performed with greater distinction than as a tactical transport. A combat-experienced Herk pilot describes the increasingly sophisticated capabilities of . . .

THE C-130: TALENTED TACTICAL TRANSPORT

BY CAPT. PETER W. LINDQUIST, USAF

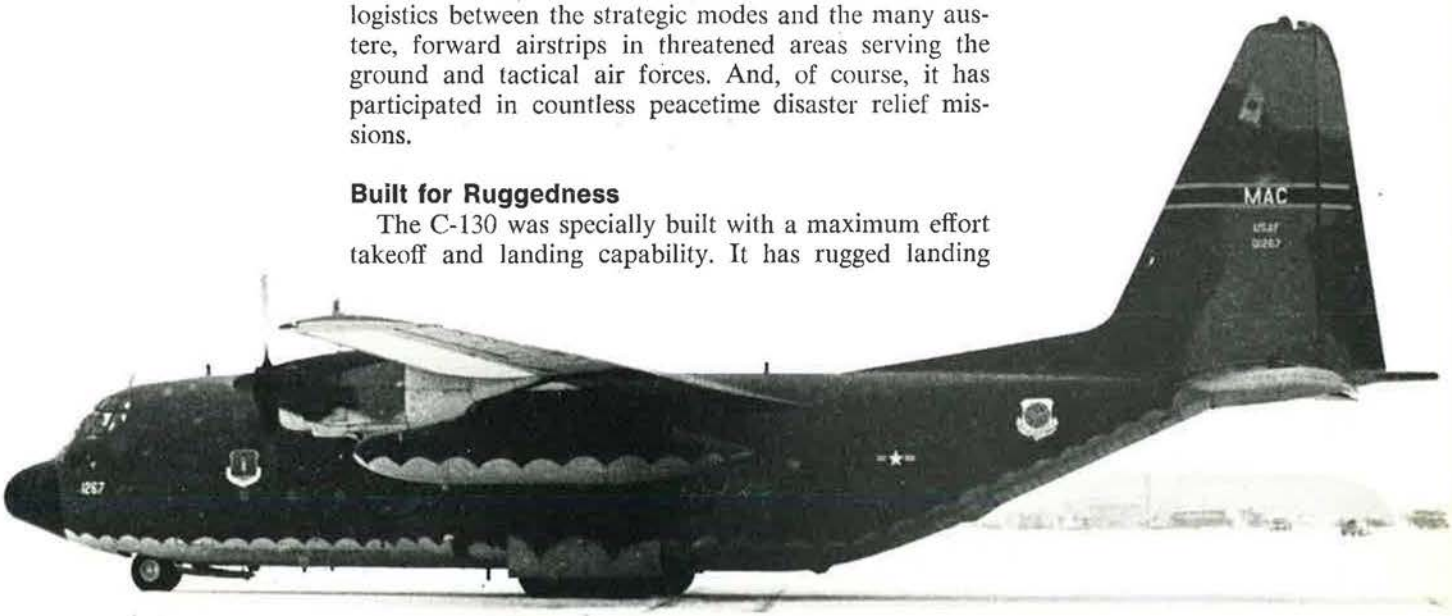
TO THOSE who have flown the Lockheed C-130 Hercules, she's known by such affectionate names as "Herky Bird," "Trash Hauler," "Green and Brown Whisper Jet," or just "Herk."

The Herky Bird doesn't look like much to the casual observer. Seeing her, in all of her clumsiness, sitting on the ramp in camouflaged dress is like looking at a duck out of water. But to those who fly her, the camouflaging on the high-winged, four-engine turboprop aircraft only adds to her uniqueness.

The "Herk" was designed for the tactical airlift mission. It can drop paratroopers in airborne assault, deliver cargo by various aerial delivery methods, make landings on short, unsophisticated airstrips, or carry wounded soldiers from the combat zone to a rear-area hospital. Tactical airlift fills the crucial gap in routine logistics between the strategic modes and the many austere, forward airstrips in threatened areas serving the ground and tactical air forces. And, of course, it has participated in countless peacetime disaster relief missions.

Built for Ruggedness

The C-130 was specially built with a maximum effort takeoff and landing capability. It has rugged landing



gear for unimproved runways and reversible propellers to hasten stopping. Once on the ground, the C-130 can stop in less than 3,000 feet. It is this part of the mission, short-field landings, that brings to mind an experience that occurred in the jungles of Southeast Asia.

Our mission on a very hot and steamy day was to haul fuel stored in rubber bladders. The mission took us from a large air base in the south of the country to a small airstrip along the Laotian border. This field was approximately 3,500 feet long by sixty feet wide, carved out of the jungle. A semblance of an approach path was cleared at one end of the runway. The surface was "all-weather diet," chewed up like powder in spots and packed down like cement in others by many days of mass assaulting. Just locating the airstrip was a feat of airmanship in itself. However, getting a transport aircraft weighing about 142,000 pounds on the ground safely would severely test the skills of man and the responsiveness of machine. The tactic that would be employed was that of the short-field approach and landing. This is the method by which equipment, supplies, or personnel can be concentrated most effectively into one spot.

The object of the first part of the short-field approach is to stay as high as possible to avoid small-arms fire, and, in this instance, to avoid several fifty-foot-tall trees within a half mile of the runway. Airspeed on final was approximately 110 knots, with a rate of descent of 1,000 feet per minute necessary to clear the trees. Aircraft attitude and airspeed control are highly critical due to a variety of factors: Computed approach speed is close to stall speed, touchdown must be made 100 to 500 feet past the end of the runway within flight manual rate of sink limitations, and landing at a higher airspeed than computed will increase the minimum runway required. Also, in this instance, keep in mind that once on the ground, we were committed to stay there because the trees at the departure end blocked a missed approach procedure.

Once we were on final and safely past the trees, all our concentration was on airspeed and the touchdown point. When we crossed the threshold of the runway, we reduced our rate of descent to about 500 feet per minute. Touchdown was not very smooth, but was at the proper point and "on speed." Reversing and braking actions were initiated *immediately* after touchdown. With the bumping and thumping that comes with landing on a rough, uneven surface and with trees and bushes flying by on both sides and dust and dirt filling the air, we came to a screeching, turbulent halt. Since there was no offloading area, we taxied to the end of the runway, did a 180, and backed up. Because of the threat of enemy mortar fire, our offloading was to be accomplished with engines running.

While we waited for our cargo of fuel to be transferred to ground storage tanks, another C-130 started its approach to the same 3,500-foot runway we were sitting on. Have you ever been in the cockpit of an aircraft and watched as another large airplane makes a steep approach over fifty-foot trees to the same 3,500-foot dirt strip you're on? Then have you seen that aircraft disappear from view behind a hump in the center of the runway as it touched down? Suddenly it reappears thundering over the hump, straight toward you with dust and dirt flying in every direction and the aircraft straining and bobbing as the crew struggles to bring the seventy-ton monster to a halt.

Events like this, which illustrate the remarkable versatility of the C-130 Hercules, came to be normal occurrences for a "Herky" pilot in Southeast Asia.

LAPES Delivery Mode

If it is impossible to air-land supplies or equipment at forward operating locations, another mode of delivery is the Low Altitude Parachute Extraction System (LAPES). LAPES is one of the most dramatic and highly accurate means of delivery.

LAPES is self-contained and normally needs no special ground-support equipment. The system requires a relatively level area twenty to fifty feet wide and 400 to 500 feet long. One to three parachutes extract the load from the aircraft, while it is flying only five feet above the ground. The system has the capability of delivering loads ranging from 3,780 pounds to 36,700. LAPES can deliver a single platform or a combination of two or three platforms connected in tandem, in one extraction pass. Upright marker panels for day extraction operations or lights at night are positioned on the extraction zone as aids in identification and aircraft alignment. Delivery requires exacting load preparation, concentrated crew effort, and skillful aircraft control.

At an altitude of 200 feet and with the aircraft trimmed at 130 knots indicated airspeed, the command is given, "Deploy the drogue." A fifteen-foot drogue parachute attached to the cargo ramp is dropped from the back of the "Herk." The inflated drogue chute is towed for approximately ten seconds in level flight before a rate of descent of 1,000 feet per minute is established. With the ground rushing to meet the aircraft at a dizzying rate and as the release marker panels flash by, the command, "Green light," is heard. With this command comes immediate decrease in drag, due to force transfer between the ramp and the extraction chutes. A rapid, compensating nose-up elevation correction is followed immediately by a nose-down correction to counter the nose-up pitch as the twenty-foot extraction chutes yank the load out of the aircraft. The nose-down elevation input then is quickly relieved so as to avoid flying into the ground as soon as the load leaves the aircraft. Immediately after the load has left the ramp, the pilot applies maximum power and rotates the aircraft to twenty-degree pitch attitude to clear any obstacles at the end of the zone.

Tank Extraction Tests Crew

One of the loads that is dropped during a LAPES extraction is the United States Army's M551 Sheridan tank. This load requires the maximum in crew profes-

Using the LAPES delivery technique (left) C-130s can deliver equipment as large as the Army's Sherman tank. Below, these USAF Herks are two of more than 1,300 C-130s in use by thirty-seven countries.

The latest C-130H, represented by the Malaysian Air Force Herk (above), has fifty percent more range than earlier models. Worldwide, C-130s, including USAF versions in battle dress (right), have logged more than 11,000,000 flight hours.

sionalism and coordination during the extraction sequence. When loaded in the Herk's cargo compartment, the tank has a clearance of six inches on each side and a mere four inches at the top. This load, weighing 36,700 pounds and measuring twenty-four feet in length, will be extracted at 130 knots airspeed and at an altitude of only five feet. The change in aircraft pitch that takes place as this mammoth load moves to the rear of the aircraft is tremendous and requires the highest standards in crew ability and training to avoid a disastrous loss of control. Only a few of the most experienced aircrews are chosen to perform this difficult maneuver, and the training needed to maintain proficiency is among the most extensive that is required by the tactical airlift mission.

The steep approach technique described earlier must be used for all heavy weight (such as the M551) LAPES deliveries. This is primarily due to the pilot's capability to stay in phase with the elevator control requirement as the extraction takes place. LAPES can also be done in Instrument Meteorological Conditions (IMC), and in formation depending on the requirements of a particular mission.

Wing Has All-Weather Capability

One of the most sophisticated pieces of equipment that has been added to the C-130 is the Adverse Weather Delivery System (AWADS). Under conditions of zero visibility or darkness, AWADS-equipped C-130s can maintain precise formation positioning and make extremely accurate paradrops of supplies and equipment. The 317th Tactical Airlift Wing, located at Pope AFB, N. C., is the only wing in the Air Force to have this "all-weather" capability. A formation of 317th TAW C-130s can fly a designated route, airdrop, and recover to a predetermined destination all without a crew seeing the other aircraft or the ground itself. The 317th first tested the feasibility of the AWAD System in the early 1970s, and, since then, has repeatedly showed the system's accuracy and versatility in Southeast Asia and in peacetime exercises and demonstrations.

The system, when operating in the en-route navigation mode, can use navigation aids to continuously update aircraft position. However, AWADS's primary function is to free the aircraft from reliance on ground aids. In areas where there are no ground navigation aids, the pilot can use his forward-looking radar to take a fix on such points as the bend in a river, whose location is known. Navigational updating using such radar fixes provides the means of maintaining the desired courses. The position of the aircraft is continuously determined by the navigational computer, which has an accuracy within two percent of the distance traveled.

During airdrop operations, the AWAD System provides course steering information to the pilot, enabling him to fly the aircraft to a Computed Air Release Point (CARP) where the cargo or paratroopers must be released in order to land in the designated drop zone. The system determines the CARP using data on wind conditions, parachute parameters, parachute loads, altitudes, and aircraft speed. The AWADS then visually signals arrival of the aircraft at the CARP.

Another very important function of AWADS is its capability to provide exact information for fixed separation of up to thirty-six aircraft in formation, to locate and identify formation aircraft, and to pass informational signals to each other during any type of weather conditions.

The AWADS visual display is mounted between the pilot and copilot and is capable of indicating all similarly equipped aircraft within a ten-mile radius. In addition, a radar function can be selected that affords hazardous weather detection at ranges in excess of 150 nm. The track-while-scan display involving course-to-steer, and aircraft altitude is provided at the pilot's and copilot's Attitude Direction Indicator (ADI). Selected interplane range is displayed on the pilot's and copilot's instrument panel. The station-keeping secondary control panel, by manually setting track, cross track, and altitude to a specific offset between aircraft, provides the capability of flying a particular formation position. The control panel also provides a means to test and monitor the entire system for proper operation.

The Flight Command Indicator (FCI) provides the signaling capability to and from specifically selected aircraft in the formation to command turns, slowdown, acceleration, descent, and climb. Proximity warning can be either a visual display of the intruding aircraft provided by a strobe on the pilot's indicator or by an aural warning from the flight station loudspeaker. The pilot is required to take evasive action by changing position or to warn the offending airplane.

Tactical Airlift Proved in SEA

During the Vietnam War, tactical airlift found itself in full partnership with the Army, Navy, and Marine Corps forces. The C-130, with supporting equipment, has revolutionized conventional warfare. Battlefield mobility and resupply depend almost entirely on tactical airlift. Battlefield aeromedical evacuation has given casualties unprecedented chance for survival.

Whether the mission is military or civilian oriented, the C-130 can deliver men, equipment, and supplies anywhere in the world and support these operations as long as necessary. ■

The author, Capt. Peter W. Lindquist, is a 1968 AFROTC graduate of Drake University. At the time he wrote this article, he was the Assistant Chief of the Standardization/Evaluation Division of the 317th Tactical Airlift Wing at Pope AFB, N. C. Captain Lindquist, who has more than 500 hours of combat time in the C-130, is both AWADS and LAPES qualified and was part of the initial cadre to test AWADS. He also helped to develop formation LAPES under instrument flight conditions.

Relatively little is known about the aerospace forces of the People's Republic of China, despite the fact that the PRC has the world's third largest air force. Within the constraints of available data, a student of Asian military/political affairs describes the organization, equipment, strategic concepts, tactics, and modernization trends of . . .

Communist China's

A SHORT history, limited operational experience, and the pervasive secretiveness of the Chinese Communists combine to limit the data needed for thorough analysis of People's Republic of China (PRC) aerospace power. This article is based on information from a number of open sources and from recent interviews with officials and scholars in the Republic of China on Taiwan. Although there are gaps and inconsistencies in our knowledge of PRC aerospace forces, it is undeniable that the People's Liberation Army Air Force (PLAAF) is the world's third largest, with a potential for significant qualitative improvement.

Background

The early use of airpower by the Chinese Communists was insignificant, beginning with the periods of conflict with the Japanese during World War II and with the Nationalists up to 1949. Originally using hand-me-down equipment from the Soviets—who took it from the Japanese—the PRC's air force academy was founded in 1945–46 with a cadre of 200 students and four obsolete biplane trainers. Only thirty additional aircraft seized from the Nationalists came into their inventory during the same period, most of them not only ancient, but in miserable disrepair.

It was not until the PRC's entry into the Korean War that the PLAAF, with the direct support of the Soviets, quickly found itself in the ranks of nations possessing modern air forces. Of this force, Air Force Chief of Staff Gen. Hoyt S. Vandenberg said, "Almost overnight Communist China has become one of the major air powers of the world."

Chinese pilots were initially rated as poor, but improvement was steady, and their principal weapon, the Soviet-built MiG-15, was a good performer against USAF F-86 Sabres. Although Chinese air tactics showed steady improvement in late 1951 and early 1952, they lost 976 aircraft, compared to the United Nations losses of only 139 in air-to-air fighting. Generally, the Chinese employment of airpower and their specific tactics were not highly regarded. General Vandenberg's statement was true in a sense, but air action by the Communist forces had only modest effect on the course of events.

During later crises in the Taiwan Strait in 1958, the 1962 situation with the Nationalists over Quemoy and Matsu, and the border conflict with India, Chinese airpower again was of little significance.

In the Vietnam War years, PLAAF aircraft were reported over North Vietnam, but there is nothing to suggest vigorous participation in actual air actions. A number of ground-based air defense units were present, usually covering the PLA railway engineer troops which, in considerable numbers, gave most effective service in repairing bomb damage.

The seizure of the Paracel Islands in January 1974 involved air, ground, and naval forces. Air cover was the primary task of the PLAAF, and it was performed without major disturbance. Since the islands were claimed by South Vietnam, this action was taken at a time when any outside interference seemed unlikely, so there was no real test of air performance. Even so, the operation was, by all reports, highly professional.

Extreme caution in air operations characterizes the confrontation along the 4,500-mile Sino-Soviet border. Occasionally Peking charges Moscow with helicopter-borne intrusions, and one such case resulted in holding a helicopter and its crew for some time. Nevertheless, restraint—albeit *alert* restraint—prevails.

Organization

For military administration and control, mainland China is divided into eleven military regions, each commanded by a powerful senior soldier. Some reports say that air defense districts coincide geographically with the regions; others suggest that there are six air defense commands. The latter version would be more suitable to the system required for command and control of modern jet aircraft operations. There are Air

BY COL. ANGUS M. FRASER, USMC (RET.)

Aerospace Forces

Force deputies and offices within each of the regional commands, but they appear to answer directly to Air Force Headquarters in Peking in all but routine matters.

Operationally, the Air Force is organized into air divisions, regiments, and squadrons. Three squadrons make up a regiment and three regiments an air division. One Indian source mentions 1,500 aircraft in forty regiments, giving a reasonable average of thirty-seven-plus aircraft per regiment. An air district may have under its command independent regiments, bomber divisions, ground attack divisions, and air defense zones. The air defense zones, in turn, control the integrated Chinese air defense system. The PRC's strategic missile systems are under the control of the central command in Peking.

A ballistic missile early warning system covers about ninety percent of the approach arc from the Soviet Union. The older Soviet-type radars in general use are only partially effective against modern attack. Antiaircraft missile defenses include a thin net—perhaps "several hundred"—weapons of the Soviet SAM-2 class assigned to the Air Force. There are concentrations of warning equipment and weapons positioned to protect the more important industrial and military sites. Army antiaircraft weapons include such Chinese-built Soviet-type pieces as light and heavy machine guns and larger calibers—37, 57, 85, and 100-mm. They contribute to a total system that at best is only marginal.

Naval air bomber elements come under fleet headquarters, but their fighters are under the command of the air defense zones, with the headquarters exercising a coordination function only.

It is not surprising, given their history of almost exclusively ground warfare experience, that the original leaders of the Chinese Communist military establishment are most comfortable with the problems and concerns of land armies. This is reinforced by the unique concept of the armed forces as the essential vehicle for protection of the Communist Party and the revolution. Air forces are not easily fitted into the structure of regional organization as it now appears. In fact, modern air defense operations demand central control. Air Force representation at the center must often appear to be greedy seekers of a disproportionate share of the national budget and technological resources.

Personnel

All soldiers of the PLA are conscripted under a uniform system. The inductee is given his basic training at the place where he joins, then transferred to a unit. The period of service in the air arm has been reported as three or four years. Men are selected for pilot training on the basis of general potential and ability, subject to overriding considerations of ideological purity and family origin. The son of a former "poor peasant" has a substantial initial advantage. The respect enjoyed by the PLA and the relatively better lot of the soldier as compared to that of the youths "sent down to the countryside" make service life desirable to many.

Pilot training lasts two years, and there are believed to be about 10,000 pilots in the PLAAF. Training for the remainder of the 250,000 men varies in length according to assignment. In the pilot-training program, six months are devoted to primary flight training and basic theory. The second phase, nine months long, moves to more advanced and complex flying, gunnery, and theory. The final nine-month period gets into more complex elements of flying, after which the flyer is assigned to an operating unit where he receives transition and unit training.

It would be dangerous to think that Chinese pilots are still second-rate, the products of inadequate training, insufficient flying time, and ideological intrusion. To an outsider, the massive program of political and ideological training may seem strange, but it clearly fits into the Maoist philosophical concept of the armed forces as propaganda and revolutionary forces.

The author, Col. Angus Fraser, retired from the Marine Corps in 1964. He served in North China at the close of World War II and was Senior Marine Advisor to the Republic of China in the early 1960s. He is a graduate of the British Joint Services Staff College and of the National War College, and author of the book The People's Liberation Army: Communist China's Armed Forces *published by Crane, Russak & Co., in 1973. Now a research analyst and consultant on Asian affairs, Colonel Fraser has been a frequent contributor to AIR FORCE Magazine.*

Aircraft in the PLAAF

There is no absolutely authoritative single source for data on the numbers and types of aircraft in the PLAAF, but the annual "Military Balance" published by the London-based International Institute for Strategic Studies enjoys an excellent reputation for accuracy. The following tabulation is based on the IISS 1976–77 "Balance."

	TYPE AND NUMBER		
MiG-15	about 200	Tu-16	about 65
MiG-17	about 1,500	Il-28	about 300
MiG-19 (F-6)	about 2,000	Tu-2	about 100
F-9 (MiG-19 variant)	"some"	Tu-4	"a few"
MiG-21	about 75	Helicopters	300

This listing covers the Air Force only. In addition, the naval air force (whose air defense functions are integrated into the national system) is reported to have about 500 jet fighters including MiG-17, MiG-19/F-6, and F-9; about 100 Il-28 and Tu-2 bombers, some equipped for torpedo firing; about fifty Mi-4 helicopters; and some maritime reconnaissance aircraft.

The civil air fleet of the PRC is a potential military resource. The IISS credits Peking with 400 aircraft controlled by the General Administration of Civil Aviation. As of August 1974 (including aircraft on order at the end of 1973), the inventory included ten Boeing 707s, thirty-eight Hawker-Siddeley Tridents, seventy-eight Ilyushins of four types, and a mixture of several other British and Soviet types. The PRC holds an option to buy three Concorde supersonic transports.

Basic Strategy

The late Mao Tse-tung at times described the People's Republic of China as "poor and blank" and as "semi-colonial and semi-feudal." He also proclaimed that "China has stood up." The desire to assert China's status as a power in the world faces scarce and inadequate resources to support broad modernization programs of industry, agriculture, military forces, and research and development. The allocation of resources is the most critical task facing PRC leadership.

Under these difficult circumstances, the PRC has adopted a national strategy that provides a shield behind which other activities may proceed. Its basic purpose is defense of the realm. A mixture of sophisticated deterrents and reasonably effective conventional forces has been combined with the classical modes of "People's War" to produce a threshold-raising posture that is marginally able to ask the question: "What do you want from China that is worth the damage China is able to do in return?" This is not an ideal position, but it probably is the best that is possible at this time.

The structure and armament of the PLA today indicates that extended operations beyond the borders for purposes of conquest have low priority, although nuclear retaliation against more distant targets is clearly central to the defensive plan. The Air Force's contribution to the overall strategy is reflected in the positioning of forces and the programs for improving performance.

Tactics

Fighter tactics call for multilayered flights that give mutual support at several altitudes. The provisions for protection of the flight leader and for concentration of firepower are sound. Ground attack missions are usually preplanned because of the rather primitive system of air liaison and forward control. While modest by US standards, ground support has grown more important in recent years. The observed results of the Indo-Pakistan experience has probably been influential. Bombing tactics are traditional, using both high- and low-level methods, with formations and direction of attack established by the nature of the target and the opposition. The PLAAF flies reconnaissance missions at low altitudes, reporting directly or by relay. Photo-reconnaissance as well as visual observation is used. Aircraft on reconnaissance may also conduct search-and-destroy missions. Night operations are conducted, but at lower intensity. Visual techniques are used for bombing ground targets and for cannon, rocket, or chemical attack. The importance of striking such targets of opportunity as enemy nuclear delivery means is recognized.

Nuclear Weapons

Nuclear weapons and their use are not exclusively or even mainly the province of the Air Force. An organization named "Second Artillery" apparently exercises the primary function. The headquarters of this organization is part of the Ministry of National Defense and is separate from the Artillery, having a position equal to that of the Artillery or Navy. The PLAAF is, however, significantly involved in nuclear affairs. Several test drops from Tu-16 bombers demonstrated the ability to deliver a three-megaton device to a radius of 1,650 nm, adding importantly to target coverage. The number of Tu-16s in service (and the possible ability of other aircraft to deliver these weapons) indicates an important nuclear warfare role for the Air Force.

Since the original test of a twenty-kiloton device in October 1964, there have been seventeen more. One was apparently a failure and has never been acknowledged. Tests have involved drops from aircraft, tower shots, missile firings, and underground explosions. Four have been thermonuclear devices. The variety suggests that data for a range of applications are being accumulated.

The PRC reportedly has deployed twenty to thirty intermediate-range ballistic missiles (IRBMs) and fifty of medium range (MRBMs), with ranges of 1,500 and 600 nautical miles, respectively. Two limited-range ICBMs—

perhaps 3,500 miles in range—that can reach targets fairly deep in Russia are said to be in position. American authorities on a number of past occasions have reported the imminent appearance of a 7,000-mile ICBM that could reach the United States, but it has not yet been tested. Tracking and monitoring arrangements do apparently exist. The PLA Navy has one submarine of the Soviet *Golf* class, with a basic missile-firing capability, but no actual weapon has appeared. A single test was reported by one activity but there has been no further corroboration.

The PRC nuclear program has been described by Gen. George Brown, Chairman of the JCS, as a "steady, almost painstaking . . . relatively small but carefully conceived strategic program." The Chairman went on to say that "a modest but credible nuclear retaliatory capability against the USSR has been achieved." The equipment and capabilities of the air arm in a retaliatory strategy based on threshold raising are significant but perhaps not primary. Tactical nuclear weapons have not yet appeared, but the ability to produce and use them no doubt exists.

Should Peking at some future time return to her hostility toward the US as chief enemy, the Tu-16 force would take on a new dimension. Sixty of these aircraft delivering three-megaton weapons are a formidable threat to Korea, Japan, and Taiwan. Japan, most vulnerable to nuclear damage, would be in particular jeopardy because of the presence of American bases there. The *physical* resources of the PRC nuclear force now can reach metropolitan Russia, India, and a number of American allies in Asia. A direct threat to the US by missile or submarine lies in the problematical future.

The PRC also operates a satellite program. To date, there have been six successful launches, the most recent on August 30, 1976. Announcements have been, as is customary, long on political rhetoric and short on hard data. It was revealed, in connection with an earlier launch, that a capsule had been safely recovered, leading to speculation that the Chinese were planning to put men in space.

Chinese missile test programs have, in addition to their satellite applications, been coordinated with the overall military program, and there has been no evidence of serious trouble or shortages. There is apparently still only one rocket test facility—the one at Shuang Cheng Tzu. The largest vehicle used in the launch of the first five orbital missions was the CSS-X-3, a 3,500-mile-range vehicle that has launched one spacecraft of 6,000 to 10,000 pounds on a photo-reconnaissance mission. The site has also launched military devices to the station at Lop Nor, some 500 miles away.

Strengths and Weaknesses

The strength of the PLAAF lies in its numbers and in the dedication of its people. The Peking leadership is well aware of its limitations, and the Air Force is not called upon to perform beyond its capacity.

The great and glaring weakness of the PLAAF is its obsolescent aircraft inventory. The larger part of its holdings simply could not stay in the air for any extended period of conflict with either of the superpowers.

The break with the Soviet Union in the early 1960s seriously impeded Chinese modernization. For a time after the cutoff of Russian support, the PRC continued to produce aircraft and associated equipment based on the Soviet models on hand. Over time they have produced a number of MiG-19s (designated F-6 and F-9) and a few MiG-21 (F-8) fighters, and fifty or more Tu-16 bombers as well as light helicopters.

There is no aspect of modern conventional war in which equipment makes a greater difference than in the air. Peking's willingness to forego the ideological indulgence of self-sufficiency in the search for better equipment shows a realistic awareness of the inadequacies of their equipment. The PRC has been shopping for some time. In 1973, it was reported they were interested in buying 200 Harrier aircraft. Apparently this venture did not bear fruit. In 1975, there was an unconfirmed report of their attempt to purchase a number of Mirage III fighters from France through a West German intermediary. This deal, also, did not mature. The PRC has reportedly purchased Soviet Atoll missiles and a number of French R530 air-to-air missiles for the F-9. They have even tried to buy an advanced US-made computer that could be useful in air defense.

Many China watchers feel the PRC is capable of making high-quality airframes, but unable to produce the engines to drive them at design criteria performance. The turn to Rolls-Royce seems to support this assessment. In December 1975, the PRC signed an agreement to purchase a number of Spey 202 engines, to be followed by the construction of a plant in China where the Chinese would build the engine under license, and with British assistance.

The vigor with which sophisticated weaponry has been sought supports the idea that Peking has recognized the low returns on further investment in marginal equipment, and will spend willingly when better technology or performance is available.

* * *

The PLAAF shares a formidable problem with the other military services. The view from Peking sees hostile and dangerous neighbors in every quarter—the Soviet Union, South Korea, and Japan (to the degree that it harbors US forces), the Republic of China on Taiwan, and India. The ability of the PLAAF to fight a multifront war of any size is doubtful, especially when more than half of the air resources is already committed to the Soviet border.

The Air Force must compete with a number of other agencies, civilian and military, for its share of the budget and industrial capacity of the nation. The "four modernizations" are not talked about quite so much now, but they remain in being in this order: industry, agriculture, military, and science and technology. Some students of Chinese affairs suggest that concentration on nonmilitary priorities *now* will in a few years produce an industrial base capable of providing a much more formidable military establishment.

The Chinese threat is, and will continue to be for some time, of less concern than that of the Soviet Union —but it is only prudent to give close and continuous attention to what Peking is doing and to shape the American attitude accordingly. ■

U. S. Air Force

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The B-1, for example, is now successfully airborne. Powered by four advanced-technology F101 augmented turbofans, the B-1 will fly from low-level penetration speeds just under Mach 1 to supersonic speeds at high altitudes. And it will cover a longer mission range with greater survivability and nearly twice the payload of America's current intercontinental bomber.

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Two advanced aircraft are powered by GE's F103 engine. Powering the YC-14 Advanced Medium STOL Transport (AMST), twin F103s will provide that aircraft with outstanding and reliable short-field capabilities plus excellent mission range and payload. Powering the E-4A Advanced Airborne Command Post, four F103 high bypass turbofans give that aircraft the power, reliability and low fuel consumption needed to meet its varied and complex mission objectives.

General Electric engines. Once again, the Task Masters for critical Air Force missions. 205-115

GENERAL ELECTRIC

The Bulletin Board

By James A. McDonnell, Jr., MILITARY RELATIONS EDITOR

Hike Failures Ease RIF Threat

Promotion failures accounted for the forced departure of 1,376 USAF officers and played a big role in holding reduction-in-force RIFs to a modest 512 in FY '76. The promotion RIFs included 298 Regular officers who had enough service to retire; one failed promotion to O-3, forty-one to O-4, and 256 to O-5. The year's passover-separation statistics break down as follows:

Passover to:	*Regular*	*Non-Reg.*	*Total*
O-2	—	2	2
O-3	118	183	301
O-4	153	546	699
O-5	1	75	76
	272	806	1,078

In FY '75, there were 945 promotion-failure separations. Most of the FY '76 increase stems from the fact that 166 of the 546 non-Regs departing for not making O-4 had only one passover, not the traditional two. USAF had changed the rules to encourage their early exits, pointing out that chances of selection the second time around were extremely unlikely. Since the DOPMA legislation with its $30,000 ceiling for severance payments is dead this year, all upcoming forced exits will bring no more than $15,000 in individual severance payments.

What about FY '77? Officials told AIR FORCE Magazine that preliminary statistics project 778 officer promotion failure separations. Though undecided about a reduction-in-force RIF, they seem optimistic that a large one will be avoided.

The authorities noted that FY '77, which began October 1, 1976, marks the ninth straight year of officer strength cuts; the year's net reduction of about 3,000 will reduce the corps to 96,000 members.

Once again, USAF is resorting to "voluntary loss" projects such as retirement waivers, voluntary early outs, and letting surplus pilots depart (with an option to return four years hence). No firm RIF board plans had been made by early fall as officials examined returns from the voluntary release exercises.

Personnel officials reaffirmed their determination to consider only non-Regular officers for reduction-in-force RIFs. They said that the annual augmentation programs have brought the best officers into the Regular establishment, that "Regular tenure" is an important career incentive, and that as long as projected force outs are not excessive, the present policy will continue.

Thousands of non-Regular officers, meanwhile, remain under the continuing threat that their employment will be terminated suddenly. Hq. USAF officials, noting that future strength ceilings are "an unknown quantity," could offer no hope that the threat might ease during the next few years.

They said that the authority in DOPMA to early-retire senior officers "would at least partially offset the impact of RIF" on junior non-Regulars. But as noted below, DOPMA has been sidetracked again this year, and there are no serious moves to enact separate legislation for early retirement.

Pay, People Legislation

There was a flurry of action on military pay and people legislation prior to congressional adjournment. The highlights:

• **Grade Relief and DOPMA.** The law-makers took no final action on DOPMA, the measure that would modernize officer management policies and invoke urgently needed reforms. But they did extend USAF temporary grade ceilings for two years, which means the service won't have to RIF, demote, and delay promotions affecting more than 6,000 officers.

Earlier, the House had approved DOPMA, which contains the permanent grade ceilings USAF really needs. But Sen. Sam Nunn (D-Ga.), citing a host of objections, blocked the measure. Whether or not a compromise can be worked out next year is highly uncertain. Meanwhile, the services cannot consolidate their officer promotion systems, move to an all-Regular force beyond the eleven-year service point, increase officer severance pay, let senior officers share in RIFs, or take any of the many other worthwhile steps DOPMA provides.

• **Pay.** The year-long fight over the retired pay add-on ended with its defeat, the government holding it was not justified. Instead, the law-makers approved straight cost-of-living raises—without the add-on—every six months.

They also voted to bar government officials making more than $37,800, including generals and admirals, from the general pay raise that took hold October 1. The size of that boost for the rest of the troops averaged 4.83 percent, as had been forecast.

• **Recomputation.** During the Vietnam War, 2,800 retirees were recalled to active duty with the understanding that on release they would recompute their pay at current active-duty rates. But that didn't happen, so there's been a drive to correct the matter. But members of the House Appropriations Committee, wanting no part of any recomputation measure, blocked it.

• **Taxes.** One section of the massive new tax reform act requires the services to withhold state income taxes from military pay. Air Force was waiting for the official word on how to proceed. The Act also ends, for persons beginning service after September 25, 1975, automatic tax exemption for disability retirees. And only such persons with 100 percent disability or combat-related disability cases will qualify. Persons retired for disability before that date are not affected; they'll still enjoy tax exemptions.

Another section restricts the weekly $100 sick-pay exclusion. To be eligible now, a retiree must be permanently and totally disabled. And, even then, adjusted gross in-

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come above $15,000 reduces the exclusion on a dollar-for-dollar basis.

The tax measure also permanently exempts military members from the need to record moving expenses in order to claim deductions.

• **Survivor Benefits.** The House overwhelmingly passed a bill, strongly supported by AFA, to liberalize the SBP in several ways. It includes language to (1) remove the "lock-in" provision when no survivor exists; (2) cut from two years to one the time required for a new spouse to be eligible for benefits; and (3) reduce or eliminate various Social Security offsets. However, at press time, Senate Armed Services Committee approval of the SBP changes was problematical. And there were warnings that, should the Senate approve, a Presidential veto was waiting in the wings.

Veterans, Survivors Pay Upped

Congress has approved an eight percent boost for the 2,300,000 veterans drawing Disability Compensation and the 368,000 military widows and other eligible survivors drawing Disability Indemnity Compensation (DIC).

These are cost-of-living boosts, effective last month. They apply to both the basic and statutory rates of veterans (including some military retirees) with service-connected disabilities. A typical veteran drawing compensation based on a forty percent disability will receive $145 instead of $134 per month.

DIC is based on the deceased member's grade. An example of the increase: from $337 to $364 per month for the widow of an O-3.

The measure also directed the Veterans Administration to probe the DIC program, examine the income levels of recipients, and decide whether DIC should continue to be based on the deceased member's pay grade. This study, to be completed by next October, could lead to significant changes in the DIC program.

In separate legislation, the lawmakers approved a twenty-five percent pension increase for World War I veterans, supporters saying it was needed because many of those old-timers are in financial need. The measure also provides a seven percent raise for low-income veterans drawing nonservice-connected pensions.

The law-makers rejected a proposal to extend VA medical care coverage to the women pilots (WASPs) who, as civilians, flew supply and other support missions in World War II. Sen. Barry Goldwater (R-Ariz.) had steered the WASP measure through the Senate, but House opponents said approval would open the veterans benefits door to other civilian groups that supported the war effort.

Meantime, that contributory GI education bill (outlined in the September "Bulletin Board") faced an uncertain fate as Congress neared adjournment. The measure had cleared the Senate, but a House Veterans Affairs Committee spokesman was not optimistic that the House group would get to it before Congress adjourned.

Curtailed AECP Opened

The Airman Education and Commissioning Program, closed by Congress for two years, has been reopened—after a fashion. After considerable USAF pressure to reinstate the commissioning project, the law-makers okayed a mere 200 AECP inputs during FY '77 (which started last month). They refused to put up any money for school expenses.

Accordingly, new participants must pay their own tuition or use their GI Bill benefits. Another limiting factor is that the program will only enroll applicants seeking engineering, scientific, and technical management degrees.

Once they complete their degrees, AECP participants go to Officer Training School and receive commissions as second lieutenants. AECP has been the principal route by which airmen could advance to officer status. AFA has strongly supported restoration of AECP, though without the entry and funding curbs.

Recruiting Tougher

Air Force has met its recruiting goals year after year, but the task has been getting much tougher in recent months, recruiting officials report. With civilian job opportunities improving and fewer recruiters available, good prospects are harder to sign up. The pipeline of

Former Air Force tech sergeant Richard Miner has won first prize in the Veterans Administration Bicentennial Art Contest for his oil painting "Lest We Forget." It depicts American casualties on a beachhead with the Washington Monument rising on the horizon. First Lady Betty Ford, honorary chairman of the contest, is shown here with Sergeant Miner's winner, which earned him $1,000. Sergeant Miner represented the VA hospital at Northampton, Mass. The competition drew more than 100 entries from VA hospital patients around the country.

many thousands of prospective recruits waiting to suit up in succeeding months has been slashed. Authorities are apprehensive about the future.

Accordingly, USAF recently laid on new projects to bolster the recruiting effort. Under them the service:

- Has invited sharp first-term career-minded airmen to help local recruiters nail down good prospects for Air Force membership. As Headquarters sees it, these "first-termers can easily relate to their friends, former classmates, and contemporaries and add credibility to the recruiter's 'tell-it-like-it-is' policy." The recruiter aides get time off their regular posts to help in the drive.
- Has urged active-duty and retired members, and their families, to identify quality-type youths in their respective neighborhoods, to talk up USAF opportunities, and steer them to regular recruiters. A related move involves advertisements with mail-back coupons, which prospective USAF recruits may fill out and mail to the Air Force Opportunities Center, Peoria, Ill. Recruiters will take it from there.
- Will distribute bumper stickers to all Air Force people, including civilians and retirees, which carry the "Air Force—A Great Way of Life" recruiting theme.
- Recently expanded the guaranteed initial base of assignment choice to seven sites: K. I. Sawyer and Wurtsmith AFBs, Mich.; Grand Forks and Minot AFBs, N. D.; Ellsworth AFB, S. D.; Malmstrom AFB, Mont.; and Warren AFB, Wyo. Of course, these are not among USAF's most popular locations, but the option to choose and be pretty much assured of not moving for four years should have some appeal. The program is described as a test, but officials expect to continue it next year.

Tours in Turkey Backed

Before last year's political trouble that resulted in the Turkish government taking over US installations in that country, most married USAF members assigned there had their families with them. Since then there's been a sharp fall-off; many members are leaving their dependents in the States, according to Maj. Gen. William H. Ginn, Jr., the TUSLOG chief who has command jurisdiction over all major USAFE units in Turkey.

He wants to reverse the drop-off, because he feels Turkey "is a good tour" and that many people have an erroneous image of life there. "They think the base facilities are closed, that housing is poor, and that it's unsafe to go off base—so they don't bring their dependents and take the short fifteen-month tour instead," General Ginn told AIR FORCE Magazine recently.

"But that's the wrong view entirely. The Turks do control access to the gates, but in fact it makes little difference to the 12,000 USAF members and dependents in the country," he said. He underscored the long list of facilities and activities at the four major USAF sites of Ankara, Izmir, Incirlik, and Karamursel. They include kindergarten through twelfth grade schools, clubs, commissaries, bowling alleys, varied athletic programs, hobby shops, and much more. Off base there is good fishing, hunting, boating, and sightseeing. Opportunities for taking in the many historical and travel attractions are described as excellent.

At Incirlik and Karamursel, self-sufficient bases, all members live on base in "adequate" housing. Those at Ankara and Izmir live in off-base apartments and receive a housing allowance.

Oversea Tour Extensions Up

Approximately 4,200 USAF members extended their foreign tours earlier this year at USAF's urging, and saved the government a tidy sum in the process. Nearly 13,000 other Air Force people accepted another PCS option by volunteering for an extra year-long with-dependent tour, *e.g.*, forty-eight months in Hawaii as opposed to the normal thirty-six months.

In related moves this year to save travel dollars, Headquarters reports that after December 1, tour lengths will be increased at Eielson AFB, Alaska; Okinawa (except isolated areas); and Taipei, Taiwan. The new program allowing certain airmen to serve five-year guaranteed tours at Grand Forks and Minot AFBs, N. D., and Laughlin AFB, Tex., was being reviewed but authorities said it would remain in operation. However, there is a possibility that Laughlin may be closed.

Authorities also report satisfaction with the move initiated early this year to keep many people at their Stateside bases longer than was customary.

The various "PCS turbulence initiatives" saved USAF $24 million in FY '76, Headquarters said. All remain in operation except the one that found 4,200 people volunteering for an extra year abroad. That expired with people having a September 30, 1976, or later scheduled date of return to the states.

In another development, Headquarters said it still plans to phase in travel-transportation entitlements for married E-4s under two years' service and below, starting next October. Getting the funds—an estimated $46 million for one year—is the problem.

Short Bursts

Shifting people from overmanned skills to career fields that are under strength has been a continuing USAF project among the airmen population. Now the service, under a new management plan called **Palace Executive,** is nudging lieutenant colonels from crowded to undermanned fields. Not only will it broaden their experience, but improve their chance for making full colonel, Headquarters said. To apply for Executive, officers should contact their resource manager at the Military Personnel Center.

Far fewer USAF members went over the hill last fiscal year than the previous year. **FY '76 AWOLs** totaled 3,738, with 3,158 returns. This compared with 6,679 departures and 5,558 returns in FY '75. SAC led the way, reporting a drop from 1,739 to 890 AWOLs. What caused the improvement? More selective recruiting and quality control programs, Headquarters asserted. While pleased, officials said USAF can do still better. Its AWOL rate has always been much lower than the other services.

The burning personnel question is **how to maintain current manpower levels and existing benefits** without increasing personnel outlays, according to Nita Ashcraft, USAF's new Assistant Secretary for Manpower and Reserve Affairs. Mrs. Ashcraft, meanwhile, promised that Air Force officials will pursue the recently rejected DOPMA legislation "with renewed vigor" when the measure is reintroduced next year.

One reason sizable Pentagon

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staffs are required: **USAF's Legislative Liaison office** alone gets 40,000–50,000 letter queries annually, and all are researched and answered. There's no count on the telephone queries the same shop fields, but it's huge. Most of the questions are on promotions, assignments, and other people matters.

Once again in 1977, USAF won't hold Air Force-wide tennis or golf championships or participate in the **interservice events in the two sports.** The USAF interservice sports-recreation lineup for next year: basketball, wrestling, boxing, track and field, volleyball (men and women), chess, and bowling. Talent and photographic competition will also be conducted.

USAFE officials are pleased that **Lou Holtz, coach of the New York Jets,** is pleased. Holtz conducted USAFE football clinics last summer and came away with extraordinary praise for USAFE members and leaders. He spelled it out in detail in a letter to Sen. Jesse Helms (R-N. C.), and Helms put the letter in the *Congressional Record.*

Open mess managers who don't cut the mustard will be reclassified, not merely reassigned to similar duties. That's the nub of a strongly worded letter from the Military Personnel Center to command personnel officials. Seems that too often commanders haven't been tough enough. "If an open mess manager does not meet standards, his AFSC must be removed. Under no circumstances should the individual be assigned to another open mess," the MPC warning said.

October 1 was the day USAF

(Continued on p. 87)

Ed Gates . . . Speaking of People

Continuing Turbulence on the OER Front

That buzz surrounding the Officer Effectiveness Report system just won't go away.

Because of ever-increasing inflation in the rating award process, OERs constituted a nagging officer personnel issue during the late 1960s and the early 1970s. Since nearly everyone was receiving perfect or near-perfect ratings, a bushel of problems developed. There were squawks by the carload.

So, in late 1974 the service launched the "new system," one officials believed stood a reasonable chance of attaining general acceptance as well as doing a better job. By severely limiting the number of officers who could receive truly outstanding ratings, the new project erased OER inflation overnight, and nobody quarreled with that.

Unfortunately, the new system, with its rigid controls, ignited a whole new set of gripes, largely from the half of the officer force that now receives the lowest ratings. Included in this unhappy group are officers on the Hq. USAF Air Staff who, under any other rating setup, probably would be identified as among USAF's most noteworthy performers.

The control formula, it will be remembered, assures that only twenty-two percent of the officer corps will receive "1"—top box—ratings, while an additional twenty-eight percent may receive "2" or second box ratings. This means that half the entire force—nearly 50,000 officers—cannot avoid what many regard as near-disaster: third (or lower) box ratings. And, indeed, numerous second-box recipients who regard themselves as front runners also are protesting the new program.

Critics also objected to several related features of the new plan. One is the review process in which the "reviewer" exercises great authority over ratees, even though he may not know them personally.

Observers of the USAF personnel scene find the current OER turbulence about as intense as the storm that prevailed in earlier years. Like the commissary funding issue, OERs have become a highly emotional issue and rank as a high-priority discussion topic in O-clubs, BOQs, offices, staffs, professional schools, and other places where officers gather.

USAF officials, who launched the new project amid cautious optimism following six years of probing for an acceptable alternative, naturally are extremely concerned. From the Chief of Staff down, they have kept the closest tabs on
new development. And worried right along with each or

Headquarters recently, in response to press queries, is
a carefully worded six-page "statement" on how the
system is operating. The report concluded *(see last mo
"Bulletin Board")* that "it is working basically as desig
to the long-term benefit of both the officer corps and
sonnel managers." USAF did acknowledge that some
exist.

But the big news from the statement was that vice
manders of major commands and other senior leaders w
gather in Washington specifically to study OER problem
all, some three dozen generals, welcomed by Chief of
Gen. David C. Jones, participated in the two-day conc
in September. It was a significant turnout that undersc
the importance that USAF leadership attaches to the
project.

General Jones spoke to the conferees for nearly two ho
He reiterated his support for the new system, but ur
improvements in its operation, particularly in the mu
criticized review process. The conferees advanced many
posals, which a Hq. USAF spokesman later said are be
carefully studied.

Whether or not officers generally can be reconciled
mains to be seen. Headquarters can explain, as it has do
that a third box rating is not the end of the line; that m
officers over an extended period should receive a "var
of ratings"; that promotion boards do minimize the imp
of third boxes for Air Staffers (and others in elite-type jo
that new assignees fare about as well in ratings as oth
that nonrateds in flying units do as well, sometimes bet
rating-wise than flyers in the same outfits; and that beca
of their expertise and experience, reviewers are in the b
spot to shuffle ratings if that is necessary.

But not enough people have been listening; others ar
convinced. Also disturbing to some are the official statis
for the first round of ratings, showing that from twenty-
to thirty-seven percent of the top boxes went to officers
had just gained promotion eligibility. That tops the twe
two percent Air Force-wide allocation and means a la
distribution of lower boxes among officers not yet in
promotion zone.

Retiring on September 30, CMSgt. John D. O'Dell ranked first among chiefs throughout the entire Air Force, with almost seventeen years of time in grade. His last three promotions came within eight years. Chief O'Dell's final assignment was with the 93d Field Maintenance Squadron, Castle AFB, Calif. He began his military career in 1942 with an enlistment in the US Marine Corps.

ir Force wasn't the only service to endure rating infla-
. Army suffered too, but when that service last revamped
ystem, it failed to install controls. The same old problems
ain, and the same old gripes persist.
he story in the Navy is slightly different, according to
rmed sources. Navy officers explaining their rating pro-
s acknowledged that inflation does indeed prevail. "But
have a device to reduce the problem—the rating officer
t rate all his people among themselves," they said.
or example, an admiral recently rated six fast-burning
manders (O-5s) serving under him at Navy Headquarters.
gave them all fours, the top rating, but he also ranked
n in his order of preference, one through six, marking
n fitness report accordingly.
The picture will come through clearly to promotion
rds, and you can bet the guy marked number six isn't
y to advance," the officers added. They agreed with
ir Navy officers' claims that there is not a great deal of
plaining about their rating system and that "most Navy
ers accept it." But many do so "without enthusiasm,"
her Navy source noted.
SAF raters and reviewers do not line up the people they
against each other, although the reviewer does state on
n OER the number of officers he reviewed, a Hq. USAF
kesman said. However, he noted that one of the pro-
als from the generals' OER conference would permit re-
vers to use priority lists from each rater to help in the
l rating decision.
ir Force officials, at any rate, examined a great many OER
as before embracing the present system. This included a
se review of the other services' programs. While disturbed
many of their own officers are far from pleased with
new program, USAF leaders feel they have a basically
nd system that doesn't require major tinkering.
hey expect that as time passes and more ratings are
dered, many officers who received third boxes the first
e around will score better. Hence the anticipated "variety
atings" forecast by Hq. USAF for "the great majority of
ers."
ut this will take some time—a couple more annual cycles
way. And, of course, for each improved rating, there must
a reduced rating. It all suggests continuing turbulence
he OER front.
leanwhile, it might be helpful if present and future critics
something their predecessors have consistently avoided:
forth alternatives to what they contend are weaknesses
he system. It's easy to criticize and ridicule, but—
ecially in the case of the OER—it's awfully tough to
e up with better ideas. ■

NOW BETTER THAN EVER

Enrollment Period Extended t

AFA HOSPITAL

Hospital Costs Are Out of Sight!

To give you more time to consider the *new features* of AFA Hospital Indemnity Insurance, the enrollment deadline has been extended to December 3, 1976. Remember, ALL AFA members are eligible to apply!

New!

Benefits now available up to $80 per day. See Plan D-1, D-2, or D-3 in the Benefit and Premium Schedule.

New!

Hospital Out-patient Benefits. See next page for details.

BENEFIT SCHEDULE

PREMIUM SCHEDULE

INDIVIDUAL PLAN

Member's Attained Age	Plan A-1 Member: $20 per day Annual	Plan A-1 Semi-Annual	Plan B-1 Member: $40 per day Annual	Plan B-1 Semi-Annual	Plan C-1 Member: $60 per day Annual	Plan C-1 Semi-Annual	Plan D-1 Member: $80 per day Annual	Plan D-1 Semi-Annual
Under 40	$ 31.00	$ 16.50	$ 57.00	$ 29.50	$ 84.00	$ 43.00	$110.00	$ 56.00
40-49	$ 39.00	$ 20.50	$ 72.00	$ 37.00	$105.00	$ 53.50	$138.00	$ 70.00
50-59	$ 56.00	$ 29.00	$106.00	$ 54.00	$156.00	$ 79.00	$206.00	$104.00
60-64	$ 81.00	$ 41.50	$156.00	$ 79.00	$231.00	$116.50	$306.00	$154.00
65 & over*	$ 59.00*	$ 30.50*	$ 65.00*	$ 33.50*	$ 72.00*	$ 37.00*	$ 79.00*	$ 40.50*

LIMITED FAMILY PLAN

Member's Attained Age	Plan A-2 Member: $20 per day Spouse: $15 per day Annual	Plan A-2 Semi-Annual	Plan B-2 Member: $40 per day Spouse: $30 per day Annual	Plan B-2 Semi-Annual	Plan C-2 Member: $60 per day Spouse: $45 per day Annual	Plan C-2 Semi-Annual	Plan D-2 Member: $80 per day Spouse: $60 per day Annual	Plan D-2 Semi-Annual
Under 40	$ 63.00	$ 32.50	$113.00	$ 57.50	$164.00	$ 83.00	$215.00	$108.50
40-49	$ 76.00	$ 39.00	$140.00	$ 71.00	$204.00	$103.00	$268.00	$135.00
50-59	$109.00	$ 55.50	$207.00	$104.00	$304.00	$153.00	$402.00	$202.00
60-64	$156.00	$ 79.00	$301.00	$151.50	$446.00	$224.00	$591.00	$296.50
65 & over*			COVERAGE ONLY AVAILABLE UNDER INDIVIDUAL PLAN					

FULL FAMILY PLAN

Member's Attained Age	Plan A-3 Member: $20 per day Spouse: $15 per day Children: $10 per day Annual	Plan A-3 Semi-Annual	Plan B-3 Member: $40 per day Spouse: $30 per day Children: $20 per day Annual	Plan B-3 Semi-Annual	Plan C-3 Member: $60 per day Spouse: $45 per day Children: $30 per day Annual	Plan C-3 Semi-Annual	Plan D-3 Member: $80 per day Spouse: $60 per day Children: $40 per day Annual	Plan D-3 Semi-Annual
Under 40	$ 78.00	$ 40.00	$142.00	$ 72.00	$206.00	$104.00	$270.00	$136.00
40-49	$ 91.00	$ 46.50	$169.00	$ 85.00	$246.00	$124.00	$323.00	$162.50
50-59	$125.00	$ 63.50	$235.00	$118.50	$346.00	$174.00	$457.00	$229.50
60-64	$172.00	$ 87.00	$331.00	$166.50	$490.00	$246.00	$646.00	$324.00
65 & over*			COVERAGE ONLY AVAILABLE UNDER INDIVIDUAL PLAN					

*Coverage for members age 65 and over is only provided through the AFA Senior Age Benefits Program (see details above) under the individual plan. In the event you become age 65 while insured under the basic program, your coverage will be transferred automatically to the AFA Senior Age Benefit Program on the first renewal date of the certificate following your 65th birthday.

NOTE: Your premium is automatically adjusted to the rate for your attained age on renewal.

UNDERWRITTEN BY Mutual of Omaha Insurance Company, Home Office: Omaha, Nebraska

ecember 3, 1976!

NDEMNITY INSURANCE

ew Hospital ut-patient Benefits

lf you require hospital out-patient treat-nt within 48 hours of a covered accident other emergency sickness, this new AFA nefit will pay $20.00 for each out-patient it. There is no limit to the number of es you or insured members of your fam- may receive out-patient treatment at the spital for accidental injuries, but such atment for emergency sickness is limited 5 visits per year ($100). Of course, no re than one payment, per insured per-n, may be made during any 24-hour riod and, naturally, payments under the t-patient benefit plan will only be made ou are not confined in the hospital over-ht.

he optional $20/day hospital out-patient efit may be added to any of the basic ns.

mium for Hospital Out-patient Benefit

Plan	Annual Cost	Semi-Annual Cost
INDIVIDUAL PLAN	$ 3.00	$1.50
LIMITED FAMILY PLAN	$ 6.00	3.00
FULL FAMILY PLAN	$11.50	5.75

gibility

All members of the Air Force Association o are citizens of the United States are gible to become insured under this pro-am. Members of their families are also gible for coverage, under the Full Family an; dependent children will be insured be-een the ages of 14 days and 19 years nmarried children between the ages of and 23 are also eligible if they are wholly pendent upon the principal insured for pport and are attending school or college a full-time basis.)

Why Pay Money Out of Your Pocket When You Are Hospitalized?

Every family has extra expenses when a family member is hospitalized. But that doesn't mean you have to pay them if you're covered by AFA's Hospital Indemnity Insurance.

A Simple, Practical Plan

AFA Hospital Indemnity Insurance benefits—now available up to $80 per day—begin on the first day you are hospitalized—for covered sickness and accidents—and continue for as long as 365 days. No deductible. No waiting period. And benefits are payable in addition to all other insurance or government benefits you might receive. Benefits are paid directly to you unless you request payment to a hospital at the time you submit a claim.

How It Works

Under AFA's Program, you have three basic plans to choose from. You simply select the one which best meets your needs.

Individual plan . . . coverage for you; Limited family plan . . . coverage for you and your spouse; Full family plan . . . coverage for you, your spouse, and all of your dependent children.

Under each plan you have a choice of coverage . . . $20, $40, $60, or $80 per day. Depending on the plan you select, your spouse would receive 75% of your daily benefit and each child would receive 50% of your daily benefit. And, in all cases, benefit payments would be made for up to 365 days in the hospital for each covered illness or accident for each insured member of your family.

Provision for Pre-Existing Conditions

Health conditions for which the insured has received medical treatment or advice or has taken prescribed drugs or medicine within 12 months prior to the effective date of his insurance, are considered to be pre-existing conditions. Coverage for such pre-existing health conditions will begin after 12 consecutive months during which time he is covered under the policy and receives no medical treatment or advice and takes no such prescribed drugs or medicine.

Renewal Provision

As long as the Master Policy with AFA remains in force, termination of your coverage can occur only if premiums for coverage are due and unpaid, or if you are no longer an AFA member. Your certificate cannot be terminated because of the number of times you receive benefits.

Exceptions

Your Plan does not cover losses resulting from (1) hospital confinement commencing prior to the date the protected person or eligible dependent becomes insured under this certificate; (2) declared or undeclared war or act of war; (3) service in the Armed Forces of any country, except the United States; (4) acts of intentional self-destruction or attempted suicide while sane or insane; (5) pregnancy, including childbirth or resulting complications; (6) confinement in any institution primarily operated as a clinic, convalescent home, rest home, nursing home, or home for the aged, drug addicts, or alcoholics, or hospitalization involving nervous or mental disorders where no charge is made for confinement expense.

Senior Age Benefits · Payable in addition to the hospital benefits of Medicare

Members age 65 and over may qualify for coverage under the Federally sponsored Medicare program. The hospital benefits of Medicare currently provide coverage in excess of $104 during the first 60 days of hospitalization; during the following 30-day period, Medicare pays for eligible charges over $26 a day; for hospitalization in excess of 90 days, Medicare benefits are available only when you utilize the 60-day "lifetime reserve," and in this event, your costs become $52 a day.

In order to help cover those costs not paid by the hospital benefits of Medicare, AFA Senior Age Benefits are available to all members age 65 and over. It provides daily benefits for as long as 365 days. Benefits for the first 90-day period, during which Medicare coverage is available, are identical for all senior age policyowners—$10 a day for the first 60 days and $15 a day for the 61st through the 90th day of hospitalization. Daily benefits for coverage beyond the 90th day are available in different amounts ($20, $40, $60, or $80 a day) depending on your choice of plan.

AIR FORCE ASSOCIATION

Insurance Division

1750 Pennsylvania Avenue, N.W., Washington, D.C. 20006

I remember
Sunday afternoons when everyone felt too lazy to do anything but sit around and read the funnies or do the crossword puzzle. And there were always those great smells coming from the kitchen.
We were all together then.
I miss that.

Someone back home wants to share your memories. Long Distance is the next best thing to being there.

Bell System

The Bulletin Board

people officially **stopped having to sign out** in the orderly room at leave-taking time.

A master's degree is no longer required for **selection for the Air Force astronaut program.** A bachelor's will do because USAF wants to enlarge the applicant pool.

Senior Staff Changes

RETIREMENT: B/G William C. **Branan.**

CHANGES: B/G Melvin G. Bowling, from DCS/Ops., Hq. ATC, Randolph AFB, Tex., to Cmdr., USAF Recruiting Service, and DCS/Recruiting, Hq. ATC, Randolph AFB, Tex., replacing M/G Andrew P. Iosue . . . **B/G William R. Coleman,** from DCS/Maint., Hq. AFLC, Wright-Patterson AFB, Ohio, to Cmdr., Def. Property Disposal Service, DSA, Battle Creek, Mich. . . . **B/G James E. Dalton,** from Cmdr., Hq. ARPC, Denver, Colo., to Dep. Dir., Doctrine, Concepts, and Objectives, DCS/P&O, Hq. USAF, Washington, D. C.

M/G (L/G selectee) **John P. Flynn,** from Cmdr., AFMTC, ATC, Lackland AFB, Tex., to IG, Hq. USAF, Washington, D. C., replacing retiring L/G Donald G. Nunn . . . **M/G Andrew P. Iosue,** from Cmdr., USAF Recruiting Service, and DCS/Recruiting, Hq. ATC, Randolph AFB, Tex., to Cmdr., AFMTC, ATC, Lackland AFB, Tex., replacing M/G (L/G selectee) John P. Flynn . . . **B/G William J. Kelly,** from Staff Judge Advocate, Hq. AFLC, Wright-Patterson AFB, Ohio, to DCS/Procurement and Production, Hq. AFLC, Wright-Patterson AFB, Ohio, replacing B/G Robert Scurlock.

B/G Phillip N. Larsen, from DCS/Systems, Hq. AFSC, Andrews AFB, Md., to Chief, Program Management Assistance Group, Hq. AFSC, Andrews AFB, Md. . . . **M/G Howard W. Leaf,** from DCS/Rqmts., Hq. TAC, Langley AFB, Va., to Cmdr., AFTEC, Kirtland AFB, N. M., replacing M/G Robert A. Rushworth . . . AFRES **B/G Roy M. Marshall,** from 403d AR&RW, Selfridge ANGB, Mich., to Cmdr., Central AFRES Region, Bergstrom AFB, Tex. . . . **M/G Robert C. Mathis,** from Dep. for F-15, ASD, AFSC, Wright-Patterson AFB, Ohio, to DCS/Systems, Hq. AFSC, Andrews AFB, Md., replacing B/G Phillip N. Larsen . . . **B/G Thomas H. McMullen,** from Cmdr., USAF-TAWC, TAC, Eglin AFB, Fla., to DCS/Rqmts., Hq. TAC, Langley AFB, Va., replacing M/G Howard W. Leaf.

B/G Don H. Payne, from IG, Hq. PACAF, Hickam AFB, Hawaii, to DCS/Ops. & Intel., Hq. PACAF, Hickam AFB, Hawaii, replacing M/G Freddie L. Poston . . . **M/G Freddie L. Poston,** from DCS/Ops. & Intel., Hq. PACAF, Hickam AFB, Hawaii, to Cmdr., 13th AF, PACAF, Clark AB, P. I. . . . **M/G John S. Pustay,** from Sp. Asst. for AWACS Matters and Ad Hoc AWACS Task Force, Hq. USAF, Washington, D. C., to Dir. of Doctrine, Concepts, and Objectives, DCS/P&O, Hq. USAF, Washington, D. C., replacing B/G John E. Ralph . . . **B/G John E. Ralph,** from Dir. of Doctrine, Concepts, and Objectives, DCS/P&O, Hq. USAF, Washington, D. C., to Sr. Mil. Advisor to Dir., US Arms Control and Disarmament Agency, Washington, D. C.

M/G Robert A. Rushworth, from Cmdr., AFTEC, Kirtland AFB, N. M., to V/C, ASD, AFSC, Wright-Patterson AFB, Ohio . . . **B/G Robert Scurlock,** from DCS/Procurement and Production, Hq. AFLC, Wright-Patterson AFB, Ohio, to Dep. for F-15, ASD, AFSC, Wright-Patterson AFB, Ohio, replacing M/G Robert C. Mathis . . . **M/G (L/G selectee) George H. Sylvester,** from V/C, ASD, AFSC, Wright-Patterson AFB, Ohio, to Cmdr., ASD, AFSC, Wright-Patterson AFB, Ohio, replacing retiring L/G James T. Stewart . . . AFRES **B/G John E. Taylor, Jr.,** from Cmdr., 301st TFW, Carswell AFB, Tex., to Reserve Forces Policy Board, Washington, D. C.

SENIOR ENLISTED ADVISOR CHANGES: CMSgt. Earl Dorris, from Hq. AFCS/DCS, Engineering Plans, to Senior Enlisted Advisor, Hq. AFCS, Richards-Gebaur AFB, Mo., replacing CMSgt. Rick Rivard . . . **CMSgt. Norman O. Gallion,** from Hq. TAC/DOC, to TAC Advisor and Chairman of the TAC Enlisted Advisory Council, Langley AFB, Va., replacing CMSgt. Robert N. Harris . . . **CMSgt. Robert E. Rogers,** from OLG/DEN/ALC, Base Sergeant Major, Hill AFB, Utah, to Senior Enlisted Advisor, Hq. AFLC, Wright-Patterson AFB, Ohio, replacing CMSgt. Anthony J. Madonna. ■

Bob Stevens'

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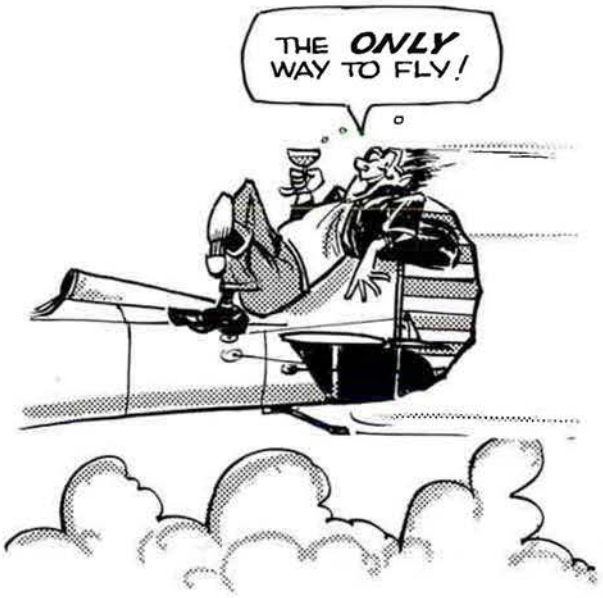

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