NOVEMBER 1981/$1

AIR FORCE MAGAZINE

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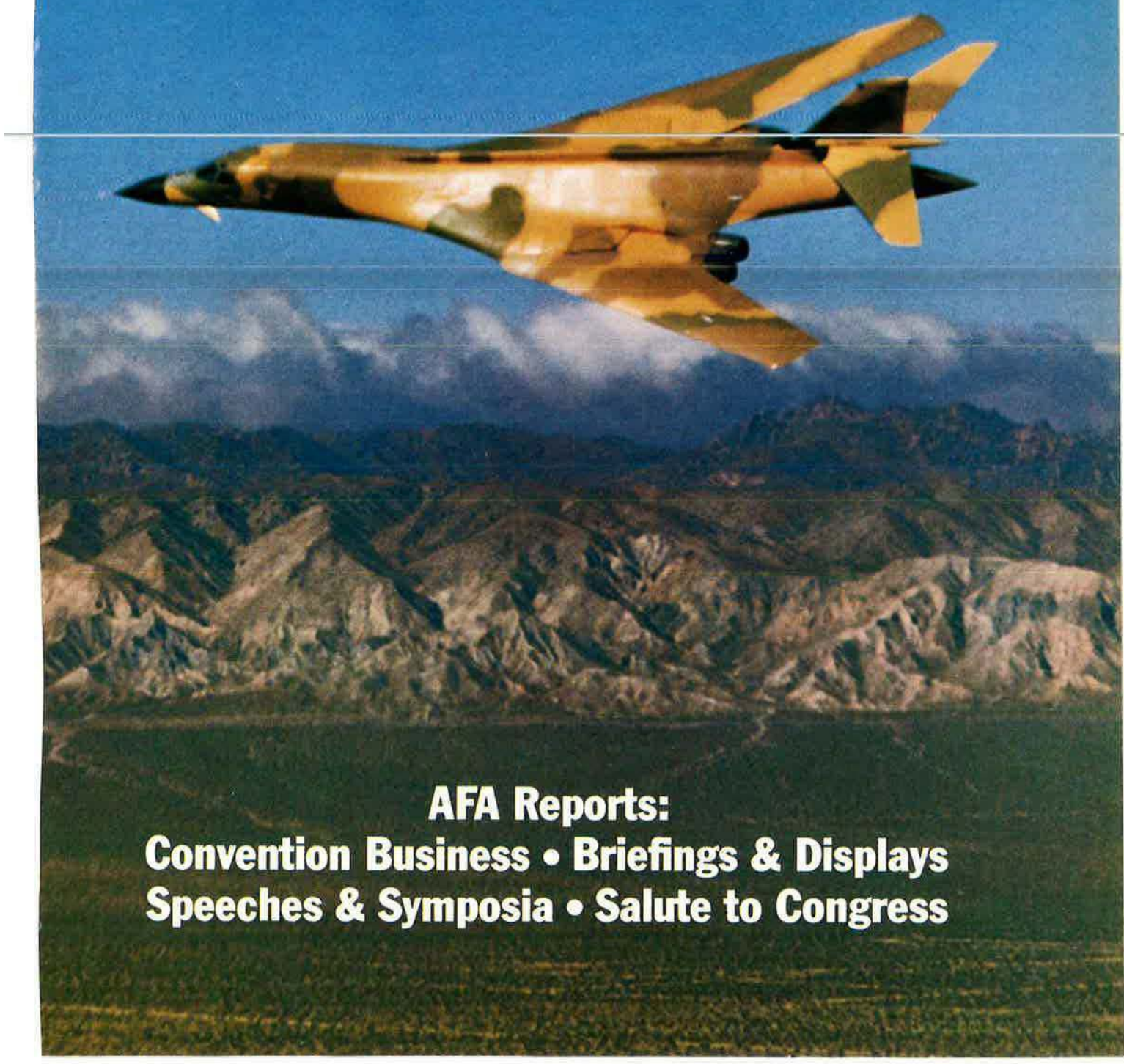

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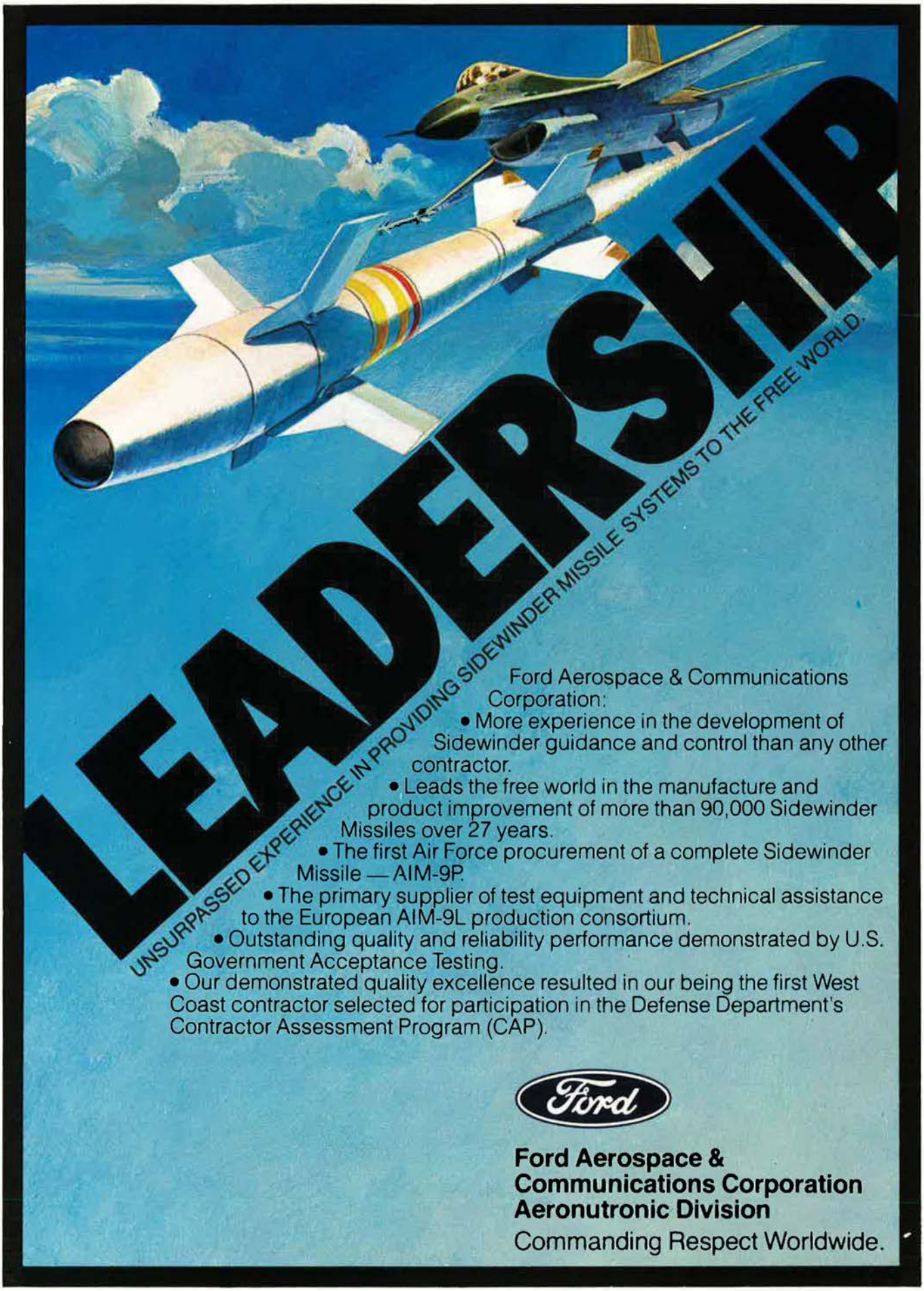
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This Month

NOVEMBER 1981 • VOLUME 64, NUMBER 11

ABOUT THE COVER

As part of President Reagan's defense policy (see p. 18), the Air Force is planning to procure 100 B-1 bombers to revitalize America's air-breathing leg of the Triad. On the cover, B-1 prototype No. 3 flies a landing system evaluation 200 feet above Haystack Butte, Calif. (Photo courtesy of Rockwell International, North American Aircraft Div.)

Departments

THE AI
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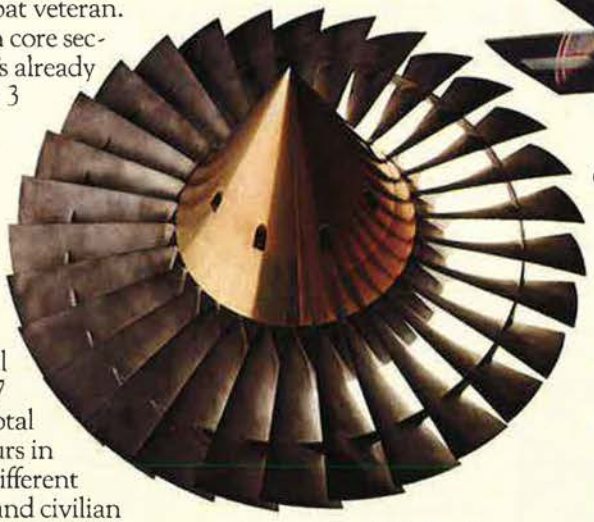
Why is Garrett's TFE76 turbofan the leading candidate to power the Air Force's New Generation Trainer?

Because it's the only candidate engine with the heart of a combat veteran. A proven core section that's already seen over 3 million hours of military action in the Rockwell OV-10 Bronco.



As well as over 17 million total flight hours in over 50 different military and civilian aircraft. (That's twice as many hours as the NGT will accumulate in 20 years of operation!)

The TFE76's core section already has the design maturity and production experience of some 8,000 engines behind it. Which eliminates the high risks associated with the development of an engine which has never been production

OV-10 Bronco

A mediu bypass, 1,200 t 1,500 lb. thrust tur fan, the core of the TFE76 is based on Garrett's extremely successful, fuel-efficient turboprops: the military T76 and th civilian TPE331. What's more, the TFE76's fan uses the advanced aerodynamics of our latest TFE731 turbofan, the engine that powers 14 of today's leading business jets. Whic means you'll benefit from the latest, most cost-effective design concepts.

The adaptability of the TFE76's turboprop core to a highly efficient, rugged military turbofan has already been proven in a demonstration engine program begun back in January, 1979.

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up to 30 times more resistant to foreign object damage, and are extremely tolerant to high levels of inlet distortion.

For maximum engine protection and condition monitoring, our TFE76 is equipped with a full-authority electronic fuel control system. A feature which also helps us achieve our exceptionally low SFC. And, to reduce maintenance costs, we offer fully-modular design, backed up by our extensive experience in supporting Garrett engines worldwide.

The lesson to be learned is clear: Garrett's TFE76 is the low risk, high performance choice for the Air Force's NGT. For more information, write: Propulsion Engine Sales, AiResearch Manufacturing Company of Arizona, P.O. Box 5217, Phoenix, AZ 85010. Or call (602) 267-2319.

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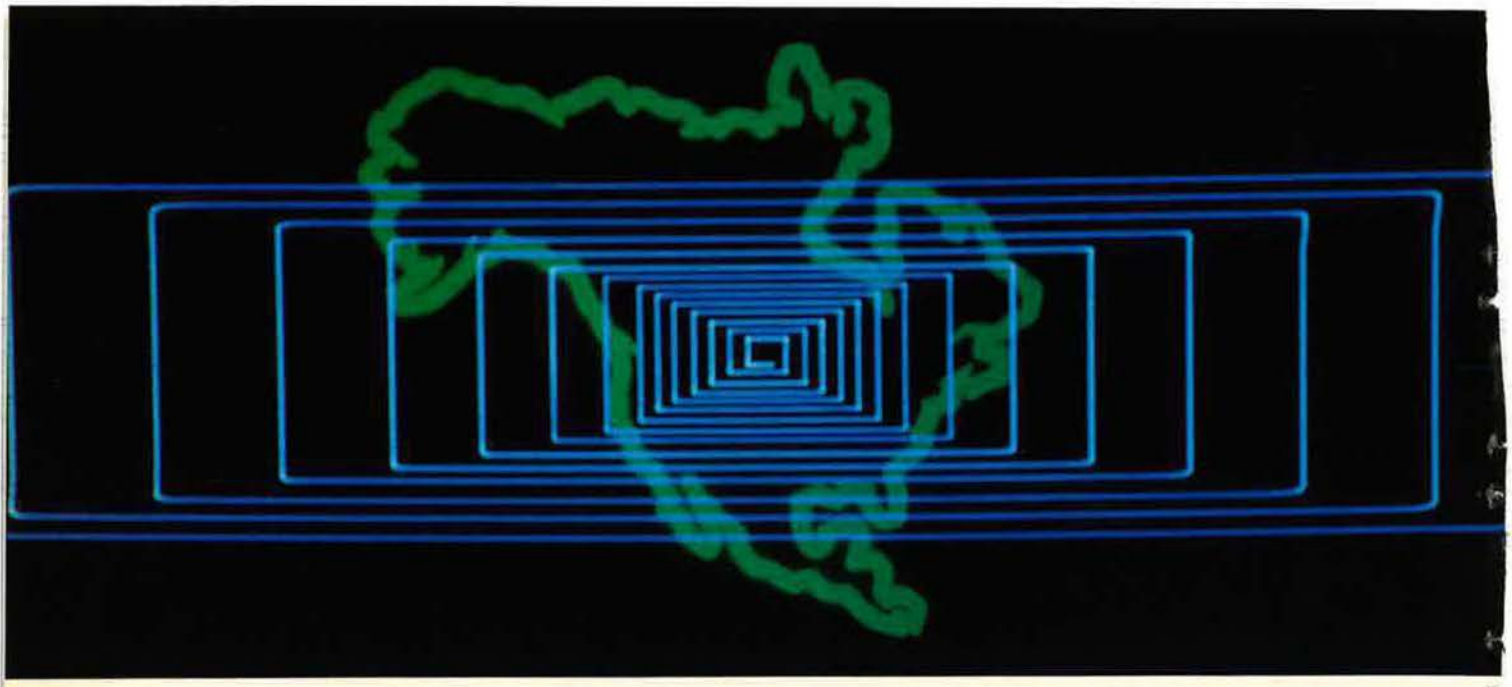
Garrett's TFE76 Military Turbofan.



Managing information in a changing environment.

The management of change has become a high-priority challenge for those in command of intricate operations.

The Bell System understands the changes taking place within the defense complex. We know that managing change means managing information.

Systems management is, after all, a Bell specialty. Not only have we taken the lead in developing an overall plan for multiple, distributed, defense communications systems, we have committed technology, resources and our knowledge to its step-by-step implementation.

We start with the urgent and varying needs of military missions and proceed to the orderly transition of integrated systems—all the while meeting requirements for security, priorities, reliability, energy management.

Our advanced systems capability makes it possible to manage information for all bases in a specified area. This application centralizes communications control, billing, attendant service. It unifies and automates directory and information. It improves service while increasing personnel productivity. As part of the overall design, it will accommodate tactical, strategic and technological changes throughout the '80s.

Put our knowledge to work in support of your changing mission. Ask your Bell Military Account Executive for a briefing on our information management capabilities.

The knowledge business

AIRMAIL

Flatten the Pyramid?

Your interview with General Iosue (*"Personnel Outlook Improving, If . . . " p. 34, August '81)* inspired me to comment on our people problems in the Air Force. What are our most important people problems? What are the possible solutions? A few evenings of thought and a stack of scratch paper led me to a somewhat surprising conclusion. . . . The promotion pyramid should be flattened by slowing the average rate of promotion, together with an increase in total lengths of careers.

Effecting stretched promotion patterns need not be painful to service people if some long-standing management policies are changed. One has to do with aging of the force. Modern technology has fathered requirements for training and experience—supplanting the need for a young force as an overriding policy. There is no real reason for mandatory retirement. Nor is there any reason to abandon twenty-year retirement with the 2.5 percent per year incentive for continued service. Without a retirement pay cap, the annuity would exceed base pay after forty years of service—thus encouraging voluntary retirement within an appropriate age range.

Next, a policy of "perform-or-out" should replace "up-or-out." The latter promotes inflation rather than effectiveness, and forces unnecessary ejection of highly qualified, technically inclined people. Among these folks are the talented engineers and technical people we need, who often must be replaced by government or civilian contractor employees to get the job done—at higher costs.

Promotion policies should be geared to emphasize career progression in terms of recommended training and broadening experiences rather than promotion potential. The latter is a natural outgrowth of the former, and can be identified more readily by job growth patterns than rating forms.

Management must differentiate positions requiring technical vs. executive talents. The former requires competence, experience, stability, and good pay. The latter require the elusive qualities of dynamic leadership, decisiveness, and drive; they must provide dividends for success and risks for failure. Motivations of people who want to continue technical careers are dramatically different from those who are ambitious for rapid advancement through the ranks of management. Surely, rewards for excellence and penalties for failure should also differ. . . .

All of the above are aimed at placing people in the right jobs at each stage of professional development—and at keeping the professionals in a more experienced force throughout their productive lives. Promotion in rank at an unwarranted pace simply tends to prove the Peter Principle. It is a poor substitute for adequate training, compensation, and self-confidence generated by interesting and productive work experiences. These basic job-satisfaction factors can be provided more effectively and economically within the framework of longer, but slower paced, careers.

Maj. Paul T. Burnett, USAF
Alamogordo, N. M.

Keep It Strong!

I am writing this letter primarily to my fellow junior officers in USAF. My motivations lie in two main areas: USAF's problem with personnel retention, and in overall force improvement.

Being of junior tenure, we obviously have a great deal yet to learn and experience, but to the Air Force we are a priceless commodity. Our youth, aggressiveness, and desire to defend this land make us so. Keep the motivation strong! Observe your chain of command closely; make note of strengths and analyze weaknesses. When undesirable occurrences come your way, take them with a grain of salt and, most importantly, keep the motivation strong! This critical time of prolific Soviet expansion demands *our* strongest efforts.

Undoubtedly, consideration will be given to civilian employment opportunities during your career. Please give this some very careful thought. Consider where you'd be doing the *most overall good.* There are, of course, fine and important positions to be filled in the civilian sector, but nonetheless give it careful consideration. The Air Force needs us. It is not so important to "fill positions" as it is to fill positions with highly motivated personnel.

This, in my opinion, is the most crucial step toward overall force improvement.

1st Lt. "B" Baldwin, USAF
McConnell AFB, Kan.

View From the Grass Roots

The people-oriented articles in your August 1981 issue were interesting and enlightening, and I was glad to see the Air Force realizing the importance of the family to Air Force personnel. Unfortunately, having been in SAC for the past three years, I can assure you that any top-level support Air Force families enjoy does not reach down to the grass-roots level of SAC's bomber and tanker squadrons.

SAC's official policy, of course, is that families are a top priority, but their actual support of families stops after those words are spoken. For example, when a pilot here tried to get out of one day of alert to attend his grandmother's funeral, the Ops Officer's first comment was, "Were you close to her?"

Where I am stationed, crew members average six months a year away from home either on alert or TDY, and during the other six months, time off is kept to the absolute minimum required by regulation. I know that many people believe that crew members have it relatively easy and enjoy plenty of time off, but those people are not presently serving on a crew, and so do not know what it is really like.

Please do not get the idea that I am a single disgruntled "crewdog" trying to blow off some steam; in fact, I am career-oriented and am trying to find enough reasons to stay in the Air Force. Morale of almost all bomber and tanker crew members in this wing is no longer low—it is nonexistent. And why? Virtually no family life is

the primary answer. It has even gotten to the point where we have had to spend extra time at work dusting, cleaning, painting, cutting grass, and cleaning parking lots for CAFI (Commander's Annual Facilities Inspection), but we have difficulty getting home to do many of those same things.

As a result, SAC as a whole must have some real people problems because I cannot believe that our wing is that much different than any other SAC wing. SAC families are given consideration only if it does not interfere with anything else—regardless of any top-level Air Force support for those families.

Name Withheld by Request

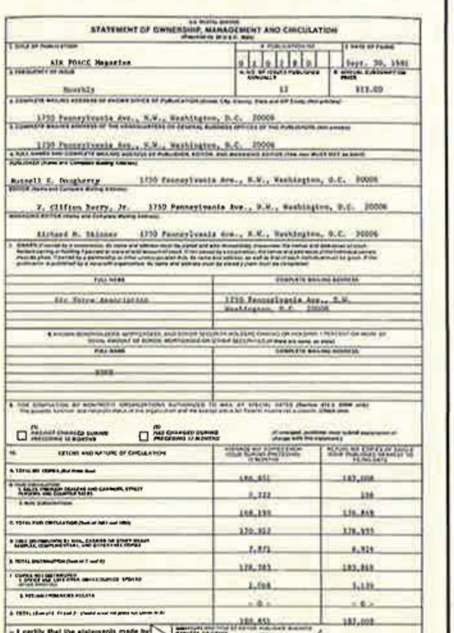
Bombs Away

Congratulations to Michael Nisos on a well-written feature story, "The Bombardier and His Bombsight," *(p. 106)* in the September issue.

It was particularly interesting to me since I was stationed at Childress Army Air Field as an on-the-line cadet from July 1944 until January 1945, which was apparently the same time Mr. Nisos was getting his bombardier training. Since I was born in 1926, I was just young enough to never quite get commissioned in the war, although I was discharged as a cadet on November 5, 1945.

I still remember the AT-11s flying out of Childress, and the big hangars with the tall simulated bomb platforms. As part of "make work" to keep us busy, I unloaded boxes of 100-pound practice bombs filled with concrete, and the empty, blue-metal bomb cases which were filled with sand before the black powder spotting charges were put in the tail.

Anderson Chandler
Topeka, Kan.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NONE

I certify that the statements made by me above are correct and complete

AIRMAIL

More Than Ever

From an old charter member of this great organization, thank you for the September '81 article, "AFA's Early Days," by James Straubel.

I am approaching (not necessarily VFR) the "springtime of my senility," as I am sure are the bulk of most WW II vets, but each issue of AIR FORCE Magazine never ceases to amaze me with its depth of comment, editorials, and articles. Like good wine, you only get better.

Keep it up—this great country needs the Air Force Association more now than ever before.

Robert M. Bascom
San Jose, Calif.

Thrill of a Lifetime

I wish to thank you for the thrill of a lifetime. My son appeared on the front cover of your September 1981 issue, and it was a delight for the whole family. (John Jr. is in Jimmy Leeward's P-51, looking straight at the camera.)

Not only did I enjoy seeing *Little Brown Jugs* [Mr. Marshall's B-25] appear on your front cover and in the context of your article *("The Marvelous Mustang," p. 144)*, courtesy of Jeff Ethell and Bill Ford, but I enjoyed many other aspects of your magazine. Thank you so much for delivering this entertaining issue to me.

Of course, being a Warbird lover, I hope that the trend continues.

John Marshall
Ocala, Fla.

Jack Gross

AFA's Assistant Executive Director for Finance Fred Musi's salute to me *("A Salute to Jack Gross," p. 163, September '81)* was perhaps too complimentary, but I must confess I enjoyed his commentary—although the remains of my modesty suffered a good bit.

I should, however, make two additions to the article. First, Fred's frequent feats of legerdemain in the accounting field have been essential to AFA's financial controls.

Second, and to correct a possible misimpression, I have vacated the office of National Treasurer—but only the office itself, and not the AFA mission, which is much too important. Actually, I hope this frees me to do more on a wider scope, both as a member and director.

I'm happy to have been a part of AFA's growth years.

Jack B. Gross
Hershey, Pa.

20th Fighter Group

I would like to hear from all who would be interested in a reprint of *Kings Cliffe*, the WW II unit history of the 20th Fighter Group, Eighth Air Force, England. It will cost around $25 to $30.

Author and historian William "Bill" Hess, Recording Secretary of the American Fighter Aces Association, says it is the best of the unit histories of that era.

We are also looking for German or other photos of our downed P-38s and P-51s. The squadron code letters are: 79th, MC; 77th, LC; and 55th, KI.

Jack Ilfrey
President
20th Fighter Group Assn.
127 Lewis St.
San Antonio, Tex. 78212
Phone: (512) 223-8921

First Primary Flying School Class

The first class of cadets entered the US Army Air Corps Primary Flying School at Randolph Field, Tex., in November 1931. The class received their wings on October 14, 1932.

Earl D. Johnson and Russell I. Oppenheim, both graduates of that class, are organizing a fiftieth anniversary reunion of the members of that first class. The reunion will be held in San Antonio, Tex., on October 13–14, 1982. Any former class members interested in attending the reunion should contact us at the addresses below.

Earl D. Johnson
36 West Brother Dr.
Greenwich, Conn. 06830
or
Russell I. Oppenheim
401 Ridgemont
San Antonio, Tex. 78209

Capt. Willy Coppens

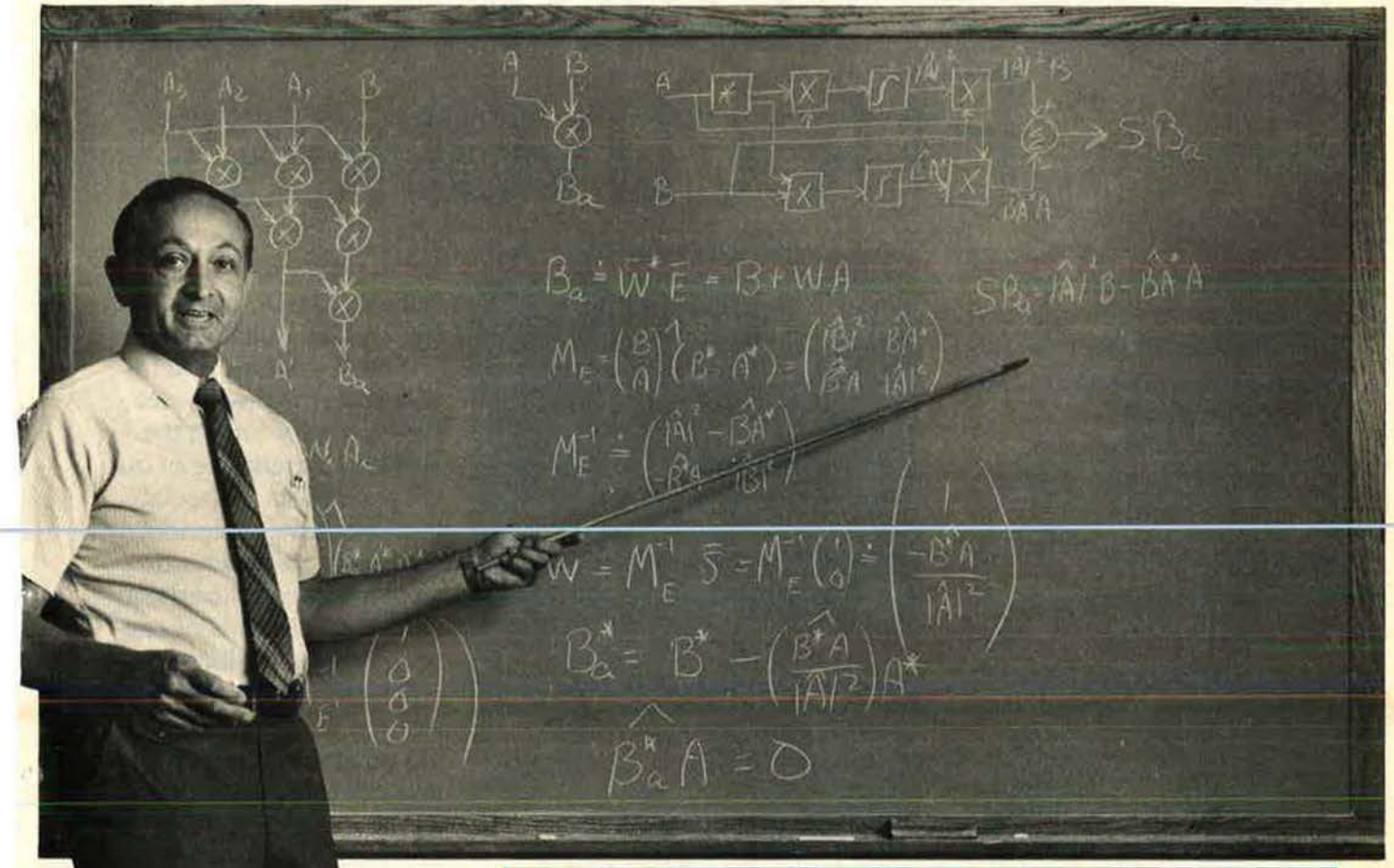
I am a relative of Willy Coppens, Belgium's foremost WW I ace. I've been trying to find a book about Willy, or some photos, but everything seems to be out of print.

If anyone knows of any sources where I may obtain such a book, please contact me at the address below.

Capt. James H. Coppens,
USAFR
632 Woodley Rd.
Maitland, Fla. 32751

Signal processing technology on the move.

Ron Mosolgo on turning adaptive processing theory into the reality of hardware.



Modern electronics systems must handle an ever-increasing number of signals arriving at the same frequency and bandwidth—for multipurpose radar, secure communications, electronic warfare, automatic test equipment, image processing, and other vital areas.

At Lockheed Electronics, Consulting Scientist Ron Mosolgo says: "What we need are processors that continuously adapt themselves to the electromagnetic environment, reject the signals we do not want, and optimize the reception of the ones we do want.

"And at Lockheed, we are now beyond just the theory and research for such processors—we have the hardware solution. We are actually building such a high-technology system. The Lockheed adaptive array processors will be all-digital, high-speed modular systems capable of going to higher-order solutions because of their modularity."

Being at the forefront of signal processing technology is nothing new at Lockheed. With long experience in radar signal processing, the company has developed unique optical pulse compression and solid-state signal correlation techniques. For moving target indication and Doppler processing techniques, the company today holds a leadership position in hybrid analog/digital charge couple devices.

And now, in answering the need and building the hardware for adaptive array processors, Lockheed is once more leading the way.

Lockheed Electronics

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a prototype C^3I test-bed for the Navy's Carrier operations, and MIFASS for the Marines. These processing centers exploit data collected by mobile intercept and direction-finding systems like Guardrail and EH-1X, developed by our ESL subsidiary.

These systems and future systems now under development reflect the skill and experience of our C^3I specialists...specialists who have designed new software and hardware to process floods of data from all kinds of sensors, rapidly, flexibly, and efficiently...men and women who are developing advanced maxi, mini, and micro computer networks to process information economically and in

near-real time.

If you're interested in applying TRW's tactical C^3I expertise, contact Stan Cochran, TRW Systems, 75/1900, One Space Park, Redondo Beach, California 90278. Phone: (213) 535-3625

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IN FOCUS...

By Edgar Ulsamer, SENIOR EDITOR (POLICY & TECHNOLOGY)

Washington, D. C., Oct. 2

Inauspicious Resumption of Arms Talks

When US and Soviet negotiators meet on November 30 in Geneva, Switzerland, to probe the potential for reducing theater nuclear forces (TNFs) in Europe, the American side will have as its main concern—as the *Wall Street Journal* so trenchantly put it—"to keep the Russians from stealing their wallets." Even this won't be easy to do. The Soviets hold all the trump cards, from vastly superior TNFs in being vs. largely paper forces planned for the future on the West's side, to political and public-relations advantages that threaten to entrap the US in a propagandistic Dunkirk from which the only out may be capitulation to Soviet dictates.

The prospect of a *danse macabre* performed to Moscow's tune is disconcerting by itself. With the TNF negotiations setting the stage for next year's START (strategic arms reduction talks, a Reagan Administration coinage taking the place of SALT), it becomes tempting to suggest double jeopardy.

According to Richard Perle, Assistant Secretary of Defense for International Security Policy, the Soviets have deployed more than 250 SS-20 launchers in a manner that enables "almost all of them" to strike targets in Western Europe. The SS-20 IRBM (intermediate range ballistic missile) carries three independently targetable high-yield warheads and has a "refire capability," according to Secretary Perle. "We believe the Soviets have deployed refire missiles but are not sure to what extent," he added.

Further, he said circumstantial evidence shows that the Soviets continue to maintain the means for transforming the SS-20 IRBM into the SS-16 ICBM. The latter is simply an SS-20 with a third stage. Some of the third stages that US intelligence knows have been manufactured are not accounted for, suggesting that the Soviets might use them to graft ICBM capability on some SS-20s.

Secretary Perle believes the Soviets decided to spin off the SS-20 from the SS-16 during the SALT I negotiations in order to circumvent the accord's limits on ICBMs. Prior to SALT I the Soviets had about 250 ICBMs targeted against Western Europe. By "inventing" the SS-20—which as an IRBM does not count against SALT limits and whose existence was unknown to the US negotiators—the Soviets were able to retarget the 250 ICBMs against the US while shifting coverage of European targets to a weapon system that bypassed SALT, he said.

The moral of the story, he suggested, is that if "you leave something outside of an agreement with the Soviets that they can substitute for what is covered, they will arrange their force structure" to take advantage of the loophole. And he is afraid that history might repeat itself. The Soviets have developed and are deploying two new ballistic missile systems—the SS-22 and SS-X-23—that can be substituted for the SS-20. Capitalizing on the European NATO members' anxiety over permitting the deployment of US TNFs on their soil, beginning in December 1983, the Soviets have already hinted to European diplomats that they might reduce their inventory of SS-20s if the US agreed not to deploy its 572 ground-launched cruise missiles and Pershing IIs.

In another gambit that suggests even greater brazenness and hypocrisy, the Soviets have suggested that long-range TNFs in Europe should be frozen at present levels—meaning perpetuation of their lopsided advantage—since these weapons come under the purview of START, which is to get under way next year but may be years away from consummation. As Secretary Perle pointed out, the US, for obvious reasons, considers long-range TNFs the most pressing and thorny issue of the TNF negotiations. Not only are the Soviets adding SS-20 launchers at a rate of one unit a week to their arsenal but they are deploying SS-22s and the SS-X-23 at a fast clip, according to Secretary Perle. About a hundred SS-22s have been deployed so far. This weapon, he said, has sufficient range to strike all NATO targets except the UK from sites in the Soviet Union. The SS-X-23, whose deployment is getting under way, has a range of about 500 km.

The Soviets enjoy another major advantage in the field of TNFs through the so-called forward-deployed systems, meaning nuclear-capable fighter aircraft. Soviet nuclear-capable aircraft of the Fencer, Fitter, and Backfire types based within striking range of NATO outnumber those of the US by a ratio "of three to one or four to one." Also, geography accords the Soviets a clearcut advantage. Except for the fewer than 200 F-111s based in Europe, no forward-based nuclear-capable US aircraft can mount militarily useful strikes against Soviet territory. Nuclear-capable Soviet aircraft based along the western perimeter of the Warsaw Pact's territory, on the other hand, can reach the entire NATO target complex, Secretary Perle stressed.

Because of the proliferation of Soviet intermediate- and medium-range ballistic missiles, the USSR's TNFs deployed against NATO pack a lethality far in excess of legitimate military needs, he said. For instance, only half the number of currently deployed SS-20s—with only one refire—is needed to strike all the high-value nuclear targets in Western Europe twice, according to Secretary Perle.

Secretary Perle, who also is the Pentagon's senior representative on an interagency task force preparing for the resumption of START (SALT), said that the Administration has not yet decided whether Backfire bombers—which can be used for both TNF and intercontinental strategic nuclear missions—should be covered under START or the TNF negotiations. Similar uncertainties exist with some sea-based systems, such as SSBNs assigned to the defense of NATO and sea-launched nuclear-armed cruise missiles, although the US inclination is to capture these systems through START, he said.

The Reagan Administration's approach to strategic arms reduction

accords differs markedly from that of its predecessors, according to Secretary Perle. For one, the Administration will seek reductions from existing rather than projected force levels; for another, missile throw-weight rather than the number of launchers is to be "the pivotal criterion" for establishing an equitable strategic balance.

The US, he said, can figure the USSR's aggregate throw-weight "within an envelope of uncertainty that isn't too bad" and will seek "sharp reductions in throw-weight." At the same time, the Reagan Administration considers the so-called National Technical Means (NTM) for verification of Soviet adherence to strategic arms reduction accords "not adequate for verification of some of the limitations that are under consideration." He cited specifically the "endless disputes with the Soviets over their ABM radars" which they claim serve only in the air defense role. It is clear, he said, that "we will have to go beyond NTMs [in the main satellites with high-resolution sensors], but how far beyond and the degree [to which cooperative measures such as on-site inspection and production limits] can be used, is not yet settled." The prevailing view within the Administration is that "we should not go beyond what we can verify" in terms of START provisions.

Ex-Defense Secretary Brown Supports MX/MPS and New Bomber

In his first comprehensive public comments on the state of America's defenses since leaving office nine months ago, former Defense Secretary Harold Brown took positions that contained overtones of hawkishness. Pillorying, for instance, the convoluted logic that holds that if the Soviets develop the means for destroying the bulk of the US ICBMs or SLBMs it would be provocative for this country to develop equivalent capabilities, Dr. Brown reminded the "better-red-than-dead" neutralists that "it has been demonstrated in Cambodia that these are not mutually exclusive choices."

At a meeting with defense writers in Washington, D. C., Dr. Brown reaffirmed his belief that the strategic Triad's "land-based missile component is very important and that it is not possible to get its benefits by placing [ICBMs] in the air or at sea. The best solution I have seen is some kind of multiple protective shelter arrangement." Asked by this columnist about the so-called "common missile" concept that was conceived and rejected during his tenure as

IN FOCUS...

Secretary—and which has been resurrected by the Reagan Administration—Dr. Brown said that "we concluded that this [approach] is more trouble than it's worth."

The Defense Department looked at the "common missile," a ballistic missile with an eighty-four-inch diameter that could be used by the Air Force in multiple shelters as well as in the Trident SSBNs' launch tubes, as "a means for saving money." After comprehensive studies, the conclusion was reached that "some money could be saved during the development phase, very little in production," and that because the land-based version of such a missile carries fewer warheads than an uncompromised design a significantly larger number of missiles would have to be procured than is otherwise necessary, Dr. Brown stated.

Pointing out that the commonality between SLBM and ICBM versions of a "common missile" is limited because of intrinsically different mission and safety criteria, Dr. Brown said the development of such a system would take longer and yield no cost reduction compared to the acquisition of two fundamentally different designs. He added that because the ninety-two-inch MX is further down the track, the common missile is a "worse idea" now than when it was first rejected by the Carter Administration.

In a spirited defense of an MX system deployed in multiple protective shelters, the former Secretary said "I never felt that because a system could be rendered somewhat vulnerable by 10,000 one-megaton [Soviet] warheads that it wasn't a good weapon." Under such an extreme scenario there would be enormous damage to each of the various Triad components, he suggested.

Two responses—separately or jointly—can counter a Soviet warhead proliferation directed at putting MX/MPS at risk, he said: "Expansion of the system, and providing it with ballistic missile defense [BMD]." A Soviet buildup of this magnitude would mean "that arms control is out the window" and, hence, termination of the SALT I accord limiting BMD deployments is logical under such circumstances, he said.

Ballistic missile defenses of ICBMs housed in fixed silos won't help the survivability problem of this basing mode. BMD and MPS interact favorably because the former increases the proliferation effect of the latter two- to threefold, according to Dr. Brown. He was chary of recent claims that breakthroughs in BMD technology make it possible to defend a single ICBM silo or shelter against five or six Soviet warheads through the use of mobile BMD radars. He countered that the only BMD "breakthroughs [that occurred since he left the Pentagon] are public-relations breakthroughs." Over the past few years there have been advances in BMD technology, but they are "not staggering," nor do they answer difficult questions about the multiple kill capability of BMD systems in the presence of electromagnetic pulse (EMP) and other nuclear weapons effects, he said.

In a forceful rebuttal of recent claims that gravitational and geodetic anomalies, lumped together under the term "bias error," render US and Soviet ICBMs so inaccurate that they could not destroy each other's silos, the former Defense Secretary said this involves a "wrong conclusion from a real phenomenon." Suggesting that current guidance technology is capable of holding the bias error to about thirty feet over an ICBM's 5,000-mile trajectory, he predicted that by the end of the decade it will be possible "to have a warhead come right down in the middle of a silo cover," meaning that anything that can be located can be destroyed, if there is no MPS, possibly coupled with BMD. "I certainly would not want to rest the security of the United States on the claim that the Soviets . . . can't hit our silos," he stressed.

He was equally disinclined to abandon the strategic Triad and the mutual reinforcement this approach provides for its individual components. Expressing confidence that in the 1980s the SLBMs will remain "relatively invulnerable," he warned however that in the 1990s, if there is no MX, both the fixed-based ICBMs and the strategic bombers will become vulnerable and then "you [might] see funny things happen to your submarines—this could happen—yet you won't be able to correct [these vulnerabilities affecting the three legs of the Triad simultaneously] for some six to ten years," the time required to field new systems.

Faulting the Reagan Administration for what he termed "its unfocused rehashing of the MX design and basing alternatives," he said the consequences are critical delays, a stiff-

SCIENCE/SCOPE

An Advanced Medium-Range Air-to-Air Missile (AMRAAM) built by Hughes has proven its capabilities by scoring a direct hit on its first fully guided launch. The prototype missile, designed to replace 25-year-old technology, recently was fired from a U.S. Air Force F-16 fighter. It shot down an F-102 drone target aircraft. The test showed clearly that the Hughes radar guidance concept for AMRAAM performs as predicted. The uncomplicated electrical and mechanical interface between the missile and the launching aircraft also met all requirements. AMRAAM is being developed for the Air Force and Navy as a replacement for the Sparrow. It will outperform Sparrow, yet cost less and weigh half as much. Hughes is a finalist in a 33-month validation phase program.

The U.S. Navy will soon enter full-scale development of the Joint Tactical Information Distribution System (JTIDS). The program will develop a family of secure, jam-resistant communications terminals for use by ground, shipboard, and airborne elements. Using the Navy-developed Distributed Time Division Multiple Access (DTDMA) architecture, the system will provide real-time surveillance, voice and data communications, and precision navigation. This advanced architecture ensures high capacity and flexible network management. TADCOM, a joint venture of Hughes and ITT Avionics Division, has been formed for the development and production of the Navy JTIDS system.

The Joint Surveillance System, North America's new air defense system for the continental United States and Canada, has passed its readiness test at Hughes and is ready to be installed at the first of seven regional operations centers. JSS, officially called the AN/FYQ-93, will replace the 20-year-old BUIC/SAGE system now used by the joint U.S.-Canadian North American Air Defense (NORAD) Command. The seven Regional Operations Control Centers will integrate data from more than 80 long-range radars (up to 20 for each center) located throughout the continent. In addition to generating a composite radar picture for each region, JSS will provide control of fighter aircraft operated by the USAF Tactical Air Command and Canadian forces. Data links will provide information automatically to adjacent centers and to the NORAD Command Center.

U.S. Air Force maintenance crews using a new electro-optical device can check out the imaging infrared guidance system for the Maverick air-to-ground missile in only five minutes. The Hughes-developed device, called an Infrared Target Simulator, is used with a portable test set. It attaches to missiles loaded on launchers or inside storage containers in the depot. The 35-pound device simulates moving targets of different intensities to verify the missile's imaging and tracking performance before it is loaded on the aircraft. Before, these tests could be done only in a laboratory due to the size of the test equipment.

The 500th weapon control system for the U.S. Navy's F-14 Tomcat fighter has been delivered by Hughes. The AN/AWG-9 weapon system detects targets the size of fighter aircraft more than 100 nautical miles away. It also tracks more than 20 airborne targets while simultaneously guiding up to six long-range Phoenix missiles against six different targets.

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ening of the political opposition, and the danger that the Administration may have "preempted" itself from building anything other than a truncated, token system. He scorned assumptions about excessive growth in the number of Soviet warheads that are the basis for the Administration's contention that an MX/MPS system is not survivable without BMD. The same line of reasoning can be applied to strategic bombers, he said. If one posits "an unlimited number of Soviet RVs [reentry vehicles, or warheads] the bombers can't survive either because even if they take off [the Soviets, by means of barrage bombing] could cover the entire US with sufficient overpressure to destroy them in the air."

Although he "would build a bomber" rather than not, he said that is "not an overwhelming but still a strong case." The decision to cancel the B-1 back in 1977 "may have been a close call but the B-1 is now clearly not the best nor even the second-best way of confidently assuring penetration of Soviet air defenses in the 1990s," Dr. Brown maintained. Reciting the Carter Administration's arguments against the B-1—in the main that in the 1990s Soviet air defenses will have the capability to down the majority of penetrating B-1s and ALCMs even though they will never score 100 percent—the former Secretary theorized that "going ahead with the B-1 could lead to pressures to . . . starve the Advanced Technology Bomber [ATB or "Stealth"]" of essential funding, thereby jeopardizing that weapon system. He claimed that if both the B-1 and the ATB programs are pursued with the same intensity, the Stealth bomber would be only two to three years behind the former's operational availability.

On the other hand, if the B-1 takes the play away from ATB, the Stealth bomber might not reach the inventory before 1995 or 2000, he said. He acknowledged that no Stealth bomber has even flown in full size, whereas the B-1 has, and that therefore an element of risk attended development of ATB. On the other hand, US deployment of Stealth bombers would force the Soviets to spend $100 billion or more on specialized defenses, "money that they can't spend on offensive systems in Europe or Southwest Asia," he suggested. (He declined to discuss the nature of future air defense systems that would be effective against ATBs.)

So far as air defenses against bombers of the B-1 type are concerned, he claimed that the Soviets need only flesh out and refine the existing systems. He conceded, however, that growth in Soviet defensive capabilities would trigger boosts in the B-1's countermeasures. The result would be a cycle of countermeasures begetting counter-countermeasures, thus providing the B-1 bomber with a renewable margin of penetrativity.

An alternative to the B-1—that could work in conjunction with ATB and the other elements of the Triad—might be a "two-stage cruise missile that takes off from the US, goes 5,000 to 8,000 miles, and [can approach and penetrate] the Soviet Union from all directions." Such a weapon would have basing-mode problems similar to those of MX and have a flight time to the Soviet target complex twenty times longer than an ICBM, he pointed out.

Dr. Brown shared the Reagan Administration's concern over the question of adequate survivability of the nation's strategic command and control system: "The vulnerability of command and control is as important as the vulnerability of strategic offensive systems, even though we are talking about a $10 billion command and control investment vs. $30 billion or so in the case of offensive systems."

He worried that congressional cuts of the Defense budget—that "have just begun and might become habit-forming, perhaps with the tacit approval of the Administration"—might find an early, soft target in command and control investments. In general, he warned that the current consensus for a stronger defense might be dissipated by "mistaken decisions" in either the economic or military sectors. If interest rates and inflation continue at high levels, cries in Congress for defense cuts will rise, Dr. Brown predicted. Wrong decisions concerning strategic programs coupled with failure to constrain Soviet strategic growth through arms limitation and reduction or "if we engage in a fruitless search for strategic superiority" might also induce a backlash against defense spending boosts and, at the same time, deprive the conventional forces of essential funds, according to the former Defense Secretary.

In the nonstrategic arena, Dr. Brown is worried principally by the "increasing vulnerability of surface ships to cruise missiles," a condition that he predicted will become acute in the second half of this decade. The answer to the problem, in part, may be greater reliance on land-based airpower to support and augment naval task forces, he suggested, even though "interservice rivalry" militates against this approach. The B-52 flights to the Indian Ocean during the Southwest Asian crisis "didn't come easy—because of interservice rivalry—but they got done," he pointed out. Land-based air also would be vital in support of naval operations in the Mediterranean during wartime, he said.

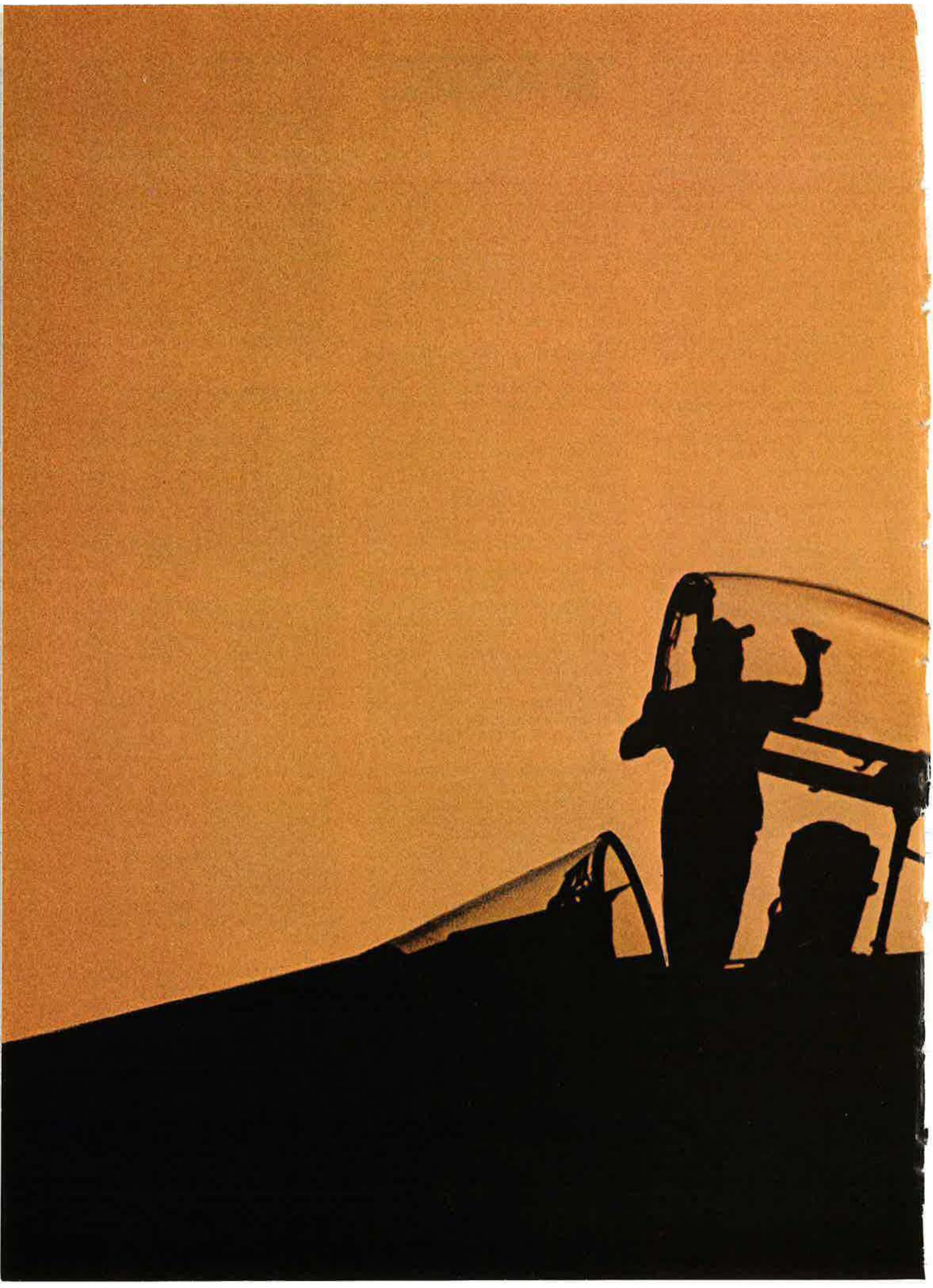
IN FOCUS...

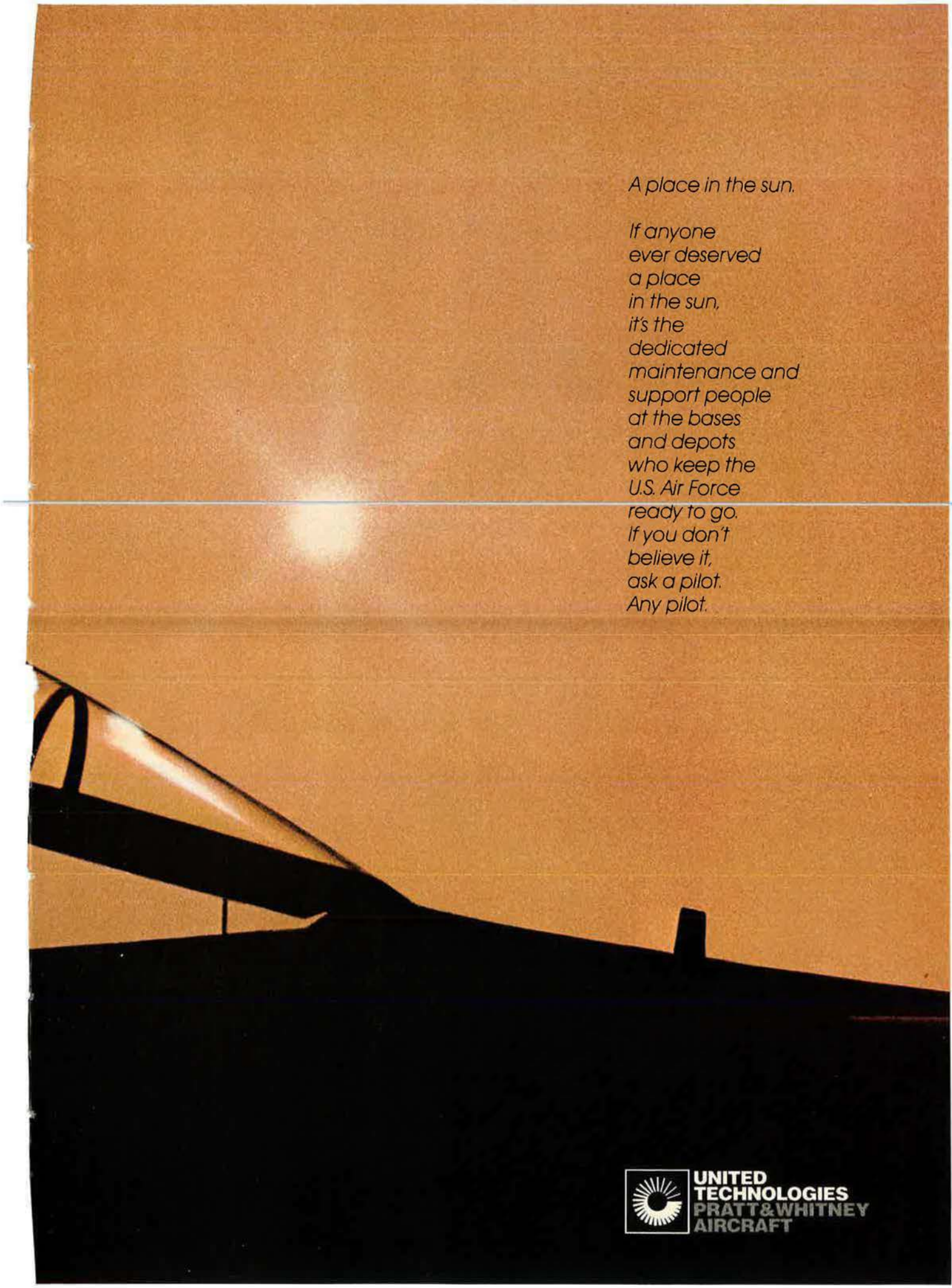
Washington Observations

★ Commercial aviation executives believe that the maturing of advanced composite technologies brought on by the "Stealth" aircraft programs will revolutionize commercial aircraft design in the 1990s. Seed money spent by the Air Force to meet a military requirement, thus, might once again provide the taxpayer with broad and unanticipated returns on his investment.

★ Press reports alleging that without SALT II constraints the Soviets could deploy up to twenty-eight warheads—instead of the ten permitted by the accord—on their SS-18 heavy missiles, and thus easily overwhelm MX/MPS, involve half-truths. The Soviets, after a fashion, have already tested the feasibility of deploying fourteen MIRVs on the SS-18. They could deploy as many as twenty-eight warheads on the SS-18 but in the process would lose the hard-target kill capability required for counterforce targets. The maximum number the system can accommodate and still retain the required lethality against hardened targets is between sixteen and eighteen, or not significantly more than what the Soviets have already tested.

★ Deployment of the Soviet equivalent of the US Navy's Trident SSBN, the larger and faster Typhoon, is being hampered by difficulties involving the SS-N-20, the world's longest range SLBM developed especially for this class of Soviet submarine. Designed to provide a range 300 miles greater than that of the SS-N-18, the SS-N-20, according to US intelligence, is not coming off the production lines at the required rate—presumably because of developmental troubles—thereby delaying operational deployment of the Typhoon. ■

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AEROSPACE WORLD
News, Views & Comments

By William P. Schlitz, SENIOR EDITOR

Washington, D. C., Oct. 1

★ A Colorado ANG A-7D team from the 140th Tactical Fighter Wing at Buckley ANGB near Denver won September's Gunsmoke '81 competition.

The meet was conducted over a specially designed course on the training range at Nellis AFB, Nev., with the aircraft flying simulated combat missions and being rated on bombing and strafing accuracy, navigation, and operational readiness.

Twelve four-aircraft teams represented USAF, AFRES, and the ANG. Engaged besides the A-7s were A-10s and F-4s.

The winning team leader—Lt. Col. Wayne Schultz—was presented the "Top Gun" award for the best individual performance by a pilot.

TAC sponsored the revived week-long Gunsmoke competition, last held in 1962. Besides CONUS crews, others came from USAFE, PACAF, and Alaskan Air Command. All were selected as the best in previous competitions.

The weapons "Loadeo" and maintenance competitions were both won by the A-10-equipped 23d TFW, England AFB, La.

Gunsmoke, now planned as a yearly event, is aimed at "providing aircrews with enhanced training in air-to-surface delivery of live ordnance," officials said.

★ A disturbing event has taken place in the town of Poplar in Wisconsin. It is there that Maj. Richard I. Bong, World War II ace of aces with forty victories, is buried.

Major Bong's sister, Mrs. Joyce Bong Erickson, reports that the memorial to him was broken into recently and a number of irreplaceable items stolen. Among them were the pilot's many medals, including the Medal of Honor.

A paragraph in an editorial in the Duluth *News-Tribune/Herald* expresses the local sentiment best:

"What's clear is that the thief or thieves have taken much more than the sum of what the medals and other articles would be worth on the open market. They have stolen a cherished part of our area's heritage. . . ."

The police have a suspect but no hard evidence. Through donations, a substantial reward has been offered for the return of the mementos.

AFA deplores this despicable depredation. Its Head of the Lakes Chapter in Duluth, Minn., has taken the lead in establishing a reward fund. This was swelled when a former commander of Dick Bong's, now a retired general in Oklahoma, dispatched a check for $1,000. Contributions can be sent to Edward A. Orman, President, Head of the Lakes AFA Chapter, 368 Pike Lake, Duluth, Minn. 55811. Checks should be made payable to the "Dick Bong Reward Fund."

Dick Bong earned his wings in January 1942. As a P-38 pilot, he flew in combat over New Guinea, Borneo, and the Philippines. After 200 missions he was ordered back to the US and became a test pilot in the development of the P-80 jet fighter. Major Bong was killed in an explosion of the aircraft in August 1945. He was twenty-four.

★ A joint industry team of ITT Avionics Division and Westinghouse Electronic Warfare Division has been selected by DoD to proceed with full-scale development (Phase II) of the Joint Service AN/ALQ-165 Airborne Self Protection Jammer (ASPJ).

An internally-mounted electronic countermeasures system, ASPJ is designed to protect Air Force and Navy tactical aircraft against hostile radar-directed weapon systems.

The award, for $14 million plus, was made by the Naval Air Systems Command, executive agent for the program, to the ITT/Westinghouse ASPJ Joint Venture Program Office located at the ITT Avionics Division, Nutley, N. J.

The current development phase, expected to total between $80 and $85 million, is scheduled to be concluded in 1984. The entire program, of the widest electronic countermeasures scope ever planned by the services, may total $1.2 billion.

★ USAF's aerial demonstration team—the Thunderbirds—has canceled its schedule of appearances for the remainder of 1981. The cancellation followed the death of the team leader—Lt. Col. David L. Smith—in the crash of his T-38 Talon jet in September in Cleveland, Ohio.

Winners of the Gunsmoke '81 "Top Team" award, from the 140th Tactical Fighter Wing, Colorado ANG, are (from left): Lt. Col. Wayne Schultz, team leader and the meet's "Top Gun," Maj. Joe Thomas, Capt. Larry Sadler, Capt. Bud Sittig, and Capt. Charles Betts. The winners flew Vought A-7Ds. See item above.

The crash was attributed to ingestion of birds into the aircraft's engines. Crew chief SSgt. Dwight Roberts ejected safely from the backseat. Colonel Smith's chute didn't open in time. He was in his third year as Commander of the precision flying team.

A 1963 graduate of the Citadel, Colonel Smith had a long career in TAC. He flew 353 combat missions in F-4s during two tours in SEA. He was on his way to his 211 appearance with the Thunderbirds.

The Thunderbirds have been in existence since 1953. In their flights around the country and the world—and literally thousands of performances—they have suffered twelve fatal crashes involving fourteen pilot deaths. The Thunderbirds are among the smallest group of the world's aviation elites—only 129 pilots have been assigned since the beginning.

AEROSPACE WORLD

★ Four aviation pioneers—three Americans and a German—were recently inducted into the International Aerospace Hall of Fame, San Diego, Calif.

The four:

• James S. McDonnell (1899–1980) began a career in aviation in 1923 and founded the company that bore his name in 1939. When it merged with Douglas Aircraft Co. in 1967, he continued as chairman of the board until 1972. His design genius produced a series of jet fighters of which the F-4 Phantom is the most famous. Mr. McDonnell was awarded the Collier Trophy in 1967.

• Dr. Ernst Heinkel (1888–1962), in an aviation career that spanned more

President's Strategic Plan

With his five-point announcement of decisions taken on strategic systems, President Ronald Reagan ended months of uncertainty, rumors, and leaks. The debate over wisdom and funding of the decisions has begun. The text of his announcement is the starting point, and is presented here in full.—THE EDITORS

As President, it is my solemn duty to ensure America's national security while vigorously pursuing every path to peace.

Toward this end, I have repeatedly pledged to halt the decline in America's military strength and restore that "margin of safety" needed for the protection of the American people and the maintenance of the peace.

During the last several years, a weakening in our security posture has been particularly noticeable in our strategic nuclear forces—the very foundation of our strategy for deterring foreign attacks.

A window of vulnerability is opening—one that would jeopardize not just our hopes for serious, productive arms negotiations but our hopes for peace and freedom.

Our plan is a comprehensive one.

It will strengthen and modernize the strategic Triad of land-based missiles, sea-based missiles, and bombers.

It will end long-standing delays in some of these programs and introduce new elements into others.

Just as important, it will improve communications and control systems that are vital to these strategic forces.

This program will achieve three objectives:

• It will act as a deterrent against any Soviet actions directed against the American people or our allies.

• It will provide us with the capability to respond at reasonable cost and within adequate time to any further growth in Soviet forces.

• It will signal our resolve to maintain the strategic balance: this is the keystone to any genuine arms reduction agreement with the Soviets.

Let me point out here that this is a strategic program that America can afford.

It fits within the revised fiscal guidelines for the Department of Defense that I announced last week.

During the next five years, the entire cost of maintaining and rebuilding our strategic forces will take less than fifteen percent of our defense expenditures.

This is considerably below the twenty percent of our defense budget spent on strategic arms during the 1960s when we constructed many of the forces that exist today.

It is fair to say that this program will enable us to modernize our strategic forces and, at the same time, meet many of our other commitments as a nation.

Let me outline now the five main features of our program.

• First, I have directed the Secretary of Defense to revitalize our bomber forces by constructing and deploying some 100 B-1 bombers as soon as possible while continuing to deploy cruise missiles on existing bombers.

We will also develop an advanced bomber with "Stealth" characteristics for the 1990s.

• Second, I have ordered the strengthening and expansion of our sea-based forces.

We will continue the construction of Trident submarines at a steady rate; we will develop a larger and more accurate sea-based ballistic missile. We will also deploy nuclear cruise missiles in some existing submarines.

• Third, I have ordered completion of the MX missiles.

We have decided, however, not to deploy the MX in the "racetrack" shelters proposed by the previous administration or in any other scheme for multiple protective shelters.

We will not deploy 200 missiles in 4,600 holes, nor will we deploy 100 missiles in 1,000 holes.

We have concluded that these basing schemes would be just as vulnerable as the existing Minuteman silos.

The operative factor here is this: No matter how many shelters we might build the Soviets can build more missiles—more quickly and just as cheaply.

Instead, we will complete the MX missile, which is more powerful and accurate than our current Minuteman missiles, and we will deploy a limited number of the MX missiles in existing silos as soon as possible.

At the same time we will pursue three promising long-term options for basing the MX missile, and choose among them by 1984, so that we can proceed promptly with full deployment.

• Fourth, I have directed the Secretary of Defense to strengthen and rebuild our communications and control system—a much neglected factor in our strategic deterrent.

I consider this decision to improve our communications and control system as important as any of the other decisions announced today. This system must be foolproof in case of any foreign attack.

• Finally, I have directed that we end our long neglect of strategic defenses.

This will include cooperation with Canada on improving North American air surveillance and defense.

As part of this effort, I have also directed that we devote greater resources to improving our civil defenses.

This plan is balanced and carefully considered—a plan that will meet our vital security needs and strengthen our hopes for peace.

It is my hope that this program will prevent our adversaries from making the mistake others have made and deeply regretted in the past—the mistake of underestimating the resolve and the will of the American people to keep their freedom and protect their homeland and their allies.

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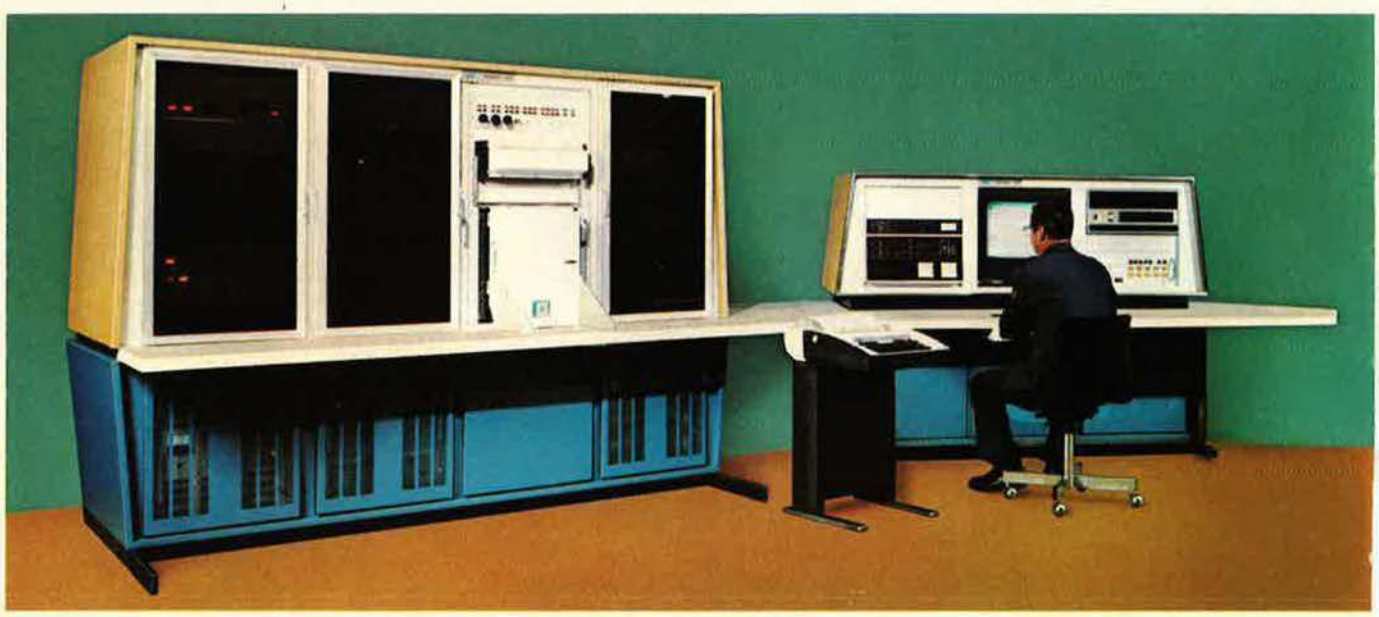

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AEROSPACE WORLD

than fifty years, designed some 531 aircraft including the first rocket plane and the first European operational jet aircraft. He designed and built his first aircraft in 1910.

• William P. Lear, Sr., (1902–1978) invented numerous electronic devices for automobile and aircraft use and was granted some 100 patents in aircraft radio communications and navigation. The company he founded in 1962—Lear Jet Industries—is a leading manufacturer of business and airline jet aircraft, aviation electronics equipment, helicopters, and stereo systems. He was awarded the Collier Trophy in 1950.

• Lt. Gen. Ira C. Eaker, born in 1896, is regarded as one of the founding pioneers of modern concepts of strategic airpower. His military career began in 1917 and he earned wings in 1918. General Eaker commanded Eighth Air Force during World War II. On retirement from USAF in 1947 he served in senior positions with both the Hughes and Douglas Aircraft Companies. He currently writes extensively on national defense and aerospace subjects.

Artist's concept of the USAF/McDonnell Douglas C-17 operating from austere forward airfield. See item below.

★ USAF has picked McDonnell Douglas Corp., Long Beach, Calif., as prime contractors to develop the CX transport, designated C-17.

C-17 is visualized as a long-range, air-refuelable aircraft with the primary mission of providing intertheater airlift of outsize cargo—including tanks and infantry fighting vehicles—directly to airfields in potential conflict areas.

The selection concluded a seven-month proposal evaluation and source review that followed submission of design, management, and cost proposals by McDonnell Douglas; Boeing Co., Seattle, Wash.; and Lockheed Corp., Marietta, Ga.

The action does not commit USAF to build the CX. Currently, several mixes of outsize and oversize, bulk-capable aircraft are being evaluated as a means of correcting the shortfall in airlift capability. The specific aircraft to be acquired will be resolved under a plan approved by DoD.

As prime contractor, McDonnell Douglas will undertake CX full-scale engineering development and provide two production options following final contract negotiations.

Then, if Congress and DoD give a green light on production, the first CXs will be produced and delivered to Military Airlift Command in the late 1980s. Full operational capability is planned for the 1990s.

The CX, with a crew consisting of pilot, copilot, and loadmaster, will operate from runways as short as 3,000 feet. It will have an intercontinental range and cargo capacity of 172,200 pounds.

★ The Clarence H. Mackay Trophy, presented annually for "the most meritorious flight of the year," has been awarded to two B-52 crews from the 410th Bombardment Wing, K. I. Sawyer AFB, Mich.

The 644th Bombardment Squadron crews successfully completed a nonstop 19,353-nautical-mile around-the-world mission during March 12–14, 1980. Their immediate object was to locate and photograph elements of the Soviet Navy operating in the Arabian Gulf.

The crews completed the mission in forty-two-and-a-half hours, their aircraft requiring more than 1,000,000 pounds of fuel transferred by seventeen tankers. It was only the third time in history that a mission of this type has been accomplished.

Crew of the lead B-52 included Maj. William H. Thurston, pilot; Capt. Steven C. Nunn, copilot; Capt. Wayne M. Hesser, radar navigator; Capt. Charles M. Schencke, navigator; Capt. Corrie J. Kundert, electronic warfare officer; and SSgt. Samuel J. Carmona, gunner. The crew was augmented by an instructor pilot, Capt. Richard M. Zimmerman.

Maj. John M. Durham served as Commander of the second aircraft. The crew included Capt. Thomas E. Clark, copilot; Capt. James A. McLaughlin, radar navigator; Capt. Brent R. Bunch, navigator; Maj. William J. Manley, electronic warfare officer; and SrA. Stephen M. McGinness, gunner. In addition, the crew was augmented by an instructor pilot, Capt. Michael G. McConnell.

AEROSPACE WORLD

The Mackay Trophy is the oldest award intended exclusively for Air Force flying officers. It was established in 1912 by Clarence H. Mackay, a wealthy industrialist, philanthropist, communications pioneer, and aviation enthusiast. Sponsor of the trophy is the National Aeronautic Association.

★ Nineteen Americans and two Europeans have completed the first phase of training at the Johnson Space Center in Houston and will continue toward qualification as pilots and mission specialists for future flights of the Space Shuttle.

The nineteen are now full-fledged members of NASA's astronaut corps, bringing the total to seventy-nine.

Among them are five Air Force officers: Col. John E. Blaha; Lt. Col. Roy D. Bridges, Jr.; Maj. Guy S. Gardner; Maj. Ronald J. Grabe; and Capt. Jerry L. Ross.

The European Space Agency is to decide which of the two Europeans is to transfer to NASA's Marshall Space Flight Center in Huntsville, Ala., for payload specialist training in preparation for the first Spacelab flight, a joint European/US venture. The other will continue training as an ESA astronaut at Johnson for possible selection as a mission specialist for European payloads aboard Shuttle flights.

The two are Dr. Claude Nicollier of Switzerland and Dr. Wubbo Ockels of the Netherlands.

★ Stimulated by the findings of a special commission and the concern among many national and academic institutions about the decline in US interest in knowing the world and its languages, DoD has begun advertising in *Commerce Business Daily* for expressions of interest in an unclassified program focusing on the smaller nations of the world.

DoD plans to assess the interest of universities, analytical organizations, and individuals in a proposed program to increase the availability and quality of US knowledge about such countries.

DoD is soliciting statements of interest in and qualifications for work in specialized language training; in applied unclassified and publishable research in the fields of history, political science, economics, geography, cultural anthropology, social psychology, sociology, and the geophysical sciences; in assistance with conferences and workshops; and in development of updated bibliographies of regional literature.

The Defense Intelligence Agency, DoD's analytical arm for studies of this nature, has been designated to manage the effort to determine if such studies are feasible and has already begun to contact academic institutions for their views.

A long-term program that is saving the US Navy time and money involves Air Force C-5s transporting sixty-five-ton ships' transmissions from the manufacturer in California to Maine, where some of USN's new frigates are being built. Another benefit is that the transmissions can retain their "assembled-as-tested" status. The program, begun in early 1978, should continue for the next six to ten years. The transmission payload has set a record for weight carried in the C-5.

★ The recipients of USAF's General Thomas D. White Environmental Awards for 1980 were announced recently:

- The Environmental Quality Award went to Vandenberg AFB, Calif., "for exceeding the most rigid environmental standards in the nation and for developing a comprehensive air quality management system."
- Myrtle Beach AFB, S. C., received the National Resources Conservation Award "for its fish and wildlife, forestry and endangered species programs, outdoor recreation, historic preservation, and recycling of waste products."
- James L. Johnston, a civilian employee at Vandenberg, was presented the Individual Natural Resources Conservation Award for "improving and protecting grazing and croplands, wetlands, threatened and endangered species, timber and water resources" at the base.

The awards are named for the former Chief of Staff who instituted USAF's first conservation program.

The winners will compete with those of the other services for DoD environmental awards.

★ A new system that can locate hostile ground radars and direct attacks against them with great accuracy is currently under development for US tactical air forces.

Tactical Air Command officials said that the Precision Location and Strike System (PLSS) is so advanced it can distinguish between a friendly and hostile radar signal, identify the type of system transmitting, locate it, and direct aircraft or standoff weapons against it.

Lt. Col. Gary Smith, chief of TAC's PLSS Management Office, said the system can identify the type of radar operating because radar emissions are "as individual as fingerprints."

Mounted on TR-1 reconnaissance aircraft, PLSS is visualized as providing all-weather, highly accurate emitter location and strike of enemy targets, thereby increasing the survivability of friendly aircraft.

PLSS will be able to give a theater-wide overview of enemy defenses, including air-defense systems, enemy activities, and potential targets, Colonel Smith said. "PLSS will be to the air-to-ground battle what AWACS E-3A aircraft are to the air-to-air battle," TAC officials said.

The F-16 Fighting Falcon, TAC's newest multirole fighter, is to be the first operational attack aircraft modified with PLSS equipment.

Lockheed Space and Missile Co. is

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Jellicoe

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prime contractor for the system, testing of which will begin in 1984. PLSS should be operational by mid-to-late-1980s. The systems will include two ground stations in Europe and a deployable station at Nellis AFB, Nev. Full-scale development of the system is estimated at $700 million.

★ **NEWS NOTES—Actor and aviation enthusiast Cliff Robertson** has been presented the **1981 L. P. Sharples Award** by the Aircraft Owners and Pilots Association "for his significant contributions to general aviation." The award is named for the founding chairman of AOPA. Mr. Robertson played John F. Kennedy in the film "PT-109" and was awarded an Oscar for his role in "Charly."

A **second NATO E-3A airborne early warning aircraft** is currently being outfitted at the Dornier plant in Germany after a delivery flight from Boeing Aerospace Co., Seattle. It should be ready for NATO use in mid-1982. Production acceptance test flights on the first AWACS aircraft were to begin in October.

At-sea tests of **USAF's COBRA JUDY phased-array radar system** aboard the USNS *Observation Island* are currently under way. COBRA JUDY—designed and built by Raytheon Co.'s Equipment Division—is to be used **to collect data on foreign strategic ballistic missile launches.** The system is housed in a steel turret that stands four stories high and weighs 250 tons. The turret is rotatable. Once the tests out of Boston Harbor are complete, the ship will operate in the Pacific and be based at Pearl Harbor.

Participating in Reforger 81/Crested Cap, the **annual large-scale deployment from CONUS to Western Europe,** were two Air Force fighter wings. The 4th TFW, Seymour Johnson AFB, N. C., contributed twenty-four F-4E Phantom IIs, and the 37th TFW, George AFB, Calif., deployed twenty-four F-4Gs.

Dwane L. Wallace, chief executive officer of Cessna Aircraft Corp. from 1936 to 1975, has been named this year's **recipient of the Wright Brothers Memorial Trophy,** sponsored by the National Aeronautic Association. His life-long contributions to aviation and public service were cited for his selection.

Died: inventor **Edwin A. Link,** aviation and oceanologic pioneer best known for his flight simulators used to train pilots and astronauts, of an undisclosed illness in September in Binghamton, N. Y. He was seventy-seven.

Died: Dr. Charles S. Sheldon II, a former chief of the Science Policy Research Division of the Library of Congress's Congressional Research Service. The authority on Soviet space activities contributed to this magazine, most notably in the annual Soviet Aerospace Almanac issues. Dr. Sheldon succumbed to cancer in September in Washington, D. C. He was sixty-four. ■

AEROSPACE WORLD

New Museum Curator

According to USAF officials, Mr. Jack B. Hilliard will replace retiring Air Force Museum Curator Royal Frey, a career Air Force civilian employee and former P-38 pilot.

Mr. Hilliard joined the staff of the Marine Corps Museum at the Washington Navy Yard in 1967, and has held the post of Chief Curator since 1969. He had been a research historian with USMC since 1962.

Hilliard has a "considerable feel" for the Air Force—he enlisted in 1951, completed pilot training in 1953, and was commissioned in 1954. On active duty until 1958 when he left to work on a B.A. and M.A. in history, he joined the Air Force Reserve at Andrews AFB, Md., in 1963 to fly C-119, C-124, and C-130 aircraft. Mr. Hilliard now serves as an Air Force Reserve Mobilization Augmentee to the Chief, War and Mobilization Plans Division at Air Force Headquarters in the Pentagon.

Mr. Hilliard received a degree in National Security Management from the Industrial College of the Armed Forces in 1976. He has completed his course work for a Ph.D. in American Studies at George Washington University.

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CAPITOL HILL

By Kathleen G. McAuliffe, AFA DIRECTOR OF LEGISLATIVE RESEARCH

Washington, D. C., Sept. 25

Defense Budget Cuts

Secretary of Defense Caspar Weinberger stated that the President will not accept any reductions in defense beyond the $13 billion in outlays for FY '82–'84 he recommended be cut from the original budget plans. The $13 billion means about $28 billion in budget authority reductions during the same period.

The Defense Secretary told the House Budget Committee that the reductions in the military budget result *only* from changed economic conditions and that Administration resolve to rearm quickly remains firm. Hence, funds for strategic force modernization, *e.g.*, MX, multirole bomber, command control communications and intelligence (C^3I) upgrades, do not fall under the budget ax.

Secretary Weinberger, identifying programs to be cut, referred to them as "relatively low priority" in comparison with others left untouched. With congressional concurrence, the Air Force will see the following:

- Early retirement of the B-52D, cuts in spares and modifications will save $62 million in FY '82.
- Retirement of the fifty-two Titan IIs between FY '83 and FY '87.
- Termination of the KC-10 tanker in FY '82, a savings of $500 million.
- Curtailment of the A-10 buy will save $350 million in FY '82 by cutting forty aircraft planned for delivery to the Reserve and Guard, and then terminating the program in FY '83.
- Slowdown of the KC-135 tanker reengining.
- Slowdown of the F-15 buy resulting in procurement of twelve fewer aircraft in FY '83.
- Revamping the A-10 and F-16 night targeting programs (LANTIRN) by substituting lower-cost technologies.
- Slowing the manpower buildup by two years.

Describing the final decisions as difficult, the Secretary said the reductions may cause further delay in meeting the Administration goals of improvement in living standards for military personnel and eliminating deficiencies in existing forces, *e.g.*, increasing spare and repair parts, increased strategic nuclear forces to assure parity with the Soviets, and a buildup of general-purpose forces.

Congressional Support Shaky

Support in Congress for the Administration's relatively low budget cuts for defense is shaky at best, even within its own party. GOP senators on the Budget Committee are looking for $20–$30 billion defense outlay reductions for FY '82–'84. Some of these senators are among the most ardent supporters of a balanced budget.

In the House, a group of about twenty-five moderate Republicans, nicknamed "Gypsy Moths," announced their belief that a $9 billion outlay cut is required for FY '82 if the President planned a reduction of $20 billion in the entire federal budget. A spokesman for the Gypsy Moths said the group would be hard pressed to support the second round of budget cuts in social programs if DoD's share is only $2 billion. In response, Secretary Weinberger told Congress that a $9 billion cut would be a "tragic" mistake and prevent the US from regaining the military muscle lost to the Soviets in the last decade. Further, Rep. Joseph Addabbo (D-N. Y.), Chairman of the Appropriations Defense Subcommittee, said a $7–$10 billion cut could be made without harming vital programs.

Meanwhile, two senior members of the House Armed Services Committee, Reps. William Dickinson (R-Ala.) and Charles Bennett (D-Fla.), announced their opposition to any such deep cuts. Both Congressmen stressed the need to keep intact the first budget in twenty years which—in their view—adequately meets US defense needs. Other pro-defense members are seeking to reduce by ten percent the recently adopted tax cut instead of cutting the defense budget.

However, deeper cuts in defense are expected from Congress, which could further stall the appropriations process. Authorization conferees, having held up final action on the $136 billion procurement and R&D bill, could throw the authorization bill back to the Armed Services Committees for reworking if the budget cuts adopted by Congress go much deeper than $2 billion. The Armed Services Committees would take from the Appropriations Committees first crack at selecting programs to be hit. This could delay passage of a defense appropriations bill well past Thanksgiving Day.

Interim Funding

The Department of Defense and seven other federal agencies will be operating under a continuing resolution until November 20 because the FY '82 appropriations bills cannot be passed by the start of the new fiscal year on October 1. The interim funding measure directs DoD to operate at the FY '81 level or at the FY '82 budget estimate, whichever is lower. The stopgap resolution prevents DoD from beginning any new programs requested for FY '82 until the appropriations bill is enacted.

Representative Addabbo blamed the Administration for the delay in adoption of the bill because of the further budget revisions, the indecision on the strategic force modernization program, and the lack of detail on the fiscal elements of the Five-Year Defense Plan. Representative Addabbo felt the committee would not be justified in approving a bill for FY '82 without knowing Administration plans for future years.

Soviet Defense Spending

A congressional panel heard testimony that a recently released Defense Intelligence Agency (DIA) report suggests "the Soviet leadership has apparently opted for further growth in military strength as the standard of living of the population stagnates and even declines in some areas. . . . Soviet resource allocation priorities continue to reflect the traditional stress on military power. . . ."

According to DIA, 1976–80 witnessed an economic slowdown with significant shortfalls in almost every area of the Soviet economy. ■

STATEMEN

"A force that cannot fight a

Adopted unanimously by delegates to AI

THE continuing Soviet arms buildup, especially in the strategic nuclear sector, combined with a worsening world situation requires a central and long-overdue response: A cohesive global strategy for the 1980s based on a national consensus backed up by the weapons, forces, resources, and industrial base that make it viable and sustainable.

The backbone of America's global strategy is—and always will be—the people who serve in the Armed Forces. Rebuilding America's military strength—as mandated so overwhelmingly by the electorate in November 1980—means in turn rebuilding an undergirding structure of confidence: Confidence by the men and women of the armed forces in their country's commitment to them; and confidence of the nation in the military's commitment to provide for its freedom and its peace. It is a two-way street; the nation cannot expect to have a committed and competent military force without a national commitment to the people who make up that force.

While weapons and materiel are critical to deterrence or the conduct of war, the ultimate determinant of success or failure, of victory or defeat, are those who fight. The nation can ill afford to treat its Armed Forces as "a sometime thing," neglected materially and in other ways most of the time yet relied on in crisis and war to ensure national survival. Last year, the Congress took an important first step forward to restore society's appreciation for, and the quality of life of, the men and women in uniform. There is a great deal of additional ground yet to be covered. We must keep up this momentum.

For a cohesive global strategy to become worthy of that name, another fundamental deficiency must be corrected: The mismatch between overextended strategy and shrinking military capabilities. Aerospace power clearly is the crucial and most suitable means for revitalizing US defense capabilities and for providing the responsiveness and "long reach" to make America's military strategy credible and effective in the dangerous and turbulent decade of the eighties. These special characteristics of aerospace power extend from deterrence of nuclear war—or, if need be, fighting such conflicts at various levels of escalation: To projecting force effectively, efficiently, and flexibly, including support of troops in battle. Also, the aerospace forces provide the highest return on investments in readiness, sustainability, modernization, and force level increase.

Aerospace power, in a unique manner, capitalizes on one of the nation's greatest strengths—the development and application of new technology. Judicious, sustained investments in technology offer the best hope for negating the Soviet lead in manpower and force size. Conversely, second-best military technology can mean finishing second in war. The nation as a whole must recognize, however, that continued superiority in our aerospace systems stands or falls with the vitality and productivity of the entire US industrial base in general and of the defense industrial base in particular. That base is weakened; it must be revitalized and sustained. The Air Force Association, therefore, firmly endorses a comprehensive national effort to increase industrial productivity, broaden our resource base, shorten lead times, and facilitate the efficient and economical development and acquisition of the sophisticated aerospace systems that our national security demands.

The broad requirement to revitalize the military capabilities of this nation by modernizing and improving all elements of our aerospace forces is recognized and supported by this Association. In previous policy statements we have highlighted the critical importance of training, readiness, and sustainability. They all continue to be important and are recognized as such. Current circumstances, however, create other high priorities that demand the nation's attention. These priorities involve crucial decisions on, and support of, vital modernization of nuclear strategic forces.

Specifically, there is no more pressing national security requirement than to end the technological filibuster that has frustrated for more than five years all attempts to develop and deploy a survivably based modern ICBM force, known as MX. By any measure, the nation is behind schedule in closing the window of vulnerability that the Soviets have opened through their massive and growing lead in the size and number of their ICBMs and the warheads these missiles can deliver against hardened targets in this country, especially ICBM silos. The number of Soviet ICBM warheads, in the view of most defense experts, is now sufficient to destroy almost the entire US ICBM force in a first strike.

This vulnerability creates pervasive strategic nuclear instability. Our ability to avoid coercion and exert leverage erodes in step with the Soviet ICBM threat growth and the aging of US strategic nuclear weapons. This erosion, more than any other factor, creates the dangers that threaten America's vital interests and survival in the 1980s.

With deterrence of the Soviet strategic nuclear

OF POLICY

in cannot be expected to deter."

ual National Convention, September 14, 1981

forces the central goal of our military strategy, the real target of our strategic forces must be the mind of the Soviet antagonist. In this decade, and beyond, the assured survivability of the US ICBM force, thus, is as crucial as the retaliatory assured destruction of Soviet war-supporting facilities and industry that the US strategic nuclear forces have always guaranteed. Further, the American people need to recognize that the Soviet strategic posture is being tailored by a cold logic of surviving and prevailing in strategic nuclear war, should such a conflict break out.

The anchor of this Soviet logic is that the USSR's predominance in ICBM capabilities makes it possible to limit the damage that the US can inflict on Russia's hardened and other crucial targets by preemptively destroying the only US weapons that can do so rapidly and reliably: Our ICBM force.

After more than fifteen years of rigorous and agonizing search by the Air Force and a host of responsible defense scientists and analysts, a land-based MX system using concealment in multiple protective shelters has emerged as the best way for denying the Soviets strategic superiority and for creating a strong incentive to halt further pointless buildups of their strategic nuclear arsenal. This Association urges the Administration to start development and deployment of a survivable land-based MX system without further delay.

There is an equally urgent need for a new, operational, multirole strategic bomber, defined by the Air Force as the Long-Range Combat Aircraft, or LRCA.

The inherent operational flexibility combined with the large payload capacity (nuclear or conventional weaponry) of large bombers offers the only realistic option—beyond programs already in progress—to improve the relative US strategic posture early in the second half of this decade.

The tasks of bombers within the Triad of strategic forces are broad. They represent a reusable strategic force in the nation's arsenal. They can be used to deliver a variety of weapons in initial strikes and in delayed strikes against the enemy's residual or reserve strategic nuclear forces because of the bomber crew's ability to make strike decisions on the spot. Also, as it becomes more and more difficult to secure access to forward military bases, the ability to project our forces rapidly from US territory becomes crucial. This circumstance gains added importance as Soviet adventurism fostered by an increasingly favorable strategic balance grows bolder and occurs more frequently. The long-range, dual-capable manned bomber is a fundamental component of rapid global projection that, based in the continental US, can respond to threats to the US interest anywhere in the world within hours. Further, in a nonnuclear conflict it could be the initial force to stop armed aggression and to bring to bear massive conventional firepower to augment tactical forces until carrier air and tactical air assets and reinforcements can reach the scene.

The long-range bomber also can be used in a maritime role to perform sea surveillance missions, to augment US naval forces in the attack of the enemy's naval combatants, or to mine harbors and straits. Lastly, the bomber can play an important role in theater nuclear conflict by releasing nuclear-capable tactical aircraft for other missions.

The multirole strategic bomber is too important and too urgently needed to be exposed to unnecessary technological risk. Therefore, pending development of the Advanced Technology Bomber (ATB) to meet the requirement for a new Long-Range Combat Aircraft, the tested and readily producible B-1 variants should be procured without delay. The need is for a mixed force of B-1 variants and Advanced Technology Bombers. The advantage of such a mix is that it rapidly provides a modern replacement for the aged B-52 and an advanced system as soon as it can be developed, tested, and produced. It also forces Soviet air defenses to cope with two generically different threats. Further, if and when the B-1 loses ground to ATB in penetration capability, it can revert to the cruise-missile-carrier and force-projection roles, even though eventually some ATBs might also become available for one or the other of these special missions.

This Association strongly believes that the flexibility, survivability, and mutual reinforcement inherent in the strategic Triad concept have stood the test of time brilliantly. But the time to modernize the Triad's obsolescent components is now. Further delays in launching long-overdue modernization programs not only jeopardize national security but increase costs.

A force that cannot fight and win cannot be expected to deter. Aerospace power—developed to proper levels—provides the margin for a winning capability across the spectrum of warfare and hence strong deterrence. We must not lose the momentum toward aerospace strength that is more crucial to world peace and our nation's survival than ever before. ■

FORCE MODERNI

Adopted unanimously by delegates to AFA's Annu

AMERICA'S security—and, by extension, that of the free world—is becoming increasingly dependent on US aerospace power. Global turbulence, fostered by Soviet adventurism as well as by energy and other resource shortages that create the opportunity for political coercion, clearly is on the increase. The aerospace forces' ability to apply military power rapidly and over a range from strategic nuclear forces to a symbolic show of force in support of a friendly power in distress is the most effective and essential means for deterring, or when necessary fighting, the conflicts that threaten peace and freedom in this dangerous decade.

In dealing with these growing and changing threats, the nation must take a vital first step: It must draw up and follow a coherent military strategy to guide our technological thrusts, and it must determine the nature and scope of our force modernization programs. Secondly, such a strategy must be mated to stability and continuity in planning and funding the host of programs that collectively provide the capabilities needed to support such a strategy.

Program stability, in turn, goes hand in glove with other factors of crucial importance to a coherent global strategy. Basic here is the soundness of the military planning and of the intelligence capabilities that help shape that planning. It is vital in this context that the US support an effective national intelligence structure, with strong capabilities in military, political, economic, and technical fields. Further, the nation must be prepared to conduct covert intelligence actions against hostile foreign governments or parties when such actions are deemed to be in the national interest by the President and the appropriate congressional authorities.

Another critical element of a long-term cohesive strategy is a strong defense industrial base that is capable of "surging" rapidly in time of crisis or war. Yet there is evidence of that base being eroded by dwindling capacity, slipping quality and productivity, severely curtailed access to critical materials, and inadequacies in technical manpower and labor force. This decline must be halted. The remedies are neither instantaneous nor total, but they must be applied quickly and forcefully.

Two related deficiencies come into play here—the nation's increasing dependence on foreign sources for critical raw materials and the dwindling stockpile of critical strategic materials that are of fundamental importance to both the defense industrial base and the national economy. The national interest requires that research and development directed at finding substitutes for vital, scarce materials be accelerated and intensified. Equally critical is the need for the executive and legislative branches of government to provide reasonable access to public lands for early and comprehensive scientific evaluation and use of the potential metallurgical and energy resources they might contain. Lastly, the stockpile of critical strategic materials must be built up and maintained at a level to ensure that vital national security needs can be met in case of crisis or war.

Revitalizing the defense industrial base will make it easier to develop and procure weapon systems and military supplies more cost-effectively and in turn to step up the rate at which the nation modernizes its military forces.

These steps, in combination, will contribute to a margin of safety in the defense posture that is now tragically lacking and dramatize to friend and foe alike America's determination to restore its military capabilities to high effectiveness and credibility.

RESEARCH AND TECHNOLOGY

Tomorrow's military capabilities are determined significantly by today's science and technology programs (research and development). The science and technology program, which includes manufacturing technology and materials technology efforts to increase the productivity and vitality of the industrial base, has one primary objective: to provide a margin of excellence sufficiently broad to enable the United States to develop and field new military capabilities superior to those of potential adversaries. Not only is the development and production of military equipment fundamental for the long-term strength of the armed forces—along with such factors as the skills, training, and morale of military people—but the high visibility of these programs makes them a crucial component of deterrence.

The balance of military equipment between the Soviet Union and the US has changed markedly over the past decade and these trends—generally unfavorable to this country—can be expected to worsen in the years immediately ahead. The Soviet Union now makes about twice as great an effort as this country in military research and development, thereby creating a growing risk of technological surprise. A clear indication of the Soviets' commitment to defense technology is the increasing share of their military spending that goes to research and development. Soviet military R&D expenditures over the past ten years exceeded in the aggregate those of the United States by about $90 billion. While the US

APER

ATION AND R&D

onal Convention, September 15, 1981

is holding its own in most critical technological fields because of this country's commercial technology edge and the momentum derived from the lead built up in the 1960s, the US is losing the lead in some key technologies, including electro-optical sensors, guidance and navigation, and propulsion.

Of special concern is the Soviet concentration on several unconventional technologies at a level far in excess of the US program. The Soviet high-energy laser program, for instance, is estimated to be five times the US level of effort and is tailored to the development of specific laser weapon systems, while the US confines its program to exploratory work.

The Soviet high-energy laser program . . . is estimated to be five times the US level of effort and is tailored to the development of specific laser weapon systems. . . .

US intelligence can identify about fifty major Soviet military systems at this point in various stages of test and evaluation. Many of these systems are quite significant; for example, a new ballistic missile submarine (the world's largest), a new interceptor and associated look-down, shoot-down missiles, a new tank, and a variety of precision-guided munitions.

The intense, steadfast Soviet commitment to outdistance this country in military technology clearly will make it more difficult to maintain the US technological advantage in the future than it has been in the past.

Aggravating this condition is the fact that over the past decade and a half the thrust of the US military R&D program has changed from visionary and daring quests of new frontiers to static approaches. Maintaining technological superiority requires that the Defense Department and the Air Force stay on the cutting edge of science and engineering. Needed are the kind of outreach programs that characterized the Air Force research and development effort in the 1950s and 1960s and produced advanced ICBMs and aircraft.

There also needs to be increased concern with maximizing the return on investment in military R&D and acquisition. Several important steps need to be taken: First, R&D investment burdens should be shared more with this nation's allies through multinational codevelopment and coproduction; second, investments of productivity-improving technology must be identified. The Defense Department must take the lead in encouraging increased investment in productivity-enhancing equipment by the aerospace industry. The defense-related marketplace must be provided with greater stability. Multiyear contracting is an essential means to improve stability. So are steps that free operating capital for investments in productivity-enhancing technology. Further, in developing new systems, care must be taken that they are logistically supportable and affordable. The most technically advanced system, unless supported by a sound logistics base, cannot take full advantage of the technology designed into it.

When designing new systems, it is imperative that the engineering community look beyond the R&D phase. The principal means of achieving this is through initiating logistics engineering during R&D and continuing through the transition phase of the system to an air logistics center.

A problem that affects all Air Force technology programs is the shortfall of officers in the science and engineering fields that is now in excess of 1,300.

This problem will be compounded by anticipated increases in the need for technical officers through the next two decades. During the same period, the demand for technically educated people in the civilian sector is likely to increase even more rapidly. USAF's success in attracting and retaining needed scientists and engineers will depend on the overall ability of the nation to revitalize the technical training base. The Air Force, in turn, must be given the means to sponsor adequate numbers of qualified people in fully funded graduate education programs and ensuring sufficient undergraduate scholarships for talented young officer prospects. Also, incentives must be provided to attract scientists and engineers to military service.

STRATEGIC FORCES

Deterioration of the strategic balance clearly is the primary concern of our national security policymakers. The military challenge is clearest and most consequential in the area of our strategic nuclear forces. Soviet nonstop modernization has relegated the once-superior US to a position of uncertain parity with the USSR.

Key to our nuclear deterrent strength is preservation of the chain of command through reliable, survivable command control communications and

intelligence (C^3I) capabilities for our strategic Triad forces. Years of inattention and underfunding have resulted in a gravely weakened C^3I system while Soviet capabilities to attack and disrupt US strategic networks have greatly increased. C^3I must be designed to give the National Command Authorities flexible operational control at every level of conflict. Strategic force changes resulting from deployment of new systems require innovations in command and control in order that our forces realize their full potential.

Improvements and modernization are needed in ground- and space-based radars for our C^3I network to control all phases of nuclear conflict. Current deficiencies are such that C^3I systems' survival from a first strike, let alone endurance through a prolonged nuclear conflict, is not assured. Congressional action to support the upgrading of our warning and communications network is essential. Costs for needed improvements are substantial, but not out of line with other planned strategic force modernization costs. The Triad's ability to perform its mission ultimately depends on reliable and survivable command and control, thereby justifying the costs of such upgrade programs.

The so-called window of vulnerability of the '80s is widening and demands immediate modernization of the Triad. Of central importance is the growing vulnerability of our strategic land-based ICBM force. Soviet capabilities continue to increase across the entire spectrum of strategic warfare. Modernization of their land-based missile force, including development of yet another new generation ICBM, increases the threat to our fixed-silo ICBMs. At the same time, Soviet proliferation of highly accurate reentry vehicles continues. Only a small number of our land-based missiles would be able to survive a dedicated Soviet ICBM attack if they were held in silos during the entire attack. The current threat demands the expeditious deployment of a survivable ICBM to supplement the Minuteman and Titan force. The MX, deceptively based on sovereign US territory, offers the best solution to this vulnerability problem. The unfavorable exchange ratio resulting from a nuclear exchange would weaken the Soviets' strategic position, thereby deterring their first strike. MX embodies the unique characteristics of land-based ICBMs: quick, flexible response; high alert rate; reliable command control communications and intelligence; independence from warning; and hard-target kill. The MX system will restore essential equivalence by strengthening the US deterrent posture and at the same time contribute to overall limitation of nuclear weapons by allowing the US to negotiate toward equitable arms reductions from a position of strength.

The MX system's inherent ability to maintain preservation of location uncertainty remains its most advantageous feature. Its substantial throw-weight and increased number of warheads with improved accuracy increase the utility of each surviving missile against a full range of Soviet targets.

Deployment of MX should not detract from the need to make timely, qualitative improvements to our Minuteman and Titan force, thereby increasing overall force flexibility. Addition of the Mark 12A warhead will provide Minuteman III with improved flexibility and higher yields than the current Mark 12 reentry vehicle. The Airborne Launch Control System Phase III allowing remote retargeting of 200 Minuteman IIIs from EC-135 aircraft is essential to increase the endurance of our aging ICBMs and must be completed.

A combined force of B-1 derivatives and Advanced Technology Bombers incorporating Stealth technology provides a most effective bomber modernization program well into the twenty-first century.

AIR-BREATHING LEG

Growing, modern Soviet air defenses necessitate that a new strategic manned bomber come on line as soon as possible. As mandated by Congress, this weapon must be capable of performing the mission of a conventional bomber, cruise missile launch platform, and nuclear weapons delivery system in the tactical and strategic arenas. A combined force of B-1 derivatives and Advanced Technology Bombers incorporating Stealth technology provides a most effective bomber modernization program well into the twenty-first century. Both systems are needed.

The B-1 variants, which rely on a combination of reduced radar observability and highly effective reprogrammable electronic countermeasures, will be fully capable of penetrating the Soviet Union well into the 1990s. This will allow designated B-52s to revert to the cruise missile carriage mission and others to be retired from the fleet. To keep the B-52s as a viable offensive weapon system over the next decade and beyond would require numerous expensive modifications. As these airframes age, their operation and maintenance costs will grow at an increasing rate. Therefore, the timely retirement of some of these airframes will result in a substantial cost savings. When the B-1's capability to penetrate declines eventually in the face of growing Soviet defensive efforts, the B-1 will be able to function as a very effective cruise missile carrier. In view of potential breakthroughs in Stealth technology, the acquisition of penetrating advanced technology bombers should start in the 1990s. The B-1 could be even more important as a complement to the B-52 if current expectations in regard to advanced technology bombers don't materialize.

In the meantime, the modification program for the B-52 force must continue in order to keep these aircraft viable through the mid-1980s. This modification program will transform the B-52 from a pure penetration to a shoot-then-penetrate role and finally assign it to a standoff role. The ALCM, sched-

uled for first deployment on the B-52 in December 1982, will provide greater accuracy, flexible routing and targeting, and saturation of Soviet air defenses. The ALCM, deployed in conjunction with Short-Range Attack Missiles (SRAM) and gravity weapons, improves the overall capability of the air-breathing leg of the strategic Triad.

There is a crucial need to augment the strategic nuclear forces with modernized theater nuclear forces (TNFs), comprised of Pershing II and ground-launched cruise missiles (GLCMs). The latter, with a range of 2,500 km, will be able to strike fixed targets throughout Eastern Europe and in the Soviet Union from their sites in England, Italy, and possibly other Western European locations.

In response to the large-scale Soviet theater nuclear force buildup, notably their continuing deployments of the SS-20 mobile intermediate-range ballistic missile and the Backfire bomber, NATO agreed in December 1979 to a long-range theater nuclear modernization program involving deployment by the US Air Force of ground-launched cruise missiles in Western Europe with an initial operational capability of December 1983. Deployment of GLCM will allow the use of dual-capable aircraft in the conventional role for a longer period before transitioning them to a nuclear role and would allow planners to take full advantage of the inherent flexibility and capability offered by manned aircraft to strike targets of opportunity.

Deployment of these weapons must not be delayed because of narrow political considerations or Soviet propaganda campaigns exploiting Western European sensitivities.

TACTICAL AIRPOWER

Constrained budgets over the past few years have forced a difficult choice between modernizing USAF's tactical forces or supporting their near-term readiness. A proper balance must be struck in funding the acquisition of new aircraft and the day-to-day operation of tactical forces in being.

Emphasis on a survivable, capable tactical C^{3}I network is essential to counter steady, steep Soviet improvements in this arena. Further, the US tactical C^{3}I network must be interoperable with our allies to provide better detection, location, and classification of enemy forces.

Improvements in Soviet tactical aviation and ground forces have resulted in widening their numerical advantage and reducing the qualitative edge of US tactical aviation. A substantial imbalance in numbers has grown up over the years favoring the Soviets. Their technological sophistication now rivals our own.

Further, quality and quantity are relative virtues in a tactical fighter force. In combination, these characteristics determine the degree to which the fighter force can meet the requirements demanded by the threat. Neither approach alone can satisfy all requirements in the face of real-world budgetary and physical constraints.

Recent events have reaffirmed the importance of USAF's ability to respond to contingencies wherever they occur. During the early critical phases of a contingency it is essential that our tactical aircraft represent the best our country can field. National requirements demand both continued technological improvements and adequate numbers to meet the threat.

With Soviet tactical fighters now being produced at a rate of one new aircraft every seven hours, or roughly 1,300 per year, we need to fund a dynamic modernization program to restore USAF's inventory to an adequate level. Look-down, shoot-down and twenty-four-hour, all-weather capabilities must be provided.

A balanced mix of quantity and quality in air-to-air, ground support, air-to-surface, and all-weather counterair interdiction aircraft is essential.

Planned force size must be increased to include more tactical fighters for long-range theater interceptor missions, continental air defense, and the antisatellite (ASAT) mission.

Operational standoff weapons must be incorporated in close air support and battlefield interdiction aircraft because of Soviet ability to achieve overwhelming force ratios. Our combat aircraft must be designed to achieve high target kill rates.

There is a clearcut need for a vigorous research and development program to improve the performance of tactical aircraft. The Air Force's Advanced Tactical Fighter program coupled with associated efforts in engine technology must be carried forward expeditiously to ensure the availability of superior tactical combat aircraft in the 1990s and beyond.

STRATEGIC DEFENSIVE SYSTEMS

Serious deficiencies exist in the ability to warn of and defend against a bomber attack on CONUS.

Continental US air defense systems, in conjunction with Canadian forces, contribute to overall deterrence by reducing the prospect that the Soviet Union could carry out a successful air attack. Because of major gaps in low altitude and coastal surveillance coverage, existing detection systems don't furnish sufficient tactical warning to take necessary survival measures. Furthermore, even with tactical warning, the current fighter force would not be able to conduct active defense against low-level penetrators since the bulk of this force lacks a look-down, shoot-down capability against such a threat.

For surveillance of our coastal approaches, over-the-horizon backscatter (OTH-B) radars on the East and West Coasts must be deployed to provide all-altitude coverage out to approximately 1,800 nautical miles. OTH-B is also required on the southern periphery to detect intrusion from that quadrant. Alternatives must be considered for the northern surveillance requirement, including a northern-looking OTH-B, ground-based microwave radars to replace the current Distant Early Warning (DEW) Line, and a space-based surveillance system. AFA supports immediate modernization of the DEW Line to foreclose surprise, low-altitude attack through this critical quadrant while more advanced technologies are being explored. Also, an additional purchase of

AWACS is required to provide an enduring capability for continental detection and intercept capability by improved, modern fighters. These steps represent minimum requirements that should be met fully and in a timely manner.

SPACE OPERATIONS

The Department of Defense is becoming increasingly dependent on space-based assets to conduct vital military operations. Military space operations must ensure our access to space, protect US forces and systems from threats in and from space, and guarantee the availability and survivability of space systems which enhance land, sea, and air forces. The Air Force, therefore, must be given the means to conduct three types of space operations: support, force enhancement, and defense. Space support operations must include launch and recovery activities, on-orbit support, and satellite surveillance and control. Force enhancement must encompass global surveillance and communications capabilities, worldwide command and control systems, precise positioning and navigational data, and current detailed, timely meteorological data. Space defense operations must focus on detection, tracking, and identifying all objects in space; timely warning to the National Command Authorities (NCA) of hostile actions against the United States and our allies; developing the capability to deny or nullify hostile acts in or through aerospace; and conducting sustained operations to detect and analyze aerospace threats.

The Space Shuttle is important to USAF's space operations because it will perform space launch services formerly accomplished by a variety of expendable launch vehicles (ELVs). Beyond the objective of providing an economical, reliable, safe, timely, and reusable space launch capability, the Air Force must have priority access to the Space Transportation System (STS) for tasks not possible with expendable launch vehicles and not practical with earlier manned space programs. However, in light of past technical risks and program schedules, the Air Force must provide expendable launch vehicles as a backup to the Shuttle to protect against unforeseen difficulties until the system reaches full maturity.

AIRLIFT NEEDS

Viable, credible mobility is itself a strong deterrent to aggression and as such a fundamental facet of our defense strategy. Yet our current strategic airlift capability remains in a woefully inadequate state. The best combat forces in the world are useless if they can't be rapidly deployed and supported in conflict. Our ability to meet the needs of the theater commander through force projection, resupply, and reinforcement in a timely manner is dismal, especially in the NATO and Southwest Asian theaters. Our major mobility enhancement programs must go forward if US power is to be brought to bear on a global scale as needed.

Airlift, sealift, and prepositioning of resources must be made to work together to provide the ability to respond rapidly to contingencies on a worldwide basis. In areas of long-standing US commitments, and where the security of prepositioned equipment can be maintained, prepositioning can decrease the demand on lift assets. However, prepositioning (both ashore and afloat) depends upon airlift to "marry up" personnel and materiel with equipment stored in the theater. In areas where prepositioning is not possible or practical, the time-urgent needs of a crisis must be met by airlift until sea lines of communication are established. Yet our strategic airlift force capability falls far short of being able to produce either surge or sustained flying hour objectives. This shortfall must be corrected. Current modifications to the C-141 and C-5 fleets must continue.

The C-5 wing modification program—now well under way—must be completed expeditiously. The same applies to the C-141 "stretch" program that will provide additional load capacity equivalent to approximately ninety C-141s at a fraction of their cost. The cargo-carrying CRAF enhancement program must be supported to realize real growth in the near term. Modification of existing civilian wide-body aircraft provides a significant increase in cargo-carrying airlift capability in an economical way. CRAF when activated could double current airlift capabilities to meet emergency reinforcement objectives. However, the most critical initiative is expeditious procurement of a long-range transporter—the CX—capable of carrying all major Army firepower weapons, including the M-1 tank, and landing in small, austere airfields.

TANKER/CARGO REQUIREMENTS

Additional aerial refueling capability is needed for bomber operations in support of the Single Integrated Operational Plan (SIOP). The requirement for tanker support will increase further when the B-52Gs begin to carry Air-Launched Cruise Missiles (ALCMs) externally. Compounding the problem is the requirement to refuel airlift and tactical aircraft for contingency operations, especially in NATO and the Mideast. Present aerial refueling requirements for combined SIOP and contingency missions exceed the current capabilities. During simultaneous operations all these missions would be degraded seriously due to tanker deficiencies.

The Air Force program to reengine the KC-135 fleet to add refueling capability and overcome some operational and environmental problems must be carried out expeditiously. The limited thrust and fuel offload capabilities, excessive fuel usage, water augmentation (takeoff thrust) problems, and excessive engine noise and emissions of the fleet make reengining imperative.

A mix of reengined KC-135s and KC-10s, in conjunction with the remaining KC-135As, would provide the necessary modernization to meet future aerial refueling needs. Addition of the KC-10 alone cannot solve present tanker deficiencies in terms of "boom" intensive requirements in which more booms, not necessarily more fuel, are required to meet tactics,

such as SIOP, airlift, and fighter employments.

Although the Air Force does not view the KC-10 as an alternative to KC-135 reengining, cost-effectiveness comparisons for equal capability show that life-cycle costs for reengining are less than life-cycle costs for the KC-10.

The proper force mix of KC-10s, reengined KC-135s, and KC-135As with long and mid-range offloads provides increased basing availability and responds to Administration concerns on global response, flexibility, environment, energy consumption, and force modernization. This program is essential and urgent.

HELICOPTER REQUIREMENTS

Air Force responsibility for combat rescue and recovery, evacuation, global weather services, and other special operations needs added assets. The Air Force decision to replace helicopters of limited payload, range, and cruise speed with a version of the UH-60, superior to any helicopter in the inventory, warrants full Defense Department and congressional support. These helicopters must be equipped with advanced sensor systems for night and all-weather operations.

READINESS/SUSTAINABILITY

The types of war the US is likely to have to deter—or if deterrence fails, fight—are come-as-you-are wars. Forces and capabilities in being are likely to determine whether or not there will be conflict—and if that answer is affirmative—determine its outcome. Increased readiness and sustainability must have priority on a par with force expansion and modernization. We must remove peacetime deficiencies and enhance war-fighting capability at all costs.

Recent budgetary emphasis of operations and maintenance (O&M) must be continued. Every O&M dollar contributes to readiness. USAF must have adequate O&M funding to translate its investments in weapon systems, people, and facilities into war-fighting capability. The flying hour program is the most visible example of O&M buying readiness, with thirty-six percent of the appropriation going to maintaining aircraft and buying fuel to fly them. Through these expenditures, O&M plays an essential role in the key elements of combat capability: operational readiness and sustainability. No investment in equipment and facilities would produce readiness without a well-trained and dedicated force.

Training and quality of life are critical to the human element in the readiness equation, and the level of O&M funding is the prime determinant of both. Yet the current flying hour program does not permit the Air Force to meet all training requirements. There is an obvious need for sufficient spares, fuel, and other consumables to support an efficient flight training program throughout the Air Force. Not only is the Air Force at less than full requirements for training, but the service's ability to generate the required sorties is limited because of shortages of spares.

There are two sides to the flying hour dilemma. One is funded by O&M (fuel, supplies, and depot maintenance) while the other is funded by procurement (spares). By their very nature, one side cannot totally offset shortages in the other. Current shortages of spares prevent near-term attainment of flying goals even if the O&M funds were available. Significant increases in spares are being funded but, because of their long lead time, they will not be available until 1984.

The Association, therefore, strongly endorses Air Force efforts to fund vitally needed logistic programs. The combat readiness and sustainability of USAF forces are tied directly to adequate funding of these programs. Over the past decade logistics suffered at the expense of force expansion and modernization. While recognizing the need for the latter, properly balanced and integrated emphasis on each is absolutely imperative to ensure Air Force units are ready and capable to respond to worldwide contingencies now and in the future.

Efforts to improve USAF's transportation, storage, and distribution system in Europe, known as the European Distribution System, are necessary to support any conflict in that theater. Also, increased prepositioning of spares and munitions in NATO is especially important because of the scarcity of airlift during a NATO contingency. Finally, USAF's contributions to the Rapid Deployment Force (RDF) in the form of personnel support equipment, portable aircraft shelters, vehicles, and munitions must be fully funded.

Other key logistics initiatives encompass the modification of aircraft to keep aging weapon systems and components viable. These initiatives, combined with Air Force and congressional efforts to overcome previous deficiencies in O&M, replenishment spares, and munitions accounts, are vital.

Each is imperative to realize the full potential of US and allied airpower.

Overall, readiness and sustainability require a broadening of the mobilization base to increase the surge capabilities of the armed forces.

ELECTRONIC COMBAT NEEDS

Electronic combat involves the "central nervous system" of modern warfare in a defensive as well as offensive sense. The Air Force must maintain superiority in its own command and control capabilities as well as in the means for destroying, disrupting, and deceiving those of potential enemies. The principal requirement is continued, expeditious development and deployment of an integrated mix of lethal and nonlethal systems to suppress enemy defenses and protect penetrating US forces.

Primary programs involved in the lethal category include the F-4G "Wild Weasel," HARM (the high-speed antiradiation missile), and the precision location strike system (PLSS) that will make it possible to pinpoint and strike time-sensitive threats and command and control facilities, thereby reducing attrition and improving effectiveness. Nonlethal

weapons that are required urgently include the EF-111A Tactical Support Jamming system to counter Soviet early warning, ground control intercept, and acquisition targets, as well as the EC-130H Compass Call system that will permit wide-band jamming of hostile command and control nets from a standoff position. Sharp growth of the Soviet threat brought on by broad advances in the quantity and quality of their weapon systems dictates a corresponding stepping up of the Air Force electronic combat capabilities, along with vigorous research and development efforts to maintain technological superiority in this field.

AIR RESERVE FORCES

The Air National Guard and the Air Force Reserve perform a large and important part of the day-to-day mission of the strategic, general-purpose, and mobility forces. In terms of wartime role, they provide thirty-three percent of the tactical fighter capability;

AFA POL

DEFENSE MAN

Adopted unanimously by delegates to AFA's An

PRESIDENT Ronald Reagan, in October 1980, informed the Air Force Association that " . . . the key to adequately manned and spirited armed forces is the rekindling of the national will and pride in service to country." Since he has taken office, his Administration has put on record its firm belief that American servicemen and women deserve to be treated as first-class citizens.

The Air Force Association applauds the Administration for this stand and wholeheartedly supports it. In the near past this concept has not always been operative. Irritants, both major and minor, have given an impression, intentionally or unintentionally, of "second-class" status. These irritants have produced uncertainty and disillusionment among both military and civilian personnel. Examples across the spectrum include the progressive withdrawal of traditional benefits, requirement to pay fees for government-owned parking spaces, failure to initiate a positive educational incentive program for military members, and the imposition of "pay caps."

AFA encourages the Administration to remain steadfast as it moves towards this self-declared goal. The goal is worthy—and overdue. And urgently needed if the services, especially the Air Force, are to recover from the talent hemorrhage of the late seventies. That unhappy circumstance saw some 12,000 pilots and 5,000 navigators exit in only four years. A concurrent mass exodus of second-term enlisted people and an alarming loss rate of NCO careerists with ten or twelve years' service created a force that today is excessively light in experience.

There are positive indications that this exodus is slowing. But there are also strong indications that many members are taking a "wait-and-see" attitude. One clear example is the unusually large number of one-year extensions. Obviously, many Air Force men and women are waiting to see whether promised improvements really materialize. They are "sitting on the fence" and their ultimate retention decision depends on results, not promises. Frustrated expectations are perhaps the strongest force driving military people to civilian employment. Thus, while a declaration of "first-class" status is encouraging, follow-through on the actions to back up that declaration is essential.

This is particularly significant now. For the first time in a decade, the Air Force is projected to increase its overall strength. At the same time, unfortunately, competition for new enlistees has never been tougher. Increased other-service recruiting, a decrease in the absolute number of young people entering the recruiting market, and a lessening in what the sociologists label the "propensity to serve" will combine to make the recruiting job more difficult. Thus, it is imperative that retention incentives be strengthened. Air Force readiness cannot be maintained with a "revolving door" force. As Gen. Lew Allen, Jr., Air Force Chief of Staff, has said: "You cannot draft an experienced NCO." AFA agrees, and would add, "Nor can you recruit such experience."

Certainly, there have been compensation improvements. AFA recognizes and appreciates the members of Congress who have led the fight for these recent gains. However, we caution that these gains, which have contributed to some stabilization of the force, also have come at a time of rampant inflation and turbulence in our national economy. The retention value of these improvements is yet to be tested adequately in the manpower marketplace. An improving economy—while certainly a welcome situation—could adversely affect the military manning situation unless other comprehensive actions are taken.

It's a fragile situation. The nation will require a maximum recruiting effort, as well as higher-than-sustaining retention. Additionally, burgeoning requirements for scientific-technical people will place added demands on both recruiting and retention.

There is no question that the single most important retention factor is to achieve and maintain a stable, strong military pay system at relative com-

sixty-one percent of the tactical and forty-eight percent of the strategic airlift capability; twenty-one percent of the strategic aerial refueling capability; and forty percent of the tactical air support job.

The air reserve forces maintain a high state of readiness to respond rapidly to crisis requirements. Their people are thoroughly experienced, proficient professionals. As the air reserve forces' contributions to the Total Force increase, so does the need for intensified and accelerated modernization. This is especially true so far as the requirement for newer, more capable aircraft is concerned. At the same time, testing of mobilization procedures also takes on added importance and must be increased.

In summary, we pledge our unwavering support of a comprehensive and sustained defense effort sufficient to close the gap with the Soviets and ultimately to reach a position of American military superiority that is essential to ensure peace and freedom in this dangerous decade. ■

PER

POWER ISSUES

onal Convention, September 15, 1981

parability with the private sector. If we are to maintain a capable peacetime military, the pay issue is basic.

But over and above equitable military compensation, we call on the American public to accord an increased measure of respect and acceptance of the professionalism and personal dignity of those serving in the military. AFA members are uniquely situated to carry this message into the communities around the nation. It is the policy of this Association that we will do so with every means at our disposal and that we will strive to increase our capability and performance in this vital area.

In turn, we call upon the military services themselves, especially the Air Force, to take those internal steps necessary to treat members with the individual respect and dignity they deserve. This Administration has enunciated—and the Air Force has long been a proponent of—the concept that, at all levels, people, missions, and resources will be brought into better balance. Commanders must have authorities, incentives, and sanctions commensurate with their responsibilities. Commanders must command; managers must manage. Putting the authority—and responsibility—for operational actions at the lowest level of command possible for effective management is an approach AFA strongly encourages. We oppose micromanagement of the military by top levels of government. This is, in itself, an effective acknowledgment of professionalism.

We believe there must be a return to the view that service to one's country is an American obligation. AFA calls for support of some broad form of national service . . . for all eighteen/nineteen-year-old . . . men and women . . . that would include military service, but not be restricted to such service.

In a larger view, public acceptance of the military is but one facet of public acceptance of the proposition that each American owes service to America. The corollary is that our country honors those who serve it. Our country was built on this proposition. Its subtle erosion has led to predictable and regrettable consequences, perhaps most noticeable in the recognized failures of the All-Volunteer Force. We believe there must be a return to the view that service to one's country is an American obligation. AFA calls for support of some broad form of national service and responsibility for all eighteen/nineteen-year-old (or post-high school) men and women, a national service that would include military service, but not be restricted solely to such service. In this way, the obligations of citizenship could be shared equitably by all Americans.

What form this national service should take would be shaped, of course, by national priorities. Certainly service such as care and comfort of the aged, ill, and infirm; protection and conservation of natural resources; urban renewal and rehabilitation of our nation's cities; augmentation of public services; community service across a broad spectrum; etc., would be a part of this. But—another vital part would be support of the personnel requirements for recruits in our military services. Recognizing also that military service carries weightier responsibilities, unique hazards, and a more formal commitment, such service might be for a period of time and with compensation proportionally different from other national service tasks. In any event, a detailed plan is not the province of this policy paper; rather, a commitment by our nation to the concept of national service is—and such is urged.

In the absence of some form of national service that includes military service, an acute recruiting and retention problem remains. Incentives, particularly educational incentives, are sorely needed. There

is a definite requirement for a new educational incentives program to sustain the level of quality people needed in the military. This new program, balanced to offer both recruiting and retention incentives, should be noncontributory. Most certainly there should be provisions for educational incentives for Reserve and National Guard service also. A key to the retention aspect would be a provision for transferability of benefits for careerists to influence these people to remain in service. The transferability feature, AFA believes, is the most valuable aspect of any such program. The total program would offer a balance between recruiting and retention, considered essential to meeting the quality needs of the Air Force for the future.

In summation, we urge the Administration, the Congress, and the services themselves to take the steps necessary to maintain the quality and esprit of our fighting force. In turn, AFA pledges to work hard toward the goal of developing general public understanding and support for the legitimate needs of our military and its people. All of us, working together, can accomplish this. The necessity to do so is paramount.

With the foregoing in mind, AFA also calls attention to the following agenda of crucial issues needed to attract, retain, reward—and acknowledge for service rendered—a first-class fighting force of first-class Americans.

COMPENSATION

It is essential to achieve a permanent solution to the military pay inadequacy problems, which were so noticeable during the latter half of the seventies. AFA believes the primary objective must be to restore military pay to the levels of comparability with the private sector that existed in 1972. Therefore, AFA supports a pay raise of such magnitude as to symbolically "wipe the slate clean" and signal a national commitment to ensuring that members of our armed forces are adequately compensated. Implicit in the restoration of full pay comparability is the requirement to sustain this relationship in the future and not to use military pay to set an example of fiscal restraint. We believe that pay caps cost more in the long run due to the loss of experienced career personnel and the associated costs of recruiting, training, and seasoning replacements.

AFA supports:

- The 14.3 percent across-the-board pay raise.
- Restoring full pay comparability with the private sector.
- Developing a mechanism to link military pay raises directly with those provided in the private sector.
- Developing a new occupational survey mechanism, which includes "blue-collar" skills. This survey would then be used as a basis for military pay raises.
- Retention of the pay and allowance system as the fundamental form of military compensation.
- Eliminating the differences between officer and enlisted per diem policies.
- Increased rates for hazardous duty incentive pay, plus the development of new statutory authority to provide payment for additional hazardous skills and duties.
- Full reimbursement to mobile home owners for transfer expenses.
- A permanent system of flight pay for flight nurses, similar to that now authorized for flight surgeons.
- Providing basic allowance for subsistence as an entitlement to all single career enlisted personnel.
- Payment of a cost of living allowance to single and unaccompanied members stationed in high-cost overseas locations, who reside and subsist on base.
- Efforts to eliminate the pay ceiling for senior Air Force military and civilian personnel.
- Increasing mileage allowance for family members until appropriate per diem allowances can be enacted.
- Permanent authorization for enlisted flight pay.

AFA opposes:

- The indirect use of basic pay reallocations to achieve a reduction in items tied to basic pay—such as quarters allowances, subsistence, Survivor Benefit programs, etc.

ADEQUATE REIMBURSEMENT FOR PCS MOVES

AFA supports:

- A new definition of adequate PCS (Permanent Change of Station) reimbursement as a "cost of performing the mission" and the recognition the money is "reimbursement for required expenses"—not additional compensation.
- Actions by DoD and Congress to increase mileage and per diem to keep pace with rising costs.
- Providing Temporary Lodging Authority (TLA) for up to twenty days.
- Providing adequate travel reimbursements to junior enlisted members being reassigned in the continental US.
- Increasing the household goods weight allowances for all members.

SPECIAL AND INCENTIVE PAY

AFA supports:

- A twenty-five percent increase in officer and enlisted flight pay to provide a long-term solution to the aviation retention problem.
- Paying flight pay to rated officers with more than twenty-five years of service when serving in an operational billet and required to fly on a regular basis.
- Establishing authority for an engineer/scientific officer accession and continuation bonus.

RECOGNITION OF THE ROLE OF THE FAMILY

AFA believes that the families of Air Force members play an important role in career decisions and serve as a vital source of strength that contributes to the Air Force mission. Responding positively to family needs will strengthen the Air Force as an institution, improve the Air Force family, and bring reality to the concept that "the Air Force takes care of its own." AFA endorses the expansion of func-

tions and developing new programs that are responsive to the changing needs of the Air Force family in the eighties.

AFA supports:

- Expanding support functions and developing new programs which will be responsive to the changing needs of the Air Force family of the 1980s.
- Establishing installation-level authorized family support centers.
- Expanding relocation programs to address the needs of the entire family and to provide help in obtaining temporary lodging before departure and at the new station, to provide help in locating new housing, and to assist in settling at the new station.
- Improving the quality of household goods shipment.
- Improving the quality of existing military family housing units.
- Increasing the number of military housing units.
- Appropriating funds for the construction and operation of child-care facilities.
- Employment and education programs to assist family members in locating or preparing for employment.
- Orientation programs for Air Force Reserve and Air National Guard family members to include the impact of mobilization.

RECRUITING

To reverse permanently the adverse retention trends of the past, to sustain the high-quality career force needed in the future, and to achieve the accession levels needed for readiness will require sustaining the momentum begun last year in several major areas, such as recruiting, educational incentives (the "GI Bill"), and officer accessions.

AFA supports:

- Adequate recruiting resources.
- An increase in special duty pay for experienced recruiters and senior supervisory personnel.
- Adequate housing for recruiters—continuing leased housing or higher VHA.

AFA opposes:

- Establishing recruiting incentives for one service that are denied to others.
- Requiring the Air Force to reduce quality standards for enlistees.

EDUCATIONAL INCENTIVES

AFA supports:

- The development of a new educational incentive program for the armed forces, with the following characteristics: noncontributory; for all who serve honorably; increased benefits for remaining in the service for six years; and the option for officer and enlisted personnel with ten years of service to transfer their unused education benefits to members of their families.

AFA considers the transferability feature to be the most potent feature to enhance career retention.

COMMISSIONED OFFICER ACCESSIONS

AFA supports:

- An increase of 3,000 AFROTC scholarships for the engineer/technical disciplines.
- Opportunities for qualified enlisted members to become commissioned officers.
- An increase in AFROTC subsistence allowance.
- Legislation to permit cadets in scholarship programs which are longer than four years to maintain the scholarship entitlement for up to one additional year.
- Seeking accreditation of AFROTC courses toward the requirements of a degree in those colleges and universities where credit is presently not allowed.

UNIQUE CONDITIONS OF OVERSEAS SERVICE

A fundamental need exists to improve the conditions of overseas service in order to attract additional experienced personnel to these duties and to encourage more members to serve longer tours, thereby reducing turbulence and PCS move requirements.

AFA supports:

- Action to remove the ceiling on the number of dependents overseas.
- The improvement of overseas incentives programs, such as: environmental morale leave programs for members and families; creation of home leave provisions; higher priority for dependent travel and emergency travel payments for members and families; upgraded overseas foreign duty pay provisions; increase in family separation allowance; and increase in government liability for household goods that are lost or damaged.

MEDICAL, DENTAL CARE

The military was once a pioneer in health-care coverage. Its program was second to none. This is no longer the case. AFA urges steps be taken to restore military health care to its preeminent level. AFA also recognizes the need for improvements in the CHAMPUS program, since not all personnel have access to military direct care facilities.

AFA supports:

- A family dental-care program similar to those provided in the private sector.
- A family optical care program similar to those provided in the private sector.
- Legislation that would make medical care an "entitlement" for families and retirees.
- Improvements in CHAMPUS programs, such as more frequent updates of the physician fee profiles; continuing review of percentile levels; and improving administrative processing to eliminate "red tape" and lengthy delays in payment.
- Expanding the CHAMPUS program to include: dependent eye examinations; a cap on member liability for reimbursements in catastrophic situations; and elimination of copayments and deductibles for dependents of active-duty personnel.
- Improved professional support for military physicians and other health-care professionals.

AFA opposes:

- The institution of any so-called "nuisance fee"

for families and retirees using the direct care system.

- Curtailing or eliminating the Armed Forces Health Scholarship Program (AFHSP) and/or the Uniformed Services University of the Health Services (USUHS).

TRAVEL PROGRAM IMPROVEMENTS

AFA applauds the Presidential actions designed to simplify the procedures used to reimburse federal civilian employees and military members when traveling on official government business and urges DoD expeditiously to adopt the locality-based flat rate per diem reimbursement concept.

COMMISSARY

AFA believes that the military commissary system is an essential, fundamental institutional benefit of military service and strongly opposes efforts to reduce this benefit through the contracting-out of commissary sales store operations.

MORALE, WELFARE, AND RECREATION PROGRAMS

AFA staunchly opposes recommendations that would eliminate the use of Base Exchange sales store profits as the primary source of funding for military morale, welfare, and recreation programs and facilities.

SURVIVOR BENEFIT PROGRAM (SBP)

AFA commends the Congress for taking steps last year toward reducing the Social Security offset to the SBP annuities of some military survivors and urges continued reductions be made until the Social Security offset no longer acts as a financial disincentive toward program participation.

LEASED FAMILY HOUSING PROGRAM

AFA strongly opposes actions to terminate the Leased Family Housing Program within the continental United States (CONUS). Indefinite retention of the leasing authority is essential to provide military recruiters and other service personnel the ability to obtain adequate housing in mission areas located in high-cost localities where the Variable Housing Allowance is insufficient to meet unique housing needs.

AIR FORCE RESERVE AND NATIONAL GUARD

AFA supports:

- Continuation of the Technician Program for the Air Force Reserve and Air National Guard.
- Educational and VA-type guaranteed home loan aid for Air Force Reservists and Air Guardsmen.
- Enactment of the Reserve Officer Personnel Management Act (ROPMA).
- Continuation of current military leave policies for federal employees who are also members of the Reserve Forces.
- The President's Committee for Employer Support of the Guard and Reserve.
- An equitable military leave policy by employers that does not interfere with regular vacations for Reservists.
- A new nondisability retirement plan on a reduced annuity basis for Air Force Reservists and Air Guardsmen who retire before age sixty.
- Raising the ceiling of sixty creditable retirement points for Air Force Reservists and Air Guardsmen.
- Legislation that would permit receipt of immediate retirement pay to totally disabled Reservists, who have otherwise qualified for Reserve retirement.
- Broader authority and more funds for enlistment and reenlistment bonuses for Air Force Reservists and Air National Guardsmen.
- Legislation to provide special pay programs for Air Force Reserve and Air National Guard physicians and dentists.
- Legislation that would totally eliminate the Social Security offset from the benefits received from the Reserve Forces Survivor Benefit Plan (RFSBP).
- Legislation that would provide aviation career incentive pay to Air Force Reserve and Air National Guard crew members on the same basis as provided their active-duty counterparts.

RETIREMENT

AFA is firmly opposed to any fundamental changes in the active force military retirement system (including earned/expected Social Security benefits). If changes are deemed necessary, they must be made prospectively (and "grandfathered") so as not to violate implicit and implied contracts made to military members.

AFA supports:

- Retirees becoming active in the Air Force Retiree programs of the Air Force.
- Expanding the programs supporting Air Force retirees.
- Maintaining the goals of both the Air Force Enlisted Men's Widows and Dependents Home Foundation and Air Force Village.
- Dental care for retired members and dependents.
- Lifetime coverage under CHAMPUS for military retirees, without regard to Social Security, Medicare, or service-connected disability treatment by the VA; and removal of current nonavailability certificate requirements.
- Removal of the dual-compensation limitations for retired officers.
- Recomputation of retired pay to reflect changing military pay structure, especially pre-1968 retirees.
- A three-year grace period for government-paid moves to the home of choice upon retirement.

AFA opposes:

- Any action that penalizes retired service members working for the government, by curtailing either their retired military pay or Civil Service salary.
- Reduction in long-term retirement benefits that would occur if DoD's Uniformed Services Retirement Benefits Act becomes law.
- Any offset of military pay by Social Security benefits.
- The current so-called "Catch-62" provisions of

federal law, which requires retired military people who have subsequently earned retirement from Civil Service to give up applicable credit for their military retired pay and replace it with Social Security at age sixty-two.

- The current guidance that requires members processing for retirement to "overcome the presumption of fitness."

CIVILIAN PERSONNEL

AFA supports:

- Efforts to eliminate the pay ceiling for Senior Executive Service members and General Schedule employees.
- Legislation to reform the federal wage system, to include: repealing the requirement for a five-step rate system; repealing the Monroney amendment; and repealing the requirement for uniform night shift differentials.
- Legislation for improving federal premium pay practice regarding overtime pay for holiday work, Sunday pay, stand by/on call, administratively uncontrollable overtime, and pay for night work.
- Legislation to return to the provisions of the Civil Service Reform Act (CSRA), which permits up to fifty percent of the Senior Executive Service positions to receive bonuses.
- Legislation to increase the allowance for federal employees transferred in the interest of the government.
- Legislation to change the tax law regarding taxes on reimbursement for relocation expenses.
- Legislation to establish tax exemption for Civil Service Retirement Plan contributions.
- Legislation to increase the uniform allowance for federal employees.
- Federal employee reimbursement of moving/travel expenses upon retirement or death to home of record (or equal distance) if the last move was for the convenience of the government.
- Amending the Federal Employee Group Life Insurance Program to permit federal employees to contribute after retirement with continuing coverage.
- A moratorium on legislation initiatives that would change the performance appraisal system.

AIR FORCE JUNIOR ROTC

AFA supports:

- An increase in the number of JROTC units.

CIVIL AIR PATROL

AFA supports:

- Continued federal funding of the Civil Air Patrol and an increase in CAP's capability to perform its search and rescue mission.
- Increased disability and death benefits for CAP members injured or killed on operational missions.
- The CAP Cadet Program and CAP Aerospace Education mission.

VETERANS

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

AFA supports:

- Greater government emphasis on training and jobs for Vietnam-era veterans.
- A continuing network of VA hospitals, fully funded and adequately staffed.
- An expanded National Cemetery system, responsive to the needs of US veterans.
- Legislation allowing disabled veterans retired from military service on a longevity basis to receive both retired pay and VA disability compensation.
- Extension of time restrictions on eligibility for earned veterans education benefits.
- The current veterans preference system in federal employment.
- Increased emphasis on making psychological counseling available to veterans, especially Vietnam-era veterans.
- Extending the current cutoff date for the old GI Bill.

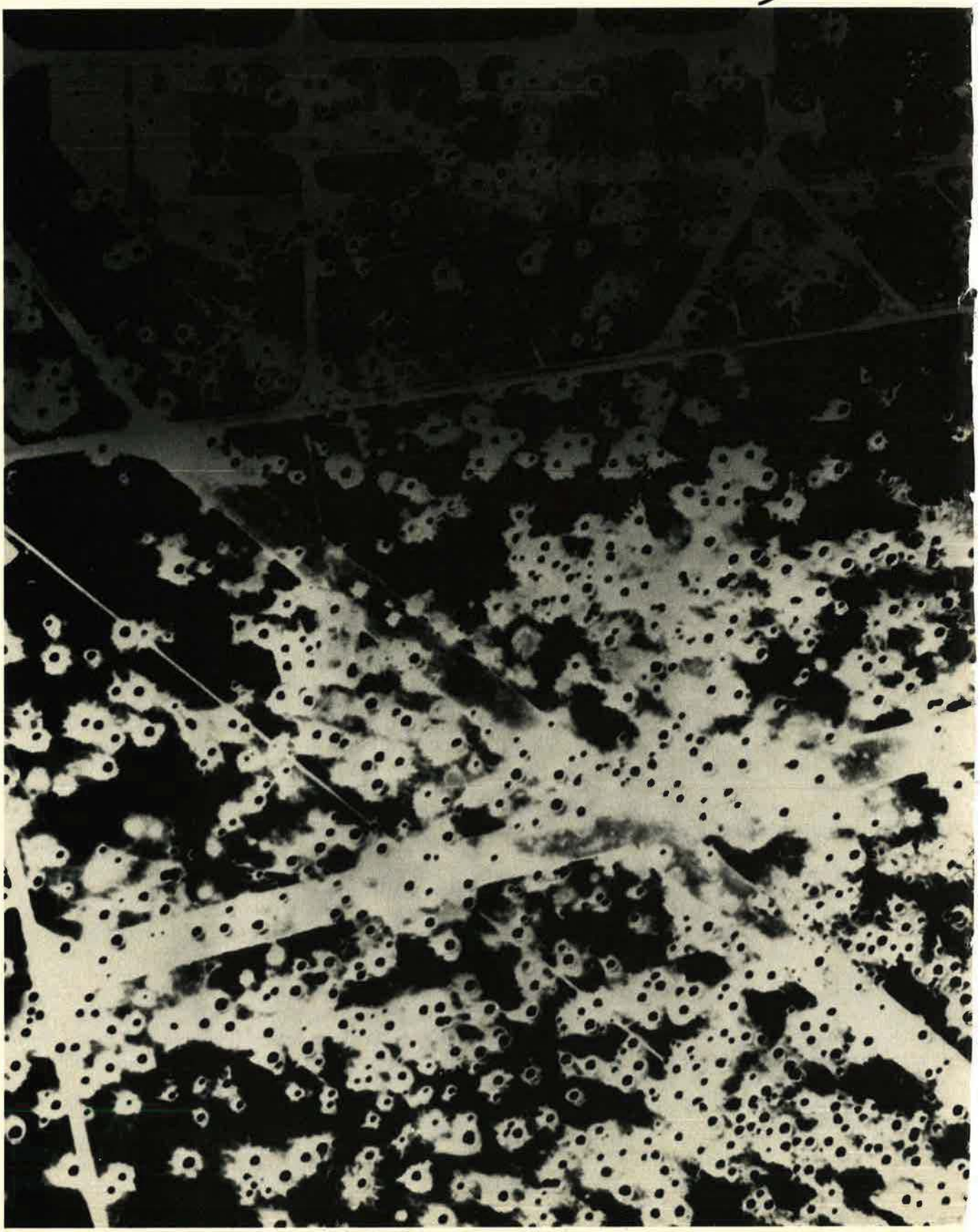
MIAs/POWs

In view of the recent return of the remains of former prisoners of war in Vietnam and the persistent and increasingly substantial reports of others still being held prisoner in Southeast Asia as a result of their service in SEA, we endorse and support the vigorous actions now being taken by the President and the Administration to pursue to resolution a full accounting of American military personnel listed as MIA or POW and urge that every effort be made to assure that any and all survivors or remains of those deceased are immediately returned to us.

AFA supports:

- Granting to all former POWs the assumption of "service connection" for compensation purposes for any chronic disease, irrespective of the date of onset.
- Medical treatment for any disability on the same basis as that provided for veterans who have service-connected disability rated at fifty percent or more.
- Waiver of restrictions imposed on vocational rehabilitation by 38 USC 1503, so that former POWs may be granted vocational rehabilitation whenever, and as many times as necessary, to maintain the veteran's employability.
- Continued physical examination of former POWs, along with continued national studies.
- Liberal presumption of unfitness, based chiefly on location and length of imprisonment, in connection with disability programs. ■

Home, Sw



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In his keynote address, the National Security Advisor to the President expanded on the Reagan Administration's two key defense tenets . . .

Reduce Vulnerability, Restore Safety Margin

BY THE HON. RICHARD V. ALLEN

IT IS A distinct pleasure to have this opportunity to be with you on your thirty-fifth anniversary of service to the Air Force and the nation. The pleasure is intensified because of the suitability and timeliness of your anniversary motto "Pride in the Past—Faith in the Future." There could be no more accurate summation of President Reagan's attitude toward the meaning of his Presidency and, indeed, of the mandate the American people gave him ten months ago.

You and the American people have every reason to feel pride in our past. In the eighty years of this century, we have achieved extraordinary things, the most breathtaking aerospace accomplishments, by any measure, in the history of mankind.

As we take stock of our situation today and assess the challenges that lie ahead, the record of your past accomplishments serves as a model of the dedication, professionalism, and excellence that is essential to our national survival in the future.

In many ways, aerospace power has altered the fundamental tenets of our national security. During most of our history, geography was the foundation for our security—two oceans protected us from the machinations of adversaries in Europe and Asia. But today, aerospace power has negated much of the protection our nation once enjoyed. At the same time, however, aerospace power has added new dimensions to our national security, primarily in the form of the finest air force in the world.

The quality of the Air Force is not just a function of technical developments; it is more importantly a reflection of the men and women who serve. Succeeding generations of Air Force professionals have built on the expertise of those who went before. . . . This passing of expertise has complemented technological development and is the backbone of our air combat capabilities that has served us so well in World War II, Korea, and Vietnam, and now stands as a crucial element of our strategic nuclear deterrent.

It is the knowledge preserved from the past and built upon by you, our current aerospace leaders, that helps ensure our aerospace power will always be in the forefront of our capabilities to preserve our safety and freedom. I do indeed consider it a personal honor to be in your presence today at your thirty-fifth anniversary to share some thoughts about "Pride in the Past and Faith in the Future."

Richard V. Allen, Assistant to the President for National Security Affairs, addressing the AFA Convention.

Rebuilding the Nation's Defenses

It is well that you have a rich tradition of success, for the challenges which we face in the 1980s may well be the most substantial in our nation's history. The Soviet Union, by operating on what is essentially a wartime economy for the last twenty years, has equaled the United States in almost every meaningful measure of military power—both conventional and nuclear. Moreover, the Soviet Union has repeatedly demonstrated its expansionist tendencies, its willingness to use military power as an instrument of Soviet foreign policy, and its com-

mitment to challenge Western interests on a global scale. Taken together, these factors give rise to the two key defense tenets of this Administration: A quick reduction in our "window of vulnerability" and the restoration of our "margin of safety."

The "window of vulnerability" might as easily be construed as a "window of opportunity" for the Soviet Union. Because of inadequate defense spending over the past decade, we find ourselves today in an extremely disadvantageous strategic position.

The dangers of our present deficiencies are alarming to consider. Most alarming is the danger that the Soviet Union will miscalculate and attempt to exploit a perceived "window of opportunity" that could, in turn, generate a confrontation of cataclysmic proportions. The Soviet Union should be under no illusions as to the willingness and capacity of this mighty nation to respond at any level to Soviet aggression.

But deterrence is a dynamic concept, and tough words must be followed by substantial action. In order to maintain the credibility of our deterrent, we must move ahead to restore the strategic balance so that the chances of Soviet miscalculation and a major confrontation are kept to a minimum.

To this end, as Secretary of Defense Caspar Weinberger has pointed out, the Reagan Administration will be the first administration in history to address simultaneously the task of rebuilding all three legs of our strategic nuclear Triad. It will be an awesome task, but the President considers this to be his most crucial objective, for our Triad is the bedrock of global peace. We are at the same time proceeding in an extraordinary effort to build up the other components of our military forces as well.

It is appropriate to mention the key decisions that are being made in the Administration. These complex decisions, which will define the main lines of our deterrent forces for decades to come, are enormously important to us, to our allies, and to our adversaries. They will certainly determine the composition of our strategic nuclear deterrent well into the twenty-first century, and hence they must be choices which truly reflect our long-range national security interests. The President, Secretary Weinberger, and other members of our national security team have spent weeks and months assessing the options and evaluating the proper course of action. It is not easy to make such decisions, especially when our industrious friends in the press insist on making the decisions for the President and the Secretary of Defense!

". . . the manned bomber can be launched and then recalled, providing us with a critical tool for prudent crisis management."

Moreover, these decisions involve the Congress in a direct and important way, and the President has listened carefully to its distinguished members, drawing on the years of experience they embody. It is a fundamental truth that our national defense policy will be effective and harmonious to the degree that the Chief Executive and the Congress are in harmony. President Reagan is aware of this fact and welcomes the cooperation and participation of Congress.

Need for a New Manned Bomber

In the early 1960s, our strategic nuclear deterrent was dramatically enhanced by the addition of submarine-launched ballistic missiles and the deployment of the Minuteman and Titan ICBMs. It seemed as if the manned bomber would fall on hard times. Critics argued that the strategic bomber had lost its effectiveness in an age of ICBMs and sophisticated Soviet air defense systems. They argued that the manned bomber, a strategic dinosaur, had essentially outlived its environment and ought no longer be a component of our forces. These critics were wrong then, and they are wrong now. But their arguments lingered on, and, coupled with short-sighted austerity in the defense budget, contributed to deferred decisions on a manned bomber for a generation. After all, if it is a question of building a weapon system that is obsolete upon its initial operational capability, why build it at all?

These critics were wrong and have faded from view and, for the time being, from positions of power. But their legacy survives in the absence of a modernized bomber force. The B-52 still valiantly (some would say miraculously) sustains the air-breathing leg of our Triad, the same B-52s which have been flying for more than twenty-five years.

The manned bomber provides an invaluable dimension of our strategic Triad; only the combat-proven bomber is usable in different types and levels of conflicts, from brush-fire scraps to general nuclear war. The bomber keeps us protected against an enemy antiballistic missile system breakout. It brings human intelligence to bear in the combat zone for damage assessment and the attack of mobile and immediate targets. Perhaps most important, if war threatens, the manned bomber can be launched and then recalled, providing us with a critical tool for prudent crisis management.

In a crisis situation, bombers can be launched to show resolve and intent, which can be instrumental in dealing with even the most tense and delicate of situations. This capability must be maintained.

I am sure the key question on your minds is what type of bomber force will replace the B-52. It is the province of the President and the Secretary of Defense to announce the important choices that shall be made to reinvigorate our deterrent forces. But based on what the President has said in recent years, it is indeed reasonable to assume that he will insist

Richard V. Allen is a native of Merchantville, N. J., who completed his B.A. and M.A. studies at the University of Notre Dame, and pursued doctoral studies at the University of Munich, and Freiburg, Germany. He served on the National Security Council staff during the Nixon Administration, going there from a post at the Hoover Institution on War, Revolution, and Peace at Stanford University. He is Assistant to the President for National Security Affairs.

on a United States Air Force comprised of aircraft that will meet the Soviet challenge through the turn of the century as successfully as the B-52 has met this challenge for the last three decades. As he has often said, we must produce forces that are responsive to the challenge we face, and we must do it in the shortest time possible. In recognition of his solemn obligation to provide for our national security, the President would not settle for anything less.

Modernizing the ICBM Force

Another major decision the President will make is on modernization of the land-based leg of our strategic nuclear deterrent, the ICBM.

By the close of the 1970s, an era in which the United States enjoyed recognized superiority over the Soviet Union came to an end. In response to the outcome of the Cuban Missile Crisis of October 1962, the Soviet Union made fundamental choices concerning its future military growth. Those choices involved painful allocations of scarce resources, but in the Soviet system the citizens have no voice in such matters. Thus, the Soviets energetically pursued modernization of their strategic forces, and have now caught up in the accuracy they can achieve with their ICBM force. Moreover, the size of the Soviet ICBM force has grown larger than our own. In this Administration we wrestle with the implications of these developments, implications that call into question the survivability of our present ICBM force. It will come as no surprise to anyone in this audience that no easy answers to the ICBM dilemma will be found; we, too, must make choices and allocate resources effectively and intelligently.

One answer to this problem is simply to do away with land-based ICBMs. This is no solution. The land-based leg of the Triad, the one most immediately affected by improved Soviet ICBM capabilities, is currently a key asset that can successfully attack very hard, pinpoint targets in a timely manner. Some of the very attributes that give land-based systems this capability also add to their vulnerability. For instance, the fixed location of an ICBM contributes to its high accuracy and to the relative ease and reliability of communications. The Soviet Union knows the locations of our ICBMs, and this, coupled with increasing Soviet ICBM accuracy, makes land-based systems inherently vulnerable, but by no means useless.

No one leg of our Triad is absolutely survivable all of the time; each leg is sensitive to different kinds of threats. The key is to make the price to the potential aggressor for destroying each leg of the Triad very high and the price for destroying the entire Triad beyond reach. Survivability, however, is not the only criterion upon which our ICBM decision will be based. In order to reestablish the credibility of our strategic nuclear deterrent, each Triad leg must also have the capability to put at risk different types of enemy targets at different times in a conflict.

These types of considerations have been carefully weighed as the Administration reviewed our strategic force options. The discussion of our future ICBM has involved not just the narrow question of where one should be based, but also the broad notion of the role that a new missile must play in maintaining our strategic nuclear deterrent.

A Thriving Economy—Key to Defense

We cannot discuss strategic force modernization, or indeed any aspect of our defense budget, without talking about national economic recovery and federal budget realities. Our national security is served not only by a strong military establishment, but also by a vigorous, thriving economy. Through rampant federal over-regulation and massive government spending, the health and the momentum of our economy were undermined over the past fifteen years. It is obvious that these developments have had an important impact on our national security. We may have at last learned that a strong and credible defense effort can be sustained only if it is rooted in a vigorous, dynamic, productive economy.

By late 1976 we were prepared to mend our ways, and five years ago the defense program established by President Ford would have provided for our safety for years to come. A new administration chose other priorities and other policies to achieve security, and a bad situation became rapidly worse.

Fortunately, the election of 1980 served as a referendum on the national security policy of the United States. The issues were joined, and the people spoke—decisively. Their mandate to President Reagan was that he should develop and implement a defense policy to restore the margin of safety, to field forces and weapons that would restore our deterrent, to work with our allies toward rebuilding leadership in the common defense, and to do all this as expeditiously as possible.

In fulfilling this mandate, the President is now moving forward with a balanced, realistic, and prudent long-term defense program.

The immediate priority has been to get America going again and to restore strength and vitality to our national economy. To do this, we have had to make painful budget decisions and adjust spending across a broad spectrum. At the same time, the Administration has made a commitment to increase the rate of growth in our defense budget.

As we have learned over the past days, the President has made important decisions regarding the defense budget for the years ahead. After a thorough assessment of the objectives the nation must pursue, he has made possible a sensible and far-reaching program that will be the guarantee for our future security and that of our allies.

It is clear that the President's commitment to rearm America remains unchanged, and that adjustments to the defense budget will not be misunderstood by either our adversaries or allies. The United States will continue to rearm at a vigorous pace and will take concrete steps to reestablish the margin of safety as rapidly as possible.

With the future of the defense program assured by the allocation of funding to achieve it in the years ahead, the Secretary of Defense and his team will proceed to give it concrete expression.

Long-term planning for defense production can resume, and industries associated with the defense sector can once again plan ahead, confident that their capital investments in vitally needed infrastructure will not be retarded by sudden

program reversals. Steadiness of purpose counts for a lot, and the indispensable ingredient of industrial and public confidence is vital to the success of the long-term defense program now being put into place.

Forging a National Foreign Policy

The public consensus will be reflected in the natural partnership between the President and the Congress. The President is pledged to restore that bipartisan consensus in the connecting links of foreign and national security policy, because he knows the price the nation will pay if this coalition of purpose cannot be achieved. After nearly fifteen years of disintegration, the time has clearly come to reconstruct the postwar bipartisan underpinnings of national security, a felicitous condition which truly made us safe for so many years.

The impact of the President's decisions on our foreign policy goals will be productive and long-lasting. The Secretary of State, whose important cooperation in reaching these decisions helped ascertain that they will meet our needs for the future, can continue his conduct of our comprehensive foreign policy objectives with the vital defense components in place. We believe that the signal of our determination to be secure will not be misread or misinterpreted by anyone.

While we are restoring the margin of safety, the President is determined to follow the path of negotiation. We recognize that true security can never be achieved by the mere accumulation of weapons and that a coherent strategy of arms reduction negotiations and objectives is an equally important component of our national security.

During the campaign of 1980 and on numerous occasions since, the President stressed three basic principles which should govern negotiations on arms reductions.

First, as we prepare to negotiate, we should assure the funding and eventual deployment of US forces sufficient to deter conflict at any level, or to prevail in the event of a conflict.

Second, the agreement sought in negotiation should be based on strict reciprocity, and must result in arms reductions that are equitable and, importantly, verifiable.

Third, arms control agreements, as in the case of other agreements, will be negotiated in the broad context of Soviet behavior.

In these principles we differ from those who would undertake unilateral cutbacks in essential force modernization programs while failing to insist on reciprocity, equality, and full verifiability.

As the President and Secretary of State Alexander Haig have declared, the United States is serious in its determination to negotiate. Indeed, Secretary Haig will soon begin discussions with the Soviet Union on theater nuclear forces reductions in Europe, and will fulfill our commitment to begin negotiations before the end of this year. Down the road, we shall be ready to negotiate a Strategic Arms Reduction Treaty (START) and other arms control agreements based on the principles and objectives established by the President.

The Proposed AWACS Sale

Today I should like to mention one other subject reflecting this Administration's commitment to improving our national security posture: It is the proposed sale of AWACS and other air defense enhancement items to Saudi Arabia. Much of the commotion and rhetoric surrounding this issue stems from misunderstandings.

Two basic points must be made about the proposed sale.

First, it is in the national security interests of the United States that this sale be made. Saudi Arabia must have an improved capability to protect itself, and in particular its vital oil facilities, from an enemy air attack. The Iran-Iraq war has demonstrated the willingness of regional antagonists to attack each other's oil assets. The United States, Japan, and the Western world could not afford the interruption in oil that would occur as a result of a successful air attack on key and highly vulnerable Saudi oil facilities. Moreover, the Soviet threat to the region is increasing, and states in the region must have the means to cope with such expansions.

Second, this sale poses no substantial threat to the security of the state of Israel. Many of you here today know well the limitations of AWACS capabilities; it is essentially a flying radar platform. The superiority of the Israeli Air Force, supplied with the most sophisticated American aircraft, is such that with or without AWACS in Saudi Arabia, Israel would win any regional air war in the foreseeable future. The President, who has just concluded a most successful meeting with Israeli Prime Minister Menachem Begin, reiterated his commitment to maintain a favorable balance of power in the region and to ensure that Israel's security is not jeopardized.

The President will now make his case to the Congress, which has an important voice—and a high responsibility—in this matter. We believe that the Congress will pay close attention to the President's reasons for supporting the sale, and that, as a matter of exercising its own responsibilities, will not prejudge it.

In this way, the national interest will be served, and the President's important and overarching objective of achieving peace, security, and cooperation in the Middle East will be well served.

Faith in the Future

The second part of your thirty-fifth anniversary motto—"Faith in the Future"—is a most appropriate summary for the defense policies of the Reagan Administration. We do have faith in the future. And the President's policies mean that we will not face a future clouded by uncertainty, indecision, and empty rhetoric. No longer will the United States be considered an unreliable or indecisive partner in security affairs. The Administration's commitment to a vigorous, viable defense posture begins with the President and carries through the Administration to all individuals who serve this country.

To you men and women in uniform, the President has sent a special message of gratitude, admiration, and pride. The efforts you make, at great personal sacrifice, to protect the freedom of this country will once again merit the highest respect and admiration of this country. The President is grateful to you for your personal efforts, and the country is grateful to you for your commitment. ■

Secretary Verne Orr reviews the Air Force situation, and advocates a working partnership with the public to ensure consistent defense policies.

The Threat, The Weapons, and The People

BY THE HON. VERNE ORR, SECRETARY OF THE AIR FORCE

I WOULD like to commence my remarks by acknowledging two debts and expressing a tribute. The first debt is to the former Secretary of the Air Force, Dr. Hans Mark. I had never met Hans until I reported to the Pentagon shortly after my call from the President. No Secretary could have possibly done more than Hans Mark did to make sure the transition from one Administration to another was smooth and trouble-free. Hans has become a good friend, and we are fortunate that he accepted the appointment as the Deputy Administrator of NASA.

Second, I would like to acknowledge the debt owed the Air Force Chief of Staff, Lew Allen. I have never worked with any other Chief, but certainly none could have been more cooperative and more helpful to an incoming Secretary. Lew Allen has been a model of patience and consideration as I have learned the ropes of the job. Working with him is one of the real delights of the job.

Third, I would like to pay a tribute to the entire "blue-suit" Air Force. Our Constitution calls for civilian leadership of the military. When you stop and consider that this means that periodically a man or woman comes in to head a service in which he or she may have had little or no prior experience, you can readily imagine a situation possibly fraught with friction. A Secretary comes into a position of leadership and instantly is expected to participate in decisions involving officers and enlisted personnel who have twenty-five years or more in the service. It would be only human nature if, occasionally when their office door is tightly closed, they would want to bang their head on the wall and groan at the leadership an Administration has furnished them.

But may I say, with great gratitude, that if the officers and enlisted personnel of the Air Force have felt that way for the past eight months, they have been tremendously successful in hiding their feelings. I could not imagine a more cooperative attitude than I have found as we together have been forming a new team for the years ahead. To them, for their cooperation and their support, I express my deep appreciation.

Secretary Verne Orr (center), during his tour of AFA's Aerospace Development Briefings and Displays, observes the Vought Corp. display with Senior VP Jack Welch (left) and former astronaut (and now company executive) Michael Collins.

Facing the Soviet Threat

I would like to divide my talk into three areas. First, some thoughts about the Soviet threat. Second, a brief discussion of some of our weapons. And third, and by far the most important of all, some observations on Air Force personnel.

With respect to the Soviet threat, it was not too long ago that a United States citizen made headlines by suggesting that this country cut armaments fifty percent, with the expectation that the Soviets would then do likewise.

The proposer of that suggestion was undoubtedly sincere, but I have to believe that he was naïve. In plain truth, we have been maintaining a level of expenditure on armaments at less than fifty percent of the Soviets for at least the past four years—and it hasn't worked!

Consider, for example, the rate of production of fighter planes. In Fiscal Year 1982, if the budget goes through Congress as we hope and expect it will, the Air Force will

purchase 222 combat planes. If we add roughly a comparable number for the Navy, we come out at something less than 500 for the two services. The Soviets will build 1,300 in this same time frame. The Air Force hopes, over the next five years, to add twelve combat squadrons. At the rate of Soviet production, disregarding attrition, they would be equipping a new combat squadron every week or so.

Since 1960, the Soviets have increased the number of intercontinental delivery vehicles sixfold. Our former nuclear superiority is gone. Even more important is what this change in balance does to the Soviet perception of their ability to achieve their objectives in a nuclear war.

Verne Orr is a former businessman and political associate of President Reagan who served in the California state government and during the Presidential campaign. He holds a bachelor of arts degree from Pomona College and a master's in business administration from the Stanford Graduate School of Business. During World War II, Mr. Orr served in the Navy and was discharged from the Naval Reserve in 1951 as a lieutenant commander.

". . . we are being massively outbuilt by the Soviet Union in almost any area that it takes to wage war."

If the Navy Secretary and the Army Secretary were here to talk with you, they could tell their own stories about excessive Soviet production in ships, in submarines, in tanks, trucks, and field artillery. The fact is that we are being massively outbuilt by the Soviet Union in almost any area that it takes to wage war.

Even in space, the Soviets have continued to forge ahead rapidly. We take justifiable pride in the successful flight of the Space Shuttle, but let us not overlook that Young and Crippen were the first Americans in space in six years. During that same interval, the Soviets launched twenty two-man space missions and one three-man mission—a total of forty-three men in space.

One of the priorities General Allen and I share is an enhancement of our space efforts. In that regard, I am pleased to note the President has just nominated James Hartinger of NORAD to full general, reestablishing a four-star level at that important command.

Even more disconcerting than Soviet activities is a look at the location of the strategic materials that would be necessary for the United States to procure in the event of war. While we must import vital raw materials from around the world, the Soviet Union has within her borders nearly all of the scarce strategic materials necessary for the production of modern arms. The location of our vitally necessary oil supplies, which must traverse thousands of miles from Southwest Asia, is all too well known to warrant discussion here today.

But having just returned from Africa as the head of the President's delegation to Swaziland, I am more aware than ever of the number of strategically important materials for which we must look to that continent. I would hazard to guess that, as we come more and more to realize our dependence on Africa as a source of strategic materials, we will place an ever greater emphasis on maintaining friendly relations with the myriad of new nations which now make up modern Africa.

So we look across Europe and find a nation that is devoting a much greater share of its gross national product to armament than is the United States, one that is more self-sufficient than is our country, and one that has plainly adopted a policy of aggression.

Air Force Weaponry

Let me now talk a bit about Air Force weapons. Not the impending decision on the new bomber or the basing of the MX missile. Those are for the President of the United States and Secretary Weinberger to announce. But I want to turn to our more conventional weapons.

Every so often someone writes a book or a magazine article and earns himself a tidy sum of money by criticizing weapon systems in one of the three services, and by suggesting that all would be well if we would only make them simpler.

The emphasis on the simple has usually two themes. The first is that our planes are so complex that they are beyond the capacity of our pilots to fly them safely, and that we are unable to train personnel with sufficient skills. The second is that our planes are too complex to fly and that they are always down for repair.

A long time ago I was the editor of our college daily. I learned then that the best column or editorial can be ruined by a search for the facts. By the same token, some of our critics would have their arguments destroyed if they were more careful to search out the facts. What are those facts?

The F-16 currently has an accident rate of thirteen aircraft destroyed per 100,000 flying hours. Compare that with some of the less complex planes that are supposedly safer.

The F-100, at the same stage of its development, had a record of forty aircraft destroyed per 100,000 hours of flight. The F-104 had a master record of nearly sixty aircraft destroyed per 100,000 hours of flight and, if you want to go way back to the P-51, as some of our critics have yearned to do, it had a record in one year of 111 aircraft mishaps for each 100,000 hours of flight, a record significantly greater than the current F-16.

And if the F-16 is so unsafe and so difficult to maintain, can you tell me why the Israelis were so upset when their delivery of F-16s was delayed a few weeks or why Venezuela and Pakistan are knocking at our door to get earlier delivery of these same planes?

If one looks at twin-engine planes, the F-15 has an accident rate of under five destroyed aircraft per 100,000 flying hours. At the same

"The Administration did not come to Washington to lead in the sacrifice of American youth upon the false altar of inadequate, inferior planes."

stage of development, that rate is less than half of the accidents of the F-4.

How about the other half of that great myth, that our planes are so complex they are constantly under repair.

In 1980, the F-16 had the third lowest maintenance man-hours per hour of flight of our six USAF first-line fighters and bombers.

Well let's just think together for a few moments about the trend in warfare. In World War I, we all know that the battleships fought in such places as Jutland when they could just see each other on the horizon. Twenty-five years later, in World War II, battle groups seldom came in sight of each other. Instead, the conflict was carried on at several hundred miles distance by carrier planes launched from both sides.

Since World War II, we have had conflicts in areas of the world where modern weapons and tactics are employed. If one studies the reports of Israeli and Syrian aerial engagements, one quickly sees that planes are being shot down even before the pilots come into visual contact.

It is against this backdrop that we hear of those who would have us build simple, inexpensive weapons. Just what capability would they prefer that we omit? The radars, which enable a pilot to know he has an opponent? The missiles, which enable him to fire a weapon that will seek out his opponent? The anti-jamming devices, which are designed to negate the radar from ground-based antiaircraft? The sensing devices on our planes, which let a pilot know that a missile has been fired at him and permit him to take evasive action? The supersonic speed, which offers the pilot some chance of quick evasive action when he is fired upon? But let me assure you of one thing. The Administration did not come to Washington to lead in the sacrifice of American youth upon the false altar of inadequate, inferior planes. I promise you we will continue to build sophisticated, capable weapon systems that will enable our pilots to fly with the least loss of life possible.

That does not mean that this Administration wants to waste money, and that does not mean that there is not money to be saved in and around the Pentagon and on our bases. There is, and we are looking for savings.

No one can operate a service with more than 560,000 uniformed personnel, 240,000 civilians, and about 200,000 in the Guard and Reserve—a total of approximately 1,000,000, and stand before an audience and say that there aren't economies and efficiencies to be had.

Searching for Savings

We are looking for them in big ways and in little ways. Let me give you just two illustrations. When I became Secretary, I asked the Assistant Secretaries, the Deputy Assistant Secretaries, and the "blue-suit" offices to take a hard look at their magazine and newspaper subscriptions. We canceled eighty-six, a total of twenty percent of all those arriving at the Pentagon and we are just starting.

A small savings.

Recently, I conferred an honor on a member of the Air Force who suggested that planes at the Air Training Command receive air pressure and electricity from centralized distribution. Previously, each plane had an individual unit at its side on the apron. The lifetime savings at that one command? $75 million.

Large and small, we are seeking economies.

Finally, and most importantly, may I talk to you about Air Force people. We can have the best planes, the most accurate missiles that the world has ever seen, but if we don't have dedicated, competent personnel to man them, to fly them, to see that they are in a good state of repair, to see that the parts necessary are there when needed, then we will not have an effective Air Force.

I am told by those that have been in the Air Force a long time that morale is considerably higher than it had been just recently. When Mrs. Orr and I visit bases, we learn that morale appears to be very good indeed.

A substantial part of that high morale must be attributed to the pay raise of last year, and for that we extend our thanks to Congress and the previous Administration. Another very important part is undoubtedly due to the fact that military personnel will get a pay raise effective October 1. That bill is currently under debate in the Congress and the exact size is unknown, but it appears it will be competitive.

If we get approximately fourteen percent, that will merely bring armed

While touring the briefings and displays at the AFA convention, the Hon. Verne Orr (right) stopped to chat with Lt. Gen. J. B. McPherson, USAF (Ret.), and Mrs. McPherson. General McPherson is President of the Air Force Historical Foundation.

"This pay cap impresses me as one of the most shortsighted policies that this country could adopt."

forces personnel up to the level which we promised when we began our transition to the All-Volunteer Force in 1972. At that time, we agreed that military personnel should earn roughly the equivalent of what they could make doing similar work outside the military services.

There has been some talk that the All-Volunteer Force is a failure; that we cannot convince the right numbers of the right quality of people to join. This Administration thinks that, until we meet our targeted goal of paying equivalent wages, it is premature to discuss whether or not the All-Volunteer Force is a failure. We are confident that, with adequate pay, good housing, acceptable working conditions, and the availability of the necessary parts and equipment, the All-Volunteer Force can be successful.

On that score, let me tell you that our efforts in recruiting are moving forward splendidly. For the fiscal year just ending, Air Training Command set a target that eighty-eight percent of the recruits with no prior military experience should be high school graduates, and I am pleased to tell you that this target was achieved. For the coming fiscal year, they have increased the target to ninety-two percent, and they are confident they will also meet that target.

As an aside, permit me to describe a personal example of how one aspect of our recruiting system works. While at the Air Training Command I was invited to list my talents and express an interest in enlisting in a specialty of my choosing. I am delighted to tell you that there was one opening as a radio operator, which happens to be a hobby of mine, and they offered to reserve that opening for me effective May 6, 1982. Not only that, but my talents and experience indicated I was able to enter as an E-3, not just at the beginning level of E-1. I am sure that such flattery did nothing to impair the career of Gen. Bennie Davis, who at that time was head of the Air Training Command and who is now head of the Strategic Air Command!

Recruiting Women

Beyond achieving our general recruiting goals, I should comment that the Air Force continues to be the leader among the governmental agencies and the military services in the recruitment and utilization of women. Our 63,000 women—a 400 percent increase since FY '72 and at 11.2 percent the highest female representation in any service—are an integral part of our Air Force capability. We are proud that the Air Force has equal enlistment standards for both men and women and includes the largest number of women officers of any service.

In brief, our recruitment programs have been aggressive but realistic; they have produced results. Our morale is good—our people are trained—they are ready. However, permit me to sound a note of caution. Some—possibly a very large amount—of the high morale of our people is based upon the expectation that this Administration will recognize their needs and will react accordingly. If we fail to convince the Congress that a substantial pay raise is in order, much of that aura of good feeling could rapidly disappear and the gains of the past year lost. Along these same lines, the current pay cap has caused a degradation in the pay of our general officers by as much as fifteen percent per year. This pay cap impresses me as one of the most shortsighted policies that this country could adopt. Assuming a cost-of-living raise is approved as planned for October 1, 1981, all general officers will make the same amount, and in slightly more than a year, it is likely that a full colonel will receive the same salary as the Chairman of the Joint Chiefs of Staff.

This year we promoted four three-star generals to four star, and sixteen left the service. That makes for a regrettable attrition rate of more than forty percent among our three-star generals.

The real squeeze comes among two-star generals who, in the prime of life, possessing a wealth of experience, are just the type of person being sought by corporations for their executive leadership positions. The prospect of earning no more for the next eight or ten years, combined with the necessity to change residences several times during that period at an out-of-pocket cost and the removal of a number of perquisites that formerly were enjoyed by general officers, combine to encourage many of them to leave the service. If we are to have strong leadership in the Air Force, this type of policy must be changed for it deprives us of the high-quality people who are the foundation on which such leadership must be built.

But the best improvement of all in the armed forces may not be last year's pay bill nor this year's pay bill, although they are both vitally important. Certainly, one of the prime factors in producing a competent All-Volunteer Force is the respect that you and other citizens pay to personnel who have chosen a military life for a career.

My officers tell me that today they wear their uniforms to events and places that they would not have considered only a few years earlier. There is a new spirit in this country regarding military service, a return to a spirit that once existed.

It is really the view that you and other citizens hold toward the military and defense that is crucial.

If we are to meet the Soviet threat that I described earlier, we need a working relationship—a partnership—wherein we in the Pentagon provide the means to assure our nation's security and those of you not in the military keep us on our toes—alert to those areas where we can do this more efficiently.

And together we must make sure the American public understands the need for a strong defense and has the confidence they are getting value for their dollars.

The development of such a partnership ensures a United States whose defense policies are consistent, whose alliance commitments are met, and whose stability and fairness are recognized throughout a troubled world. ■

The world aerospace power balance is shifting, with USAF trends showing improvement over the 1980 level. USAF Chief of Staff Gen. Lew Allen, Jr., discusses why and how in this address to the AFA Convention.

USAF's Renewed Spirit

BY GEN. LEW ALLEN, JR., CHIEF OF STAFF, USAF

Air Force Chief of Staff Gen. Lew Allen, Jr., during his address to the 1981 AFA National Convention.

I AM delighted to have the opportunity to share my views with you again this year on some of the key issues facing the Air Force and the nation. It is a special honor for me to be able to address this thirty-fifth anniversary gathering of the Air Force Association. I am told the paramount goal of the founders of AFA some thirty-five years ago was to see to the establishment of an independent US Air Force—an objective that was achieved just one short year later. Would that we could translate our goals into accomplishments so quickly today!

I deeply appreciate the support and assistance AFA has provided to the Air Force and to me personally during my tenure as Chief of Staff. You have made my job more rewarding, and you have contributed importantly to a better Air Force. Throughout its thirty-five-year history, the Association has played a vital role in explaining national security requirements to the American people and in increasing public understanding of the vital contributions of airpower to our country's security.

As a result of this renewed public awareness and support, I am optimistic that we finally have the support we have so desperately needed to keep our air forces in fighting shape. We've been up and we've been down, but I am convinced that there is a renewed spirit of optimism and enthusiasm throughout the Air Force.

Hasn't this been a fascinating year? It began on a very high note for those of us concerned with defense. The 1980 election signaled without doubt a significant increase in patriotism and national will. That was reflected in increased budgets, pay raises, and new public support—things that helped change our desperate personnel picture. This has renewed our servicemen's confidence that we would improve working and living conditions and, most important, keep a ready, quality force.

Then, ironically, with the American public strongly supporting our needs, a number of critics have alleged that we were incompetent, wasteful, and that preparation for war increased its likelihood. Others leaped to the theme that our forces were unwieldy and unreliable and that a different approach (generally unspecified) would give both economy and effectiveness.

We are glad to respond to constructive criticism, and we hope to be the first to recognize our faults and the need for improvement. But this dialogue has ceased to be constructive. Many of you in this audience have responded effectively to these criticisms. We need your support. We need the thoughtful, intelligent analysis of the many of you who speak out on behalf of a truly strong national defense.

The Dominant Factor

Airpower is the essence, the very stuff, of modern military power. Modern airpower, in combination with the development of long-range missiles and nuclear weapons, has transformed the shape of war and, indeed, the nature of the postwar world. We have shrunk the oceans and lessened the clock on our ability to move fast and far. Airpower is a central factor in all aspects of warfare, from deterrence of nuclear war to the global projection of US combat power. Because of its speed, flexibility, and global reach, superior US airpower is today and will continue to be the *sine qua non* of the successful defense of US inter-

ests against aggression around the globe. The words of former Chairman of the Joint Chiefs of Staff, Adm. Arthur Radford, ring as true today as they did in 1954 when he said: "Airpower is the dominant factor in war. It may not win a war by itself alone, but without it, no major war can be won."

The defense challenges we face are substantial. There are numerous areas of instability and conflict around the globe. These situations, which invite and often reflect Soviet meddling, threaten important Western interests and carry an increased potential for superpower confrontation. Key conflict areas—such as Southwest Asia—are far from our shores, without either forward-deployed US forces or basic support facilities. Yet, in a crisis, a rapid US military response will be essential if we are to deter armed aggression, to fight effectively should war occur.

"Airpower is the dominant factor in war. It may not win a war by itself alone, but without it, no major war can be won." —Adm. Arthur Radford, USN, Chairman, JCS.

"The 1980 election signaled without doubt a significant increase in patriotism and national will."

Airpower is the critical factor in providing this rapid response capability. US Air Force units are equipped, trained, and ready to bring fighting power to bear anywhere in the world within a matter of hours. Our air forces can take the battle to the enemy quickly and effectively in the early days that are so critical. When arriving late means losing the war, airpower is the key to victory.

Renewed Confidence

When I addressed this convention last September, I discussed some of the serious deficiencies in US war-fighting capabilities and our plans for improvement. We were losing unacceptably large numbers of aviators and NCOs, our fighter production rates were inadequate to maintain the force (much less to keep it modern), and there were serious shortcomings in the combat readiness and staying power of our forces. While the American public had begun to show a growing awareness of the increased threat posed by the Soviet Union's burgeoning military might and more aggressive behavior, this recognition had not yet been translated into the needed increases in defense spending.

Today, the picture is much changed. Our problems have by no means disappeared—the Soviet military build-up continues apace, regional instabilities and armed conflicts dot the landscape, and we are still short of experienced personnel. Nevertheless, with the substantially increased funds provided in the 1981 and 1982 Defense budgets and reflecting major changes in priorities in Air Force budgets, we are making significant strides in enhancing the combat capability of our forces and in restoring the quality of life for our people.

We have built the foundation of a truly effective fighting force. We will be buying more and better munitions and increasing our stocks of spare parts. Our operational crews will fly more frequently and train more effectively. We will be enhancing our airlift and aerial refueling capabilities and acquiring more highly capable tactical fighters. We are also taking long overdue steps to improve our operational facilities and arrest the decline in our base facilities in this country and overseas.

While we've only started many of these programs, and the budget increases are just beginning to be felt, the effects of this impetus have resulted in renewed confidence throughout the force.

These actions and the compensation initiatives enacted by the Congress last fall and, most important, the growing public appreciation of the value of military service have produced dramatic improvements in our personnel retention rates. Recruiting has set records, although we must avoid overconfidence at these early results because our personnel situation remains critical. We are still short of those key experienced personnel we lost, and it will take us time to replace them through training and retention. We cannot again afford to lose our cadre of skilled, experienced servicemen. If we were to falter in this endeavor, the situation would be far worse the next time around than it was over the last several years.

Meeting the Soviet Challenge

The United States must continue these initiatives. The actions of our principal adversary—the Soviet Union—are clear and threatening. While our nation faces many foreign policy challenges beyond those linked to the Soviet Union, it is the ominous threat posed by growing Soviet military might that fundamentally sizes and scopes our defense effort. Decades of growing military spending have fueled a massive buildup of Soviet military capabilities across the board, and there is every indication that the

Gen. Lew Allen, Jr., is USAF's tenth Chief of Staff. After graduation from the US Military Academy in 1946, he became a SAC bomber pilot. He earned a doctorate in nuclear physics in 1954, and spent the next seven years in the nuclear weapons field, then spent the years from 1961 to 1971 in space systems-related assignments. He was named Vice Chief of Staff of the Air Force in April 1978, following duty as Director, National Security Agency, and Commander, Air Force Systems Command. On July 1, 1978, General Allen became Chief of Staff.

Kremlin's single-minded devotion to the accumulation of military power will continue in the years ahead.

A recently released Defense Intelligence Agency report revealed that, in spite of continuing serious economic difficulties and chronic food shortages, Soviet defense spending exceeded that of the US last year by more than fifty percent. This unrelenting defense effort has produced a Russian war machine of enormous size and increasing technical sophistication. This powerful armed force has become the backbone of a confident, aggressive Soviet foreign policy.

Nowhere is the challenge posed by the Soviet Union more clear than in the area of strategic nuclear forces, where the momentum of Soviet efforts has begun to tilt the balance substantially in their favor.

Over the past decade we have allowed our strategic forces to decline to the point where a broad program of improvement is urgently needed to redress this alarming and unacceptable trend. We must formulate and implement an overall program that restores our strength relative to the Soviets and assures that the Kremlin is denied any prospect of success in nuclear conflict. In pursuing this effort, the Administration has made clear its intention to continue to pursue strategic arms limitations, as an integral element of our national security, but to do so only from a position of unquestioned strength.

Today our bomber force is aging and we must soon begin a vigorous program to produce a new modern bomber with the long range and flexibility that is the hallmark of strategic airpower. This bomber must be able to deliver nuclear and conventional weapons, including cruise missiles, in a variety of missions that includes intercontinental strikes against fixed and mobile targets in the Soviet Union, counter-intervention attacks in theater conflicts, and maritime surveillance, ship attack, and mine-laying in support of naval forces.

The need to modernize our ICBM force is even more critical. Our Minuteman/Titan force is becoming increasingly vulnerable to surprise attack. We would wish it were not so and we can compound Soviet uncertainty with rapid response launch tactics. Nevertheless, we must move ahead with the deployment of the MX missile in a survivable, perhaps defended basing mode in order to restore the essential resilience and full capability of our strategic forces.

Even with prompt initiation of these and other strategic modernization efforts, we can do little to correct our weaknesses relative to the Soviets for some years to come. New weapons cannot be fielded until the latter half of this decade. Therefore, we must now make a credible commitment to preserving the strategic balance—a commitment that is adequate and lasting—a commitment that our allies can take confidence in—a commitment that the Soviets must immediately take into account.

Tactical Airpower: A Key Role

While we must, first and foremost, maintain the capability to deter nuclear war and meet US global commitments, we must also maintain effective tactical and mobility forces. We must be able to win the battle of the air in the opening days of any conflict and to maintain air superiority throughout the theater. Tactical airpower also has a key role to play in determining the outcome of the land battle.

Immediate battlefield air support for our troops and those of our allies is an important task and one the Air Force takes most seriously. The flexible firepower of our A-10s—the bulk of which are deployed to Europe—combined with F-4s, A-7s, and soon F-16s is a critical battlefield asset. We have succeeded in restoring the status of the "air-to-mudders." Our close air support forces are reliable, durable, and effective. The A-10 has consistently demonstrated its tank-killing power in realistic field exercises and, of equal importance, has shown that it can maintain high sortie rates over extended periods.

I recently attended Gunsmoke 81—a tactical bombing and strafing competition held at Nellis AFB, Nev.—the first since 1962. It was a remarkable demonstration of the air-to-ground capability of our A-7s, A-10s, and F-4s. Gunsmoke was won by a team from Buckley ANGB, Colo., flying A-7s. The winner dropped eight bombs, seven of which were bull's-eyes and the eighth within twenty-four feet of target. These were astounding results. The competition was extremely close. The A-10s and F-4s were right in there. The winner was a Guard unit, but as I said to the Guard Commander, "All I saw were Air Force people."

In addition to supporting ground forces directly, we must be able to interdict second-echelon ground forces that are essential to Soviet success. With allied forces in Europe seriously outnumbered on the ground, we simply cannot permit the Warsaw Pact to mass and resupply its forces unchallenged. Since armor-heavy Soviet-led forces must have an extensive network to sustain their round-the-clock offensive operations and rely on the timely arrival at the front of succeeding echelons of ground forces, the Pact is especially vulnerable to an effective air interdiction campaign. Moreover, in areas far removed from concentrations of US or allied land forces, such as Southwest Asia, air interdiction offers the only timely means to counter a Soviet or Soviet-supported invasion.

Our tactical forces are up to these demanding tasks, and their performance will improve further as increased numbers of F-15s and F-16s enter the force and selective enhancements are made to their capabilities.

Our most capable fighters—the F-15 and the F-16—have proven their mettle in realistic exercises. The F-15 is proving itself the world's finest air-superiority fighter. F-16s, now entering the force, have already demonstrated their exceptional air-to-air and ground attack capabilities in exercises. In a recent tactical bombing competition in the United Kingdom, an F-16 team from Hill AFB, Utah, won the meet hands down, attaining near-perfect scores in bombing accuracy.

Supporting the Fighting Forces

Moreover, these aircraft are, despite what critics say, proving exceptionally reliable. They demonstrate once again the innovative talent and productivity of our aircraft industry. Our F-15s and F-16s require significantly less maintenance per flying hour than the F-4s they

are replacing. F-16s achieved the highest mission capable rate in FY '80 of any fighter in our inventory. Furthermore, deployment exercises involving F-111s and F-15s have clearly demonstrated that our most capable all-weather tactical aircraft can operate well above planned wartime sortie rates for substantial periods. If we support them, we can fly them.

Our E-3A AWACS has more than lived up to expectations. In addition to its warning and air battle management capabilities, the E-3A has proven to be an ideal instrument of US global crisis response. AWACS deployments to crisis areas have effectively yet non-provocatively signaled US interest and concern while providing warning and air defense information.

Our current deployment of E-3As to Saudi Arabia has filled a serious gap in early warning capabilities in this vital oil-producing region. Our crews and equipment have performed superbly. It is now time for the Saudis to begin to assume these responsibilities. The provision of E-3As to Saudi Arabia will improve Saudi early warning and defense capabilities; help deter and, if necessary, defend against air strikes on oil facilities—facilities which are extremely vulnerable to air attack; and establish the foundation for a more effective regional air defense network.

US airlift forces are another key airpower element that allows us to deploy and sustain effective fighting forces to meet our global commitments. Our long-range airlift must be sufficient to reinforce and resupply forward deployed forces in Western Europe and South Korea rapidly and to move lead elements of the Rapid Deployment Force to Southwest Asia within a matter of hours.

Present US airlift capability falls far short of our needs, particularly in carrying outsize equipment such as tanks, infantry fighting vehicles, self-propelled howitzers, and helicopters. We must increase our capability to move combat forces to trouble spots around the world in time to influence the course of events.

Beware False Economies

Before closing, I would like to say a few words about a subject that has received prominent press treatment in the past several weeks—the matter of budget reductions and the nation's security. I believe several points are in order. First, we fully recognize that a strong economy is essential to a strong defense.

Secondly, the Reagan Administration has committed to a substantial and long-term real increase in defense spending. The budget increases for Fiscal Years 1981 and 1982 and the planned increases in the years ahead are enabling the Air Force to set in motion a range of capability improvements not possible a year ago. These include the development and deployment of a new bomber, a several-fold increase in tactical fighter production when compared to our previous Five-Year Program, the reengining of our KC-135 refueling fleet, and substantial improvements in the staying power of our forces.

Finally, whatever the fiscal constraints, the Air Force must protect the quality of its forces. We cannot sacrifice quality of people or of our equipment for purposes of economy. When confronted with budgetary pressures in the recent past, there has been a tendency to take actions which have had an adverse affect on the quality of our forces.

The clear requirement to modernize our tactical air forces in the post-Vietnam period without sufficient funds to support a balanced improvement program, and the focus on a short-warning, short-duration war caused us to underfund necessary support for our forces. The low priority accorded to facility maintenance, pay and benefits, and maintaining adequate stocks of spare parts resulted in decreased readiness and had harmful effects on our troop morale with the consequence being the loss of far too many experienced personnel.

We cannot afford to repeat this experience. We must sustain the steps taken in the Fiscal Years 1981 and 1982 budgets to improve our war-fighting capability and the quality of Air Force life. We must and will reject the false economies of neglecting people-oriented programs or of procuring supposedly cheaper weapon systems that are not adequate to the missions we are required to fulfill. We are determined to build the best Air Force that can be built. We have the right foundation—the right weapons programs, the right people, the right training. At whatever budget levels chosen by the Administration and the Congress, we will continue to maintain an effective Air Force that you can be proud of and our nation can rely on.

"We can afford the expense of defense. It is the cost of a loss of freedom which would be unbearable."

The Cost of Freedom

The question is: Can we afford a defense capability adequate to the challenge posed by the Soviet Union? Clearly the challenge is difficult and requires a major effort on our part since the Soviets show great ability to create and maintain a massive military machine and great determination to pay the price for a steadily growing military capability. Nevertheless, unless we are willing to bear the burden, the risk of significant US inferiority is very real and the dangers associated with such inferiority ominous. To rebuild our defenses and maintain an adequate balance of military capabilities with our principal adversary will require some sacrifices by US citizens.

But these sacrifices are clearly bearable. For example, American spending on alcoholic beverages has exceeded Air Force expenditures in each of the past five years, and casino gambling revenues are currently running double the Air Force's annual fuel bill. As these comparisons indicate, it is not a matter of economy but of national commitment to rebuild our defenses.

We can afford the expense of defense. It is the cost of a loss of freedom which would be unbearable. ■

AWARDS AT THE 1981 AIR FORCE ASSOCIATION NATIONAL CONVENTION

AFA's AEROSPACE AWARDS

The H. H. Arnold Award (AFA's highest annual award)—To **Gen. David C. Jones,** Chairman of the Joint Chiefs of Staff, for his enduring, singular contributions to the geostrategic strength and military security of the nation by greatly enhancing the readiness and effectiveness of our armed forces and fostering public appreciation of and support for the men and women serving in uniform.

The David C. Schilling Award ("The most outstanding contribution in the field of Flight")—To the **347th Tactical Fighter Wing,** Moody AFB, Ga., for exemplary achievements in the JCS-directed deployment and sustained training exercise with the Egyptian Air Force—Operation Proud Phantom—that made significant contributions to national defense and international security in the Middle East. *(Accepted by Col. Patrick H. Hafner, Deputy Commander for Operations.)*

The Theodore von Kármán Award ("The most outstanding contribution in the field of Science and Engineering")—To **Dr. Hans Mark,** former Secretary of the Air Force, for brilliantly marshaling science and engineering resources to expand and modernize Air Force capabilities in the strategic, tactical, and force-projection areas and his strong support of and effective rapport with the men and women of the Air Force.

The Gill Robb Wilson Award ("The most outstanding contribution in the field of Arts and Letters")—To **Col. Arnald D. Gabriel** and the **USAF Band.** Colonel Gabriel's more than seventeen years as the outstanding Commander and Conductor of the USAF Band has culminated in his selection as President of the American Bandmasters Association. In its fortieth anniversary year, the USAF Band has performed before millions of people throughout the US and overseas, reflecting great credit on the US armed forces and the men and women of the US Air Force. *(Accepted by Colonel Gabriel and CMSgt. Fritz Wyss, NCO in Charge.)*

The Hoyt S. Vandenberg Award ("The most outstanding contribution in the field of Aerospace Education")—To **Lt. Gen. Ira C. Eaker, USAF (Ret.),** for his gallant service to his country as a pioneer aviator, planner, commander, and writer and lecturer. His contributions to the education of our nation's people concerning aerospace power stand as timeless legacies from this great American.

The Thomas P. Gerrity Award ("The most outstanding contribution in the field of Systems and Logistics")—To **Lt. Col. Dion W. Turner,** Commander, 341st Field Missile Maintenance Squadron, Malmstrom AFB, Mont., for leadership and imaginative managerial style while serving as Commander of the largest ICBM maintenance squadron in the Air Force.

AFA National President Vic Kregel, left, presents Chairman of the Joint Chiefs of Staff Gen. David C. Jones with AFA's highest honor, the H. H. Arnold Award.

Veterans Administration Employee of the Year—To **Mrs. Chris Willis,** East Lancaster, Calif., for compassionate, timely, and beneficial service to veterans and their dependents.

The Juanita Redmond Award for Nursing—To **1st Lt. Christy Henderson,** Cannon AFB, N. M., for professional knowledge and dedication to patient welfare and selfless training of others while serving as a staff nurse, USAF Hospital, Cannon AFB.

The General Edwin W. Rawlings Award for Energy Conservation—To **Capt. James F. McEvoy,** Staff Energy Officer, Air Force Engineering and Services Center, Tyndall AFB., Fla., and **SMSgt. Wayne H. Moore,** Mechanical Systems Operations Advisor, Hq. SAC, Offutt AFB, Neb., for outstanding achievements in energy conservation within USAF.

AFA CITATIONS OF HONOR

Air Force Communications Command, Scott AFB, Ill., for twenty years of superior support of the Air Force mission and the combatant commands, and activities of DoD, significantly enhancing armed forces readiness. *(Accepted by Maj. Gen. Robert F. McCarthy, Commander.)*

Lt. Col. Richard V. Badalamente, USAF (Ret.), Pacific Northwest Laboratory, Richland, Wash., for his innovative logistics concepts and contributions to national defense and military education while serving as Associate Professor of Logistics Management, Air Force Institute of Technology, Wright-Patterson AFB, Ohio.

G. Duncan Bauman, Publisher, St. Louis *Globe-Democrat,* for his perceptive editorial policy, consistent attention to national security requirements, and support and encouragement of Air Force people.

Maj. Gary D. Bohn, Project Director, 475th Test Squadron, Tyndall AFB, Fla., for superior management and personal flight testing of the joint AFSC/ADCOM/TAC Director Fire Control System for predicting and controlling aerial gunnery fire.

Col. William H. Crabtree, Director of Engineering, Ballistic Missile Office, AFSC, Norton AFB, Calif., for contributions to the MX ICBM program in both management and engineering development.

Arthur B. Doty, Jr., Directorate of Engineering, ASD, Wright-Patterson AFB, Ohio, for advances in simulation technologies that enhanced the effectiveness of flight training across the full spectrum of cockpit situations.

Electronic Systems Division, AFSC, Hanscom AFB, Mass., for consistently superior management of the development and delivery of a wide range of command control communications and intelligence gathering systems crucial to US and allied security. *(Accepted by Maj. Gen. C. T. Spangrud, Vice Commander.)*

1st Lt. Thomas A. Grobicki, Officer-in-Charge, Software Integration, 2d CS/DOPR, Buckley ANGB, Colo., for initiative and skill in averting a disastrous systems failure, thus preventing a serious outage in a vital space system.

Maj. John A. Higgins, Chief, Test and Plans Division, Directorate of Test and Deployment, Hq. Space Division, Los Angeles, Calif., for contributions to the military space program and initiatives that provided increased safety, systems life, and effectiveness for vital satellite programs.

Maurice R. Himmelberg, Directorate of Engineering for Reconnaissance and Electronic Warfare, ASD, Wright-Patterson AFB, Ohio, for superior leadership over a broad range of weapons programs that contributed immeasurably to the Air Force mission.

1st Lt. Larry D. James, Student, Air Force Institute of Technology, Wright-Patterson AFB, Ohio, for contributions to the survivability and effectiveness of military spacecraft.

SMSgt. Jerry A. Price, Superintendent, Aircraft Maintenance, Reese AFB, Tex., for dynamic performance in leading his unit to sustained excellence despite equipment and personnel shortages.

Joseph C. Zengerle, Bingham, Dana & Gould, Washington, D. C., for dedicated government service and actions as a private citizen in support of military men and women, especially his efforts on behalf of Vietnam veterans.

333d Tactical Fighter Training Squadron, Davis-Monthan AFB, Ariz., for its contribution to the Air Force mission by its safety record and introduction of the A-10 into the tactical combat inventory. *(Accepted by Lt. Col. G. D. Lape, Commander.)*

6th Military Airlift Squadron, McGuire AFB, N. J., for safe and efficient worldwide airlift of strategic materials, including its unique role as MAC's primary nuclear airlift squadron. *(Accepted by Lt. Col. Paul Gallo, Commander.)*

Detachment 3, 322d Airlift Division, Hellenikon AB, Greece, for superior performance and safety in a variety of missions, many of national and international importance and sensitivity. *(Accepted by Maj. Kenneth D. Clonts, Commander.)*

David Essenpreis, Deputy Chief, Management Information Division, Air Force Manpower and Personnel Center, Randolph AFB, Tex., for management of major, Air Force-wide computer programs that led the way to USAF's dynamic leadership in automating personnel programs. AFA honors him as Air Force Civilian of the Year.

Col. Paul W. Arcari, Chief, Entitlements Division, Directorate of Personnel Plans, DCS/M&P, Hq. USAF, Washington, D. C., for professionalism that led to the passage of twenty-six major pay initiative laws, thus enhancing retention and morale within USAF. AFA honors him as Air Force Personnel Manager of the Year.

AFA MANAGEMENT AWARDS FOR LOGISTICS

AFA Executive Management Award—To **Col. Gordon E. Fornell,** Deputy Director of Development and Production, Washington, D. C., AFLC, for overcoming numerous engineering problems to deliver a complete, worldwide, and long-term logistically supportive KC-10 aircraft to the Air Force.

AFA Middle Management Award—To **Lt. Col. Kenneth L. Johnson,** Chief, Manufacturing and Contracting Administration Division, Sacramento ALC, McClellan AFB, Calif., for supervision of more than 20,000 contracts involving spare parts and equipment for first-line aircraft and communications-electronics systems.

AFA Junior Management Award—To **Capt. Calder D. Kohlhaas, Jr.,** Mechanical Engineering Officer, Facility Engineering Division, AFLC, Wright-Patterson AFB, Ohio, for his professional technical knowledge in providing comprehensive and aggressive management for command energy programs, thus leading to a profound and long-term effect on energy reduction.

Old comrades: Vandenberg Award-winning Lt. Gen. Ira C. Eaker, USAF (Ret.), left, and AFA's first National President and legendary pilot, Jimmy Doolittle.

AFA MANAGEMENT AWARDS FOR SYSTEMS

AFA Distinguished Award for Management—To **Brig. Gen. Donald J. Stukel,** DCS/Plans and Programs, Hq. AFSC, Andrews AFB, Md., for outstanding service as Commander of the Rome Air Development Center, AFSC, Griffiss AFB, N. Y., in providing dynamic leadership resulting in major new technologies for advanced systems serving USAF's global requirements.

AFA Meritorious Award for Program Management—To **Col. Edward P. Barry, Jr.,** Deputy for Defense Support Systems, Space Division, AFSC, Los Angeles AFS, Calif., for the management of the Defense Support Program through its major transition into a new era of increased capability and survivability, thus greatly increasing its DoD mission.

AFA Meritorious Award for Support Management—To **Donald F. Kelley,** Director of Intelligence, Electronic Systems Division, AFSC, Hanscom AFB, Mass., for contributing immeasurably to a vigorous foreign intelligence support program.

AIR NATIONAL GUARD AND AIR FORCE RESERVE AWARDS

The Earl T. Ricks Memorial Award—To **Maj. John H. Smith,** 178th Tactical Fighter Group. Springfield, Ohio, for superior airmanship while flying an A-7D in successfully recovering from an overwater in-flight emergency that included aircraft damage and bodily injury.

The Air National Guard Outstanding Unit Award for 1981—To the 117th Tactical Reconnaissance Wing, Birmingham, Ala. *(Accepted by Brig. Gen. Addison O. Logan, Commander.)*

The Air Force Reserve Outstanding Unit Award for 1981—To the 452d Air Refueling Wing, March AFB, Calif. *(Accepted by Col. William B. McDaniel, Commander.)*

The President's Award for the Air Force Reserve—To the 512th Military Airlift Wing, Dover AFB, Del. *(Accepted by Col. Jack P. Ferguson, Commander.)*

SPECIAL CITATION

Lackland AFB, Tex., for outstanding support of the Air Force Recruiter Assistance Program. *(Accepted by Maj. Gen. Spence M. Armstrong, Commander.)*

AFA SPECIAL AWARD

To **Columbia Astronauts John W. Young** and **Capt. Robert L. Crippen, USN,** for their pioneering flight in a space transportation system that promises to revolutionize both military and commercial space exploitation.

AFA President Kregel presents award to former Air Force Secretary Hans Mark, center, as USAF Chief of Staff Gen. Lew Allen, Jr., applauds.

AFA SYMPOSIA

To improve the depth and breadth of information flow about major topics, AFA is holding more symposia in more locations.

Symposia Speed Information Flow

THIS section of the magazine reports on several AFA symposia, either held recently or planned for the future. Especially noteworthy is the one held in Chicago last March, sponsored by the Chicagoland-O'Hare Chapter of AFA. A summary of its proceedings appears on p. 66, written by Robin Whittle, AFA's Director of Communications. Robin's account illustrates the superb results achieved by the Chapter in sponsoring and conducting this important event; important to AFA, but also to national understanding of vital national security topics.

AFA National Headquarters sponsored three successful symposia during the convention; they are reported separately by the staff members responsible. Dave Noerr, AFA's Assistant Executive Director/Field Organizations, tells about the symposium for chapter leaders, beginning on this page. On p. 63, Edgar Ulsamer, AFA's Assistant Executive Director/Policy and Information, reports on the symposium he conducted. Its subject: "Aerospace Technology in the Current Five-Year Defense Plan." The third convention symposium was organized and conducted by Mike Nisos, Managing Director, Aerospace Education Foundation. Beginning on p. 62, Mike's account highlights the deliberations of his panelists on the shortages of engineers and technicians, and what might be done about them.

Looking Ahead

AFA plans to conduct additional symposia on vital topics in the months ahead. The next event, scheduled for November 12–13 in Los Angeles, is titled, "The New Imperatives of US Aerospace Power." According to Executive Director Russ Dougherty, the symposium is "a searching look by senior Defense and Air Force leaders at America's critical defense needs and how to fill them." As planned, the symposium will highlight the new directions and strategies that our national security requires in the "dangerous decade of the 1980s—with special focus on the role of US aerospace power throughout the world." Top Air Force leaders from worldwide posts will participate via presentations and through dialogues with persons attending. The symposium is a sellout event, engaging the capacity of the Hyatt House Airport Hotel.

Two new national AFA symposia are planned for 1982. The first will be held in Boston on April 26–27 at the Hilton Colonial Inn. It focuses on the electronic capabilities and requirements of the Air Force, and is being planned with the cooperation and participation of Electronic Systems Division of USAF's Air Force Systems Command.

The second new symposium is to be held in St. Louis, June 24–25. Its theme is "Airlift—the Key to Modern Military Mobility." The cooperation and participation of USAF's Military Airlift Command, as well as AFA's Scott and St. Louis Chapters, will make this a landmark event.

Before those two national symposia, the Chicagoland-O'Hare Chapter will conduct its 1982 symposium on March 6. ■

Field Leaders Symposium: Working Together

BY DAVE C. NOERR, AFA AFFAIRS EDITOR

NEW on the 1981 AFA Convention schedule was a group of symposia designed to provide delegates and other registrants with up-to-date, comprehensive information on subjects of current interest. The first of these, on Tuesday afternoon, was a symposium/seminar for Air Force Association field leaders. More than 160 State and Chapter Officers, National Vice Presidents, Board Members, and other convention registrants were in attendance as President Victor R. Kregel opened the session with a review of the importance for field leaders to be familiar with senior staff members of AFA's National Headquarters. To aid in fulfilling the responsibilities of field leadership, Mr. Kregel continued, it is extremely helpful to understand both the organizational structure of the staff, and the particular functions each of the departments fulfills—particularly in terms of the relationship to field organizations.

Chairman of the Board Dan Callahan briefly reviewed the critical importance of carrying AFA's messages to the voting public. He emphasized further the need for AFA's field units to develop strong programs involving the education of America's youth in aerospace-related subjects.

President-elect Judge John G. Brosky presented some national goals, including continued emphasis on member recruitment and retention; a permanent home for the national headquarters; increased prestige and utility of AIR FORCE Magazine; improving communications with the Administration, the Congress, and the people; and working to obtain legislative relief relating to our war veteran requirement.

Executive Director Russell Dougherty welcomed the symposium participants, encouraging them to participate actively in open discussion with panel members. He reminded them that the staff existed to provide all possible help to field units and leadership, suggesting that frequent contact with appropriate staff members was encouraged and welcomed by all staffers.

The Staff Presentations

After a brief explanation of the format of the symposium, moderator Dave Noerr, AFA's Assistant Executive Director/Field Organizations, introduced the first panelist, John O. Gray, former Deputy Executive Director and now consultant to AFA. John presented an explanation of AFA's working relationship with other military-oriented associations, such as the Association of the US Army; the Navy League; the Air Force Sergeant's Association; the Retired Officers Association; the Reserve Officers Association; and many others. He went on to explain AFA's recent correspondence with more than 200 "affinity groups," inviting them to more closely associate themselves with AFA, and offering various services of potential interest to these groups. (*See p. 126.*) A sampling of favorable responses was presented. Concluding his remarks, John introduced several representatives of other associations who were in attendance.

Ben Catlin, Special Assistant/Defense Personnel Matters, the next panelist, explained the function of his office in closely monitoring personnel-related issues on Capitol Hill, and assuring that up-to-date information is provided both to Hill staffers and AFA's field leadership. He encouraged field dissemination of the data to assure widespread understanding.

AFA's Director of Legislative Research and Analysis and author of this magazine's "Capitol Hill" column, Kathleen McAuliffe, presented an up-to-the-minute report on the status of several key weapons programs on Capitol Hill. She explained her responsibilities in providing field leaders with legislative status reports which are mailed each week and research services which are available upon request.

Robin Whittle, Director of Communications, detailed the functions of her department, emphasizing the availability of videotapes, films, and speech blocks to help AFAers in the field with programming requirements. She went on to encourage everyone to send in information for *Crossfeed*, and to give their copies of *Crossfeed* and *Field Service Report* the widest possible circulation.

The final presentation of the first symposium segment was made by AIR FORCE Magazine Editor in Chief Clif Berry. Clif outlined the magazine's editorial policy, and encouraged AFAers to suggest article ideas and to submit attention-getting photos. He explained the new magazine section, "Intercom," starting in this issue *(see p. 116).*

Second Segment

Following Clif's briefing, symposium participants were given time to question all of the aforementioned panelists. After a brief but lively discussion, moderator Noerr introduced Max Keeney, Director of Membership Development and Fulfillment, and Administrator of AFA's insurance programs. Max reviewed the current year's membership drive, congratulating the record number of field units achieving or surpassing their goals, and reviewing the most successful on-base drive in recent years. He stated that with 167,000 members AFA has reached an all-time high. He stressed further that a greater percentage of these than ever before are chapter affiliated, and encouraged field leaders to continue to strive for new regular members and chapter affiliation.

Because of the absolute necessity that AFA's total membership comprise at least seventy-five percent war veterans, he implored the attendees to exercise every effort to obtain collectively 5,000 new war veteran members by year's end, suggesting that one approach is a gift of a year's membership to known war veterans and family members. This must be done to preclude severe tax consequences for AFA. A review of insurance programs, with emphasis on the new ChamPlus plan, culminated Max's presentation. A number of questions relating to both subjects followed.

The final presentation was given by Jim McDonnell, who detailed his activities as Assistant Executive Director/Programs and Association Events and Director of Military Relations. High points of Jim's presentation included encouragement to utilize his staff's capabilities in

The Field Leaders Symposium stressed close coordination and cooperation between AFA members and the national staff. Those briefing attendees included (from left) AFA staffers Benjamin Catlin and Dave Noerr and Executive Director Russ Dougherty.

providing help in scheduling and organizing programs at state and chapter level, and a digest of AFA's relationship with its several advisory councils. On the latter subject, he concluded with a suggestion that chapters contact members of AFA's Junior Officer and Enlisted Advisory Councils who reside nearby. (Reports of these Councils' activities appear elsewhere in this issue.)

As time had nearly run out, with delegates anxious to prepare to depart for the Annual Salute to Congress, further discussion was cut short.

Comments of those attending this first Field Leaders Symposium indicated an appreciation for the opportunity and a strong desire that similar symposia be included in subsequent convention planning. The primary criticism of the Symposium by delegates, with which the national elected leadership and staff agreed, was the time constraint. Everyone felt that more time for questions and answers with related discussion would make the entire event more meaningful. This suggestion will be given prime consideration in future planning.

Meantime, we hope that all our field leaders—who are the critical "grass roots" of this Association—will remain in close contact with national staff. We will do everything possible to help you in your efforts to improve your Air Force Association. ■

Shortage of Engineers and Technicians

BY MICHAEL J. NISOS, MANAGING DIRECTOR, AEROSPACE EDUCATION FOUNDATION

Aerospace Education Foundation President Dr. Don C. Garrison, right, discusses the Engineers Symposium with Foundation Trustee Leonard W. Isabelle and AEF Managing Director Michael J. Nisos, left.

A TOP LEVEL two-hour symposium on this subject was held on Wednesday, September 16, in conjunction with the Annual AFA National Convention held in Washington, D. C. Moderated by AFA's Chairman of the Board, retired Air Force Maj. Gen. Daniel F. Callahan, it consisted of fifteen-minute presentations by a blue-ribbon panel, followed by a question-and-answer period among the panel and the audience.

The lead-off panelist, Brig. Gen. Schuyler Bissell, Deputy Assistant Chief of Staff, Intelligence, provided statistical information on present and forecast engineer and technical training in the United States and the western world vis-à-vis the USSR. He pointed out that the central orchestration of Soviet scientific and technical manpower has produced a larger number of educated people, the sheer quantity of which has allowed them to make significant technical advances. The large Soviet resource pool of the 1990s will represent a formidable challenge to US superiority in science and technology, even if major changes occur in Soviet educational philosophy.

The next panelist, former Air Force Systems Command Commander Gen. Alton D. Slay, USAF (Ret.), discussed the implications of the situation presented by General Bissell for United States productivity and security interests, particularly US ability to retain industrial and aerospace leadership into the future.

Dr. Norman Hackerman, President, Rice University, and Dr. Wilbur L. Meier, Jr., Dean, College of Engineering, Pennsylvania State University, spoke on how civilian educators view this situation and what is being done, can be done, and should be done throughout academia and specialized technical institutions to address this problem.

Lt. Gen. Andrew P. Iosue, Deputy Chief of Staff for Manpower and Personnel, concluded the panel discussions by examining how the shortage of both engineers and technicians affects the military (especially the Air Force), and what our services are doing and plan to do about it.

Moderator Callahan summarized the presentations on the engineer and technician shortages as follows:

- Begin interest in mathematics and the sciences and motivate students on these subjects as early as the fifth grade.
- Improve the quality of the teachers and induce them to remain in the teaching institutions. This will require additional funds.
- Colleges and universities should broaden their teaching and let the industries specialize and hone that training.
- College laboratories should have more modern equipment and it should be maintained properly. Additional funding would also be required for this.
- Interaction between the engineering colleges and universities and the armed services, including the laboratories, should be enhanced.
- The stature and status of engineers should be recognized, and they should be better utilized.
- Within the armed services, the forthcoming pay raise should help; however, special bonus privileges should be provided to engineers similar to those in the medical and legal fields.
- Technicians who assist engineers should also be given greater attention in training, status, and utilization.
- AFA chapter members should work with parents and civic organizations in their localities to get the message out. They could encourage local schools to provide quality basic teaching in mathematics and the sciences. The Air Force Junior ROTC and Civil Air Patrol could be good starting points.

Audience participation followed the symposium. Several current projects on the subject of the symposium were presented by individuals who are involved. In addition, challenging questions were posed to the panel.

Audience interest was so great that the question-and-answer period had to be terminated forty minutes beyond the scheduled two-hour time allotted for the entire program. The entire symposium was recorded. The proceedings will be transcribed, edited, coordinated with the panelists, printed, and then distributed nationally. ■

Technology's Role in Defense Plans

BY EDGAR ULSAMER, SENIOR EDITOR (POLICY & TECHNOLOGY)

THE Air Force Association's Convention Symposium entitled "Aerospace Technology in the Current Five-Year Defense Plan," held on Wednesday, September 16, provided a *tour d'horizon* of USAF's force modernization prospects, with executives from Capitol Hill and the Pentagon as well as a political economist as the tour guides.

Under Secretary of Defense for Research and Engineering Dr. Richard DeLauer was the event's keynoter. In acknowledging the Administration's tardiness in formulating the current defense plan—because of a series of budget revisions and delays in settling strategic force modernization issues such as MX and the multirole bomber—he stressed nevertheless that "We do have a plan for force modernization and readiness that will take every nickel that we can get our hands on." A principal reason why force modernization is so urgent, he suggested, is "that there hasn't been any in years." As a result bootstrap measures, such as taking battleships out of mothballs and modifying them for cruise missile carriage in order to increase naval combat capabilities, have become essential. In spite of the makeshift character of mating reactivated battleships with cruise missiles, he predicted that the end result would be a "very effective" weapon system.

Dr. Richard DeLauer, Under Secretary of Defense for Research and Engineering, delivered the keynote address.

Over the next few years, Secretary DeLauer predicted, the Air Force will be "so busy" building airplanes—and at an optimal rate thanks to the increasing acceptance of multiyear contracting by Congress and the Executive Branch—that the service "won't have time to complain about not having enough money." He said that by the end of 1982 procurement of the F-16 would probably be on the basis of multiyear funding, a technique that boosts program stability while introducing new economies of scale.

C^3 Modernization

Over the next few years, Dr. DeLauer told the AFA meeting, "we will, for a change, pay a lot of attention to C^3 [command control and communications]." The Air Force, he said, will be leading the way toward C^3 modernization, especially in the strategic sector where "survivability and connectivity" of command and control systems clearly rank as the "number one priority." He underscored the importance of strategic command and control systems by pointing out that "without [these enhancements] we can't even talk about full utilization of the strategic weapons"—such as MX, a multirole bomber, and D-5, the new SLBM—that are to be produced within a few years.

Assembling a modern strategic C^3 umbrella system that incorporates all the traits essential for deterring, or fighting, protracted strategic nuclear wars is a tough job, according to Dr. DeLauer: "We are struggling with it but the job is bigger than all of us." The reason is that a national command and control capability involves a system of systems that requires meticulous integration and reasonably accurate assumptions about how and under what scenarios the system will be used years after its design has been initiated.

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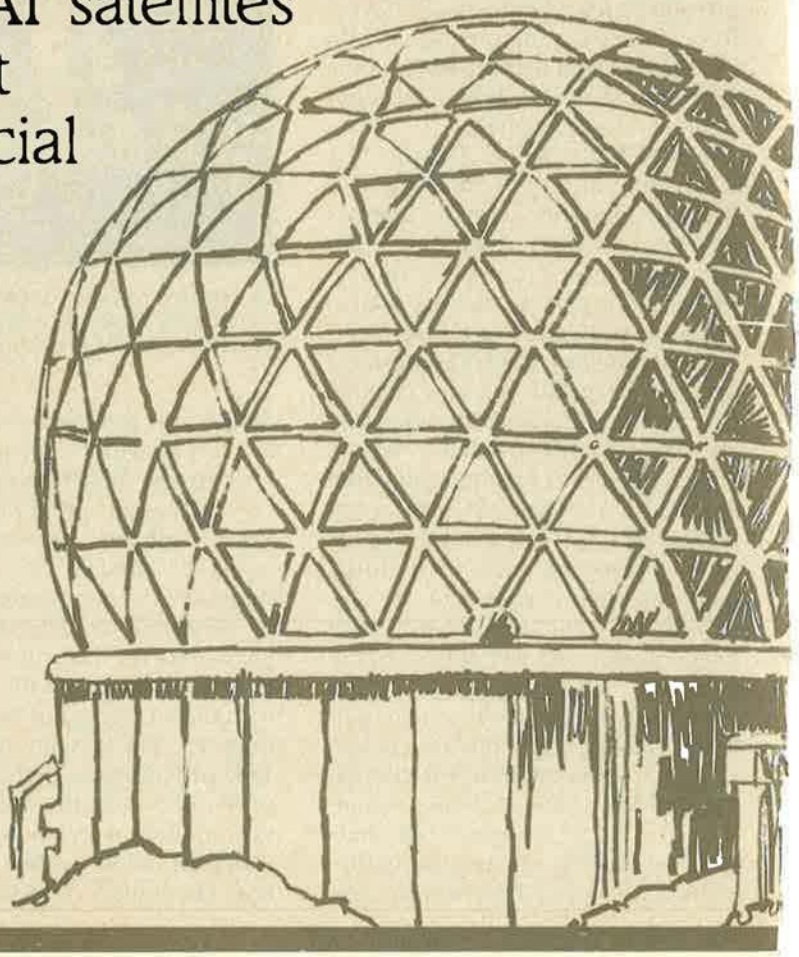

In 1957, we helped design and develop the world's first major space-craft tracking network. We still support that network –

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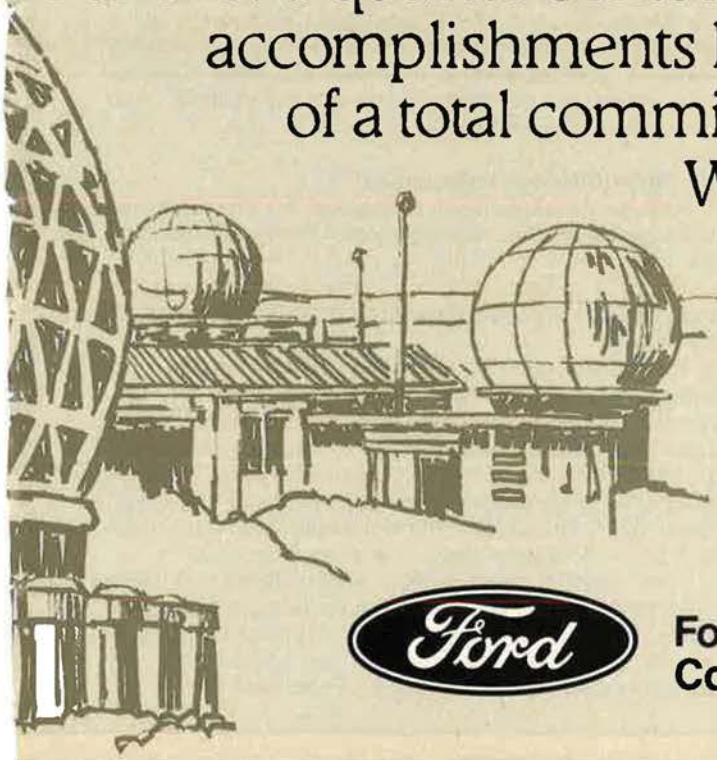

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Because many of the subordinated systems of a national C³ network are within the province of the commanders of the unified and specified commands, he said "we are, for the first time, getting them into the act" to the extent of allocating funds for their discretionary use in meeting C³ requirements.

The urgency of shoring up national command and control capabilities stems largely from the present lack of survivability and connectivity. In case of strategic conflicts "of high intensity, the prospect of C³I surviving to any degree—or it being connected at all in the beginning—is problematic," Dr. DeLauer explained. Concomitantly, the principal requirement is to ensure that the National Command Authorities and the subordinated commands "are connected to each other in a survivable way and to [provide the presently lacking capability] to reconstitute" some of the nation's strategic forces.

Other panelists amplified Dr. DeLauer's emphasis on C³ modernization. Dr. Ronald Lehman, a senior staff member of the Senate Armed Services Committee specializing in strategic and related programs, pointed out that the Committee pared weapons program money in order to fund "what is the largest command and control initiative in the history of the Congress."

Air Force Under Secretary E. C. "Pete" Aldridge, Jr., termed strategic C³ enhancement an "issue that's staring us in the face—especially so far as the endurance [of such systems] during protracted nuclear warfare is concerned." The E-4B airborne command post, he said, is one of the fundamental elements of strategic C³ connectivity, endurance, and the ability to reconstitute residual strategic forces rapidly.

Caution on Exotic Technologies

Lt. Gen. Kelly Burke, Deputy Chief of Staff for Research, Development and Acquisition, stressed in the context of C³ enhancements the importance of the MILSTAR multimission EHF (extremely high frequency) program. That proposed system, he said, is of great value to the strategic as well as tactical forces, adding "I hope we will be able to shape the program so that it is acceptable to Congress and the Defense Department and that we can move out on its expeditious development.

The Defense Department and the Air Force are about to undertake comprehensive modernization and expansion of the CONUS air defense system—which over the past fifteen years has been allowed to atrophy—Dr. DeLauer told the symposium. The first need is to be

Projecting Global Power

BY ROBIN L. WHITTLE, AFA DIRECTOR OF COMMUNICATIONS

On March 14, AFA's Chicagoland-O'Hare Chapter sponsored its fourth and by far its best defense symposium, attracting more than 500 civic, industry, and military leaders to the O'Hare Ramada Inn for in-depth briefings on the symposium theme: "US and Soviet Capability to Project Global Power." Key military leaders from all four services took a long, hard look at US and Soviet force-projection capabilities.

Vice Adm. Sylvester R. Foley, Deputy Chief of Naval Operations, discussed the growing challenges to America's vital interests worldwide in what Defense Secretary Caspar Weinberger has termed "a deteriorated geostrategic situation." Admiral Foley said the Soviets are keenly aware of the growing interdependence of the world economy and have correctly assessed the key points at which this vast system can be disrupted. They and their surrogates continue destabilizing efforts in key areas.

"A lot of the growing Soviet activism in the Third World and carefully targeted Soviet efforts to gain control of geography near key maritime chokepoints clearly reflect their appreciation of the strategic advantage which flows from control of access to critical resources," he said.

Maj. Gen. James L. Brown of the Defense Intelligence Agency assessed Soviet actions around the globe. He cited the increases in Soviet power, their confidence in their own strength, and the belief that they are on the crest of a rising tide toward global socialism. General Brown noted that the Soviets project power with more than just armed military intervention. The use of surrogate forces, arms transfers, economic credits, treaties of friendship, and political pressures are among the ways they "fuel the fires of Soviet strategy."

Lt. Gen. Thomas H. McMullen, Vice Commander of the Tactical Air Command, cited two principal advantages the Soviets have in oil-rich Southwest Asia: quantitative superiority in forces, especially in numbers of fighting vehicles, and geography. For these and other reasons, he said they can get there "fustest with the mostest," with both ground- and airpower.

US Force/Strategy Imbalances

Symposium participants discussed the discrepancies in burgeoning US commitments worldwide and declining US force levels with which to meet them. The resulting imbalances of forces and commitments make it increasingly difficult to cope with emerging Soviet challenges in all regions.

The impact on the Navy has been visible and dramatic, according to Admiral Foley. Since World War II, the Navy has maintained a substantial presence in the Mediterranean and Western Pacific. While the size of the fleet has dwindled over the past fifteen years, the Navy confronts additional requirements in the Indian Ocean, the Caribbean, the North Atlantic, the Norwegian Sea, the African and South American littorals, and the South Pacific.

"The result of these added responsibilities is that a Navy half the size it was ten years ago is required to cover more than twice the ocean area it guarded a decade earlier . . . with the net result that our limited forces are seriously overextended," Admiral Foley said.

able to detect low-flying aircraft approaching and penetrating US airspace, especially in the case of Soviet combat aircraft, Dr. DeLauer said. Yet the US lacks the means for detecting and identifying Backfire bombers engaged in an attack on this country, he said. Beyond the inability to detect and identify raids by low-flying aircraft, the US also lacks interceptors to shoot down penetrating hostile aircraft and the command and control capability to mobilize defensive assets, the Pentagon's ranking weapons expert said. For the time being, General Burke told the symposium, there are no plans to acquire surface-to-air missiles (SAMs) for CONUS air defense, even though the Air Force is buying the British Rapier SAM system, "a fine weapon system," for air defense of US facilities in the UK.

The Air Force, "without doubt," can develop a B-1 derivative and an Advanced Technology (Stealth) bomber on an overlapping schedule, according to Dr. DeLauer. Expressing high confidence in the continuing viability of penetrating bombers, he said that the mix of capabilities the Air Force plans to field will create "considerable difficulties for the Soviet Union" by placing its massive investment in conventional air defense capabilities in jeopardy.

So far as directed energy, in particular laser and particle beam, weapons development is concerned, the US is pursuing in a "thorough and prudent" manner all promising approaches, including X-ray laser weapons concepts. Further, Dr. DeLauer pointed out, "we think we know what the Soviets are doing in this field." Repeated, thorough reviews of the laser weapons field by the Defense Science Board, he said, led to a consistent, coherent program and the methodical conduct of essential experiments. The White House has taken a direct interest in the US laser weapons program and is monitoring its progress. He added that the Pentagon must guard against promising production of weapons of this type before the underlying technology is ready for operational systems.

Overall, the Pentagon's ranking R&D executive cautioned against overblown expectations of "gee whiz" technologies entering the operational inventory over the next few years since none was as yet ready for full-scale development. "Those who expect some fancy program hidden away in DARPA [the Defense Advanced Research Projects Agency] to put a laser in space that shoots down all the incoming missiles . . . will be disappointed. That's just not going to happen."

The Congressional View

The Senate Armed Services Committee concluded after extensive hearings that "there are no quick fixes for the 'window of vulnerability' " that is threatening the survivability of silo-based ICBMs, Dr. Lehman told the AFA sympo-

In discussing the state of US military intelligence, General Brown said that, despite occasional shortcomings, it is still the best in the free world. However, while there are more people in the business today, the defense intelligence community is strained to keep pace with current requirements. It is tasked to the limits of its capacity to respond.

"By a cruel paradox of our own making, our dangers are highest just when our military and intelligence capabilities have plummeted to their lowest effective levels in decades," General Brown said.

General McMullen summed up the participants' views on the imbalances between US military strategy and the forces necessary to carry it out when he said:

"World events continue to draw attention to the need for readiness, not only by the Air Force, but by all the military services. We anticipate this will result in positive efforts to support our moves to increase readiness and to make improvements in our ability to execute our mission worldwide. But I note that all of the initiatives we are now considering are long overdue."

Needs: People/Equipment

US airlift and sealift capabilities are insufficient for the rapid deployment of large forces to remote areas. Admiral Foley, for instance, noted that sealift has been neglected too long, a victim of priorities that emphasize more glamorous combat capabilities at the expense of equally essential logistics support. He said the Navy is working to restore some balance to that equation. To meet its peacetime commitments, the Navy needs a fleet of about 600 ships and fifteen battle groups, compared with its current 454 ships and thirteen battle groups.

General McMullen said the Air Force is working to solve its problem with spare parts and support—for years the victim of inadequate funding—that profoundly affect training and mission readiness. Tactical Air Command has equipment and personnel needs in each of its mission areas and requires a force structure increase of some five to ten additional tactical fighter wings beyond the forty-wing force goal set some years ago for 1982 and still not in being.

US Force Projection Capabilities

Lt. Gen. Thomas Ryan, Jr., then Vice Commander in Chief of the Military Airlift Command (now in four-star rank and Commander of Air Training Command, Randolph AFB, Tex.), said global force projection is MAC's principal business.

"If you look at the problem from the first three to four months of any major contingency, you will find the lion's share of materials, equipment, and movement of forces will be by sealift. But if you scale that down to the first two to three weeks of that war, more than ninety-five percent of those forces—if they are going to move and reinforce a theater—move by air."

Lt. Gen. Lloyd R. Leavitt, Jr., then the Vice Commander in Chief, Strategic Air Command, discussed the capabilities of SAC's Strategic Projection Force (SPF), which was initiated in response to events in Southwest Asia. General Leavitt said SPF is ready to fight and has about 4,000 people trained and ready. The centerpiece of SPF is the B-52H, which can perform night precision bombing over very long ranges and carries a large payload.

Symposium proceedings were moderated by AFA's Executive Director Gen. Russell E. Dougherty, USAF (Ret.), with question-and-answer sessions following each presentation. At the conclusion of the day's presentations, Chapter leaders held a reception for participants and guests. Coordinators of the event included Symposium Director Kevin Clary and Chicagoland-O'Hare Chapter President Walter G. "Gibby" Vartan. ■

sium. The need, he said, is for "a stable long-term program to modernize the land, air, and sea components of our strategic forces and associated C³I." The Committee members remain committed to the deployment of MX in a deceptive basing mode and they support a vigorous R&D program for ballistic missile defense. Further, he reported, they believe in the need for a new strategic bomber and support strongly development of an advanced technology bomber. Subject to timing and budgetary factors, the Senate Armed Services Committee favors procurement of a "near-term bomber, such as the B-1," and believes in developing the D-5 SLBM with "deliberate speed." It is the Committee's view, he pointed out, that the D-5 SLBM should be optimized in terms of payload, range, and accuracy, even if that delays the weapon's operational availability.

The Committee's attitude concerning the proposed CX airlifter, now renamed the C-17A—the merit of which is to be evaluated against the alternative of buying additional C-5s or other wide-body aircraft—is "divided," Dr. Lehman said, adding that the members will require additional information before a decision can be reached.

Among the long-term strategic weapons projects that are being examined by the Senate Armed Services Committee is a recallable supersonic missile of intercontinental range that uses aerodynamic propulsion and controls, Dr. Lehman told the AFA meeting.

Both Rep. William L. Dickinson (R-Ala.), the ranking minority member of the House Armed Services Committee, and Dr. Lehman acknowledged the major negative impact of delays in passing the FY '82 Defense Appropriations Bill. Without appropriating legislation, the Pentagon will operate by means of a continuing resolution reflecting FY '81 funding levels except where amended. Dr. Lehman speculated that operating on a continuing resolution will cost the Defense Department about $500 million a month, and might go on for several months. Mr. Dickinson related the delay in passage of defense appropriation legislation to the MX program and asserted that slipping that program from October of this year to January of next will drive up the cost by about $100 million.

Mr. Dickinson criticized what he termed the "stupid projection" of inflation rates that the Office of Management and Budget sets for the Defense Department. In the case of the B-1 R&D program, for instance, OMB projected an inflation factor of 1.9 percent when inflation, in fact, was running at about twelve percent. "So you have an $80 million overrun on a $4 billion program the minute you sign the contract," he pointed out. Currently OMB is assuming inflation rates in the seven percent range when in fact the rate is between nine and ten percent, the ranking Republican member of the House Armed Services Committee said. The Committee, therefore, is authorizing—and recommends that the Appropriations Committee appropriate—funds based on what the services say it will take to produce a given number of weapon systems over a given period.

OMB, he pointed out, rationalizes its unrealistically low inflation forecasts by contending that higher estimates tend to become self-fulfilling prophecies even though there is no evidence that understated inflation assumptions contribute to cost reduction.

New Requirements for Technology

Secretary Aldridge outlined a set of criteria that drive the Air Force's technology programs in new directions. The central factor is that, in all probability, the enemy in the future will have a far greater capability to locate US forces and will be able to defend his own forces better than now. Further, hostile forces that the Air Force might have to contend with in the future will have enhanced electronic warfare capabilities and be better able to detect where and how US forces are communicating, thereby pinpointing the location of major command centers. Lastly, potential adversaries will be well prepared to fight protracted wars. The ensuing requirements on US technology, he pointed out, are increased concealment and survivability, better detection of enemy forces, enhanced defensive and EW capabilities, and greater lethality under adverse weather conditions and at night, combined with high sustainability.

The Air Force's role in space, he predicted, will become stronger than certain elements of the Defense Department want it to. The "civilian leadership of the Air Force—and many of the military—look toward an expanded role in space," he said, adding, "personally, I would like to see a space command within the Air Force to operate the essential elements of our space systems."

General Burke predicted that the decline in capital investments over the past few years will reduce the ratio between the Air Force's acquisition and R&D funding in the years ahead. At present, that ratio is running at about thirty-five percent for R&D and sixty-five percent for acquisition of hardware. The trend is toward a slight boost of the latter category and commensurate cuts in the former, he said.

USAF's R&D chief said it was unlikely that the Air Force would be able to build a new fighter before 1993. Instead, the emphasis would be on "substantially modifying existing fighters before the end of the decade." Cost militates against starting a new program and the Air Force is "happy with what we have in production. Also, while I would not want to denigrate technological growth associated with airframe and engine designs, it pales in comparison with the pace of growth in avionics capability." The trend, therefore, is to retrofit new avionics suites to existing aircraft.

Political economist Eliot Janeway wrapped up the AFA symposium with an eloquent advocacy of divorcing defense funding from speculations about the state of the economy. "Don't wait for the market to turn around to build our defenses. If there is a threat to the physical security of the US, then financial security is not a consideration." he warned.

The event was attended by some 300 convention attendees who participated vigorously during the question-and-answer periods. ■

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For a comprehensive view of Air Force programs, present and future, the place to be was AFA's Aerospace Development Briefings and Displays. Herewith, highlights of the briefings and displays, seen by more than 5,000 uniformed and civilian government people concerned with aerospace power.

AFA's Informative Briefings and Displays

BY RICHARD TUTTLE

Photos by William A. Ford, ART DIRECTOR

Air Force and other government officials, both uniformed and civilian, received sixty-two briefings several times each day about the programs of forty-eight exhibiting companies. Exhibits occupied more than 50,000 square feet of floor space.

As the Reagan Administration last September neared announcement of its strategic forces decisions—how to proceed with MX missile basing, what to do about a new bomber, and how to update command and control—aerospace companies participating in the Air Force Association's annual convention in Washington detailed their planned involvement and brought visitors up to speed on a variety of other Air Force programs.

More than 6,000 people (mostly uniformed and civilian Air Force and other Pentagon personnel and congressional staffers) toured the exhibits of sixty-seven companies spread over 50,000 square feet of display space in the Sheraton Washington Hotel during the September 15–17 affair. Forty-eight of the companies conducted briefings five times each morning for escorted groups of fifteen to twenty persons each. Additional sessions were offered each afternoon by the same companies, and industry representatives were on hand morning and afternoon to answer questions on an individual basis.

Among companies displaying equipment and technology related to the MX were Avco, Boeing, Martin Marietta, Northrop, Rockwell International, and TRW.

Avco's Systems Div., Wilmington, Mass., responsible for design, integration, and test of the MX reentry system, displayed a full-scale mockup of the missile's nose section that housed models of several Mk. 12A reentry vehicles—which General Electric produces for the Minuteman—and a model of its own Advanced Ballistic Reentry Vehicle (ABRV), development of which began in 1977. As this is written, the Air Force is soon expected to decide which RV it wants for MX. The missile is capable of carrying twelve, but is constrained to ten by SALT II understandings. Throw-weight of the missile is 7,900 pounds, according to Avco.

Boeing Aerospace Co., Seattle, Wash., featured a working model of the MX transporter that showed how a missile—or a mass that simulates it—can be transferred to and from a protective horizontal shelter. Discussing methods to enhance the security of individual shelters, Boeing officials told of tests that prove it's possible to detect intruders—including those descending by parasail—and to distinguish them from

Members of a delegation from the People's Republic of China look into a full-scale cutaway model of the MX reentry system at the Avco display.

Using a one-twentieth scale model, an executive of Rockwell International's North American Aircraft Division briefs a group of Air Force and DoD officials on the Long-Range Combat Aircraft program status and future plans.

campers and others without hostile intent.

Martin Marietta's Denver, Colo., Aerospace Div. described its assembly and test role in the program and how, among other things, it meets engineering design requirements for the missile and its basing.

Northrop's Electronics Div., Hawthorne, Calif., told how its inertial measurement unit (IMU) will guide MX, and said the first unit in the full-scale engineering development program was being prepared for delivery.

Rockwell International's Autonetics and Rocketdyne divisions (Anaheim and Canoga Park, Calif., respectively) described their contributions to MX guidance and propulsion.

TRW's Defense and Space Systems Group, Redondo Beach, Calif., responsible for MX systems engineering and technical assistance, detailed plans for the first flight of the missile, set for early 1983. It will fly from Vandenberg AFB, Calif., to a point about sixty-five miles northeast of Kwajalein Atoll in the Pacific Ocean, a distance of about 4,300 nautical miles. Nineteen other test flights will follow, each with progressively more challenging goals. Some of the flights will be to new, more distant impact areas in the Pacific, one near Guam in the Marianas and another near New Zealand and Australia. The new areas "have been established to test the extended capabilities of the MX missile," TRW said. All MX testing, it said, will be completed just before the missile achieves initial operational capability in 1986.

Other Strategic Programs

Flight testing of another strategic vehicle—the B-1 bomber—was successfully concluded earlier this year, and its prime contractor, Rockwell International's North American Aircraft Div., Los Angeles, Calif., told how the plane will fit the role of the Long-Range Combat Aircraft (LRCA). Data gathered by aircraft Nos. 3 and 4 in the Bomber Penetration Evaluation program at Edwards AFB, Calif., it said, are directly applicable to the LRCA program. All four B-1 prototypes logged a total of 1,900 flight hours, beginning with the first flight in December 1974. Rockwell displayed a 1/20th scale model of its B-1/LRCA.

Along with displays of offensive strategic systems at the show were displays of defensive strategic systems, including the Cobra Judy and Pave Paws phased-array radars built by Raytheon Co.'s Equipment Div., Wayland, Mass. Cobra Judy, or AN/SPQ-11, is a 250-ton, four-story-high radar that was recently installed on the stern of the *USS Observation Island,* a 17,000-ton vessel of the Navy's Military Sealift Command. Operating out of Pearl Harbor, the ship will be able to monitor Soviet and Chinese ballistic missile tests. It will complement the huge Cobra Dane intelligence, early warning, and Spacetrack radar, also built by Raytheon, on Shemya Island in the Aleutians.

Pave Paws radars, intended to warn of an attack on the continental US by submarine-launched ballistic missiles, are installed at Otis AFB, Mass., and Beale AFB, Calif. A third is to be installed at Robins AFB, Ga. Each is housed in a triangular-shaped building 105 feet high.

In the strategic airlift arena, McDonnell Douglas presented briefings on its KC-10A Extender, which also serves as a tanker, and the C-17, winner of the Air Force's recently concluded CX competition. The Douglas Aircraft Co. division, Long Beach, Calif., stressed

how the C-17, with its four Pratt & Whitney PW2037 engines, will be able to deliver large payloads over intercontinental ranges to relatively small airfields. A maximum payload of 172,200 pounds could be carried 2,400 n.m. to a 3,000-foot strip, and approach speed would be 114 knots, the company said. Six of the aircraft could park in the space required for two C-141s, and nine could maneuver on a ramp that would take only two C-5s, it said. Turns of 180 degrees could be made in a radius of 180 feet, it added.

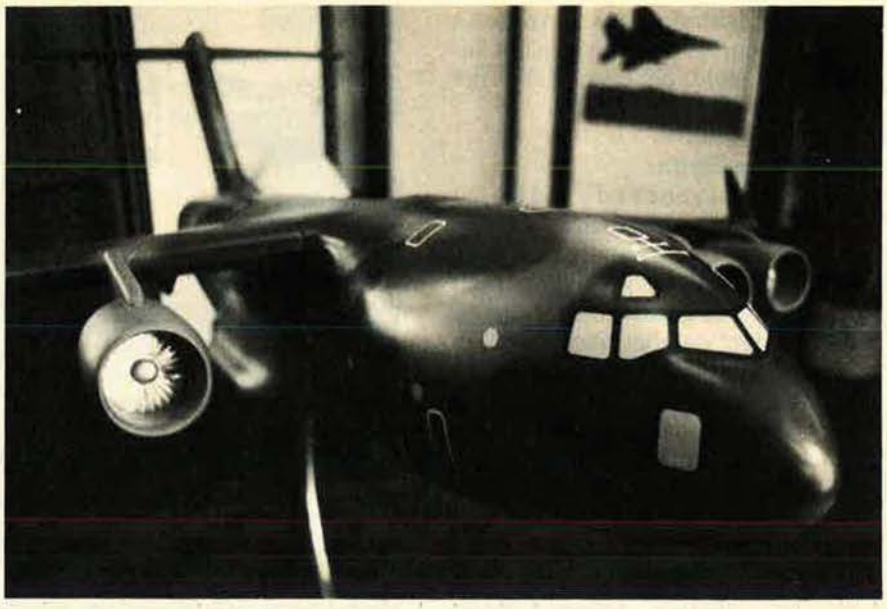
On the KC-10A, Douglas said six will have been delivered to the Air Force by the end of the year. The first was accepted March 17. Refueling tests have been carried out with a number of aircraft, including the A-7, C-5, A-10, S-3, F-14, F-15, B-52, stretched C-141, AWACS—and another KC-10A.

C³I Coverage

Command control communications and intelligence systems—on which users of tactical as well as strategic systems depend—were detailed by several companies, including the Greenville, Tex., division of E-Systems, and the Strategic Systems Div. of GTE Products Corp., Stamford, Conn. E-Systems described its electronic warfare, reconnaissance, intelligence, and surveillance capabilities, and told how it maintains and modifies special-purpose aircraft. GTE told visitors about its fiber optics command control and communications links for the MX missile.

In spaceborne command and control, General Electric, IBM, Rockwell, and TRW were among those giving updates. General Electric's Space Div., Philadelphia, Pa., displayed the Defense Satellite Communications System Phase III (DSCS III) it is developing for the Air Force and the Defense Communications Agency. IBM's Federal Systems Div., Bethesda, Md., described its Data Systems Modernization (DSM) work, aimed at upgrading the Air Force's Satellite Control Facility to allow it to deal with the increased volume of military space traffic expected beyond the year 2000. Rockwell's Space Operations and Satellite Systems Div., Seal Beach, Calif., reviewed the status of its NavStar Global Positioning System program. And TRW's Defense and Space Systems Group described how the bus of the Tracking and Data Relay Satellite System (TDRSS) might be used for the projected 5,000-pound military communications satellite, MilStar.

Space Shuttle companies at the show included the prime contractor, Rockwell International, and Martin Marietta.



This scale model of the C-17 (formerly dubbed CX) transport aircraft was unveiled and explained to AFA visitors by McDonnell Douglas, recently selected by USAF as prime contractor to develop the long-range transport aircraft.

Tactical Systems Dominate

But while displays of strategic and space systems commanded attention, exhibits of tactical weapons seemed to dominate the show.

Companies displaying equipment and technology related to the Assault Breaker concept—striking at second echelon armor with ground- and air-launched conventional weapons—included Avco, Honeywell, and Martin Marietta.

Avco described its Skeet delivery vehicle, released by the carrier missile in large numbers over enemy tanks. Upon release, each Skeet deploys fins for stabilization and, as the target is approached, descent is slowed by parachute. Four submunitions are then dispensed from the now-spinning vehicle, and each has its own guidance to seek out an individual tank. Attack is from above, where tank armor is weakest, and the self-forging fragment warhead of each submunition has deadly effect, Avco says.

The company's Systems Div. also detailed its related ERAM, Extended Range Antiarmor Munition, a member of the Air Force's family of Wide Area Antiarmor Munitions (WAAM). ERAMs, like Skeets, would be delivered by parachute, but at distances much closer to the front lines. ERAM is designed to descend to the ground where it then waits for approaching enemy vehicles. As they come into range, a warhead—similar to that of Skeet—is fired, again using the top-attack technique.

Honeywell's Defense Systems Div., Hopkins, Minn., displayed the millimeter wave method for guiding such submunitions. It said that "in live submunition tests, our MMW sensor performed successfully—detecting the target and initiating a warhead that hit the target each time."

Martin Marietta's Orlando, Fla., Aerospace division, describing its role in Assault Breaker, told how its T-16 missile (a modified Patriot surface-to-air missile) could be launched by fighter or bomber aircraft and showed how it is able to

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Richard Tuttle is Managing Editor of Aerospace Daily. *He has been with the Ziff-Davis publication since 1967. He is an active sailplane pilot, who has also flown in the F-15, F-14, F-5F, A-7K, and two-seat A-10, the Harrier, and the Hawk. He holds a master's degree in journalism from Ohio State University.*

dispense submunitions such as Skeet. Four of the missiles, it indicated, could be carried by the F-16.

Guided by Radar

The air-launched T-16, or Vought's ground-launched T-22, a version of the Lance battlefield missile, would be guided to their targets by Pave Mover airborne radar, under competitive development by Hughes Aircraft and a team of Grumman Aerospace and Norden. Norden described its Pave Mover radar (or Target Acquisition and Weapons Delivery System—TAWDS) work, as well as its effort on a related Navy synthetic aperture radar (SAR) project, the All-Weather Standoff Attack Control System (AWSACS).

Hughes Aircraft's Radar Systems Group, Fullerton, Calif., displayed its Synthetic Aperture Radar technology, including the modified AN/APG-63 radar used in the enhanced F-15 demonstrator and proposed for the F-15E. Terrain maps "have been produced at ranges in excess of 100 miles and resolutions better than ten feet have been obtained," Hughes said. Similarly, Itek's Optical Systems Div., Lexington, Mass., told how its KA-102 tactical camera can get "strategic-quality" photos.

The Pave Mover radar is being eyed by the Air Force for use with the Precision Location Strike System (PLSS), intended to defeat an enemy's ground-based air defense radars. Hooking the two together would allow simultaneous attacks on these targets and "movers"—tanks, for instance. Lockheed Missiles and Space Co., Sunnyvale, Calif., described its PLSS work and some of the other projects that its Advanced Tactical Systems Div. has worked on, including sensors that home on electromagnetic emissions. In this category, it said, are the Field Mouse, Rodent, Black Crow, Pave Spectra, Scarecrow II, and Compass Counter devices.

Rockwell International's Missile Systems Div., Columbus, Ohio, included in its briefing material information on the infrared and television-guided GBU-15 glide bomb, seen as a PLSS weapon and already in the inventory of Israel's air force. Texas Instruments, which supplies the High-Speed Anti-Radiation Missile (HARM) that would also be used with PLSS, described its Low-Level Laser Guided Bomb (LLLGB), which is roughly similar to GBU-15. Initial operational capability of the LLLGB is planned for mid-1983, TI said.

Visitors to the AFA briefings and displays saw and were briefed on the General Dynamics F-16XL, a cranked-arrow wing version of the "Fighting Falcon" slated for first flight in July 1982.

General Dynamics's Convair Div., San Diego, Calif., told how its Medium-Range Air-to-Surface Missile (MRASM), a modification of the Navy's Tomahawk cruise missile, could be used to attack enemy airfields with submunitions out to ranges of about 250 n.m. Current planning, GD said, sees the F-16 and B-52D as the primary carriers of MRASM.

Another method of attacking enemy airfields—the Ballistic Offensive Suppression System (BOSS)—was described by Lockheed Missiles and Space. The idea here is to dispense submunitions from a ballistic missile with a range of 350 n.m. Some 18,000 pounds of submunitions could be delivered "just fifteen minutes after the onset of hostilities," Lockheed said. With other payloads, it said, BOSS could become a battlefield interdiction weapon or hit hardened command and control facilities. A similar concept under study by the Air Force is "Axe," a ballistic glide missile that would use components of existing missiles to become operational before BOSS. Payload would be 6,000–9,000 pounds of submunitions.

"Hammer," like Axe an idea that came out of an Air Force Scientific Advisory Board study last summer, is generally similar to the Low Altitude Dispenser (LAD) weapon displayed at the show by Brunswick Corp.'s Defense Div., Costa Mesa, Calif. While Hammer would carry a 1,500-pound payload, LAD is capable of about 700 pounds. Range of both from the launching aircraft is about thirty n.m., and both would locate their targets in a variety of ways—PLSS, NavStar, or LANTIRN.

LANTIRN (Low-Altitude Navigation and Targeting Infrared for Night), being developed for the Air Force by Martin Marietta Orlando Aerospace, was described by Martin as well as by Marconi Avionics of Rochester, Kent, England, supplier of the head-up display. LANTIRN is planned for use on the F-16 and A-10.

Vought Corp., Dallas, Tex., and Lockheed Missiles and Space described how such aircraft could also carry the Hypervelocity Missile (HVM). Vought said the 5,000-foot-per-second missile, which would cost less than $5,000 per round, would be effective against armor targets.

General Dynamics's Fort Worth, Tex., division described the air-to-ground and air-to-air capabilities not only of its current F-16, but of its F-16XL, a cranked-arrow wing version—also known as the F-16E—that should fly for the first time next July. With 121 percent more wing area and eighty-two percent more internal fuel, it would have a bigger payload (ten Advanced Medium-Range Air-to-Air Missiles or twenty-two Mk. 82 bombs would be typi-

cal) and greater range than the present F-16. Conformal carriage of weapons would translate into a fifty-eight percent reduction in weapon drag and a significantly lower radar cross section, GD said. It added that a one-seat model would have an additional 11.4 cubic feet of space for internal avionics, and that a two-seat version would have an extra four cubic feet.

Engines and Missiles

Powering the F-16E, as well as updated versions of the F-15 and Navy F-14, might be one of the engines being developed by GE and Pratt & Whitney. The F-14 and F-16 have already flown with GE's F101 derivative fighter engine, and the F-15 has been tested with advanced F100 components developed by P&W. At the Air Force Association show, GE said the F-16 has made fifty-eight flights and logged seventy-five hours with the modified B-1 bomber engine. Grumman officials say that analytical comparisons of the F-14 powered by twin F101s and other aircraft, including the standard F-15 and F-16, show that only the F-16 with the F101 has greater acceleration.

Hughes Aircraft's Missile Systems Group, Canoga Park, Calif., and Raytheon's Missile Systems Div., Bedford, Mass., described their work in the Air Force/Navy Advanced Medium-Range Air-to-Air Missile competition. Raytheon said simultaneous launch of up to six AMRAAMs at multiple targets will be possible, and that initial operational capability of the AIM-7 successor is expected in 1985.

Also on display, at the British Aerospace Dynamics Group exhibit, was ASRAAM (Advanced Short-Range Air-to-Air Missile), being developed in Europe as a follow-on to the current AIM-9. Cooperating with British Aerospace is West Germany's Bodenseewerk.

Ford Aerospace provided information on its role in the AIM-9 program, and British Aerospace detailed its work on the Skyflash missile, intended for use on the Air Defense Variant of the Tornado aircraft. Europe's Panavia displayed a full-scale mockup of the Tornado cockpit area, and Honeywell's Avionics Div., St. Louis Park, Minn., described its magnetic helmet-mounted sight system, designed to help ensure accurate missile launches.

In the surface-to-air missile area, British Aerospace displayed its Rapier system, chosen by the US Air Force to defend its bases in the UK, and seen as a candidate for the Rapid Deployment Force.

Electronic Warfare

Electronic warfare technology and equipment were described by several companies, including Itek's Antekna and Applied Technology divisions (Mountain View and Sunnyvale, Calif., respectively); Loral Electronic Systems, Yonkers, N.Y.; Northrop Corp.'s Defense Systems Div., Rolling Meadows, Ill.; and Westinghouse's Defense and Electronic Systems Center, Baltimore, Md.

Itek addressed threat warning systems and operational readiness. Loral described its enhancement to the ALR-56 radar warning receiver used on the F-15. Northrop detailed the ALQ-171 jammer, a conformal system to be carried by the company's F-5G Tigershark; the ALQ-135 jammer for the F-15; the ALQ-155 power management system for the B-52; and terminal threat jamming transmitters for the B-1. Westinghouse told about its work in the ALQ-165 Airborne Self Protection Jammer (ASPJ) program. A team of ITT and Westinghouse was recently chosen to develop ASPJ as the next-generation tactical countermeasures system. Westinghouse also described its work in the Very High Speed Integrated Circuits (VHSIC) program, which has applications not only in electronic warfare, but in fire control, surveillance, and communications.

Assurance of jam-free communications in the near term is the goal of the Air Force's Seek Talk program. General Electrics's Aerospace Electronic Systems Department, Utica, N. Y., told of its participation in the effort. GE is competing with Hazeltine Corp., and a production decision is expected in 1983.

Rescue and Train

Loss of aircraft over enemy territory—and rescue of their crewmen—was addressed by the Sikorsky Aircraft Div. of United Technologies, Stratford, Conn. The Air Force plans to use Sikorsky's H-60 helicopter—developed for the Army as a tactical transport and the Navy as an antisubmarine warfare platform—as the basis for its new HX rescue aircraft. Designated HH-60D, it would feature updated avionics to permit rescues behind enemy lines at night and in bad weather.

Aircraft for pilot training were described at the show by more than half a dozen companies. Among those detailing their roles in the Air Force's Next Generation Trainer (NGT) program, aimed at replacing the current T-37, were Fairchild Republic Co., Farmingdale, N. Y.; Rockwell International; and Vought. Fairchild had only a week before flown its NGT demonstrator, a sixty-two percent scale manned aircraft, Describing potential powerplants for NGT were Garrett Turbine Engine Co., Phoenix, Ariz., and Teledyne CAE, Toledo, Ohio.

Participation in the Air Force's Companion Trainer Aircraft (CTA) and related programs was outlined by Beech Aircraft division of Raytheon, Wichita, Kan.; Falcon Jet Corp., Teterboro, N. J.; Gates Learjet Corp., Tucson, Ariz.; and Israel Aircraft Industries, Tel Aviv.

Looking beyond the current generation of fighter aircraft were several companies, including British Aerospace, General Dynamics, and Grumman. BAe described three projects it has been working on—the P.103, a supersonic short take-off and vertical landing (STOVL) aircraft featuring a pair of afterburning Rolls-Royce RB.199 engines, the P.106, a single-engine fighter powered by either the RB.199 or General Electric's F404; and the P.1214, a twin-tailed, forward-swept wing STOVL design using engines with plenum chamber burning (PCB). V/STOL ideas were advanced by BAe, maker of the Harrier, and by Bell Helicopter Textron, which described its XV-15 tilt rotor aircraft.

General Dynamics showed models of what it thought the US Air Force's Advanced Tactical Fighter (ATF) might look like, and Grumman described its work on a forward-swept wing prototype, being built for the Defense Advanced Research Projects Agency and the Air Force. ■

Briefings and Displays Photo

AFA's 1981 Aerospace Development Briefings and Equipment Displays were held in conjunction with the AF

Gen. David C. Jones, Chairman of the Joint Chiefs of Staff, was one of many senior military leaders who attended the Briefings and Displays program and talked with aerospace engineers and scientists.

The exhibit program attracted distinguished military and civilian visitors from abroad as well as embassy-based military attachés stationed in the US. Here, an Israeli delegation is briefed on the F-16 sidestick controller. This was one of the sixty-two briefings presented by the exhibitors.

The Hon. Verne Orr, Secretary of the Air Force, is briefed on the Rapier air defense system at one of the eighty-four participating companies or divisions of companies in attendance. Rapier will provide air defense at USAF bases abroad.

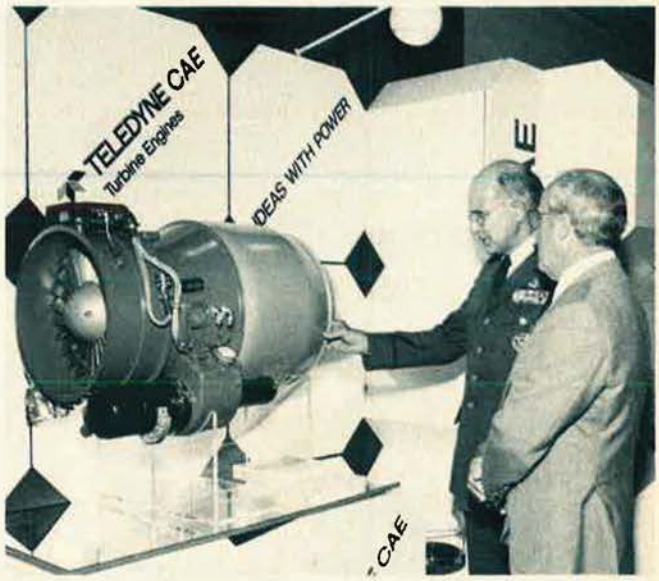
Part of the more than 6,000 military and civilian guests arrive for the morning briefing program. They included Air Force people, as well as other services, DoD, and more than forty government agencies and Congress.

Highlights

Convention at the Sheraton Washington Hotel, September 15–17.

Briefings included current and new aircraft design, propulsion systems, ballistic and cruise missiles, laser applications, electronic warfare, C³I, guidance systems, simulators, radar, infrared devices, and satellites, among the subjects covered.

The Briefings program included sixty-two separate briefings, giving military and civilian guests an opportunity to learn first-hand the latest technology developments.



Gen. Lew Allen, Jr., USAF Chief of Staff, and other senior leaders had the opportunity during AFA's Exhibits for face-to-face discussions with senior industry executives.

Two U.S. Air Force F-15's patrol high over Germany during a NATO maneuver. Under their wings, a full complement of Sparrow AIM-7F and Sidewinder AIM-9L missiles—a potent team for air-to-air defense, not only for NATO but throughout the free world.

The Raytheon-developed Sparrow AIM-7F serves as the primary air-to-air weapon on the F-15 and is deployed on other first-line aircraft. In more than 21,000 hours of captive flight-testing, it has achieved over 880 mean flight hours between failures.

That same high reliability is also going into the next generation of Sparrow, the AIM/RIM-7M. Now in production for both air-to-air and surface-to-air applications, AIM/RIM-7M features an advanced monopulse seeker and a digital signal processor for improved look-down, shoot-down performance and greater immunity to countermeasures.

Sidewinder AIM-9L—the free world's most advanced short-range, air-to-air missile—is operational on U.S. Air Force and Navy fighter aircraft. Raytheon, as prime industrial support

Sparrow and Sidewinder: a pair of aces for air defense.

contractor, is in full production on the missile's guidance and control section. And we continue to support the Navy in the development of advanced Sidewinder concepts.

For details on Sparrow and Sidewinder, please write on your letterhead to Raytheon Company, Government Marketing, 141 Spring Street, Lexington, Massachusetts 02173.

RAYTHEON

NOVA. Built on a heritage of 20,000 aircraft that trained over 200,000 pilots.

The T-6 Texan changed the face of flying in the early 1940s. The NOVA is designed to provide the USAF with an effective and efficient primary trainer well into the 21st century.

Rockwell International's North American Aircraft Division has created and developed a multitude of outstanding military trainers. In fact, NAAD holds the record for more trainer aircraft and more pilots trained than any other manufacturer in the history of flight.

NOVA's next-generation technology is an extension of this proud heritage. Its unique design features combine the simplicity of off-the-shelf hardware with Rockwell's NAAD engineering expertise. The result is an aerodynamically sound, practical aircraft that will produce a dramatic increase in performance, mission capability and fuel efficiency.

NOVA's major design features include:

- Supercritical airfoil wing.
- Full IFR avionics.
- Fuel-efficient turbofan engines.
- High-sink-rate landing gear.
- Improved access to all systems.

There's a new star rising on the horizon and it's called NOVA.

Rockwell International

...where science gets down to business

Aerospace Industry Roll of Honor

Companies Represented at the 1981 Aerospace Development Briefings and Displays

Aérospatiale
Manufacturing capabilities in fixed-wing aircraft, helicopters, rockets, and ballistic missiles
Avco Corp.
Strategic and Tactical Systems for the '80s
Bell Helicopter Textron
XV-15 Update and USAF Tilt Rotor Applications
Bell System
Telecommunications Applications for Military Systems
Bendix Corp.
Advanced Aerospace Technology on Stage
Boeing Co.
The Boeing Role on MX
British Aerospace
Aircraft Group
Advanced European Fighters—Tornado—V/STOL
Dynamics—Weapons Div.
Rapier and ASRAAM
Brunswick Corp.
Low Altitude Dispenser System (LAD)
Canadair Ltd.
Challenger, The Utility Jets for the Future
Computer Sciences Corp.
CSC—Meeting the Air Force Challenge
Control Data
1750A Architecture Design for the Air Force Airborne Computers
E-Systems
Command Control Communications and Intelligence (C^3I) in Today's Air Force
Fairchild Industries, Inc.
Fairchild Industries Current Aerospace Activities Update
Ford Aerospace & Communications Corp.
Tactical Missile, Electro-Optical, and Operations Support Systems
Garrett Corp.
Next Generation Trainer Engines
Gates Learjet Corp.
Learjet: Its Time Has Come
General Dynamics
1) Tactical Cruise Missiles for the Air Force
2) USAF's F-16 Fighting Falcon
General Electric Co., Aerospace Group
GE 25-mm GAU-12/U, 30-mm GAU-13/A, and All-Aspect Gunsight
Gould, Inc.
Air Force R&D at Gould Government Systems
Grumman Aerospace Corp.
Aerospace Technology, A Glimpse of Tomorrow
GTE Products Corp.
Fiber Optics Capabilities/MX C^3
Gulfstream American Corp.
Versatility and Reliability in Aircraft Design
Honeywell, Inc.
Insertion of VHSIC Technology into DoD Weapon Systems
Hughes Aircraft Co.
Weather Eyes for Tactical Aircraft
International Business Machines Corp.
IBM: Total Systems Responsibility
Israel Aircraft Industries
Cost Effective Products for the US Air Force
Itek Corp.
Defense Electronics Operations
Operational Readiness in Electronic Warfare
Itek Optical Systems
Modern Reconnaissance and Surveillance
ITT Gilfillan
Systems for Air Surveillance and Defense Environments
Lear Siegler, Inc.
Black Box Magic
Litton Aero Products
Inertial and Omega Navigation Systems
Lockheed Corp.
Technology on the Move—Update '81
Loral Corp.
Electronic Warfare and Aircraft Survivability
Martin Marietta Aerospace
Denver Aerospace
Mobile Missile X Project
Transtage-type Upper Stage for Space Shuttle Cargo Bay
Orlando Aerospace
T-16 Air-Launched Conventional Standoff Weapon
LANTIRN Targeting and Navigation Pods
McDonnell Douglas Corp.
Douglas Aircraft Co.
USAF KC-10 "Extender"
McDonnell Aircraft Co.
The F-15 Eagle
McDonnell Douglas Astronautics Co.
Computer-Based Training Systems
McDonnell Douglas Electronics Co.
VITAL Computer-Generated Visual System
Northrop Corp.
Aircraft Div.
The Air Force Aggressor Squadron Story
Defense Systems & Electronics Divs.
ICBM Guidance, Aircraft Navigation, and Electronic Warfare Systems
Raytheon Co.
Air-to-Air Missile Development Programs
Rockwell International
Autonetics Strategic Systems Div.
Missile X Associated Electronics
North American Aircraft Div.
Advanced Strategic Aircraft Program
North American Space Operations
DoD Navstar GPS Satellite Program and the Space Shuttle Program
Rolls-Royce Inc.
Vectored Thrust STOVL: The Solution to Runway Denial
Sanders Associates, Inc.
The History of Electronic Warfare
Singer Co.
Kearfott Div.
State-of-the-Art Inertial and Hybrid Inertial Systems
Link Flight Simulation Div.
Air Force Simulation Program Update
Sperry Flight Systems
Military Avionics in the 1980s
Talley Industries, Inc.
"Talley Technology," Capabilities, Products, and Services

Forty-eight companies conducted briefings and more than sixty-five exhibited during AFA's Briefings and Displays program. Above, a UTC briefing.

Teledyne CAE
Next Generation Trainer Engine Status
Texas Instruments
HARM, Paveway III, and Advanced Terrain Following Radar
TRW Defense & Space Systems Group
Ballistic Missiles Div.
MX: 16 Months to First Flight
Space Systems Div.
Possible Use of Proven TDRSS for Milstar
United Technologies Corp.
Norden Systems
New Challenges in Avionic and Propulsion Systems
Pratt & Whitney Aircraft
Readiness for the Modern-Day Air Force
Sikorsky Aircraft
Sikorsky's H-60, Air Force Helicopter of the '80s
Westinghouse Electric Corp.
Emerging Defense Systems and Technology for the USAF
Williams International
Small Cruise Missile Turbofan

The following companies displayed but did not hold briefings

AGA Corp.
Infrared Imaging Equipment
Aviation Week and Space Technology
1982 Defense Budget Analysis Service
Beech Aircraft Corp.
Air Force MQM-107 Training Target and other Beech Aircraft
Davis Agency Inc.
Special Worldwide Travel Arrangements
Emerson Electric Co.
Fire Control Radar, Automatic Test Equipment, Tactical Radar Threat Generator, and other Related Equipment
General Electric Co.
F101 Turbofan Engine, T700 Turboshaft Engine, CFM56, CF6, and F101 DFE Turbofan Engines
General Motors Corp./Delco Electronics Div.
High Technology Gyros, Avionics Computers, and New Family of Enhanced Computers
Jane's/Franklin Watts
Jane's Yearbooks and a List of New Jane's Publications
Litton Industries
US Air Force Standard Inertial Navigation Unit and Strapdown Inertial Measurement Unit for AMRAAM
Marconi Avionics
Digital and Automatic Flight Controls, Target Drones, Surveillance Vehicles, Automatic Map Reader, and LANTIRN HUDs
Mönch Publishing Group
Mönch Publications, Including *NATO's Fifteen Nations, Aerospace International,* and *Military Technology*
Northrop Corp., Ventura Div.
BQM-74C Aerial Target
Olympus Corp. of America
Fiberscopes, Borescopes, and Accessories
Panavia Aircraft GmbH
Tornado, the European All-Weather Strike Attack Aircraft
Rockwell International, Collins Government Avionics
AN/ARC-186 UHF AM/FM Transceiver and CMS-80 Avionics Management System
Rockwell International, Missile Systems
GBU-15 Cruciform Wing Weapon (CWW)
Rockwell International, Rocketdyne
Rocketdyne's Roles in Propulsion and Advanced Technology for the Air Force
Sermetel, Inc., a Subsidiary of Teleflex, Inc.
Process 5375—The Fuel Saver
Sierra Research Corp.
Advanced Electronic Systems
Stanley Vidmar/Stanley Works
Control Tool Kits (CTK) for USAF Flight Line Maintenance F.O.D. Elimination Program and Modular Storage Concepts
U.E. Systems
New Developments in Ultrasonic Instruments
Vought Corp.
Models of USAF Aircraft and Hypervelocity Rockets

This year marked the twenty-sixth anniversary of the establishment of AFA's Outstanding Airmen program. A highpoint of AFA's annual National Convention has always been the tribute paid to . . .

Twelve of the Air Force's Best

BY WILLIAM P. SCHLITZ, SENIOR EDITOR

"As representative and harmonious a group as we've ever hosted," said AFA staffers of this year's group of Outstanding Airmen attending the Air Force Association's annual National Convention in the nation's capital in September.

During Convention week in Washington, the twelve Outstanding were afforded four-star treatment as special guests of AFA. They and their spouses or parents were provided special tours at both the Capitol and FBI Headquarters; were honored at a luncheon hosted by Chief Master Sergeant of the Air Force Arthur "Bud" Andrews following a visit to the Pentagon; and in the course of an evening outing to a dinner theater in nearby Manassas were introduced and enthusiastically received and applauded by the dinner theater audience.

Climaxing the tribute to twelve judged best in the Air Force's enlisted ranks was the Outstanding Airmen Dinner conducted in their honor. The event marked the twenty-sixth anniversary of the establishment of AFA's Outstanding Airmen program.

As has become traditional, USAF's top enlisted—CMSAF Andrews—acted as master of ceremonies. Guest speaker Gen. Robert C. Mathis, Vice Chief of Staff, praised the Outstanding Airmen and others like them throughout the Air Force whose innovations have led to enormous savings in financial and energy resources.

Entertainment at the dinner was provided by the Strolling Strings and Singing Sergeants of the Air Force Band. The Sergeants, looking and sounding very much like a seasoned Broadway troupe in black outfits and sequined top hats, presented a medley of show tunes and other numbers.

TSgt. John M. Barger has demonstrated outstanding technical and managerial ability in his job.

The twelve Outstanding were selected from seventy-eight persons nominated by the major commands, separate operating agencies, and reserve forces, and now have joined the ranks of the 402 Outstanding Airmen preceding them.

Brief biographies of the twelve follow.

TSgt. John M. Barger, a Morse systems operator with the 6981st Electronic Security Squadron, Elmendorf AFB, Alaska, joined the Air Force in 1975. The twenty-five-year-old has earned an associate degree in communications technology from the Community College of the Air Force and a bachelor's in English literature from the State University of New York. He has

THE OUTSTANDING AIRMEN FOR 1981

TSgt. John M. Barger
6981st Electronic Security Squadron (AAC)
Elmendorf AFB, Alaska

TSgt. Deborah S. Bycenski
Directorate of Personnel Programs (Hq. TAC)
Langley AFB, Va.

MSgt. George F. Cruz
304th Aerospace Rescue and Recovery Squadron (MAC)
Portland IAP, Ore.

MSgt. William L. Harrison
Aeronautical Systems Division (AFSC)
Wright-Patterson AFB, Ohio

SSgt. Dorothy M. MacElderry
20th Tactical Fighter Wing (USAFE)
RAF Upper Heyford, England

Sgt. Jaime Ramirez
602d Organizational Maintenance Squadron (MAC)
Travis AFB, Calif.

TSgt. Ronnie C. Rogers
2852d Maintenance Squadron (AFLC)
McClellan AFB, Calif.

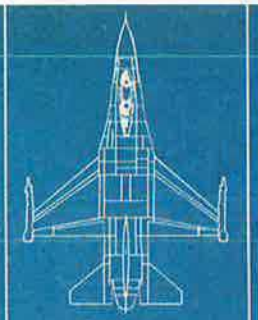
SMSgt. Richard J. Tinneny
26th Headquarters Squadron (USAFE)
Zweibrücken AB, Germany

MSgt. John L. Tremain
Air Force Engineering and Services Center
Tyndall AFB, Fla.

MSgt. George H. Walkow
Det. 1, Hq. North American Aerospace Defense Command (ADC)
Tinker AFB, Okla.

MSgt. Maxie M. Williams III
3533d US Air Force Recruiting Squadron (ATC)
Patrick AFB, Fla.

Sgt. Mark E. Wilson
5072d Air Base Squadron (AAC)
Galena AFS, Alaska



Length: 47.64 ft.
Wing span: 31 ft.
Wing area: 300 sq. ft.
Weight empty: 15,200 lb.
Max. takeoff weight: 35,400 lb.

F-16 Fighting Falcon
Combat radius: 500+ nautical miles
Speed: Mach 2+
Load capacity: 15,200 lb.
Weapons capabilities: Sidewinder heat-seeking missiles, rapid-fire Vulcan 20mm M61 gun, free-fall and guided bombs, and ordnance dispensers. Systems upgrade to include Sparrow and AMRAAM radar-guided missiles.

F-16 Fighting Falcon. High performance. Outstanding reliability. Flexible multimission capability. Now in operation with the 388th Tactical Fighter Wing, Hill AFB, the 56th Tactical Fighter Wing, MacDill AFB and the 474th Tactical Fighter Wing, Nellis AFB.

Advantage America

GENERAL DYNAMICS

With CFM56 power, the KC-135 will deliver more fuel, more efficiently, more often.

CFM56, the engine that will extend the life of the KC-135 tanker at least 25 years, is the ideal choice for re-engining this veteran USAF workhorse. Compared to the KC-135A, the KC-135/CFM56 provides 60 percent more take-off thrust, resulting in more fuel airlifted from all field lengths. This, combined with 25 percent less fuel consumption, will increase fuel offload up to 150 percent, depending on the refuel radius. Also, its noise footprint will be 96 percent less than the KC-135A, easing the concerns of communities near KC-135 airfields.

As the demands on aircraft engine performance and reliability continue to grow, the CFM56 can meet the challenge. It's meeting fuel, maintenance and noise requirements by utilizing the advantages of advanced technology. It's meeting the 1980's head on.

The right engine at the right time.

cfm international

A JOINT COMPANY OF SNECMA, FRANCE AND GENERAL ELECTRIC COMPANY, U.S.A.

An expert in recruiting programs, TSgt. Deborah S. Bycenski, twenty-nine and married to another noncommissioned officer, has earned the Air Force Commendation Medal with two oak leaf clusters.

served in Turkey and temporarily in Italy and on Crete. Sergeant Barger has been selected for Officer Training School.

Sergeant Barger's outstanding technical ability enabled him to complete the 120-day initial standardization and evaluation certification in twenty days while attaining a ninety-eight percent average. He was selected to manage and account for $2.5 million in operational equipment as NCO in charge of communications collection resources programs. He also conducts Resource Review Boards, compiles the unit history, and is a member of the Exercise Evaluation Team.

The Sergeant is president of the Elders Quorum in the Church of Jesus Christ of Latter-Day Saints, a counselor for a Boy Scout troop, and a member of his squadron's championship softball team.

His military decorations and awards include the Meritorious Service Medal, Air Force Outstanding Unit Award Ribbon, Outstanding Airman of the Year Ribbon with star, and US Air Force Noncommissioned Officer Professional Military Education Graduate Ribbon.

Sergeant Barger and his wife Lauri have two children: Heather and Jeremy.

TSgt. Deborah S. Bycenski is a career advisory technician assigned to Hq. TAC, Langley AFB, Va.

Sergeant Bycenski, twenty-nine, has an associate degree from St. Leo College, Fla. Enlisting in the Air Force in 1970, Sergeant Bycenski initially trained as a personnel specialist and later cross-trained into the career advisory field, to become a recruiter.

At Nellis AFB, Nev., she served with the Career Assistance Unit and developed the base's Air Force Recruiter Assistance Program, which was recognized as the best in the Air Force for 1977. She assumed her present duties in January 1979.

Her successful design and presentation of the TAC position on selective reenlistment bonuses for direct support maintenance career fields contributed directly to the inclusion of several direct support career fields in the FY '81 Selective Reenlistment Bonus Program. She also provided input which shaped the structure of the command's Reenlistment Excellence Achievement Program. The Sergeant was selected by the Air Force Manpower and Personnel Center to write the initial Air Force Recruiter Assistance regulation.

Sergeant Bycenski's military decorations and awards include the Air Force Commendation Medal with two oak leaf clusters, Air Force Outstanding Unit Award ribbon with one oak leaf cluster, Outstanding Airman of the Year ribbon with star, and US Air Force Noncommissioned Officer Professional Military Education Graduate Ribbon.

She is married to TSgt. Stanley J. Bycenski.

MSgt. George F. Cruz is a flightline supervisor with the 304th Aerospace Rescue and Recovery Squadron, Portland IAP, Ore.

Sergeant Cruz, forty-two, enlisted in the Air Force initially in 1957 and was discharged in 1962. Resuming his military career in 1964, he has held various posts as a Reservist. In 1971, he joined the 304th as an Air Reserve technician.

A key figure for his helicopter maintenance planning during the 1980 Winter Olympics when ARRS crews stood by in case of a "Munich-like" contingency, MSgt. George F. Cruz and his wife, Diana, relax in their garden.

MSgt. William L. Harrison, a research and development technician with AFSC's Aeronautical Systems Division, Wright-Patterson AFB, Ohio, with sons Duane and Jason during a recent visit to the Air Force Museum.

Sergeant Cruz was a key figure in support of the 1980 Winter Olympics through planning maintenance of helicopters deployed to the games. Sergeant Cruz also supervised the active and reserve maintenance crews of the helicopters used in the evacuation of survivors of the Mount St. Helens volcano eruption. He received ten quality verification inspections with excellent rating during that time.

The Sergeant is active in community affairs as a soccer coach and vice president of the Hazeldell, Wash., Youth Soccer Association.

His military decorations and awards include the Air Force Commendation Medal with oak leaf cluster, Air Force Outstanding Unit Award ribbon with three oak leaf clusters, Outstanding Airman of the Year Ribbon with star, Humanitarian Service Medal, and Air Reserve Forces Meritorious Service Award with four devices.

Sergeant Cruz and his wife Diana have two sons: Matthew and Scott.

MSgt. William L. Harrison is a special project manager for the Directorate of KC-135 Modernization, ASD, Wright-Patterson AFB, Ohio.

Sergeant Harrison, thirty-five, entered the Air Force in 1964 and initially trained as a jet mechanic. He currently is enrolled at Sinclair Community College and the Community College of the Air Force. After a long career in maintenance, he assumed his present duties in 1978.

Sergeant Harrison has managed all operational maintenance support inputs to the $2.1 billion KC-135 Modernization Program, provided expert technical support to a 200-member team of both Air Force and contractor personnel, and planned the test and evaluation program for an improved aerial refueling pump which will allow timely testing and early operational readiness. Sergeant Harrison used his operational and maintenance experience to reduce support equipment, which resulted in saving the Air Force $2.2 million in government-furnished equipment for the KC-135 Reengining Program.

Off-duty, Sergeant Harrison has been directly involved in charity work for the Wayne Township Fire Department and has actively participated in local church programs to bring young people back to the church and get them involved in church activities.

He is a senior enlisted aircrew member. His military decorations and awards include the Meritorious Service Medal, Air Force Commendation Medal with two oak leaf clusters, Air Force Outstanding Unit Award ribbon with four oak leaf clusters, Outstanding Airman of the Year Ribbon with star, Vietnam Service Medal, US Air Force Noncommissioned Officer Professional Military Education Graduate Ribbon, Republic of Vietnam Gallantry Cross with palm, and Republic of Vietnam campaign medal.

Sergeant Harrison is married to the former Anneliese Watts.

SSgt. Dorothy M. MacElderry is an intelligence operations specialist assigned to the 20th Tactical Fighter Wing, RAF Upper Heyford, UK.

Sergeant MacElderry, twenty-three, enlisted in the Air Force under the Delayed Enlistment Program in 1977.

Her first operational assignment after intelligence operations training was with the 33d Tactical Fighter Wing at Eglin AFB, Fla. While there she continued her education, attending St. Leo College. She assumed her present duties in November 1979.

Sergeant MacElderry is the primary briefer for the wing commander's weekly current intelligence briefing. She has restructured the Operations Intelligence Branch's extensive classified library which required the reorganization of reference materials, checking for proper security classifications, and creation of a cross-reference system. She also received an excellent rating for her briefings, analysis of the situation, and support to the battle staff during the North Atlantic Treaty Organization Tactical Evaluation. Sergeant MacElderry has been selected for Officer Training School.

A pensive moment with a problem: SSgt. Dorothy M. MacElderry.

Ingenious mechanical innovations have earned Sgt. Jaime Ramirez high praise from superiors.

Sergeant MacElderry is active in church activities as a Sunday School teacher, soloist, instrumentalist in the choir, and instructor in the youth choir.

Sergeant MacElderry's military decorations and awards include the Air Force Commendation Medal with one oak leaf cluster, and Outstanding Airman of the Year Ribbon with star.

Sgt. Jaime Ramirez is an aircraft inspector and mechanic with the 602d Organizational Maintenance Squadron, Travis AFB, Calif.

Sergeant Ramirez, twenty-one, is presently taking five correspondence courses through the University of South Florida.

Sergeant Ramirez enlisted in the Air Force in 1978 and was trained as an aircraft mechanic. He assumed his present duties in October 1978.

Sergeant Ramirez was responsible for establishing a remote lubrication locker with special equipment for servicing T-tail assemblies on C-141s. He also developed a technique for discovering structural damage inside the T-tail elevator and the vertical stabilizer by using a flashlight and hand mirror. Sergeant Ramirez's efforts enabled the branch to earn excellent ratings during the MAC Operational Readiness Inspection and MAC Commander's Facility Inspection.

The Sergeant served as an interpreter at Camp Liberty, Fla., for the Cuban refugees and was a member of a small staff that helped to relocate the refugees to Fort Chaffee, Ark.

Sergeant Ramirez's military decorations and awards include the Joint Service Commendation Medal, Air Force Organizational Excellence Award Ribbon, Outstanding Airman of the Year Ribbon with star, and Humanitarian Service Medal.

TSgt. Ronnie C. Rogers is a jet engine technician assigned to the 2852d Maintenance Squadron, Sacramento ALC, McClellan AFB, Calif.

Sergeant Rogers, twenty-nine, enlisted in the Air Force in 1973 and trained as a jet engine mechanic. He assumed his present duties in September 1977.

The Sergeant, during a temporary duty assignment as program coordinator for the Airman Recreation Center, made major improvements in special events programming and notice distribution which resulted in a 300 percent increase in participation at the Center. He was selected as noncommissioned officer in charge of a special nineteen-member Corrosion Control Task Force that eliminated a ninety-day backlog of work in forty days and saved the government $140,000 in man-hour costs.

Sergeant Rogers also served as the TF33 Engine Branch on-the-job training administrator, handling the upgrade training of fourteen airmen and noncommissioned officers. He learned the Maintenance Management Information and Control System, trained three airmen on the system inputs, and organized the section. His section input more than 6,000 civilian and military training records and performed more than 20,000 transactions. Sergeant Rogers discovered limitations in the Maintenance Management Information and Control System, enrolled in a base programming course, and learned to write local programs to solve the problem.

He is president of J. J., Inc., a nonprofit organization dedicated to collecting funds to further sickle-cell anemia research. Sergeant Rogers is also president of the Airman Recreation Center Advisory Committee, actively involved in the local Mama Marks Arms of Mercy Feeding Program, squadron basketball coach, base varsity basketball player, and a leader in the Unity Fellowship Church.

His military decorations and awards include the Air Force Commendation Medal, US Air Force Noncommissioned Officer Professional Military Education Graduate Ribbon, and Outstanding Airman of the Year Ribbon with star.

Sergeant Rogers's wife, Juanita, is from Sacramento, Calif.

SMSgt. Richard J. Tinneny is first sergeant of the 26th Headquarters Squadron, Zweibrücken AB, Germany.

Sergeant Tinneny, thirty-nine, earned his bachelor's degree in social studies under the Bootstrap program as an honor graduate from Northwestern State University, Natchitoches, La., in 1972, and a master of arts degree in counseling from the George Washington University, Washington, D. C., in 1978.

He entered the Air Force in 1960 and served initially in the Air Police and then in a long career as a ground safety technician.

Sergeant Tinneny became first sergeant of the 26th Security Police Squadron at Zweibrücken AB in August 1978 and assumed his present duties in January 1981.

Sergeant Tinneny was responsi-

Inspecting a jet turbine wheel is TSgt. Ronnie C. Rogers.

SMSgt. Richard J. Tinneny holds a master of arts degree in counseling.

ble for the morale, welfare, and discipline of security police and support personnel. He assisted them with the resolution of personal problems and used his counseling skills on a daily basis. He also acted as wing senior enlisted advisor in the SEA's absence, chairman of the wing's First Sergeants Group, advisor to the Base Advisory Council, and coordinator on the Base Exercise Evaluation Team. Sergeant Tinneny developed a program to provide commanders with a quick reaction force to conduct inspections in a more standardized, objective, and efficient manner. He also devised a first sergeant's screening guide that includes an in-depth review of records, personal traits, motivation, and qualifications for use by first sergeants selection boards. Both programs are being reviewed for USAFE command implementation.

He is active in professional organizations, is a college instructor, and a member of the Phi Alpha Theta International Honor Society.

His military decorations and awards include the Meritorious Service Medal, Air Force Commendation Medal with four oak leaf clusters, Air Force Outstanding Unit Award ribbon with one oak leaf cluster, and Outstanding Airman of the Year Ribbon with star.

Sergeant Tinneny is married to the former Lee Havens of Westhampton Beach, N. Y. They have three children: Christopher, Patrick, and Matthew.

MSgt. John L. Tremain is the NCOIC of engineering materials testing for Hq. Air Force Engineering and Services Center, Tyndall AFB, Fla.

Sergeant Tremain, thirty-five, attended the University of Illinois and Aurora College, and received an associate degree in civil engineering technology from the Community College of the Air Force.

In March 1966, he enlisted in the Air Force and began a long career in civil engineering, including service in SEA and Germany. He assumed his present duties in October 1977.

Sergeant Tremain manages laboratory and field testing for the Air Force's Rapid Runway Repair Research and Development Program. This $78 million program is designed to increase the Air Force's ability to rapidly repair damaged airfields and ensure continued aircraft operations. Sergeant Tremain provided validation during the testing of this program at North Field, S. C., in August 1980. He developed and implemented repair test plans, on a constrained time schedule, which were verified as adequate and caused no damage to the aircraft during F-4 and C-130 flying operations. He has also provided technical expertise and test support for other DoD and civilian agencies.

In his spare time, Sergeant Tremain serves as a volunteer motorcycle instructor at Tyndall.

His military decorations and awards include the Air Force Commendation Medal with one oak leaf cluster, Outstanding Airman of the Year Ribbon with star, Vietnam Service Medal with three service stars, US Air Force Noncommissioned Officer Professional Military Education Graduate Ribbon, Republic of Vietnam Gallantry Cross with palm, and Republic of Vietnam Campaign Medal.

Sergeant Tremain is married to the former Janice Simonis of Wisconsin Rapids, Wis. They have two children: Jason and Jeff.

MSgt. George H. Walkow is a mission technician assigned to Detachment 1, Headquarters North American Aerospace Defense Command, Tinker AFB, Okla.

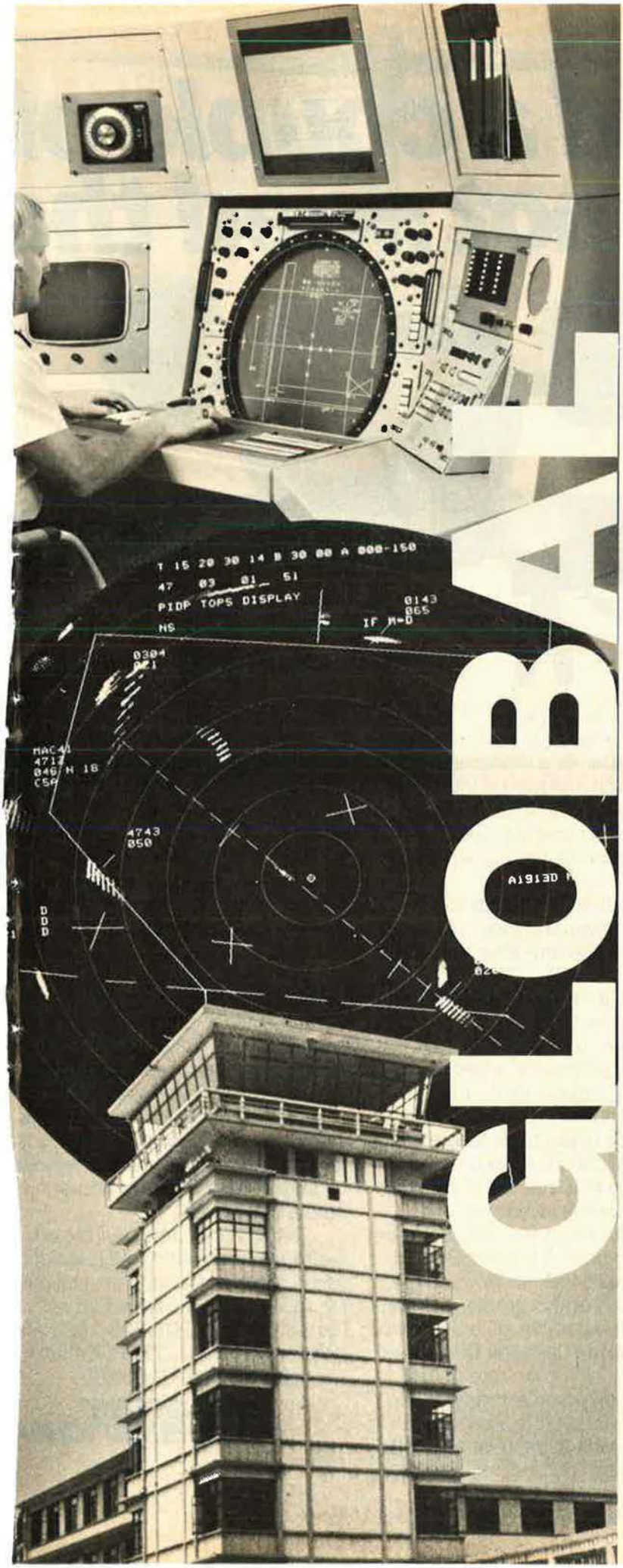
Sergeant Walkow, thirty, immigrated to the United States in 1957 with his parents. He earned an associate degree from Oscar Rose Junior College in 1980, and is presently attending Central State University.

Enlisting in the Air Force in 1969, he was trained as an aerospace control and warning systems operator.

Following a tour in Thailand, Sergeant Walkow separated from the Air Force but reenlisted in April 1974. As an airborne control and warning operator he has accumulated 814 flying hours in EC-121s. He assumed his present duties in December 1978.

Sergeant Walkow has analyzed and recommended changes to existing policies which improved the equitable allocation of flying hours for all detachments and headquarters staff personnel. Accumulating 586 flying hours in E-3As, Sergeant Walkow has flown support exercises for the TAC mission crew which required the highest level of expertise and knowledge. He also served as detachment scheduling

MSgt. John L. Tremain and wife, Janice, at home in Panama City, Fla. They have two boys: Jason and Jeff.



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But the number of aircraft types you need to buy in order to perform such missions as priority personnel transport, cargo transport, air ambulance service, flight inspection/calibration, pilot and systems training, remote surveillance, search and rescue and reconnaissance and mapping can, in fact, be reduced dramatically.

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Overall, the Canadair Challenger averages a 22% lower rate of fuel consumption per mile than a Gulfstream III, virtually the same rate of fuel consumption per mile as the far smaller Falcon 50 and, hard as it may be to believe, a 24% lower rate of fuel consumption per mile than the small, short-range T-39.

Yet the Challenger is actually bigger than all of them in the one dimension crucial to passenger comfort and a realistic working environment: width.

Measured at the floor line, the Canadair Challenger is roughly 30% wider than the Gulfstream III, and 48% wider than the Falcon 50.

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With the Challenger's big fuel tanks and extremely low rate of fuel burn, you can cross the Pacific with one stop, fly from New York to the Middle East with one stop or fly from Washington to London non-stop.

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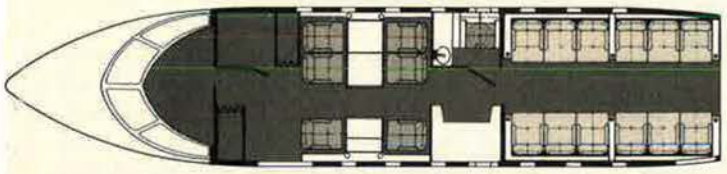
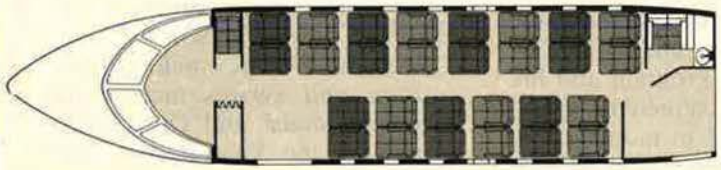
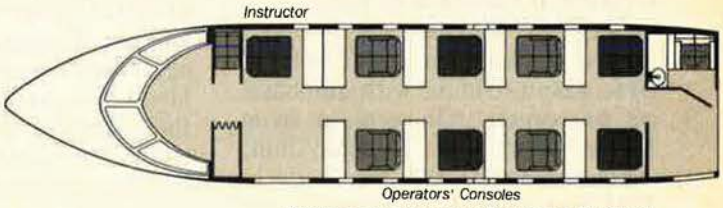


VIP Interior

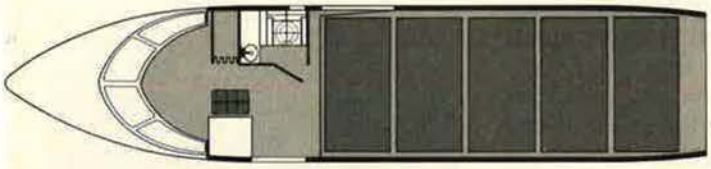
Flight Inspection/Calibration



28-Passenger Interior

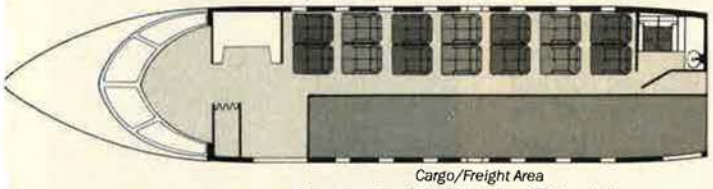


Advanced Pilot and Systems Trainer

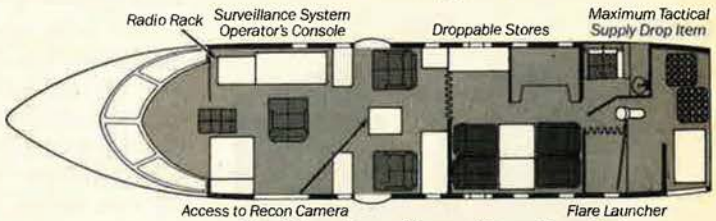


Cargo Configuration

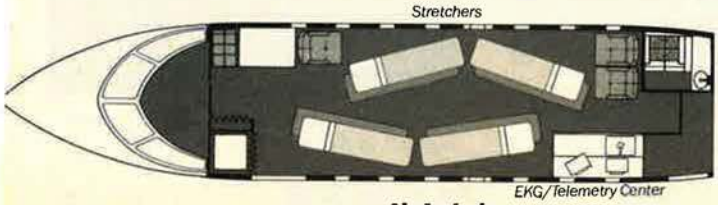
Remote Sensing and Surveillance



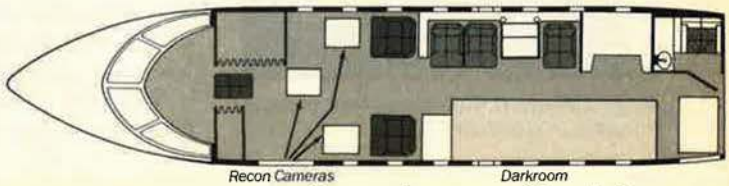
Passenger/Freight Configuration



Maritime Surveillance/Search and Rescue



Air Ambulance



Reconnaissance and Mapping

noncommissioned officer, on-the-job training manager, and Weighted Airman Promotion System monitor.

Sergeant Walkow supports varied civic functions, such as Special Olympics and Volunteers for Animal Welfare, and participates in marathons to raise money for the National Heart Association and the American Lung Association.

His military decorations and awards include the Joint Service Commendation Medal, Air Force Commendation Medal with one oak leaf cluster, Air Force Outstanding Unit Award ribbon with three oak leaf clusters, Air Force Organizational Excellence Award, Outstanding Airman of the Year Ribbon with star, Armed Forces Expeditionary Medal, Vietnam Service Medal with one service star, Republic of Vietnam Gallantry Cross with palm, and Republic of Vietnam Campaign Medal.

Sergeant Walkow is married to the former Cecilia McAdams.

MSgt. Maxie M. Williams III is a recruiter assigned to the 3533d US Air Force Recruiting Squadron, Patrick AFB, Fla., with operating location in Gainesville, Fla.

Sergeant Williams, thirty-seven, earned an associate degree in business administration with emphasis on personnel management from Victor Valley Junior College, Calif.

He enlisted in the Air Force in 1961 and trained as an automatic flight control system repairman. He served twice in SEA. Besides maintenance, he has also served in the human relations field.

MSgt. Maxie M. Williams III has an outstanding record as a recruiter.

Sergeant Williams completed recruiting school and assumed his present duties in July 1977.

His outstanding recruiting record reflects his dedication, hard work, and long hours to attract highly qualified applicants. He established a Basic Training Prep School for applicants entering under the Delayed Enlistment Program and his thoroughness in screening applicants has resulted in monetary as well as man-hour savings for the Air Force.

The Sergeant instructs classes in equal opportunity at Santa Fe Community College and at high schools in the Gainesville area. He serves on the Board of Directors of Planned Parenthood, as chairman of the Community Planning Center, and is involved in other civic activities in the Gainesville area.

His military decorations and awards include the Meritorious Service Medal, Air Force Outstanding Unit Award ribbon with one oak leaf cluster, Outstanding Airman of the Year Ribbon with star, Vietnam Service Medal, US Air Force Noncommissioned Officer Professional Military Education Graduate Ribbon, Republic of Vietnam Gallantry Cross with palm, and Republic of Vietnam Campaign Medal.

Sergeant Williams and his wife Mary have four children.

Sgt. Mark E. Wilson is assigned as a fire protection specialist with the 5072d Air Base Squadron at Galena AFS, Alaska.

Sergeant Wilson, twenty-one, has attended McMurry College and Cisco Junior College.

Enlisting in the Air Force in 1978, Sergeant Wilson undertook fire protection technical training.

Sergeant Wilson's ability to perform his assigned duties is exemplified by his actions during a February 1980 chemical explosion at the Fire Station at Dyess AFB, Tex., where he was assigned. The senior physician at the scene lauded his ability to assess and control injuries, shock, and chemical toxicity which demonstrated expertise outside his own career field. This action resulted in the award of the Airman's Medal. He volunteered to serve on the Fire Department mobility team, a duty which required him to work more than his normal seventy-two-hour workweek.

In his off-duty time, Sergeant Wilson served as a Sunday School teaching assistant and was active in the local Special Olympics program. He assisted the City of Abilene Fire Department in combating range fires on several occasions. He assumed his present duties at Galena AFS in March 1981.

Sergeant Wilson's military decorations and awards include the Airman's Medal and Outstanding Airman of the Year Ribbon with star. ■

MSgt. George H. Walkow earned medals for valor in Southeast Asia.

Sgt. Mark E. Wilson has distinguished himself in fire fighting.

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With Air Force and congressional leaders reporting positive trends in retention, recruiting, pay and compensation, and a new national consensus about defense, discussions at the annual meetings of the Air Force Association's three advisory councils focused on other issues—the development of leadership, changes in the assignment system, and keeping the public informed about defense requirements.

The Councils: Changing Focus

BY CAPT. PHIL LACOMBE, USAF, CONTRIBUTING EDITOR

The Enlisted Advisory Council, comprising last year's Twelve Outstanding Airmen, meets with their replacements. The council analyzed several concerns of enlisted people and recommended solutions to AFA and the Air Force.

It was different this year. Though pay and compensation were still major concerns for the active-duty men and women attending the Air Force Association's three advisory council meetings during the annual Convention, discussions tended to focus on other concerns—like leadership, and the roles of Air Force people in fulfilling the mission.

After attending the convention's opening ceremonies, the three groups—the Enlisted Advisory Council, the Senior Enlisted Advisors, and the Junior Officer Advisory Council—joined together for the annual Professional Update Seminar, featuring senior Air Force officials from a variety of Air Staff agencies. The highlight of the seminar was a meeting with Gen. Lew Allen, Jr., USAF Chief of Staff. General Allen's message was present throughout the meetings: "We are beginning to see, in the public, a shift in attitude. There is strong national consensus supporting the need for defense."

General Allen was optimistic about the positive trends in retention, recruiting, and funding. He cited congressional support for increased pay and compensation, and noted that the Air Force is committing substantial funds to the support of maintenance accounts that had been seriously reduced in recent years when, under fiscal pressures, priority was given to weapons acquisition programs. The Chief pointed to increases in funding for base maintenance, work area improvements, and various quality of life programs as evidence of the service's commitment to personnel issues in recent years.

A Word of Caution

But General Allen also cautioned the audience. Though his mood was positive, he noted that "the national consensus on defense is said by some to be fragile."

Yet, the need for increased commitment to defense is not short term: "There may be a point where the Soviets will get into difficulty due to their [military] spending trends. But that hasn't seemed to deter them in the past. Apparently there is substantial residual capacity in their system for additional sacrifices," General Allen said.

General Allen went on to explain the role of Air Force people in maintaining the national consensus: "The American people have limits to their support for defense. Our job is to be sure the public understands our needs and concerns." He challenged the three councils and the people they represent to do their part in articulating the requirement for defense to the public—to ensure public understanding of the Air Force's role as a vital national resource.

Recruiting and Retention Up

Also addressing the councils was Rep. William Nichols (D-Ala.), Chairman of the Military Personnel and Compensation Subcommittee of the House Armed Services Committee. Well-known as a strong advocate of comparability between military and civilian pay scales, Congressman Nichols outlined the status of the military pay raise bill. With a crucial vote on that bill only hours away, the Congressman also struck a positive chord about the future of America's defense system. "As I travel around in my job

as Chairman of the House Military Personnel and Compensation Subcommittee, I sense a change. I believe we have turned the corner in the aftermath of Vietnam. I sense a great deal of pride in the uniform. Americans were incensed over what happened in Iran and are saying, 'We're going to have a strong military.' "

Congressman Nichols noted the increased retention and recruiting rates throughout the Defense Department. He added that the quality of recruits is moving in a more positive direction with fewer recruits coming from the lowest intelligence categories and fewer non-high school graduates.

Other senior officers addressing the combined councils included: Lt. Gen. Paul Myers, the Surgeon General; Lt. Gen. Andrew Iosue, the Deputy Chief of Staff for Manpower and Personnel; Lt. Gen. Jerome O'Malley, the Deputy Chief of Staff for Plans and Operations; Brig. Gen. Richard Abel, the Director of Public Affairs; and Brig. Gen. Buford Lary, the Deputy Director of Legislative Liaison.

Although the Air Force medical program was described as the best health care in the free world, improvements are needed. Among the most pressing are the need to replace the service's hospitals, expand medical war readiness, and increase authorizations for doctors and support personnel to the number required during wartime operations. Increasing the physician and support medical staff to war-readiness requirements during peacetime provides additional benefits—such as being able to provide medical care to all eligible personnel, including retirees and dependents; reducing the number of clinical services that must be contracted out; and decreased reliance on the very expensive CHAMPUS program.

Senior Air Force personnel officials discussed the current retention situation. They showed a direct correlation between the enlisted retention rate and the civilian unemployment rate, and provided evidence of a direct correlation between pilot retention rates and the size of the pool of furloughed airline pilots.

Air Force personnel officials also described the Air Force position on the GI Bill. They indicated a number of prerequisites, from the service's point of view, for an effective program. Among them were: a requirement that the bill be noncontributory, a minimum period of honorable service for eligibility, provisions to cover Reservists, transferability from service members to their family members, and convertability from the present system.

A Positive Outlook

Lt. Gen. Jerome O'Malley also addressed the councils. General O'Malley described the rationale behind changing the name of his DCS from Operations, Plans and Readiness, to Plans and Operations. Essentially, General O'Malley indicated that attention to readiness had become a fact of life in the Air Force and increased emphasis was no longer necessary. Space, C^3 is-

Speakers at advisory council meetings: Top, Gen. Lew Allen, Jr., Chief of Staff, is introduced by CMSAF "Bud" Andrews as JOAC Chairman Capt. Tim Timmons looks on. Above left, Lt. Gen. Jerome O'Malley gave high marks to USAF operations. Left, Rep. William Nichols (D-Ala.) talked about military pay. Above, Brig. Gen. Richard Abel described the need to inform the public on defense issues.

sues, and telecommunications would, however, still be earmarked for special emphasis.

Echoing the positive note voiced throughout the seminar, General O'Malley assessed the Air Force's operational readiness: "In my opinion, we are really doing well in operations. We have the youngest crew force ever, flying the most sophisticated machines, doing the most realistic training in the history of the Air Force, and last year they produced the third lowest accident rate ever."

Other factors covered during the operations discussion included the value of space as a frontier for the military and the Air Force decision a few years ago to "put rubber on the ramp" rather than invest in logistics and support systems. The Air Force mission in space, development of a service astronaut corps, and competition between space systems and terrestrial systems for the limited Air Force dollar rounded out the operations discussions.

Other parts of the Professional Update Seminar included a presentation about Air Force liaison with Congress; an expansion, by General Abel, on the role of Air Force officers in communicating with the public; and descriptions of Air Force efforts to place communications course blocks into the various Air Force and DoD professional military education schools.

Common to most of the presentations was an emphasis on the mission, now that many of the service's compensation concerns were on the road to comparability. One senior Air Force official found an enthusiastic audience for his suggestion that it is time to renew the commitment to General Douglas MacArthur's "Duty, Honor, Country" philosophy.

Council Sessions

Council discussions after the seminar reflected this idea. The Senior Enlisted Advisors (SEAs) found fertile ground in discussions of the senior NCO's leadership role. Under the guidance of CMSAF "Bud" Andrews, the council discussed a wide variety of topics—exchanging ideas about the concerns of the enlisted force. Among the topics discussed in these closed-door sessions were: job satisfaction factors throughout the service, the value of the Stripes To Exceptional Performers (STEP) Program, a proposal for a two-tiered promotion system that would provide more rapid advancement in certain critical specialties, retention programs, the status of the GI Bill and its impact upon enlisted men and women, and the need to minimize the adverse effect of housing costs on Air Force people. The SEAs also noted that recent advances in pay and compensation seemed to result from senior Air Force officials' strong, personal commitment to resolving the inequities of previous years.

The Enlisted Advisory Council, consisting of last year's twelve Outstanding Airmen, under the leadership of CMSgt. Robert Carter, who completed his third and final year as the council's advisor, also addressed specific items. They noted that they had achieved the goal they set last year—to become visible, positive spokespersons for the Air Force. In fact, council member SSgt. Kathy A. Walls, an aircraft maintenance technician, said she had addressed more than thirty civilian and military groups in the past year. Another council member, MSgt. Larry Smith, recently returned from Crete and has already been named Speakers' Bureau Chairman for a San Antonio civic group.

The council also discussed various issues affecting the enlisted force and undertook a special project at the request of the Air Staff personnel division. The project required the council to evaluate various irritants affecting Air Force people and recommend solutions to the problems. The creative debate resulted in recommendations from the council about more individualized management of the assignment process, home basing initiatives, and the adverse impact of PCS moves.

Retirement Benefits Important to Retention

As is its charter, the Junior Officers Advisory Council (JOAC) spent most of its time in long work sessions to complete their annual special project. The Air Force Manpower and Personnel Center liked this year's project, a survey of the company grade force to identify why lieutenants and captains remain in the service, enough to adopt it. AFMPC surveyed a segment of the entire Air Force population.

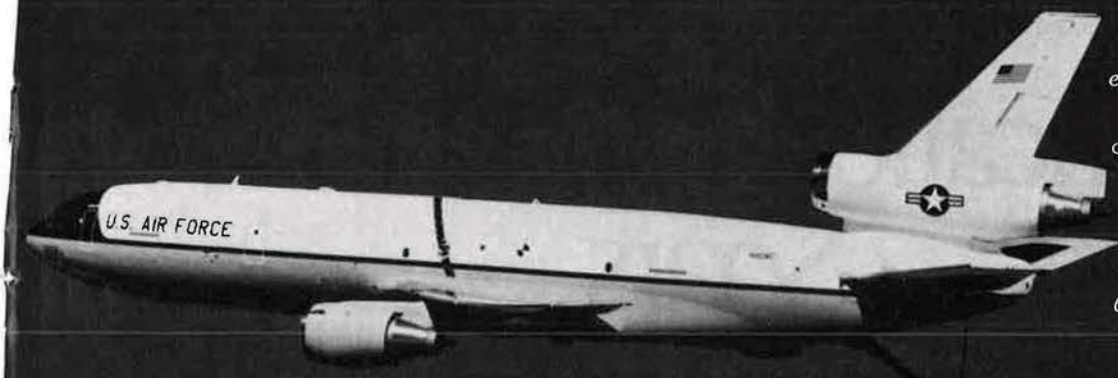
The JOAC's portion of the survey indicates that the chief factor in the decision of the junior officers responding to the survey (1,141 respondents) to remain in the service was the retirement benefit. Other factors also motivated the officers surveyed to remain in the service, but none were as strong as the retirement issue. The most significant of the other factors affecting retention were individual job satisfaction, which included the challenge of the job; diversity of responsibilities; and the satisfaction of participating in the nation's defense. Based on the survey's results, the council agreed to several recommendations for USAF and the Air Force Association—among them, increased efforts to maintain the existing retirement system.

The council discussed a number of other items. Chief among these was a long debate about the apparent conflict between the development of management skills and the need for leadership skills within the military. The council also focused on initiatives to support Air Force junior officers in their efforts to fulfill the Air Force mission, the Defense Officer Personnel Management Act and its impact on the officer corps, support for base-level Junior Officer Councils, and efforts to promote commonality among precommissioning training programs.

The council also noted that the practice of selecting representatives from Direct Reporting Units and Separate Operating Agencies late in the year was limiting their ability to work on the annual project until Convention week. To ensure effective representation of these units throughout the project, the JOAC recommended earlier selection of these officers.

Councils Thank General Usher

Council sessions ended with a visit by Maj. Gen. William Usher, Director of Personnel Plans and council advisor. Capt. Tim Timmons, outgoing JOAC chairman, offered the thanks of all three councils to General Usher and the entire personnel community for their valuable work in resolving the pay and compensation problems that threatened the Air Force during the past several years. ■



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Success of the Aerospace Education Foundation luncheon was manifest in the broad range of its activities, stellar nature of the participants, and seven standing ovations from the attendees.

Education Foundation Soars

BY MICHAEL J. NISOS, MANAGING DIRECTOR, AEROSPACE EDUCATION FOUNDATION

THE ANNUAL Aerospace Education Foundation luncheon, held in conjunction with the annual Air Force Association Convention, was attended by more than 530 persons. The luncheon is held annually to honor supporters of the Foundation, present the Hoyt S. Vandenberg Trophy, show the winning entry of the annual Foundation-sponsored Air Force Junior ROTC contest, and recognize the winning unit.

For the first time, portions of the luncheon were videotaped by AFA staff members for historical purposes and later dissemination to AFA field units.

Two special groups were recognized at this luncheon—from around the world, AFA's Enlisted Council, and its Chairman, CMSgt. Robert Carter; and the Tuskegee Airmen, Inc., and its National President, Mr. Jean Esquerre.

Just before the attendees finished their meal, they were entertained by W*U*S*A, the Air Force Band's singing group.

Special Guests

Mr. George Hardy, former AFA National President and present Treasurer of the Foundation, served as master of ceremonies for the luncheon. Special guests introduced at this luncheon were: retired Air Force Lt. Gen. and Mrs. Ira C. Eaker; retired Air Force Lt. Gen. Jimmy Doolittle; Sen. Barry M. Goldwater (R-Ariz.), Chairman of the Board, Aerospace Education Foundation; Lt. Gen. Andrew P. Iosue, DCS/Manpower and Personnel; retired Air Force Maj. Gen. Leigh Wade, the only living pilot of the four who flew around the world in 1924 in Douglas World Cruisers; Rep. James V. Hansen (R-Utah); Mr. Joe T. Mayer, representing Sen. Jake Garn (R-Utah); Mr. John Haddow, representing Sen. Orrin Hatch (R-Utah); Dr. Don Garrison, Secretary of the Aerospace Education Foundation (later elected President of the Foundation); AFA's Chairman of the Board, retired Air Force Maj. Gen. Daniel F. Callahan; Mr. Vic Kregel, AFA National President; Brig. Gen. Archer L. Durham, the military host for the AFA Convention, and Commander, 76th Military Airlift Wing, Andrews AFB, Md., and a Tuskegee Airman; Brig. Gen. David L. Patton, Commander, Civil Air Patrol; and Brig. Gen. Chris O. Divich, Commandant, Air Force ROTC.

The program began with Mr. Kregel, then AFA's National President, awarding an AFA Citation of Honor to Lt. Col. G. D. Lape, Commander, 333d Tactical Fighter Training Squadron, Davis-Monthan AFB, Ariz., for:

> Significant contribution to the mission of the US Air Force by its safety record and highly successful introduction of the A-10 into the Air Force's tactical combat inventory.

Mr. Kregel then presented the Hoyt S. Vandenberg Trophy, AFA's highest award in aerospace education, to General Eaker for:

> Gallant service to his country as a pioneer aviator, brilliant planner, fearless commander, and respected writer and lecturer. He has provided a consistent example and inspiration to all who have followed in his footsteps; and his innumerable contributions to the education of our nation's people concerning the potential of aerospace power for their security stand as timeless legacies from this great American.

Doolittle Fellowships

Next on the program was recognition of the Foundation's corporate and individual Jimmy Doolittle Fellows. Mr. Hardy explained that this Fellow program furnishes the funding for one of the Foundation's projects—application of aerospace technology to the advancement of education.

The Foundation does this by making course materials developed and used by the Air Force available to the civilian educational community for only the cost of reproduction and distribution on a nonprofit basis. He stated further that, to date, the Foundation has disseminated a total of sixty-one Air Force classroom courses, eighteen home study courses, and eleven special publications to more than 800 school and training systems of our nation and foreign countries, many making multiple purchases.

For a $1,000 individual or $15,000 corporate tax-deductible contribution, the donor receives a walnut plaque featuring a bronze medallion bearing General Doolittle's portrait. A bronze plate identifies the Fellow and the year of affiliation. All the lettering and inscriptions on the plaque are etched by laser beam. The corporate plaque is larger than the individual plaque. Enlargements of both plaques were shown on a video screen.

The bronze medallion can be easily removed, and on the back is this inscription:

> "A Jimmy Doolittle Fellow supports advancement of education through transfer to the nation's schools of instructional systems

based on applying aerospace technology to curriculum development, thereby enhancing the United States Air Force's public image."

At this writing, the Foundation has 236 individual Fellows and eleven corporate Fellows *(see box)*.

After the Corporate Jimmy Doolittle Fellow plaques were presented jointly by Senator Goldwater and General Doolittle, they presented the individual Fellows to: Brig. Gen. William L. Copeland, USAFR, sponsored by AFA's North Georgia Chapter; Col. Eric S. Doten, formerly the Professor of Aerospace Sciences, and Commander, AFROTC Detachment 157 at Embry-Riddle Aeronautical University, sponsored by Brig. Gen. William W. Spruance, USAF (Ret.), AFA National Director and Foundation Trustee (who was also recognized for having sponsored ten Jimmy Doolittle Fellows to date); and Mr. Carl J. Long, President, Carl J. Long and Associates, an AFA National Director and Foundation Trustee, who sponsored himself.

A fifth individual Fellow was to have been presented to the United States Air Demonstration Squadron, better known to millions as the "Thunderbirds." Months ago this had been sponsored by AFA's Scott Memorial Chapter, O'Fallon, Ill., and has been spearheaded by its President, Mr. Hugh Enyart. However, with the recent tragic death of the Squadron's Commander, Lt. Col. D. L. Smith, and the injuries suffered by the Squadron's number one crew chief, SSgt. Dwight Roberts, both of whom were to have been present to receive the plaque, presentation of the Thunderbirds plaque was deferred to a later time. Mr. Hardy stated that our prayers and thoughts go out to the families of Colonel Smith and Sergeant Roberts.

The sixth individual Fellow to be named was someone special, Mr. Hardy explained. The very first Jimmy Doolittle Fellow was Joe Doolittle, General Doolittle's wife. Yet, the man who so graciously loaned the Foundation his name for this program and who has supported it fully all these years has not been made a Fellow. This was rectified by an individual who is a great supporter of AFA and the Foundation—Mr. Jack Gross, retiring AFA National Treasurer and Foundation Trustee. Mr. Gross sponsored a Fellowship for Gen. Jimmy Doolittle. Jack, just released from the hospital, could not be present. Mr. Hardy then led the audience in singing "For He's a Jolly Good Fellow" twice in honor of General Doolittle.

Mr. Hardy then asked Senator Goldwater and General Doolittle to remain in their places a moment for a special presentation. He explained that at the Foundation-sponsored "Salute to General Doolittle" on December 9, 1980, at the National Air and Space Museum, many photographs were taken. But one that touched the hearts of all the Association and Foundation staff was that of "the two gentlemen standing before you." Mr. Hardy then called the audience's attention to the video screen, which showed that photograph of Senator Goldwater and General Doolittle, and read the inscription on the bottom of the photograph:

> "The fraternal bond between these two great Americans, each of whom has risen to the pinnacle of his profession, stands as an inspiration to all of us in the Air Force Association. We display this moment of manly affection between these respected leaders of our Association with pride . . . and gratitude for their years of distinguished service to our Nation and its Air Force."

An identical photograph was then presented to General Doolittle and Senator Goldwater, and to everyone's delight, they embraced once again to thunderous applause. (A third copy of the photograph will be displayed permanently in the AFA and Foundation Offices.)

The Eaker Fellowships

Mr. Hardy then announced the inauguration of the Ira C. Eaker Historical Fellowship to complement the Jimmy Doolittle Educational Fellowship. He went on to say that our Foundation and, indeed, the entire Air Force Association stems from the post-World War II impetus of Gen. H. H. "Hap" Arnold, and his stalwart associate and first USAF Chief of Staff, Gen. Carl A. "Tooey" Spaatz.

During the World War II period, and into those postwar formative years, Generals Arnold and Spaatz had two subordinates who were great leaders in their own right. Wartime commanders of the mighty Eighth Air Force, they are illustrious Americans, heroes in every sense of the word, and lifetime friends

Aerospace Education Foundation Corporate Plaques

Presented at September 14 Luncheon

CORPORATION	INDIVIDUAL RECEIVING PLAQUE
Northrop Corp. (twice)	Mr. Stanley Ebner, Vice President and Manager, Washington Office
General Dynamics Corp.	Mr. David S. Lewis, Chairman of the Board, St. Louis, Mo.
Mutual of Omaha Insurance Co.	Mr. V. J. Skutt, Chairman, Omaha, Neb.
Vought Corp.	Maj. Gen. Michael Collins, USAFR, Vice President, Washington Operations, and former astronaut
Martin Marietta Aerospace	Mr. Laurence J. Adams, President, Bethesda, Md
Boeing Co.	Mr. Lionel D. Alford, President, Boeing Military Airplane Co., a Division of the Boeing Co., Wichita, Kan.
United Technologies Corp.	Gen. William J. Evans, USAF (Ret.), Vice President, Hartford, Conn.
Garrett Corp.	Col. W. Bruce Arnold, USAF (Ret.), Executive Advisor for Congressional and International Affairs, Washington Office
Fairchild Industries	Mr. John F. Dealy, President, Germantown, Md.
McDonnell Douglas Corp.	Mr. Sanford N. McDonnell, Chairman, McDonnell Douglas Foundation, and Chief Executive Officer St. Louis, Mo.

stemming from their early flying school days together during World War I. Mr. Hardy then referred to Gen. Jimmy Doolittle, AFA's first National President; and to Gen. Ira C. Eaker, General Spaatz's pilot on the legendary record-setting *Question Mark* flight in 1929, first Vice Chief of Staff of the postwar Air Force, and writer, historian, lecturer, and educator of international fame and acclaim.

He announced that General Eaker has graciously consented to use of his name for this additional Foundation program. The funds it generates will be used to conduct dynamic, meaningful historical research and study.

Mr. Hardy asked General Doolittle and Senator Goldwater to join him in presenting the very first Ira C. Eaker Historical Fellowship award to General Eaker and his wife, Ruth. As the award was being presented, Mr. Hardy stated: "General and Mrs. Eaker, it is indeed my honor, in behalf of the officers and trustees of the Aerospace Education Foundation, to designate each of you the first two Ira C. Eaker Historical Fellows of our Foundation and respectfully to present to you these symbols of this Fellowship—with our love and gratitude."

An urgent request for the microphone was made by Mr. Edward A. Stearn, Chairman of the Advisory Committee of the Bob Hope/AFA Charity Golf Tournament, and an AFA National Director. He presented a $2,000 check and designated General Doolittle and Senator Goldwater Ira Eaker Fellows. After this, other commitments for thirteen additional Ira Eaker Fellows came from individuals in the audience. (A fourteenth was announced later by AFA's Chairman of the Board Dan Callahan. He and his wife, Mary, will sponsor an Ira C. Eaker Historical Fellowship in the name of the AFA and Foundation staff.)

AFJROTC Winner

The final major feature of the AEF luncheon was presentation of the winning entry of AEF's annual contest for AFJROTC units. This year's theme was "Freedom Is Not Free." The winner was the Air Force Junior ROTC unit at Clearfield High School, Clearfield, Utah, which has an excellent history of participation in the contest—runner-up in 1977 and 1978, honorable mention in 1979, and winner in 1976 and 1980. Clearfield's thirteen-minute videotape was shown on the giant screen.

Representatives from Clearfield High School, who were guests at the AFA Convention, included: CMSgt. John Deroian, USAF (Ret.), the Assistant Aerospace Education Instructor of the unit; the school principal, Mr. David L. Cook; and two of the cadets who narrated the videotape, Miss Joyce Connors and Mr. Michael Hawrelok. Chief Deroian and the two cadets received the winning plaque and the $2,000 cash prize from the Foundation's Chairman of the Board, Sen. Barry Goldwater. ■

Foundation Business Meeting

At the Foundation's annual meeting of the Trustees held on September 15, 1981, Sen. Barry Goldwater (R-Ariz.), the Foundation's Chairman of the Board, and three other Foundation officers were unanimously elected by the Board of Trustees to lead the Foundation for this coming year.

The three officers elected are listed below.

- President: Dr. Don C. Garrison, President, Tri-County Technical School, Pendleton, S. C., and immediate past Secretary of the Foundation.
- Secretary: Emlyn I. Griffith, member of the New York State Board of Regents, and past President of the National Association of State Boards of Education.
- Treasurer: Mr. George D. Hardy, former AFA National President, former Foundation Chairman of the Board, AFA National Director.

Seven new trustees and two associate trustees were also elected. The new trustees are:

- Brig. Gen. William A. Anders, USAFR, Vice President, General Electric Co., and former astronaut.
- Dr. John Dunworth, Dean, College of Education, University of West Florida.
- Dr. Jack Flaig, Pennsylvania State University.
- CMSgt. Alton G. Hudson, USAF (Ret.), Norden Systems, North Haven, Conn., and former Associate Trustee.
- Dr. Richard E. Marburger, President, Lawrence Institute of Technology, Smithfield, Mich.
- Dr. Hans Mark, Deputy Administrator, NASA, and former Secretary of the Air Force.
- Dr. Lavern A. Yarbrough, former Associate Trustee, Norman, Okla.

The new associate trustees are:

- Lt. Gen. J. B. McPherson, USAF (Ret.), President, Air Force Historical Foundation.
- Dr. William C. Warren, Dean of Instruction, Southern Maine Vocational Technical Institute, South Portland, Me.

In addition to the election of officers and trustees, other Foundation business was conducted. Mr. George Hardy, Foundation Treasurer, presented the financial report, which was accepted. Russell Dougherty presented the Executive Director's report, and Mr. Gilbert Nettleton, as Chairman, presented the Nominating Committee report.

Mrs. Dorothy Welker, Secretary, Iron Gate Chapter, and Salute Coordinator of the National Air Force Salute Foundation, Inc., presented two checks to the Foundation—a $25,000 donation and an additional $5,000 for five more Jimmy Doolittle Fellows. This credits Iron Gate Chapter with sixty-three Jimmy Doolittle Fellows, by far the largest single sponsor in this program. The grand total of all contributions from the Iron Gate Chapter through the years stands at $484,500.

Certificates of Appreciation were presented to individuals who, above and beyond their normal assistance to the Foundation, have rendered meritorious services over a period of time. Each Certificate read: "For continued support of the Aerospace Education Foundation thereby enhancing the Foundation's ability to perform its high priority mission . . . the application of aerospace technology to the advancement of education."

Certificate recipients were:

- Capt. Hal J. Smarkola, USAF, Office of the Secretary of the Air Force, Office of Public Affairs.
- Mr. Curt M. Graves, Chief, Education and Community Services Branch, National NASA Headquarters.
- Mr. Vincent O'Connor, AFA member and Foundation supporter, Southampton, N. Y.
- Lt. Col. Kaye H. Biggar, USAF (Ret.), Chairman of AFA's Alamo Chapter Aerospace Education Council, San Antonio, Tex.
- Lt. Col. Dorothy L. Welker, Civil Air Patrol, Secretary, AFA's Iron Gate Chapter.

Certificates of Appreciation were also announced for three individuals and organizations that have purchased three or more Jimmy Doolittle Fellows. They were: Mr. Jack B. Gross; Brig. Gen. William W. Spruance, USAF (Ret.); and AFA's Scott Memorial Chapter, O'Fallon, Ill.

The trustees also approved plans for consolidating the Foundation with the Air Force Historical Foundation.

If you want to generate career interest in cadets, flying activities are a sure bet.
That wasn't always recognized by the powers that be, but certainly is now at the Air Force Academy.

Off We Soar...

By Gen. T. R. Milton, USAF (Ret.)

MAJ. Gen. H. H. Arnold was Chief of the Army Air Corps in the spring of 1940, and as was often the case with Hap Arnold, he was mad. The West Point Class of 1940 had shown less than the usual enthusiasm for a career in the Air Corps. With a war and a force expansion coming on, Hap Arnold wanted all the young officers he could get. Besides, there was some pride involved. Why should otherwise qualified pilot candidates choose to be foot soldiers?

In characteristic fashion, Arnold went right to the grass roots to find his answer. I somehow became the chosen grass root, and my answer was simply that the Air Corps had made little effort to stir up our interest. Even our airplane rides had been dull affairs, mainly in bombers. General Arnold steamed in silence for a moment, then swore nothing like that would happen again.

The other day I had a chance to check up on how this generation of cadets has its aviation interest aroused. Hap Arnold would be more than pleased at what forty-one years has brought about.

Like the Luftwaffe during its clandestine beginnings in the thirties, the Air Force Academy has discovered that unpowered flight is a great way to begin. Soaring is basically what flying is all about, where lift and drag become things you actually deal with instead of values in an equation, and where an aviator begins to understand the atmosphere as a sailboat sailor does the sea. Those of us whose closest approach to soaring during our aviation careers came in simulated flameout landings missed out on a whole phase of flying, and one of the best phases at that.

The Air Force Academy soaring program, probably the most extensive one anywhere, is making certain this generation of aviators knows a few more things than we did. What is more, the program is largely in the hands of the cadets, a quantum jump in terms of responsibility from my day when we were herded into bombers for a sight-seeing ride up the Hudson, our responsibility limited to the senior cadet calling the roll.

The instructor was all business as he strapped me into the seat of the sailplane and made his safety checks. At twenty, and another year to go until graduation, he knows what he wants to do with his life. It is exactly what Hap Arnold had in mind.

We floated off the runway behind the little tow airplane—flown, incidentally, by a retired Air Force jet pilot—and climbed along the Rampart Range of the Rockies. At 11,000 feet, my young instructor cut loose, and we were free as a bird. He flew the sailplane like a bird and, in the landing pattern, like the fighter pilot he will one day become, a pilot already familiar with aerobatics, if not yet with an engine.

The airmanship program at the Academy is more than soaring. There is lightplane transition in Cessna T-41s and a complete parachute course ending with jump wings for those who qualify. On the academic side, there is a thorough course in navigation. All in all, the cadet who takes full advantage of this airmanship program is miles ahead of where we used to be in our fledgling beginnings.

Attrition, a polite term that covers resignations as well as those asked to leave, has always plagued the Air Force Academy. The rate is just too high. There have been a number of reasons given for this dropout rate: isolation from the bright lights; the pace is too hard; and, most frequently, change in career goals—an expression that can mean almost anything, or nothing at all.

Whatever the reason, Academy officials want to lower the percentage of people quitting without compromising the Academy's high standards, and they are on to something with the airmanship program. Once cadets get truly involved in that activity, they tend to stay. The problem is simply that the program cannot accommodate everyone, and is open, therefore, only to members of the junior and senior classes. The greatest losses come in the first two years, when the delights of soaring are denied freshmen and sophomores, some of whom, presumably, would tear up their resignations if they only knew what lay ahead.

Well, that is a problem for others to worry about. In any case, a considerable expansion of the soaring program would take some hefty financing.

Meanwhile, there is something more immediate that can be done to keep these young people aimed toward an Air Force career. That is simply a heightened interest by the Air Force itself in this Academy of theirs. Cadets are at a most impressionable age, a fact my West Point class demonstrated so many years ago. The Air Force at large must make a conscious and steady effort to convince these young people that life in a blue uniform is both rewarding and challenging.

Everything considered, that shouldn't be too hard. ■

Soaring (in this case, dual instruction) is one of USAFA's aviation activities.

F-5G TIGERSHARK

TOWARD THE ULTIMATE TACTICAL AIR DEFENSE FIGHTER FORCE.

The one true measure of a fighter force is this: win or lose. Now there is a high-performance combat capable fighter that closes out all options to enemy battle commanders, even those flying the most advanced MIG 21s and 23s. That plane is the Northrop F-5G Tigershark.

The Tigershark provides force effectiveness: more high-performance airplanes available more of the time.

The Tigershark excels in three vital areas: performance, readiness, numbers.

Performance. The Tigershark has dramatically increased performance levels for air defense over previous F-5s. Top speed: Mach 2.0. Sea level rate-of-climb: 50,300 feet/minute. Acceleration: 0.9 Mach to 1.2 Mach at 30,000 feet/30 seconds. Increased maneuvering arena. Small size. Combat thrust-to-weight ratio: 1.06. 16,000 lbs. thrust from new GE F404 engine. 60 percent more thrust than F-5E. Stall free. Rapid throttle response. Advanced avionics options provide improved capability in bad weather and around the clock.

Readiness. Tigershark has quickest fighter response time in Western world:

under 60 seconds. Compared with average of contemporary fighters, Tigershark requires 52 percent less maintenance manpower. New F404 engine has 7,700 fewer parts than J79. Half the weight. Modular construction for quick repair. In actual service current F-5s have recorded in-commission rate of 80 percent. Tigershark will be even more reliable.

Numbers. In a dogfight, pilots have proven that the only thing better than one high-performance combat capable fighter is two high-performance combat capable fighters. The Tigershark is those two.

Economical to purchase, economical to maintain. Consumes 53 percent less fuel and has 63 percent lower operating and maintenance costs than average of other contemporary fighters. The proven F-5 in-commission rate is second to none. F-5G Tigershark is the most recent version of the F-5 series, now serving 28 nations. The first Tigershark will be available for delivery July, 1983.

F-5G Tigershark. The essential element for force effectiveness.

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A heavy turnout of senators and congressmen gave AFA delegates multiple opportunities to express their views where it counts.

Successful Salute to Congress

BY BENJAMIN S. CATLIN, AFA SPECIAL ASSISTANT/DEFENSE PERSONNEL MATTERS

DESPITE a rain storm that dropped nearly two inches of water on Washington just before the Salute to Congress began, six hundred Air Force Association delegates, senators, congressmen, and senior members of the Air Force convened in the Longworth House Office Building. This year's salute was the largest yet: 124 congressmen and fourteen senators attended. In addition, fifty-three congressmen and twenty-four senators sent their legislative or administrative assistants.

This unusually good attendance by members of Congress was due to the hard work of the AFA state delegates, who wrote, called, and visited with their representatives and extended invitations to them for this event. Several groups went to their representative's office and escorted them personally to the reception.

The Air Staff attendees included the Secretary of the Air Force, Verne Orr; the Assistant Secretary for Manpower, Tidal McCoy; the Assistant Secretary for Financial Management, Russ Hale; the USAF Chief of Staff, Gen. Lew Allen, Jr.; most of the senior Air Staff general officers; and the Chief Master Sergeant of the Air Force, Arthur L. Andrews. In addition to the Air Force and congressional attendees, Gen. David Jones, USAF, Chairman of the Joint Chiefs of Staff, was in attendance.

Albany, N. Y., AFA Chapter President Philip Gardener (right) chats with Rep. Sam Stratton (D-N. Y.) (center), Chairman of the House Armed Services Subcommittee on Procurement and Military Nuclear Systems, and Brother Leo Merriman, a former Albany Chapter officer.

From the Hill

The congressional attendees included Congressman Jim Wright (D-Tex.), the House Majority Leader; Congressman James Whitten (D-Miss.), Chairman of the House Appropriations Committee; Congressman Clement Zablocki (D-Wis.), Chairman of the House Foreign Affairs Committee; Congressman Jack Brooks (D-Tex.), the Chairman of the House Government Operations Committee; Congressman Jim Jones (D-Okla.), Chairman of the House Budget Committee; Congressman Morris K. Udall (D-Ariz.), Chairman of the House Interior Committee; and Congressman Carl D. Perkins (D-Ky.), Chairman of the House Education and Labor Committee.

In addition to the committee chairmen, many subcommittee chairmen and ranking minority members attended: Congressman Trent Lott (R-Miss.), the House Minority Whip; Congressman Joseph Addabbo (D-N. Y.), Chairman of the House Appropriations Subcommittee on Defense; Congressman Jack Edwards (R-Ala.), the ranking minority member on the same committee; Congressman Sam Stratton (D-N. Y.), Chairman of the House Armed Services Subcommittee on Procurement and Military Nuclear Systems; Congressman Bill Nichols (D-Ala.), Chairman of the House Armed Services Military Personnel and Compensation Subcommittee; Congressman Richard White (D-Tex.), Chairman of the House Armed Services Investigation Subcommittee; Congressman Jack Brinkley (D-Ga.), Chairman of the House Armed Services Military Construction Subcommittee; Congressman Bill Dickinson (R-Ala.), the ranking minority member of the House Armed Services Committee; Congressman Larry Winn (R-Kan.), ranking minority member of the House Science and Technology Committee; and Congressman John Paul Hammerschmidt (R-Ark.), ranking minority member of the House Veterans Affairs Committee. Several of the congressmen who came joined the Air Force Association.

Among the fourteen senators attending were Sen. Ted Stevens (R-Alaska), the Senate Majority Whip and the Chairman of the Senate Appropriations Subcommittee on

Defense; Sen. Barry Goldwater (R-Ariz.), Chairman of the Senate Select Committee on Intelligence and a member of the Armed Services Committee; Sen. Jake Garn (R-Utah), Chairman of the Banking Committee and member of the Appropriations Committee; Sen. James D. McClure (R-Idaho), Chairman of the Energy and Natural Resources Committee; Sen. William Roth (R-Del.), Chairman of the Governmental Affairs Committee; and Sen. Roger Jepsen (R-Iowa), Chairman of the Senate Armed Services Subcommittee on Manpower and Personnel.

Roll Call!

During the reception several roll call votes took place on the House floor. Congressmen had to leave temporarily to make the fifteen-minute deadline to vote. However, no one minded because the vote was on the military pay raise bill, H.R. 3380, sponsored by Congressman Bill Nichols. This was the pay bill AFA supported. It passed 386–1!

If you are wondering why so many congressmen and senators managed to attend the Salute to Congress in a driving rainstorm, the answer is a system of tunnels and subways which connect all the House and Senate buildings with the United States Capitol.

The Salute to Congress reception gave AFA Vice President Lee Lingelbach (right) and his wife Virginia a chance to meet with Rep. Jack Brinkley (D-Ga.), Chairman of the House Armed Services Military Construction Subcommittee.

Senators take the subway or walk from the Russell Senate Office Building and the Dirksen Office Building to the Capitol, then walk through a corridor in the basement that connects with the House subway, which goes to the Rayburn House Office Building. From the Rayburn Building all three of the House Office Buildings are connected by a tunnel. Thus, congressmen and senators can go practically anywhere on Capitol Hill and not get wet.

The Air Force Association again provided the popular "Photo Corner" where groups of AFA delegates could be photographed with their congressional representatives. More than 130 groups went through the photo corner, and more than 1,000 color prints were ready for delegates to pick up by 9:00 a.m. the next morning.

The delegates provided many interesting quotes on the return trip to the hotel:

"I had no idea my congressman would take the time to come and talk to me."

"I didn't realize my congressman had so much to do."

"Do they always have so many roll call votes?"

"I didn't know congressmen worked such long hours."

"He was really interested in the way we felt."

"I was surprised at how small their offices were."

"He actually asked me, 'What can I do for you?' "

"How do you feel about the such-and-such bill?"

AFA's Salute to Congress has traditionally been effective in bringing together AFA members and congressional leaders, and this year was no exception. ■

Congresswoman Geraldine Ferraro (D-N. Y.) stopped to visit with fellow New Yorker Irene B. Keith (left), of New York State AFA's Queens Chapter.

Rep. William "Bill" Dickinson (R-Ala.), ranking minority member of the House Armed Services Committee, stopped to talk with Cecil Brendle (right), AFA stalwart from the same state.

In its second iteration, the Air Force family conference shows promise in two directions: top-level commitment to improving the quality of Air Force life, and grass-roots determination to be involved in the process.

Families—*Phase II*

BY ESTHER A. CURTIS, AFA LEGISLATIVE ASSISTANT

THEY came from every Air Force base around the world. Two hundred eighty-one delegates flew long hours or drove cars from nearby bases to come to Washington, D. C., to attend the 1981 Air Force Family Conference, Phase II, at Bolling AFB. Yet these were only the few representatives chosen by their commands to participate in this second phase of the Conference, which began last year and generated great interest from the top levels of the Air Force to the junior enlisted members and their families. The subject of the Air Force family has gained importance since the retention problem in the services led to a reevaluation of the role the families play in the decision of the member to stay in or get out.

Lt. Gen. A. P. Iosue, Deputy Chief of Staff for Manpower and Personnel, speaking at the banquet in honor of the Conference delegates put it well when he said: "We've changed our entire attitude toward the Air Force family—not only because it would help us improve retention, but also because it was the right thing to do. This is something we should have been doing many years ago; an attitude adjustment whose time has come."

Whether listening to the Chief of Staff, Gen. Lew Allen, Jr., or the young single parent in uniform, the message was heard loud and clear: improving the quality of life of our blue-suiters and their families will strengthen the Air Force and make it possible to fulfill the mission.

During the two days of the Conference, a wide range of subjects of importance to the families in the Air Force was discussed. The forum for such discussions was arranged by Col. Lawrence Foley, Assistant for Air Force Family Matters, and his capable staff, making the most of every hour, every medium, and every speaker to give the participants the opportunity to discuss problems they face and listen to other delegates address the way they overcame difficulties.

Communication was the operative word—communication needed between commanders and members of the commands, between bases and adjacent civilian communities, communication between the member and family. When communication exists, problems can be solved; when communication is lacking, even small difficulties become big problems.

The Conference Begins

It is Thursday morning, September 17. At 7:00 a.m. the Officers' Club at Bolling AFB is humming with activity. The Conference coordinators are busy arranging the meeting rooms and checking microphones and schedules. The coffee and danish rolls disappear as the delegates arrive and take their seats to hear Maj. Gen. Herbert Emanuel, Assistant Deputy Chief of Staff for Manpower and Personnel, welcome them and introduce General Allen, the keynote speaker.

At 9:15 a.m. General Allen addresses the assembled spouses, officers, airmen, and observers. Anticipation of the day's activities is noticeable on every face. It is with the knowledge that the Air Force does care about its people that the day gets started. Mrs. Barbara Allen, wife of the Chief of Staff, speaks eloquently of her personal interest in the Air Force families' quality of life and adds her support to the initiatives of the Conference. "If the family is satisfied and content, the Air Force member will do a better job," said Mrs. Allen.

Generals Allen and Emanuel stressed that the Air Force's number one priority is the mission it has to perform, but that the mission cannot be accomplished without improved and revitalized life-styles of Air Force members.

The rest of the morning is taken up with briefings on different subjects in "Focus Groups" of no more than thirty delegates at one time. We attend three briefings given by experts on medical benefits, communications and economics, what is being done by the Air Force, and what is planned for the future. Question-and-answer periods follow each session, revealing the different problems existing on different bases. The young wife from Langley AFB with four children under the age of seven was concerned about the unavailability of nursery facilities; the spouse from Korea mentioned the shortage of doctors which made it necessary for families to be treated by physicians' assistants, who they considered less qualified than doctors; the airman from Travis AFB mentioned the need for dependent dental care at the base hospital because of the impossibility of paying the fees requested by dentists in the civilian communities; the need for recreational equipment on the vast expanses of bases in North Dakota was brought up by an officer's wife stationed at Minot AFB, N. D., and so on. The two days of the conference could easily have been used up in this very first session.

The next briefing is presented by Col. Rusty Sloan, from the Air Force Surgeon General's office, who discussed how the Air Force plans to improve its medical programs by getting away from large hospital facilities in favor of smaller clinics and family health centers where personalized, more efficient care can be given each family assigned to the base.

The second session, dealing with communications, is devoted to acquainting us with the various publications we can use to communicate

within and among the various groups we have to reach—from Air Force leadership level all the way to the small base newspaper. Town meetings are stressed as a good vehicle for communication between base commanders and families, as well as with neighbors from the local civilian community.

We have to rush on, however, to the next discussion group. It is about "economics," and deals with such topics as pay, benefits, and PCS reimbursement. Legislation in Congress is the key word here. We are told what is being done to improve the picture: improvements are contemplated in CHAMPUS, dependent per diem, increased weight allowance for household goods, storage of motor vehicles, house-hunting trips in anticipation of PCS moves, increased allowance for subsistence (BAS), and, foremost, the pay raise.

It is now 12:30 p.m. The morning flew by all too fast, and luncheon is being served to all 400 participants. Highlights of this luncheon are remarks by Russell E. Dougherty, Executive Director of AFA; the Hon. Verne Orr, Secretary of the Air Force; and Lt. Gen. A. P. Iosue, Deputy Chief of Staff for Manpower and Personnel. They spoke directly, each reaffirming his commitment to Air Force families and recognizing the importance of a happy, proud Air Force member. Russ Dougherty stated that the Air Force Association represents all members of the Air Force family and will work for the security of America. Secretary Orr spoke of Mrs. Orr's contribution to his understanding of what is needed to keep Air Force family morale high. She visits with representatives of hospitals, family services, and other groups when they travel. Her observations help him to get a clear view of what can be done not only to improve the mission readiness of bases, but also what can be done to improve family services.

The Focus Workshops

Invigorated by the pleasant luncheon and excellent speakers, we adjourn to prearranged Focus Workshops. In these, a dozen delegates participate in a round-table discussion with a facilitator directing the topics of discussion and writing down the recommendations of each group.

Even though much is to be discussed, there is some time available to make the acquaintance of the persons seated next to us. We were most fortunate in making the acquaintance of an outstanding lady and delegate from RAF Lakenheath, England. She personified the delegates who came to share their experiences, the solutions they had reached at home base, and the satisfaction of doing things on their own rather than waiting for the Air Force to help with every detail of everyday problems. Wherever possible, this lady and her group of volunteers unraveled problems and tackled projects aimed at helping Air Force families to cope with the stress and difficulties of overseas duty. Unfortunately, the strict schedule of the meetings did not allow elaboration of her enthusiastic message, but clearly all will be well as long as there are such willing, imaginative doers as this lady in the Air Force family.

The afternoon passes as the Focus Group tackles each discussion subject: health, community, child care, education. Our moderator channels the discussion so that each of us can say what we feel needs to be done or how our own bases solve certain problems. The results of the afternoon's discussions are to be

Top photo: participants in the 1981 Air Force Family Conference, Phase II, buckle down to work during one of the Conference sessions. Above, four panelists share techniques for helping service families: Moderator Carol Keller; Marilyn Holmes, whose husband is a Foreign Service Officer; Kathleen O'Beirne, Navy Wife of the Year; and Dr. Pat Nida, far right, who helps families cope with stresses of frequent moves. Audience response and two-way exchange of information were enthusiastic. (Photos by TSgt. Ronald L. Weston, USAF)

compiled at the end of the Conference and will be published in the near future. We are trying to identify: (1) Has the Air Force correctly identified the issues? (2) Is USAF taking appropriate action? and (3) What else needs to be done?

The Officers' Club is the scene of an elegant evening dinner in honor of the delegates and guests. Lt. Gen. A. P. Iosue, the dinner speaker, stated: "We, the Air Force, are especially proud of the initiatives we have taken. The new Family Support Centers, which are now being tested, will bring together information, programs, services, and opportunities for Air Force families, in a way never before available. Not only will they be true focal points for family assistance, they will be symbols of our commitment to the Air Force family."

The Second Day

Friday, September 18, 8:00 a.m. As we arrive in the ballroom for today's opening ceremonies, we see familiar faces all around us. Yesterday's feeling of strangeness is gone. We are all working toward the same goal and trying to identify problems so that a solution can be found for as many as possible.

We begin with a panel of experts speaking on "Mission and the Family." The moderator, Col. (Chaplain) James E. Townsend, points out succinctly that the Air Force recognizes that both job satisfaction and family satisfaction are needed, that volunteerism should be encouraged and rewarded, and that we should strive to improve the Air Force's image in local communities.

Col. George Troxler, USAF School of Aerospace Medicine, Brooks AFB, Tex., speaks on the subject of "Family Stress" and makes such an interesting presentation that the question period could have gone on all morning. He states that self-esteem is a key factor to an individual's well-being, and that self-esteem comes from various sources: family, friends, and job. Warning that stress can damage one's health and that repressed anger causes lack of communication, Colonel Troxler said that we should learn to listen, establish honest communication, and share goals to maintain a happy life. It has been proven that family stress carries over to the job and has been cited as the cause of serious flying accidents.

Maj. Anne Bonen, an Air Force nurse and Chief, Social Actions at Bolling AFB, speaks next, calling our attention to the changes in the traditional Air Force family structure since the 1970s. Where the typical USAF family was once made up of a husband, wife, and two children, now 9.6 percent of the Air Force population is made up of active-duty couples and single parents. Many studies have been conducted on how these family members cope and the special difficulties they face, especially where single parents are concerned. She mentions also statistics showing that the nontraditional family is here to stay, and that its numbers are likely to increase. Major Bonen also states that "sense of duty" is not as strong among military members as "desire to serve."

The last panelist of this morning is Dr. Joseph R. Novello, M.D., Director of Child and Adolescent Services, Psychiatric Institute of Washington, D. C. He speaks on the role of children in the military, telling us that military children are average and that they are neither brighter nor more emotional because of the frequent moves military life-styles impose on them. He went on to say that military families should get out and find ways to get involved in the civilian community. Often those who complain the most are the ones who never leave their base.

The recurring themes of communication and self-help are heard clearly from participants and guest speakers alike. "We can do it," even though we may need the help of the Air Force here and there, is the main theme.

During the question-and-answer period following each speaker, many individual concerns are voiced by the delegates. Examples: "What is the future of joint spouse assignments?" (Getting less rosy.) "How can we get better information about new assignments from sponsors?" And so on.

Three Exceptional Ladies

Winding up Friday morning is the next panel of guest speakers. It consists of three exceptional ladies and the moderator, Carol Keller, who has been active in the Air Force's

Message From General Allen

As a result of the Air Force Family Conference, Gen. Lew Allen, Jr., USAF Chief of Staff, sent the following message to all Air Force wing and base commanders:

"We have just concluded a very successful Family Conference. I was impressed with the sincerity and enthusiasm of the people who represented you and the key role they played in highlighting the needs and concerns of the Air Force people and their families.

"Hopefully, we, in turn, fostered a better understanding of the Air Force commitment to resolving these concerns and of the programs which translate that commitment into action.

"I would like the momentum of this conference to continue. Please meet with the representatives as they return. Listen to their impressions. Act on those suggestions that are practical and use your representatives to spread the word that we are truly interested in taking care of our own."

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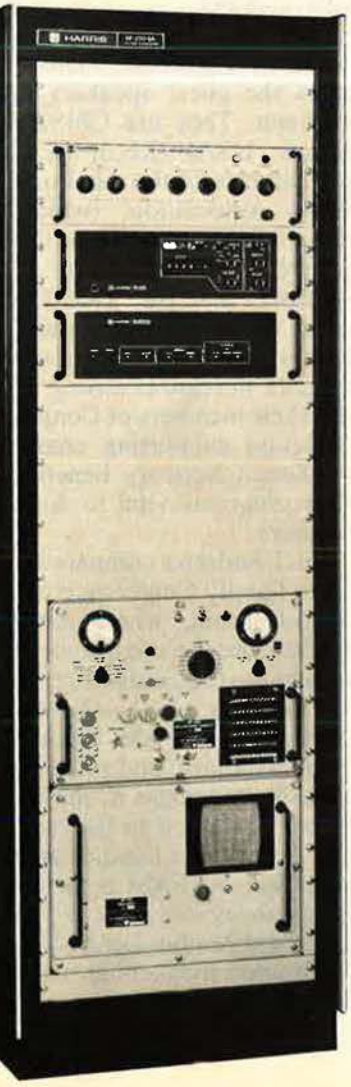

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highly successful Spouse Issues Group. Mrs. Keller introduces the panel, whose husbands all serve the country in different ways: with the State Department, the Navy, and the Air Force. They have devoted their time to helping service families overcome the difficulties encountered upon moves, stressful times, long separations from their spouses, illness, etc.

Marilyn Holmes, whose husband is a foreign service officer, has put her education and experience overseas to work, and is now the Director of the Family Liaison Office at the Department of State, assisting spouses of foreign service officers who wish to find jobs overseas, for example. Kathleen O'Beirne is Navy Wife of the Year. She not only considers the families of Navy personnel serving on her husband's ship as her own, and gives freely of her time and talents to help them, but she also writes articles designed to help ease the burden of family separations and home and school changes, thus reaching many service families with advice and shared experience. The third panelist is Dr. Pat Nida, who developed and copyrighted her own training and development system designed to help families cope with the stress and insecurities of new life-styles as they move from assignment to assignment.

The experiences related and thoughts expressed by this panel were so comprehensive that they almost needed a conference of their own. The response of the audience was so enthusiastic and the questions pouring in so numerous that the moderator had difficulty keeping to the amount of time allotted to this panel session.

Mrs. O'Beirne expressed an interesting thought when she said that a member of the military family needs ties to both the military unit and their own private family. Even if it feels unwanted or difficult, one should go out and make contact with the civilian community and get involved—the rewards are immeasurable.

So often military members say: "I didn't know this was available." By involving ourselves in community activities, knowledge of these services becomes available as a natural consequence. Mrs. O'Beirne contends that the wife relates to the unit through her husband and the husband relates to the community through his wife.

Pat Nida's fresh, outgoing personality enlivened the discussions even further. She left us with this message: do not underrate the expression of stress in our lives. Let the children know that we are also upset by the move we face, that all is not easy for us either; after all, they feel fear of the unknown, the new assignment, and we can share our apprehensions with them. She says: "Don't have unrealistic expectations of yourself in the new assignment—you will still be the same person you are today."

The Luncheon Program

Still buzzing from all the challenging thoughts left with us by this interesting morning, we file into lunch and find that, to our delight, recordings of the Air Force Band's Strolling Strings have been provided for each luncheon guest—a beautiful souvenir of last night's entertainment.

Maj. Gen. William R. Usher, Director of Personnel Plans, introduces the guest speakers for the luncheon. They are CMSAF Don Harlow, USAF (Ret.), the Executive Director of the Air Force Sergeants Association, (which contributed so generously to the Conference); CMSAF Arthur "Bud" Andrews; and the Vice Chief of Staff, Gen. Robert Mathis. Don Harlow asked all Conference participants to register strong support with their members of Congress for legislation supporting commissaries, Social Security benefits, and other programs vital to Air Force members.

Chief Andrews compared the Air Force Family Conference to a new car salesroom, where Air Force members are the salespeople and the delegates to the Conference the buyers. The new car the showroom is presenting is AFFAM, the Air Force Family Matters, and once the delegates have bought it, they will be the ones taking it to the bases and their friends and families all across the nation. AFFAM is the vehicle, but the delegates have to drive it.

General Mathis joined the other Conference speakers in reasserting the concern the Air Force has for the welfare of the families, noting that a happy home makes a happy man at his job.

Wrapping Up

The afternoon finds us reassembling in our focus Groups for roundtable discussions to establish what the Conference achieved and what else we feel should still be addressed. Our group feels that relocation of families and relations with the civilian community are of primary concern. The solution to those concerns is found starting with the base commander, who should work closely with the Family Support Center on the base and civilian community officials to foster better understanding and better support for Air Force families. Single parents in our group feel that they need to have more attention focused on their particular problems and hope that the next Conference will address their needs in greater detail.

Sponsorship also comes under scrutiny, with many of our members feeling that a good, concerned sponsor can do much to alleviate the anxiety of a family arriving at a new duty station. Unfortunately, few sponsors take this role seriously. The recommendations we formulate are recorded and will be handed in to the appropriate panel to incorporate it in the Family Conference summary.

Our final meeting is in the ballroom. General Emanuel and General Allen give us their evaluation of the importance of what has been accomplished here in the past two days. "This Conference is an evolutionary step," says General Allen. "The Air Force will be a quality force: quality in weapons, quality in people, and quality of life." General Emanuel reminds all participants that "what has been started here must be taken to every base and every family. *You* have to start the ball rolling."

It was a real privilege to meet so many outstanding men and women interested in the common goals of improving the quality of life in the Air Force, bringing the message to our Air Force leaders that we can help ourselves with support from the Air Force, and carrying the message back to the bases that the Air Force does care and will take care of its own. ■

THE BULLETIN BOARD

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

Air Force Surgeon General Cites Improvements

Testifying recently before Congress, Air Force Surgeon General Lt. Gen. Paul W. Myers noted that medical manning has improved significantly. However, he stressed that while he anticipates one hundred percent manning against authorized strength, shortages of doctors in specific key specialties continue to plague the Air Force.

Also, Dr. Myers noted, "the need remains to increase physician authorizations to meet mobilization requirements." He believes that at least 4,775 physicians are needed on active duty in peacetime—against some 3,602 currently authorized—to provide surge capability for readiness and mobilization requirements.

What would these "extra" physicians do meanwhile? AIR FORCE Magazine asked in a follow-on interview. Dr. Myers had a ready answer. "They could," he said, "be used quite effectively to provide health care to a broader range of eligible beneficiaries. This, in turn, would drive down CHAMPUS costs significantly."

In his follow-on comments to AIR FORCE Magazine, Dr. Myers noted that some of the critical shortages he had alluded to, by skill, included general and orthopedic surgeons, obstetricians, urologists, and ophthalmologists.

He also stated that thirty-seven medical facilities in the United States have been assigned contingency expansion missions. The remaining medical facilities will change their missions to provide flight medicine and primary care services to the active-duty population. This will free some medical personnel for overseas deployment or for assignment to one of the selected casualty receiving hospitals.

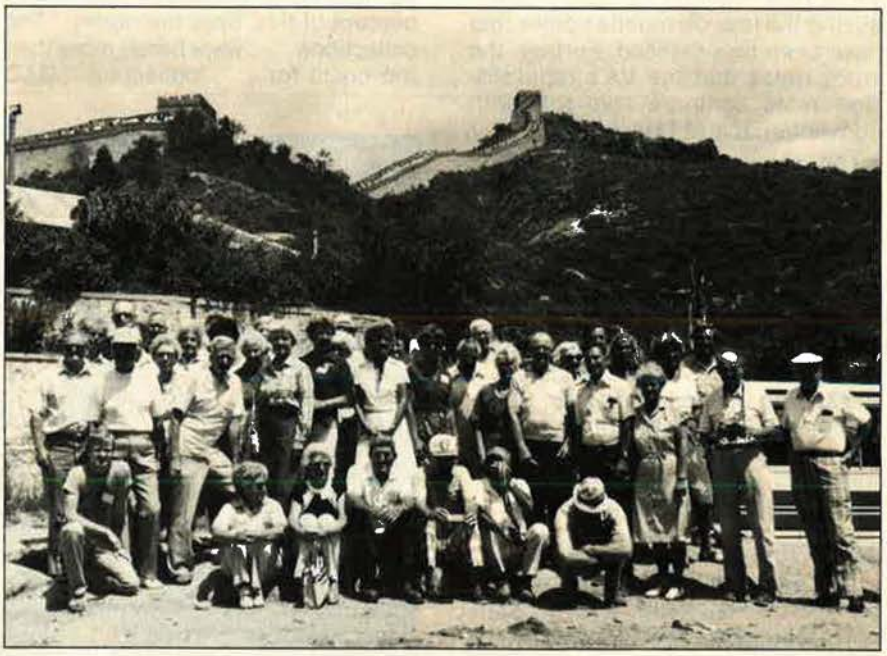
In his congressional statement, General Myers pointed with pride to the Air Force's participation in joint service readiness training initiatives. He mentioned that the Medical Red Flag exercise, an Air Force innovation in wartime-type training, is "going strong." Other readiness training efforts, he noted, include "a battlefield medicine course taught at the USAF School of Aerospace Medicine," as well as "Air Force-wide training in CPR."

"Adequacy of Air Force medical facilities remains a continuing concern," Dr. Myers cautioned the lawmakers. Noting that the average age of medical facilities approaches twenty-three years, he stressed that "these old facilities are not designed for increasing outpatient care demands." He pointed out that changes in the state-of-the-medical-art lead to more sophisticated equipment and patient testing—all of which requires more space.

Dr. Myers also reaffirmed to Congress the Air Force's position that commissioning of Air Force physician assistants (PAs) is vital. There are significant differences in the training and use of PAs among the services. For example, the Navy has a limited training program of fifty-two weeks vs. 101 weeks for the Air Force. Even though the other services have determined the warrant officer rank to be appropriate for the level of their PA training and responsibility, Dr. Myers emphasized that "the Air Force PA is a very important member of the health-care team and should be accorded a rank equal to that of other members of the Air Force health-care profession who perform services of comparable responsibility."

He also stressed that the Family Practice Program—assigning each Air Force family to a specific physician—is growing and is now in place at forty-nine bases. Future plans call for expansion to all Air Force bases. The Air Force PAs play a significant role in the effectiveness of this program.

His parting shot to AIR FORCE Magazine was to "let your readers know that I am optimistic" about improving the availability and scope of health care to Air Force beneficiaries in the near future.



What could be more impressive as a backdrop than the Great Wall, as former members, and their spouses, of the Twentieth Air Force pose for a photograph. The group, the largest such since the normalization of relations, toured the People's Republic of China for three weeks this past summer. Kunming, home of the Fourteenth Air Force during World War II, was among places visited.

THE BULLETIN BOARD

VA Mobile Home Loan Program Doing Well

The Veterans Administration mobile home loan program (patterned after the highly successful "GI Home Loan" effort) has now been in operation for ten years. Its specific charter was to "assist eligible veterans in obtaining low-cost housing and provide the alternative of mobile-home living for those who desire it." After one decade, a congressionally directed evaluation gives the program high marks and says it gives promise of playing as significant a role in the overall housing arena as its conventional home counterpart.

Study findings show that:

- The VA is doing a good job of encouraging participation by both lenders and dealers.
- The agency is carrying out its obligation to ensure suitable locations for parking the homes, in spite of the significant administrative burden it imposes. Although close to seventy percent of the homes purchased under this authority are located in rental parks, with a bewildering array of local standards, the study concludes that, on balance, the VA is pursuing both a responsible and responsive course in this regard.
- The program is successful in making it possible for veterans with low and moderate income to obtain housing at lower monthly expense than they would otherwise be able to do.
- Of importance to all taxpayers, the VA is fully meeting its goal of minimizing the loss on mobile homes that have been repossessed. Further, the study notes that the VA's repossession rates compare favorably with conventional and FHA rates.

The study also made some recommendations, such as urging the VA to encourage the development of financing for used homes; making the program more attractive to dealers by giving them more information on the program and cutting down required paperwork; instituting seminars on the program for VA field employees; and setting up a pilot program to determine the feasibility of accepting state and local location-suitability standards when such standards, by law, exceed the VA requirements.

GAO Praises/Chides DoD

The General Accounting Office, Congress's watchdog, recently gave DoD good news and bad news. On one hand, it took Defense to task for writing off millions of dollars in former service members' debts. GAO noted that disbursing officers have "frequently" inaccurately computed final pay of separating members, forgetting to deduct for unearned pay, bonuses, and advanced leave. It found that, in some cases, disbursing offices had as little as one hour's notice to prepare final payments; that separation checklists were not used; and, in many cases, formal training on computing separation payments—along with identifying potential debts—was not given.

On the collection side, GAO found that it sometimes took as long as two years before the services initiated collection efforts. Stating the obvious, the report says "the older a debt becomes, the more difficult it is to collect." Problems in this area include late notification by units to finance centers, as well as long and detailed reviews at the centers before initiating collection. Further, the study said that the services were not attempting to arrange for personal interviews with debtors or trying to reach them by telephone. Both are actions required by the Federal Claims Collections Standards.

The report noted that over a period of three fiscal years, more than $152 million was owed to the military, primarily by separating members. The services collected only about thirteen percent of this. Says the report, "The collections . . . were barely more than the costs for . . . collecting." GAO made recommendations to correct this situation.

In the accolade department, GAO says that DoD has an effective recovery program for silver from photographic waste, while many other agencies "continue to pour silver-laden photographic solutions down the drain." It recommends that these join in DoD's program (which already helps some agencies) and that, in turn, DoD take the steps necessary to accommodate this. Last year, DoD alone saved more than $6 million with its program. The GAO estimates that millions of dollars from other agencies can be saved annually by use of the existing DoD program, and recommends adding resources to DoD, if that's what it would take to fold in other civil agency programs.

You Can Fight City Hall

Although many CHAMPUS participants don't know it, some benefit decisions can be appealed. In a remarkable effort to make the program even more useful, CHAMPUS is issuing a Fact Sheet (FS-10) this month to help users wade through appeals procedures. The Fact Sheet notes that "benefit decisions can be difficult and CHAMPUS recognizes that disagreements occur."

Both beneficiaries and providers have the right to appeal. In general, nonappealable decisions include:

- The claim was denied because the service was specifically excluded by the CHAMPUS regulation (although in cases where it is felt the *application* of the regulation was improperly made, appeals can be made);
- Dispute of the "reasonable" (al-

Assistant Vice Chief of Staff Lt. Gen. Hans H. Driessnack, left, presents the General Thomas D. White National Resources Conservation Award to Col. Larry K. Barton, Commander of the 354th Tactical Fighter Wing. The Colonel accepted the award on behalf of Myrtle Beach AFB, S. C., cited for its forestry, wildlife, and recreation programs.

lowable) cost for a service (although, again, if it is believed that the decider did not properly understand the nature of the service, an appeal may be made);

- Denial of a claim because user was ineligible for CHAMPUS; or
- Denial of a claim based on failure to obtain a Nonavailability Statement.

Complete appeal procedures (there are about four levels, including a personal hearing) are outlined in the Fact Sheet in reasonably understandable terms. CHAMPUS has taken a giant step in recognizing that authorized CHAMPUS use is an earned benefit and users need to know how best to use it.

Profile for Rated Success

If you're under twenty-five and hold both a technical degree and a private pilot's license, the Air Force thinks you're a good bet to complete successfully pilot training—and they'd love to sign you up!

Recently, Air Force Recruiting Service has become concerned about what it labels an "alarming increase in the attrition rates for Officer Training School pilot candidates in both the Flight Screening Program and Undergraduate Pilot Training (FSP/UPT)." In a letter to Recruiting Group Commanders, Recruiting Headquarters pointed out that this attrition is particularly disturbing at this time " . . . when Recruiting Service is challenged to recruit more pilots than it has at any time since the advent of the All-Volunteer Force."

To counteract this trend, Headquarters wants recruiters to be aware that a recent Air Force study found several factors impact on the probability of successful completion of FSP/UPT. One is that success declines sharply with increasing age; from about ninety percent at age twenty-one to sixty-five percent at age twenty-seven. (All these findings are geared only to flying performance and not academic performance.)

Secondly, eighty-nine percent of those studied who had technical degrees made it through. Only eighty-two percent of nontechnical degree holders made it. Finally, those candidates with private pilot's licenses had a success rate of eighty-nine percent while the passing rate of those without such credentials dipped significantly to seventy-four percent.

As the Headquarters letter points out, these findings, while valid, offer " . . . no magic formula. They must be used with all other indicators and with common sense." Nonetheless, recruiters have the word and, while not excluding any applicants who meet basic qualifications, they will be zeroing in on those with "success indicators."

Benefits to Former POWs

"The lives of former prisoners of war will be enhanced greatly by this action," said Congressman G. V. (Sonny) Montgomery (D-Miss.), Chairman of the Committee on Veterans' Affairs, after President Reagan signed, in September, Public Law 97-37, the Former Prisoner of War Benefits Act of 1981. Congressman Montgomery had originally introduced this bill in the House, and had worked hard for its passage.

Mr. Montgomery said, "This law will, among other benefits, allow compensation to be paid for anxiety neurosis, which, according to a recent VA study, is the primary reason for many POW disabilities." In addition, he said, it "allows former POWs to receive both inpatient and outpatient medical treatment on a priority basis."

Under the law, former POWs can now receive outpatient treatment the same as that provided veterans for service-connected disabilities. With the average age of World War II former prisoners of war being approximately sixty-three years, Chairman Montgomery said, "the provision of both inpatient and outpatient treatment on a priority basis will mean that the medical needs of these individuals held captive for extended periods of time will be assured."

The law expands eligibility for certain benefits and health care for former POWs, including people who were held during peacetime under circumstances that the VA determines to be comparable to wartime internment; *e.g.*, crew members of the USS *Pueblo*. The law also establishes an Advisory Committee on Former POWs, which is charged with submitting to the Congress a biennial report on how it views the progress of VA POW programs.

The law also calls on the VA to seek out former POWs to alert them of their new benefits.

Drive for Engineers Continues

In an imaginative move aimed at whittling away at its worrisome engineering shortage, the Air Force, this college school year, is looking at basic trainees as possible engineer/scientific officers.

In the one-year volunteer test, new enlistees who compile an Air Force Qualifying Test score of ninety or higher and who have completed at least one year of college will be screened for possible award of a complete AFROTC scholarship, pur-

suing either an engineering or scientific degree. After attaining their degree, they will be commissioned and serve in those disciplines.

Regrettably, the number of scholarships is limited to twenty-five during this test year. If it works, however, the Air Force plans to increase this number to a hundred a year.

Why They Leave

At press time, the Air Force was racking up one hundred percent of its recruiting objective. At the other end of the manpower trail, however, the picture, while improving, was not quite so bright. Through June of this year, the Air Force was reenlisting some forty-four percent of its eligible first-termers.

In its continuing efforts to determine why good people leave, the Air Force conducts exit surveys. While these lag somewhat behind "real time," the latest, covering the first three months of this year, gives a graphic display of why some people are packing it in.

THE BULLETIN BOARD

SPEAKING OF PEOPLE

Promotion Quota Frustration

By Ed Gates, CONTRIBUTING EDITOR

When the Air Force, back on July 1, 1980, began promoting officers from the current majors selection list, officials believed the roster would be exhausted by June 1981. For those well down the list it figured to be a lengthy but not unreasonable wait. But plans misfired. Far fewer retirements than expected took place; monthly quotas plunged. The latest target date for wrapping up the promotion cycle is next month, December 1981, which assures delays of up to eighteen months.

That's much too long.

Personnel planners blew it, not only in the O-4 sweepstakes but also in the annual O-5 and O-6s derbies. In each instance they forecast far more retirements than have occurred; for all three grades, the actual count was 3,100 retirements estimated, fewer than 2,200 performed. Since it takes a retirement to create a vacancy, the service's only option has been to stretch out promotion dates.

It's easy to play Monday morning quarterback and second guess the planners, though how they could have missed the boat by such a wide margin is hard to figure. Hq. USAF acknowledges the miscalculation, saying the planners "did not accurately predict the effect the favorable prospects for a pay raise would have on an individual's decision to apply for retirement, and the impact other factors such as the enhanced role of the military, and raised quality-of-life expectations would have on retention."

At any rate, a good many officers eyeing a reasonable wait for advancement, and the increased income resulting therefrom, fumed. Their frustration rose with each monthly drop in promotion quotas. And they have been joined by additional captains whose names appear on a second majors selection list, which surfaced last May 6. Promotions from it were to have started immediately, but of course they haven't yet begun; they can't get moving until the present, long-delayed list is exhausted.

There may be nothing the service can do about it, other than try harder next time. Some quarters, however, believe that the sting of these irritating delays could be eased if the service adopted a program the Navy has used for years: frocking. Proponents of this project—there are many pro-frockers in the USAF, though few at the colonel and star levels—see it as an easy, cost-free way to recognize performance.

For those who may have forgotten, frocking lets persons chosen for advancement pin on their new rank when lists appear, providing the selectees hold billets authorizing the higher grade. Pay of the new grade, of course, does not start until the promotions become official.

Supporters contend that prepromotion wearing of the higher-grade insignia would at least partially offset the unhappiness created by the present arrangement. "True, we wouldn't get the increased pay any sooner, but we would know that the Air Force was really concerned and was trying to do something," a major-to-be who recently passed his sixteenth month on the current selection list declared.

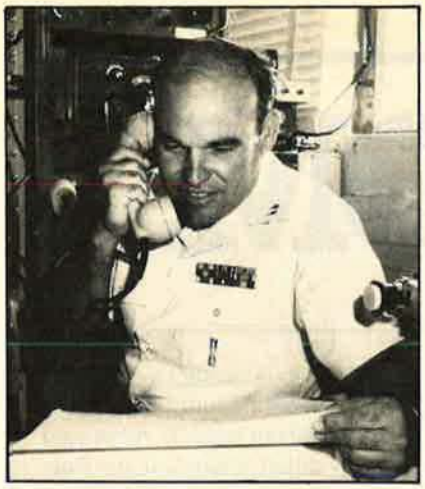
Frocking would affect NCOs as well as officers, and many groups in both categories have urged USAF to launch the program. But Air Force leaders will have none of it. They remain dead set against the idea, noting that frocking has been studied and restudied over the years and has always been found wanting. Some of their objections follow:

Frocking, they say, would be an "extreme departure from past history, customs, and tradition, and would erode basic military seniority and rank concepts without resulting in any real longtime advantages."

Furthermore, since it would not affect such things as dates of rank, entitlements, housing eligibility, etc., "frocking is cosmetic at best and could easily be considered a 'phoney,' nonmilitary-type action." Also, persons would not be able to determine an individual's real grade by looking at his uniform, and frocking would "aggravate the impact [of not being selected] on nonselectees."

Another official objection centers around persons who are removed from selected lists, placed on control rosters, etc. Under a frocking program, authorities contend, they would have to be "defrocked," thus creating problems and confusion. Another criticism holds that since some selection lists include 5,000 to 10,000 names, frocking would create huge "peak" work periods for clothing sales stores, pass and ID functions, etc.

The Army and Marine Corps share Air Force opposition to frocking. But not the Navy, which over the years has managed to come up with several extra personnel policy advantages for its members. The Navy has frocked for years and continues to do so, apparently without any of the reservations held by the Air Force. As the Navy said earlier, its frocking policy "affords early recognition and prestige . . . with very little administration burden and no increased cost. . . ." ■



A former master sergeant with the 149th Communications Flight of the Texas ANG, Kelly AFB, Merrell Schriver learned of an opening for a communications officer and after processing was promoted to captain.

Far and away the dominant reason given for getting out was pay—either that those exitees foresaw "higher pay in civilian jobs" or that the "actual amount of Air Force pay [was] too small." Fifty-five percent of the separating airmen, in fact, expected to be earning more as a civilian their first year out of the blue suit. When asked to predict what they expected pay-wise over the next five to ten years, the percent expecting to better their military earnings "outside" soared to eighty-five percent. Significantly, forty-three percent of those exiting declared that they had entered the Air Force with every expectation of making it a career.

Other reasons given for leaving included "more job satisfaction in civilian jobs"; "too many petty restrictions"; and, "more geographic stability." But pay was number one among all airmen, both first term and career. An equally important indicator of the state-of-the-force, personnel officers believe, is that the number of enlisted people taking a one-year extension has increased dramatically—*e.g.,* a seventy-seven percent increase for second-termers. The Air Force sees this trend as evidence that a significant portion of the force is taking a "wait-and-see" attitude about pay proposals currently before Congress at press time.

Short Bursts

Veterans are following the sun. The VA's latest study shows a marked **shift in veteran population to Arizona, California, Florida, and Texas.** Still, Rhode Island has the most veterans per 1,000 population, with 167. North Dakota has the fewest, with ninety-four. Los Angeles County, Calif., is the only county with more than a million veterans.

Military and civilian federal employees who paid **parking fees at government installations** during the short-term attempt by the government to enforce such rules may have refunds coming. They have been asked to submit claim forms—the government will not seek them out—and it is expected that the refund hassle will be settled by the end of this year.

A new DoD ruling allows **spouses of reservists on active duty** to shop in the BX by themselves—in the past, the reservist had to accompany them.

Since the Inauguration, Commander in Chief Reagan has given more emphasis to **wear of the military uniform in the Washington, D. C., area.** This formerly was a discouraged practice, but now all military are expected to wear their uniforms on most occasions unless civilian wear is clearly more appropriate.

The **Armed Forces Staff College,** Norfolk, Va., has been placed **under the National Defense University,** Washington, D. C. No physical move will take place, but this will complete a reorganization that brought the National War College and the Industrial College of the Armed Forces under the NDU. Formerly, all three of the colleges reported directly to the JCS. Air Force Lt. Gen. **John S. Pustay** is the current NDU President; Vice President is Ambassador Bruce Laingen, former US Chargé d'Affairs to Iran.

The **first national all-veterans wheelchair games,** featuring track and field events and swimming and table tennis competition, was held last month at the Richmond, Va., VA Medical Center.

Senior Staff Changes

PROMOTIONS: To be **General:** James V. **Hartinger.**

RETIREMENTS: B/G Lyman E. **Buzard;** B/G Allison G. **Glover;** B/G Robert C. **Karns;** B/G William L. **Shields,** Jr.

CHANGES: B/G Harley Hughes, from Dep. Dir. of Plans, DCS/P&O, Hq. USAF, Washington, D. C., to Cmdr., 19th Air Div., SAC, Carswell AFB, Tex., replacing retired B/G Lyman E. Buzard . . . **B/G John A. Shaud,** from Cmdr., 57th Air Div., SAC, Minot AFB, N. D., to Dep. Dir. of Plans, DCS/P&O Hq. USAF, Washington, D. C., replacing B/G Harley Hughes . . . **B/G John H. Storrie,** from Inspector General, Hq. AFSC, Andrews AFB, Md., to Dir. of Space, DCS/P&O, Hq. USAF, Washington, D. C. ■

INTERCOM

With this issue, the "Intercom" section makes its debut in AIR FORCE Magazine. "Intercom" contains familiar elements, as well as new ones. Its objective is to provide focus and attention in the magazine to AFA happenings. This first "Intercom" gives most attention to people and events at the Thirty-fifth AFA Convention. In future issues, emphasis will be given to chapter activities, "lessons learned" at chapters and national headquarters, and achievements by AFA men and women. The AFA national staff and AIR FORCE Magazine welcome your comments on "Intercom."

AFA's 1981 Convention: With Pride and Faith

AFA's 1981 National Convention was dedicated to Jack B. Gross, in tribute to his twenty-one years of dedicated leadership as National Treasurer. Mr. Gross had earlier this year announced that he would not seek another one-year term of office. A highlight of the "Salute to Jack Gross" was a speakerphone telephone call to Jack at his home in Pennsylvania where he was recuperating from surgery. With his usual good humor, Jack wished the delegates a successful convention.

Opening Ceremonies

The theme of the Convention was "Pride in the Past—Faith in the Future." Richard V. Allen, Assistant to the President for National Security Affairs, delivered the keynote speech. Allen said that the key defense tenets of the Reagan Administration are a quick reduction in the nation's window of vulnerability and the restoration of its margin of safety. In order to maintain the credibility of the nation's deterrent the Administration must move ahead to restore the strategic balance so that the chances of Soviet miscalculation and a major confrontation are kept to a minimum. To this end, the Reagan Administration will be the first to address simultaneously the task of rebuilding all three legs of the nation's strategic nuclear Triad, he said. Steadiness of purpose, along with industrial and public confidence, is vital to the success of the defense program now being put into place, Allen said.

THE WHITE HOUSE
WASHINGTON

September 12, 1981

As a charter member of the Air Force Association, I am especially delighted to welcome you to our Nation's Capital as you meet for your 1981 National Convention.

Your presence here underscores your commitment to the defense and well-being of our nation. As I travel this land, I sense a renewed dedication to the values and traditions that made our nation great. The spirit of patriotism built by our forefathers and defended by our Armed Forces lives on in the hearts of our countrymen. I commend the Air Force Association for all you have done and will continue to do to safeguard our most cherished gift -- peace with freedom.

You have my best wishes for an enjoyable and productive meeting and every success in the years ahead.

Sincerely,

Ronald Reagan

Chairman of the Board Dan Callahan addresses one of the Association's business sessions. Delegates from AFA chapters in forty-two states and the District of Columbia approved two position papers to direct AFA actions during the year.

INTERCOM

The invocation was given by USAF Chief of Chaplains, Maj. Gen. Richard Carr. Rev. Msgr. Rosario L. U. Montcalm, AFA National Chaplain from Holyoke, Mass., delivered a memorial tribute to aviation and AFA leaders and supporters who died during the past year *(see box)*.

National President Victor R. Kregel, assisted by Board Chairman Dan F. Callahan, presented awards to fifty-nine individuals and units of AFA and the Air Force *(see p. 117 and p. 118)*. Exceptional Service Award winners and Medal of Merit winners for 1981 were asked to stand and be recognized.

Business Sessions

Delegates from forty-two states and the District of Columbia adopted unanimously the annual Statement of Policy *(p. 30)* and two major position papers: "Force Modernization and R&D" *(p. 32)* and "Defense Manpower Issues" *(p. 38)*. These documents set the direction of AFA support and action for the year ahead.

Delegates amended AFA's National Constitution and Bylaws to establish chapters in foreign lands; increase the Board of Directors meeting quorum from ten members to twenty-five voting members; clarify the Treasurer's responsibilities regarding the annual budget; and clarify the responsibilities of the Executive Director regarding certain expenses within approved budget totals. The AFA National Convention Rules and Procedures were amended to reduce the deadline period for submission of resolutions from sixty to forty-five days prior to the Convention.

The delegates unanimously approved an increase in the one-year dues rate from $13 to $15. Other dues rates were unchanged.

Named in Memorial Tribute

These are the names of the USAF and AFA leaders and supporters and aviation pioneers who died during the last year: Col. Bill **Adams,** Col. Leon **Booth,** Gen. Omar N. **Bradley,** Clifton C. **Brewer,** Maj. Gen. Robert E. **Condon,** Leo A. **Daly,** N. W. **de Bernardinis,** the Hon. Peter H. **Dominick,** Donald W. **Douglas,** Col. Manuel J. **Fernandez,** Gen. John K. **Gerhart,** Brig. Gen. Frederic C. **Gray,** Lt. Col. James P. **Gunter,** John H. **Haire,** Capt. Nick **Hauck,** Brig. Gen. John L. **Hoar,** Frederick A. **Hoover,** Lt. Col. James **Jones,** William H. **Kelly,** Brig. Gen. Benjamin S. **Kelsey,** George **Lambkin,** Edwin A. **Link,** Adm. John S. **McCain,** Jr., John K. **Northrop,** Brig. Gen. William P. **Nuckols,** Ben T. **Plymale,** William A. **Rogers,** Howard O. **Scott,** Lt. Col. D. L. **Smith,** Mrs. Arthur **Storz,** Stanley **Switlik,** the Hon. Olin E. **Teague,** Stuart G. **Tipton,** and Juan T. **Trippe.**

Air Force Association's 1981 Activity Awards

UNIT RECIPIENTS

Donald W. Steele, Sr., Memorial Award
AFA Unit of the Year
Alamo Chapter, Texas

Outstanding State Organization
New Jersey State Organization

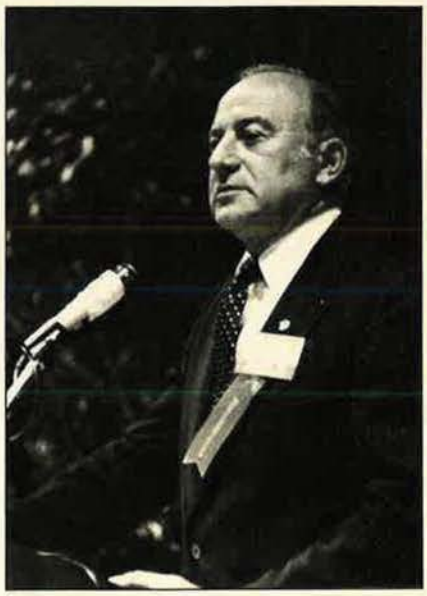
Outstanding Chapters
Central Oklahoma (Gerrity) Chapter, Oklahoma (more than 500 members)
Mobile Chapter, Alabama (101–500 members)
Charles A. Lindbergh Chapter, Connecticut (20–100 members)

Exceptional Service Awards
Eglin Chapter, Florida (Best Single Program)
Pennsylvania State Organization (Aerospace Education)
San Bernardino Area Chapter, California (Communications)
Scott Memorial Chapter, Illinois (Community Relations)
Langley Chapter, Virginia (Overall Programming)
Nation's Capital Chapter, Washington, D. C. (Overall Programming)

Election of Officers

Delegates elected John G. Brosky as National President, Victor R. Kregel as Chairman of the Board, Earl D. Clark, Jr., as Secretary, and George H. Chabbott as National Treasurer.

Judge Brosky serves on the Superior Court of Pennsylvania and is a former Judge of the Allegheny County, Pa., Common Pleas Court. He retired from the Air Force as a brigadier general, and he is a retired major general of the Pennsylvania Air National Guard. During World War II he served in the South Pacific as an artillery captain. After the war, he joined the Pennsylvania Air National Guard and was assigned to the 171st Military Airlift Wing in Pittsburgh, eventually serving as Assistant Adjutant General for Air, an office he held on his retirement. He is a graduate of the University of Pittsburgh and its law school and is an Outstanding Letterman of Distinction at the University. A former writer, he also has been active in many national and local civic organizations. He has served as a Na-



John G. Brosky, newly elected National President, addresses the convention.

Air Force Association's 1981 Activity Awards

INDIVIDUAL RECIPIENTS

AFA Man of the Year

Daniel F. Callahan, Florida

Presidential Citations

David L. Blankenship, Oklahoma
John G. Brosky, Pennsylvania
Earl D. Clark, Jr., Kansas
R. L. Devoucoux, New Hampshire
Jon R. Donnelly, Virginia
Richard C. Doom, California
Joseph R. Falcone, Connecticut
Alexander C. Field, Jr., Florida
John P. Flynn, Texas
Martin H. Harris, Florida
Francis L. Jones, Texas
Arthur L. Littman, California
J. Gilbert Nettleton, Jr., Maryland
Jack C. Price, Utah
Kenneth A. Rowe, Virginia
John V. Sorenson, Alabama
J. Deane Sterrett, Pennsylvania
Liston T. Taylor, California
A. A. West, Virginia

Exceptional Service Awards

Kaye H. Biggar, Texas
Thomas O. Bigger, Tennessee
S. Samuel Boghosian, California
Arthur R. Brannen, Arkansas
CMSgt. Robert W. Carter, Texas
William L. Copeland, Georgia
Leland P. Derrick, California
John H. deRussy, Florida
Donald W. Disbrow, California
John F. Dolan, New York
Hugh L. Enyart, Illinois
Donald F. Flaherty, California
Edward J. Fox, Texas
Robert W. Gates, Florida
William J. Gibson, Utah
David Graham, California
Robert F. Hazeleaf, California
H. B. Henderson, Virginia
John R. Hinton, Jr., California
John P. E. Kruse, New Jersey
Frank M. Lugo, Alabama
Samuel B. Moody, Florida
Daniel A. K. Proctor, Texas
Robert J. Puglisi, Ohio
William T. Reynolds, Maryland
William W. Roth, Texas
Maj. Gen. Darrol G. Schroeder, North Dakota
James C. Shutt, Texas
Col. Marvin G. Spallina, Oklahoma
Hugh W. Stewart, Arizona
Robert B. Stiastny, New Jersey
James H. Taylor, Utah
Kenneth C. Thayer, New York
Capt. Timothy T. Timmons, Virginia
Ronald N. Wallis, Oklahoma
George R. Weinbrenner, Texas

Medals of Merit

William Baron, South Dakota
Robert J. Beatson, Maryland
Capt. Thomas J. Berry, Jr., Arkansas
Jerome M. Blaine, Ohio
Charles D. Briggs, Jr., Florida
Brig. Gen. A. Paul Bruno, Utah
Jackie L. Bunn, California
George J. Burrus III, Florida
Jack Certain, Utah
Col. Edward L. Claiborn, California
Henry M. Cline, Texas
Ernest J. Collette, Jr., North Dakota
Chaplain Robert D. Coward, Florida
George W. Davis, Jr., Virginia
Delphia Dummitt, California
Gen. William J. Evans, Connecticut
Charles W. Ferrell, Tennessee
Bernard L. Gaydosh, Texas
Richard D. Gibbs, Maryland
Lee V. Gossick, Tennessee
Col. Albert C. Guidotti, Delaware
H. L. Hamrick, Florida
Brig. Gen. William E. Haymes, Sr., Virginia
Betty Hazeleaf, California
Thomas W. Henderson, Arizona
Mary V. Holub, Texas
John R. Kagel, Indiana
Joseph W. Kellogg, Texas
Donald L. Krekelberg, Alabama
Richard C. Lehman, Texas
Giles D. Leonard, Utah
Eugene B. Lewis, Arizona
Hugh L. Malone, Tennessee
Jeryl L. Marlatt, Michigan
Elizabeth F. Martin, Alabama
Charles B. Mathews, Florida
Julius P. Maxwell, Tennessee
Robert C. McCullough, Texas
Robert G. McMath, Arizona
Joseph A. Moller, Arizona
Edward J. Monaghan, Alaska
R. Gilbert Moore, Utah
LeRoy W. Niehaus, Pennsylvania
Byron J. Scott Norwood, California
Maj. Gen. Dalton S. Oliver, Louisiana
Douglas L. Pangborn, Oklahoma
Van R. Parker, California
Roy C. Redman, California
Lyle O. Remde, Nebraska
William H. Rice, Jr., Florida
Lawrence B. Ryan, New York
William L. Ryon, Jr., Maryland
Clair J. Smith, Ohio
David C. Stoltz, Texas
Herbert B. Stone, California
J. R. Temple, Virginia
Victor H. Thompson, Jr., Texas
Joseph H. Turner, New Mexico
Morgan S. Tyler, Jr., Florida
Maurice H. Udell, Texas
Ray S. Villareal, California
Lou Villegas, California
Orland Wages, Virginia
Charles E. Walker, Utah
Jack K. Westbrook, Tennessee
John J. White, Pennsylvania
Evlyn Wilcox, California
Lyman F. Worthington, Arizona
William G. Zavatson, Texas

Special Citations

Cecil G. Brendle, Alabama
Gaylord E. Giles, Oklahoma
Thurman A. Glasgow, Texas
Richard D. Kisling, Maryland
Charles E. Lucas, Virginia
Frank and William Moore, California
Col. John H. Price, Virginia
SSgt. John Cassidy & Sgt. Jose M. Rios, California
Edward A. Stearn, California

Commander's Award

Alamo Chapter, Texas

American Spirit Award

Barbarann Vessels, Oklahoma

tional Director; National Vice President (Northeast Region); State President; and Chapter President, Vice President, and Secretary. He is a member of the Aerospace Education Foundation Board of Trustees and is a Jimmy Doolittle Fellow. He is the founder of AFA's Air Force Mothers Chapter of Pittsburgh, Pa. He is an AFA Life Member.

Victor R. Kregel is an industry executive in Dallas, Tex. He entered the Air Force in 1942 and received a commission and pilot's wings in 1943. He completed Navy flight training in 1944 and received the gold wings of a Naval aviator. He flew 500 combat hours in the Southwest Pacific and later served as an exchange officer with Fighter Command, Royal Air Force. A graduate of several service schools and the University of Maryland, he was a mem-

The United States Air Force Sword of Honour

Commemorating the 40th Anniversary of the Second World War

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Every year, organizations and individuals ask Wilkinson Sword to devote their skills to the making of special swords for great occasions, or as small limited editions for collectors and investors.

Occasionally, they have to decline these invitations, for true craftsmen swordsmiths are very rare artisans these days, and only commissions of exceptional interest and prestige, and of the highest order, can be allowed to claim their attention.

It has in fact taken many months of highly skilled and painstaking work to create this outstandingly beautiful and valuable sword. The blade is embossed with the United States aircraft used during the second world war which helped to destroy the Luftwaffe and the thousands of bombing raids which destroyed the Nazi regime.

This sword is 33 inches in length, the cross piece and pommel are made from surgical steel and are silver plated. The grip is made of Rosewood and is hand french polished. On the shell guard is the official United States Air Force Badge which is also silver plated. Please be advised that there is no accompanying scabbard.

Of course, collector value does tend to relate directly to the edition limit, and it is in those cases where this has been severely restricted (perhaps to as few as a thousand swords) that the astute investor is likely to see the most satisfying return.

Only one thousand of the United States Air Force Sword of Honour will be made, suggesting that these magnificent replicas are likely to be highly regarded by shrewd collectors, and certainly promising that they will take a proud place amongst the most valuable limited editions to bear the prestigious Wilkinson Sword name.

This sword is not available to the general public—*only* to serving and past members of the United States Air Force. It will not be advertised in any newspaper or periodicals other than the "Air Force" magazine and other pertinent Air Force pamphlets.

This sword is $U.S. 295.00 plus $U.S. 3.00 shipping charges direct from the Sword Division in Canada.

Delivery of these swords is expected to be between six to eight weeks. **[Customs duty is extra]**

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ber of the Air University faculty and served as Business Manager of Athletics at the United States Air Force Academy in Colorado Springs. He has served as National President, National Director, National Vice President (Southwest Region), and State and Chapter President. A member of the Aerospace Education Foundation Board of Trustees, he is an AFA Life Member.

Earl D. Clark, Jr., of Kansas City, Kan., is President of the Collins Construction Company and the Earl D. Clark Architectural Firm. He is an Air Force colonel in the retired reserve. He has served AFA as a National Director, National Vice President (Midwest Region), and as a State and Chapter President. A member of the Aerospace Education Foundation Board of Trustees, he is an AFA Life Member.

George H. Chabbott, of Dover, Del., is a management consultant and real estate counselor, President of Commercial Consulting Ltd., and Vice President of Emerson Commercial Industrial Real Estate Division. He served in the Air Force for twenty-three years, retiring as a colonel. He participated in 150 combat missions flying B-26s in Korea, and served as a forward air controller in the Vietnam War. He is a graduate of Utah State University, and attended senior-level finance courses at the Columbia School of Bank Administration and Management, and courses at the National Commercial Lending School at the University of Oklahoma. He has served AFA as a National Director, National Vice President (Central East Region), and State President. He is an AFA Life Member.

Vice Presidents

Six new Vice Presidents were elected to head activities in AFA regions; six others were reelected. The new Vice Presidents are: H. B. Henderson, of Seaford, Va., Central East Region; Lee Lingelbach, of Warner Robins, Ga., Southeast Region; Frank M. Lugo, of Mobile, Ala., South Central Region; Howard C. Strand, of Battle Creek, Mich., Great Lakes Region; William N. Webb, of Midwest City, Okla., Southwest Region; and Edward A. Stearn, of Redlands, Calif., Far West Region.

The six reelected Vice Presidents are: Joseph R. Falcone, of Rockville, Conn., New England Region; J. Deane Sterrett, of Beaver Falls, Pa., Northeast Region; Ernest J. Collette, Jr., of Grand Forks, N. D., North Central Region; Lyle O. Remde, of Omaha, Neb., Midwest Region; James H. Taylor, of Farmington, Utah, Rocky Mountain Region; and Edward J. Monaghan, of Anchorage, Alaska, Northwest Region.

During the Aerospace Education Foundation's annual luncheon, top photo, Gen. Jimmy Doolittle, right, an AEF Trustee, and Sen. Barry Goldwater (R-Ariz.), right, AEF Board Chairman, join AEF Treasurer George Hardy in preparing to present the Foundation's Corporate Plaques. Above, Judge John G. Brosky, left, new AFA President, and Jimmy Doolittle flank Gen. Ira C. Eaker, noted aerospace pioneer, writer, and leader. General Eaker received AEF's highest award, the Hoyt S. Vandenberg Award.

Directors

Four new National Directors were elected to the Board. They are: Jon R. Donnelly, of Richmond, Va.; James P. Grazioso, of West New York, N. J; Francis L. Jones, of Wichita Falls, Tex.; and Liston T. Taylor, of Lompoc, Calif.

Fourteen directors were reelected. They are: David L. Blankenship, Okla-

homa; Robert L. Carr, Pennsylvania; William P. Chandler, Arizona; Hoadley Dean, South Dakota; R. L. Devoucoux, New Hampshire; E. F. Faust, Texas; Alexander C. Field, Florida; Alexander E. Harris, Arkansas; Arthur L. Littman, California; William V. McBride, Texas; William C. Rapp, New York; Margaret A. Reed, Washington; R. Steve Ritchie, Colorado; and Sherman W. Wilkins, Washington.

These eighteen directors join four directors under forty years of age elected earlier this year as members of the Board of Directors. Other members of the Board are permanent National Directors, National Officers, National Vice Presidents, the immediate past Chief of Staff of the Air Force, the immediate past Chief Master Sergeant of the Air Force, National Chaplain, National Commander of the Arnold Air Society, Chairman of AFA's Junior Officer Advisory Committee, Chairman of AFA's Enlisted Council, and the AFA Executive Director. Complete Board membership appears in "This Is AFA," p. 123.

Symposia

A new element of the Convention was the scheduling of three symposia: AFA Field Leaders Symposium; "Aerospace Technology in the Current Five Year Defense Plan"; and "Engineers: A National Resource—Scarcity, Challenge, and Future Implications."

Lt. Gen. John B. McPherson, USAF (Ret.), President of the Air Force Historical Foundation, addresses the Foundation's Board of Directors as former Secretary of the Air Force Robert C. Seamans, Jr., looks on. During meetings held at the same time as the Air Force Association Convention in Washington, the governing boards of the AFHF and AFA's educational arm, the Aerospace Education Foundation, approved continuing efforts toward consolidation of the two organizations. *See item on p. 126.*

The Field Leader Symposium provided an opportunity for AFA members to be updated on the many issues associated with improving unit operation and effectiveness, and to become acquainted with key national staff mem-

The pace was fast and furious as Air Force Association volunteers labored to register the delegates, exhibitors, guests, and participants during the Convention.

INTERCOM

Anniversary Dinner Dance

As is the tradition, a formal—but light-hearted—Dinner Dance capped the business side of AFA's annual National Convention in the nation's capital in September.

Held in the ballroom of the Sheraton Washington Hotel convention site, the annual event celebrating USAF's birthday drew top Air Force leadership of all ranks as well as the AFA attendees.

Although carefree, the Dinner Dance was not without its serious moments. At the behest of AFA President Kregel, all toasted the USAF's thirty-four years as a service and seventy-four years as an air force, and the thirty-fifth anniversary of the Air Force Association.

Mr. Kregel introduced, among others, Judge John G. Brosky, the newly elected AFA National President. He then presented two of AFA's highest honors: the Gill Robb Wilson Award for outstanding contributions in the field of Arts and Letters to Col. Arnald D. Gabriel and the Air Force Band. Accepting were Colonel Gabriel, with more than seventeen years as Commander and Conductor, and CMSgt. Fritz Wyss, NCO in Charge of the Band, in its fortieth year of service to the Air Force and nation. In acceptance remarks, Colonel Gabriel praised all elements of the Band—the Concert Band, Singing Sergeants, Strolling Strings, Airmen of Note, Mach 1, the Ceremonial Band, combos, and the support staff—for their dedication.

Gen. David C. Jones, Chairman of the Joint Chiefs of Staff, was presented the H. H. Arnold Award, recognizing him as Aerospace Man of the Year.

Following the presentations, two old comrades-in-arms traded gentle joshing to create an atmosphere rich in reminiscences. As crewmates aboard a B-29 during World War II, Russ Dougherty and Ernie Ford forged a friendship that has endured to this day. Russell Dougherty rose to the rank of four-star general and now serves as Executive Director of AFA. Tennessee Ernie Ford, a member and associated with AFA throughout its history, went on to become a nationally popular singer and entertainer. He acted as master of ceremonies at the National Convention on two previous occasions.

Said Gen. Russ Dougherty of Mr. Ford: "Ernie Ford was a superb crew member and an expert with the Norden bombsight. . . . But I paid a price for this expertise. For Ernie constantly sang on the interphone. *Even on the bomb run, he would hum and sing.* Fortunately for those of you who have been privileged to see the configuration of a B-29, the pilot can reach the back of the helmet of the bombardier with his right foot. . . ."

In a more serious vein, Russ Dougherty commented: "He's given his name to the Ernie Ford Chapter in the San Francisco Bay area. He has given selflessly of his rare talent and extraordinary personal charm to hundreds and hundreds of Air Force audiences across this land and overseas. . . ."

For his part in the evening's entertainment program, Tennessee Ernie offered good-natured banter interspersed with a medley of songs, including such classic trademarks as "Sixteen Tons" and "Tennessee Waltz."

Also performing for the appreciative guests were the Singing Sergeants and the Air Force Symphony Orchestra, conducted by Colonel Gabriel. Dance music was provided by the Steve Lesieur Orchestras.

A late-evening highlight of the program was the surprise appearance of the Airmen of Note dressed in World War II Army Air Corps "pinks and greens" uniforms. True to form, they played a selection of Glenn Miller hits, to the delight of the audience. Glenn Miller look-alike CMSgt. Dave Steinmeyer and female singer Helen Forrest sound-alike TSgt. Bobbie McCleary added additional World War II-era atmosphere.

—W P S

In top photo, President Vic Kregel, left, presents the Gill Robb Wilson Award for Arts and Letters to Air Force Band Commander Col. Arnald Gabriel and CMSgt. Fritz Wyss. Above, two old friends together again—Gen. Russ Dougherty, AFA Executive Director, and Tennessee Ernie Ford.

bers helping in the effort *(see p. 60)*.

"Aerospace Technology in the Current Five-Year Defense Plan" addressed such critical issues as strategic force modernization, the military mission in space, airlift enhancement, and the necessity of a strong economy *(see p. 63)*.

"Engineers: A National Resource—Scarcity, Challenge, and Future Implications" discussed the nation's critical shortage of engineers and technicians and how that affects national security and US scientific and technological progress *(see p. 62)*.

Acknowledgments

Robert J. Puglisi, Vice President (Great Lakes Region), served as Sergeant at Arms. Jack C. Price, Chairman of the Constitution Committee and former AFA National Secretary, served as Parliamentarian. Credentials Committee members were: William N. Webb, Chairman; John P. Byrne, President of Arizona State AFA; and Marjorie O. Hunt, member of the Constitution Committee. Inspectors of Election were: James H. Taylor, National Vice President (Rocky Mountain Region); Sam E. Keith, Jr., National Director; and William A. Dietrich, President of Missouri State AFA.

With deep gratitude, AFA acknowledges the important volunteer contributions to the success of the Convention by the following individuals: Jane Belanger, Cecil Brendle, Dave Dingley, Evie Dunn, Olive Felty, Mary Gill, Jean Isaacs, Helen Jeffrey, Phil Loebach, Chuck and Mary Lucas, Dan Marrs, Lee Meador, Betty Nelson, Sue Noerr, Irene Robertson, and Wanni Spence. They donated their time and effort to help ensure that the AFA Convention functioned smoothly.

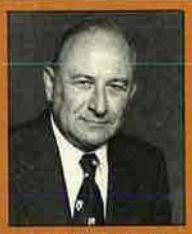
Our appreciation also goes to AFA leaders and delegates who attended the Convention and whose diligent efforts contributed toward making it one of the most enjoyable, productive, and interesting National Conventions. Our

THIS IS AFA

The Air Force Association is an independent, nonprofit, aerospace organization serving no personal, political, or commercial interests; established January 26, 1946; incorporated February 4, 1946.

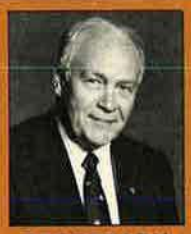
OBJECTIVES

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 for all mankind.

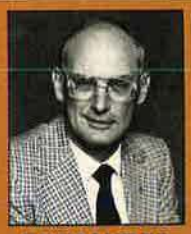


PRESIDENT
John G. Brosky
Pittsburgh, Pa.

BOARD CHAIRMAN
Victor R. Kregel
Dallas, Tex.



SECRETARY
Earl D. Clark, Jr.
Kansas City, Kan.



TREASURER
George H. Chabbott
Dover, Del.

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Information regarding AFA activity within a particular state may be obtained from the Vice President for the Region in which the state is located.

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(ex officio)
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AFA MEMBER SUPPLIES

Just in time for Christmas! Selected items for AFA members. Each item is emblazoned with the AFA logo. Especially nice to give as presents, presentations, or for your own use. Order by November 15 to ensure delivery by Christmas.

A. **Tankard:** Polished pewter, suitable for engraving. $16.

B. **Cross Pen:** Gold-Plated with full-color AFA logo. $16.

C. **Member Pin:** Gold-filled member lapel pin. $15.

D. **Stickpin:** Gold-filled member stickpin. $16.

E. **Paperweight:** Clear Lucite with embedded AFA logo. $13.

F. **Briefcase:** Suede with AFA logo. $29.50.

G. **Ties:** Fifty percent silk/fifty percent polyester, embroidered logo. Specify navy or maroon. $15.

H. **Ladies Scarf:** 100 percent silk with navy trim and logos. $15.

I. **Pocket Knife:** Light weight, engravable, made by Swiss Army Knife manufacturers. $15.

J. **Luggage Tag:** 35th Anniversary Commemorative Bag Tag. Reverse side for name and address. Leather strap. $1.

ORDER FORM

Please indicate below the quantity desired for each item to be shipped.

A. Tankard $16 ____
B. Cross Pen $16 ____
C. Member Pin $15 ____
D. Stickpin $16 ____
E. Paperweight $13 ____
F. Briefcase $29.50 ____
G. Ties $15
Specify: Navy ____
Maroon ____
H. Ladies Scarf $15 ____
I. Pocket Knife $15 ____
J. Luggage Tag $1 ____

Total for items $ _____

Enclose your check or money order made payable to the AIR FORCE ASSOCIATION, and send to: 1750 Pennsylvania Ave., N.W., Suite 410, Washington, D.C. 20006. (D.C. residents add 6% sales tax)

Name _____
(please print)

Address _____

City _____

State _____ Zip _____

1981 AFA Membership Achievement Awards

Each year, specific membership objectives for new members are established for AFA Regions, State Organizations, and Chapters. The units listed below achieved these objectives as of July 31 (two months prior to the September 30 close of the chapter year) and were recognized as pacesetters during the September National Convention. The names of additional units achieving their membership objective by the September 30 date will be published in the December issue of AIR FORCE Magazine.

REGIONS	VICE PRESIDENTS
Rocky Mountain	James H. Taylor
Southwest	Francis L. Jones

STATE WINNERS	PRESIDENTS
Alaska	Frank X. Chapados
Arizona	John P. Bryne
Arkansas	Arthur R. Brannen
Georgia	Lee C. Lingelbach
Idaho	David P. Swearingen
Maine	Arley McQueen, Jr.
Maryland	Thomas W. Anthony
New Jersey	John P. E. Kruse
New Mexico	Joe Turner
Oklahoma	Aaron C. Burleson
Utah	William J. Gibson

CHAPTER WINNERS	PRESIDENTS
Abilene (Texas)	Ronald W. Mick
Admiral C. E. Rosendahl (New Jersey)	Ronald Montgomery
Airport #1 (Pennsylvania)	Lee W. Niehaus
Alamo (Texas)	James Shutt
Altus (Oklahoma)	William L. Dobbs
Anchorage (Alaska)	Casper S. Bierman
Andrews Area (Maryland)	William L. Ryon
Blytheville (Arkansas)	John B. McNulty
Central Missouri (Missouri)	Paul E. Rodriguez
Central Oklahoma (Gerrity) (Oklahoma)	Rex Ball
Charles A. Lindbergh (Connecticut)	Alton G. Hudson
Chattahoochee Valley (Georgia)	William W. Harrington
Chautauqua (New York)	Elden B. Hollobaugh
Chicopee (Massachusetts)	Andrew W. Trushaw, Jr.
Colorado Springs (Colorado)	Frank E. Merritt
Concho (Texas)	R. F. Durso
Coosa Valley (Georgia)	William T. French
Dacotah (South Dakota)	Philip G. Killey
David D. Terry, Jr. (Arkansas)	Harry Daugherty
David J. Price/Beale (California)	Tony Bevacqua
Delaware Galaxy (Delaware)	Joseph H. Allen, Jr.
Eugene (Oregon)	Scott Sloane
Fairbanks Midnight Sun (Alaska)	Michael T. Cook
Flying Yankees (Connecticut)	George Demato
Fran Parker (New Mexico)	Bruce Pedersen
Garden State (New Jersey)	Phyllis Gajdos
Gen. Daniel James, Jr., Memorial (New York)	Dorothy Wadsley
General George C. Kenney (Connecticut)	Irving Tulin
General Robert F. Travis (California)	Donald W. Disbrow
Gold Card (Utah)	Harry L. Cleveland
Greater Amarillo Area (Texas)	David D. Cooper
Greater Pittsburgh (Pennsylvania)	Tillie Metzger
Gus Grissom (Indiana)	Donald James
H. H. Arnold Memorial (Tennessee)	Lee V. Gossick
Heart of the Hills (Texas)	Edward J. Fox
High Desert (California)	Albert R. Bienert
Hudson (New Jersey)	Joseph J. Bendetto
James H. Straubel (Michigan)	Marjorie O. Hunt
Jax (Florida)	Roy E. Nelson
John C. Stennis (Mississippi)	Bryan M. Shotts
Lake Superior Northland (Michigan)	R. Thomas Peters, Jr.
Leigh Wade (Virginia)	Andrew H. Heath
Llano Estacado (New Mexico)	Ken Huey, Jr.
Mercer County (New Jersey)	Irving Lewis
Middle Georgia (Georgia)	Bobby E. Bates
Ogden (Utah)	Charles E. Walker
Plattsburgh (New York)	James F. Judkins, Jr.
Pope (North Carolina)	Hank Finch
Razorback (Arkansas)	Ben Ashmore
Reno (Nevada)	William L. Skliar
Richmond (Virginia)	George W. Davis, Jr.
Rocky Mountain (Utah)	Lorene Walker
Sacramento (California)	Van Parker
Sal Capriglione (New Jersey)	Joseph M. Capriglione
Salt Lake (Utah)	Douglas Adamson
San Bernardino (California)	Evlyn Wilcox
Scott Memorial (Illinois)	Hugh Enyart
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Steel Valley (Ohio)	Clair J. Smith
Tallahassee (Florida)	T. K. Potter, Jr.
Tennessee Ernie Ford (California)	Scott Norwood
Thomas B. McGuire, Jr. (New Jersey)	Frank S. Kula
Thomas Watson, Sr. (New York)	Robert Austin
Topeka (Kansas)	Wilbur R. Wortham, Jr.
Tucson (Arizona)	Tom Henderson
Union Morris (New Jersey)	Robert B. Stiastny
Ute (Utah)	Giles D. Leonard
Wasatch (Utah)	George W. Jenson

thanks also go to all registrants for their cooperation with security arrangements. We are grateful to the many AFA leaders in the field whose personal contributions of time, effort, and finances have helped enhance AFA's continued growth and prestige through the past thirty-five years.

AFA's 1982 National Convention will be held at the Sheraton Washington Hotel in Washington, D. C., September 13–16. —By Vic Powell

Alamo Chapter Joins in Honoring Top Recruiters

Recently, AFA's Alamo Chapter joined the Air Force Recruiting Service and San Antonio Chamber of Commerce Military Affairs Council to provide a week of honors and festivities for the winners of Blue Suit III, an annual recruiter incentive program sponsored jointly by the three organizations since 1979.

This year, the honors went to Flight 13F from Jamestown, N. Y. Flight 13F achieved more than 195 percent of its goal during the five-month competition period while maintaining a ninety-two

INTERCOM

Enjoying dinner on the San Antonio River are the winners of the jointly sponsored AFA and Recruiting Service Operation Blue Suit III Competition.

percent high school graduate rate.

"We couldn't have had this marvelous week without the enthusiastic support of people such as Jim Shutt [Alamo Chapter AFA President] and Frank Manupelli [former Texas State AFA President and current vice-chairman for the San Antonio Chamber of Commerce Military Affairs Council]," said Brig. Gen. Thomas C. Richards, Recruiting Service Commander.

The recruiters and their spouses traveled to Randolph AFB, Tex., for a whirlwind tour of San Antonio. Included in the week-long program, arranged by the local AFA Chapter and the Chamber, were: a Lone Star Brewery visit; riverboat dinner; Chamber-, AFA-, and Recruiting Service-hosted meals; dinner atop the Tower of the Americas; a visit to Lackland AFB, complete with a parade by graduating trainees; and lodging at the Hilton Palacio de Rio Hotel.

Members of the flight were: MSgt. Bobby Jacques; Ms. Cathy Firkel; MSgt. Mike Twaroski; MSgt. Bob Art; MSgt. Chuck Tache, Jr.; SSgt. Mark Linderman; SSgt. Jim Apperson; and Sgt. Mike Black. —By SSgt. Steven C. VanWert

"Affinity Groups" Respond to AFA's Outreach Program

AFA is reaching out to cooperate with "affinity groups." They are groups of Americans who served in the Air Force and its predecessor corps and have a continuing interest in US aerospace power. A letter went out from AFA national headquarters to nearly 300 of these groups, acknowledging their existence and expressing AFA's desire to cooperate with them in as many ways as possible. The responses have been truly heartening and open up new avenues for broadening the base of Americans who are dedicated to the principles articulated in AFA's Constitution.

Extracts from a sampling of the first several responses follow.

"We do need help. Please advise me of the cost to maintain a mailing list of 350 people."

Milton H. Sipple, Jr.
N. Calif. Ret. AWS Officers

"Thank you for your generous offer for help—there is a definite need for a clearing house for reunion associations. . . . The approach you're taking will be helpful to all."

W. D. Baird, M.D., Secretary
17th Bomb Group Reunion Association

"For far too many years we have watched AFA's activities from a distance and wished we could be part of them. You've now made that possible with your excellent letter."

Edward C. McCann,
Editor of *Whistle*
345th Devil Hawks

"The opportunity you've provided us to get help from AFA is a godsend! Right now our greatest need is a speaker for next year's reunion—could you help?"

Robert Holiday
391st Bomb Group Association

"Please send more information about the way you might be able to help us with mailing and reproduction costs."

R. C. Allen, Secretary-Treasurer
557th Bomb Squadron Association

"I appreciated your very welcome letter with regard to our common objectives . . . [and] I enclose a copy of our current address roster."

Wayne O. Seddon
459th Fighter Squadron

"I enclose herewith the names of our current mailing roster. . . . We urge our people repeatedly to join and support AFA. . . . The Constitution and bylaws of our Association provide that, upon dissolution, any funds in the treasury should go to the Air Force Museum and the Air Force Association."

Thomas C. Fetter
90th Bomb Group (H) "Jolly Rogers"

"We're all about seventy, or older, and not really interested in anything new. . . ." (NOTE: AFA's Executive Director, Russ Dougherty, replied: "Please don't let our seventy-year-old President of the US hear you say that!")

Aerospace Education Foundation and Air Force Historical Foundation Edging Toward Consolidation

The governing Boards of Trustees approved continuation of exploratory and coordinating efforts toward consolidation of the Air Force Association's educational affiliate, the Aerospace Education Foundation, and the Air Force Historical Foundation during meetings held in Washington that took place at the same time as the AFA Convention.

The actions resulted from several months of discussion between the respective staffs and leadership of the two foundations. The discussions aimed at developing ways and means through which the two organizations could enhance and strengthen the common objectives of "servicing the greater historical foundation of our past—relating them as prologue for our future security requirements—and utilizing our dynamic history on the vital and continuing progress of our aerospace education and program activities."

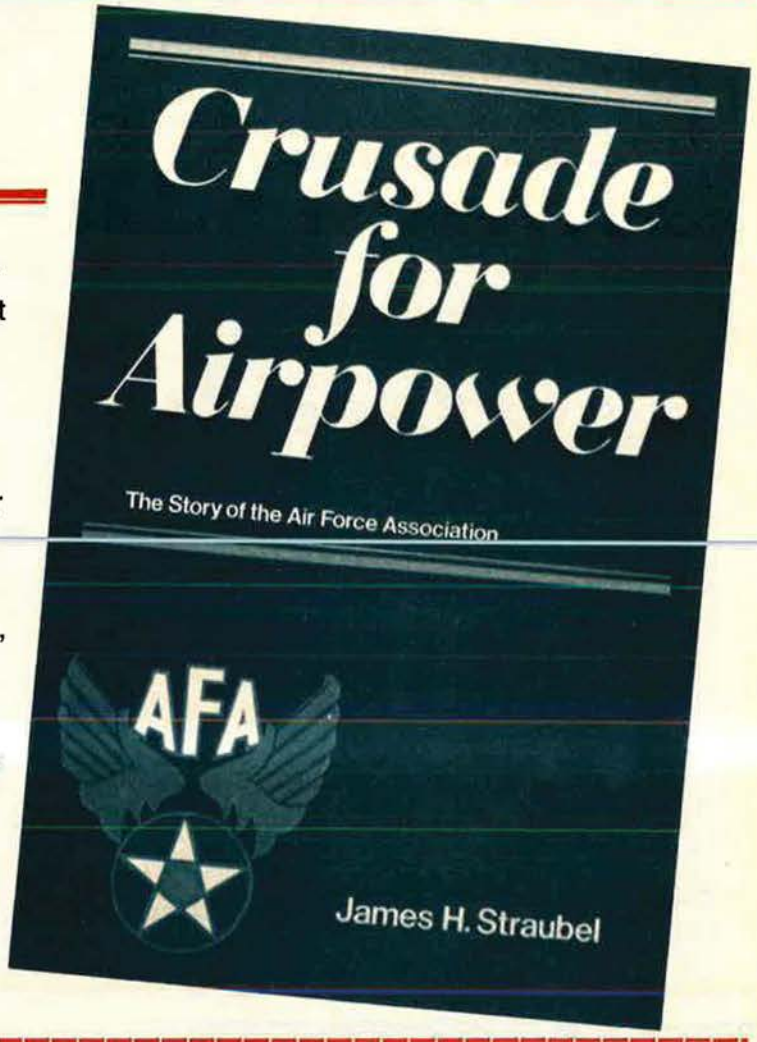
Speaking to the Air Force Historical Foundation Board of Trustees, Air Force Secretary Verne Orr said: "Without an organization like the Air Force Historical Foundation, the things we do today will neither live nor guide our actions tomorrow." He pledged support for the AFHF activities, saying, "It is vital to let the next generation know what the last one did."

Both Russell E. Dougherty, Executive Director of the Aerospace Education Foundation, and John B. McPherson, President of the Air Force Historical Foundation, noted that much more work remains to be done before the consolidation can be finalized, but that they are heartened by the support of their respective boards and the Air Force uniformed and civilian leadership for this vital step. ■

Crusade for Airpower

CRUSADE FOR AIRPOWER is continued confirmation that "what is past is prologue," and a reminder that "the heritage of the past is the seed that brings forth the harvest in the future." The educational value of this book transcends the Air Force Association, showing how concerned and dedicated Americans can educate themselves and others to achieve the basic requirements for national security.

This book is the story of AFA, with its ups and downs detailed in highly readable form, supplemented by a large collection of photos, many published here for the first time.



Crusade for Airpower

Please send me _____ copies of James H. Straubel's new book, *Crusade for Airpower: The Story of the Air Force Association,* at the special advance price of $12.45 plus $1.50 for shipping and handling for a total price of $13.95 per copy. (After December 31, 1981, the price will be $14.95, plus $1.50 for shipping and handling.) Expect delivery in late spring, 1982.

Name _____

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City _____

State _____ Zip _____

AFA Chapter _____

_____ copies @ $13.95 = $ _____

☐ Check or money order enclosed

☐ Charge to:

- ☐ American Express
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- ☐ Account No. _____
- ☐ Expiration date _____

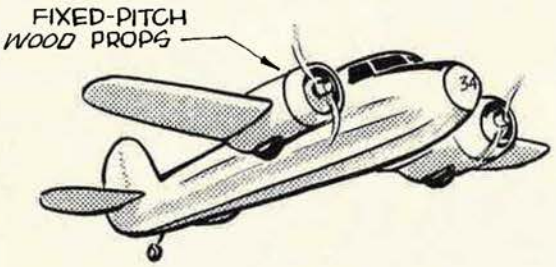
Make checks or money orders payable to: Aerospace Education Foundation, 1750 Pennsylvania Avenue, N.W., Washington, D.C. 20006

Signature _____

Bob Stevens'

"There I was..."

THE LC-78, CESSNA "BOBCAT" – A WOOD and FABRIC ***ADVANCED*** TRAINER WAS ALSO KNOWN AS:



" THE BAMBOO BOMBER"
" DOUBLE-BREASTED CUB"
" RHAPSODY IN GLUE"
" SAN JOAQUIN BEAUFIGHTER"
" FAMILY CAR OF THE AIR"

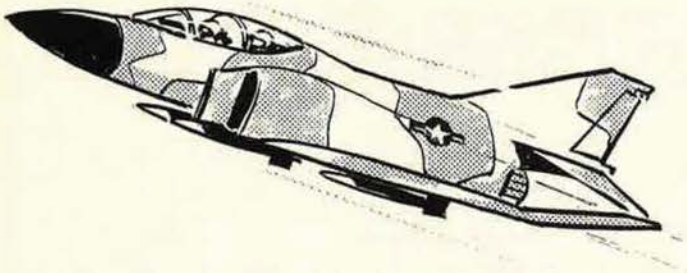
THE AIRMAN'S MIND IN REPOSE (A STATE OF LIMBO DURING THE HOURS & HOURS OF BOREDOM BETWEEN THE MOMENTS OF STARK TERROR ASSOCIATED WITH COMBAT) CAN CONJURE UP SOME WEIRD NICKNAMES FOR MEN and EQUIPMENT. HERE'S SOME OLDIES FROM OUR TIME IN PINKS & GREENS (OR BLUES – DEPENDING ON YOUR D.O.B.)...

THE WARRANT OFFICER, OR "HALF LT.," DREW A LOT OF FLAK...

(THERE WERE JR. and SR. GRADES)

HERE'S A FEW LATER MONIKERS:

IT ALL STARTED WITH THE PHANTOM. YOU ***HAD*** TO HAVE A NAME FOR THAT GUY IN THE OTHER SEAT!



F-4 = **GIB** (SIMPLY, GUY IN BACK)

F-105 F/G = **BEAR** (HE'S IN HIS PIT)

F-111 = **YOT** ("YOU OVER THERE!")

note: side by side seating

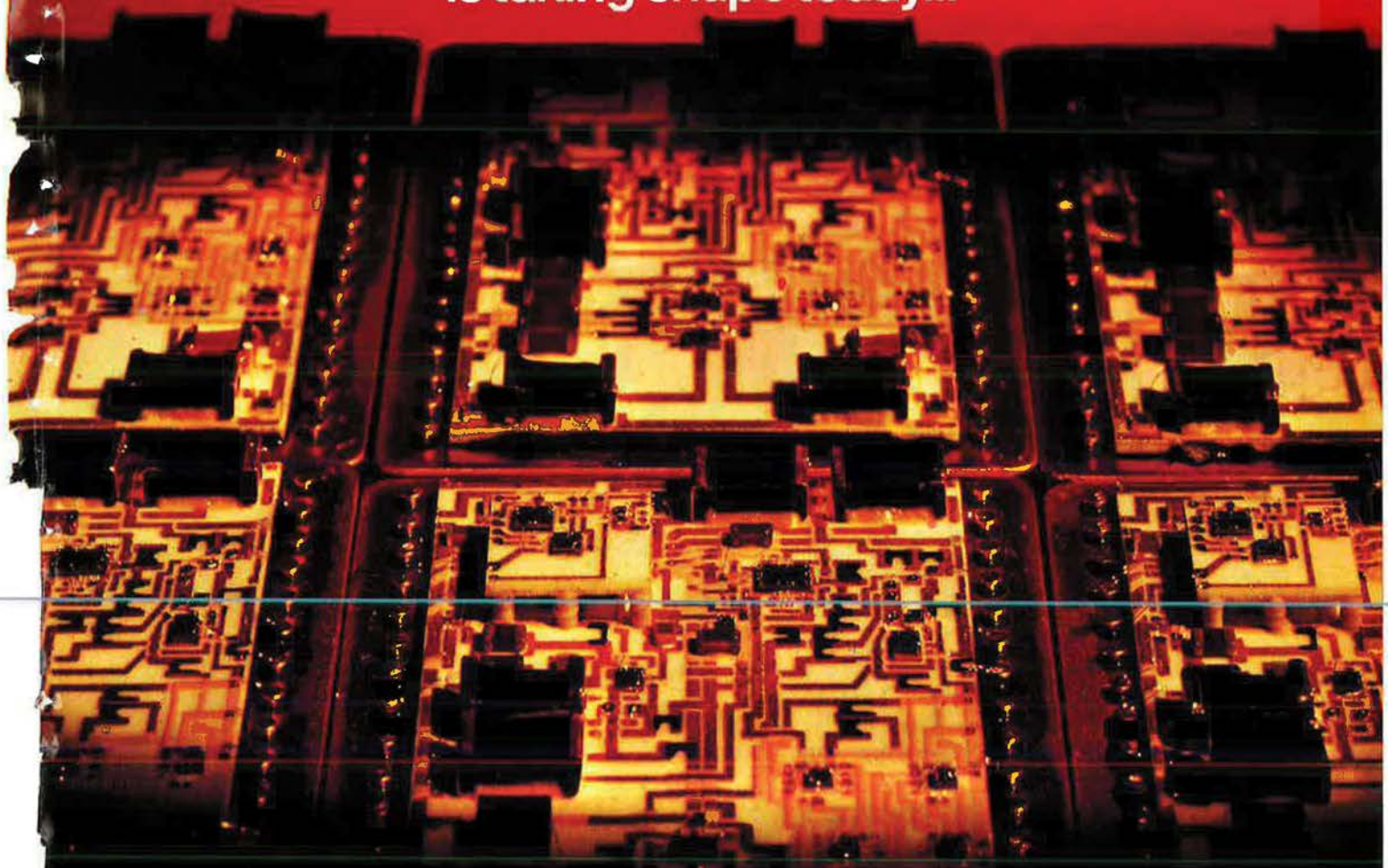
THANKS TO ROBB SATTERFIELD, MIDLAND TX.

IT NEVER FAILS

YOU'VE HAD A FIELD DAY ON THE OTHER SIDE OF THE BOMB LINE ALONE & ARE SURE YOU GOT 2 CONFIRMED and 1 PROBABLE ONLY TO FIND ON YOUR RETURN THAT THE TAPE WAS NOT REMOVED FROM THE GUN CAMERA!

Bob Stevens

The technology of tomorrow is taking shape today...



because someone asked Sperry.

Sperry's engineering leadership is a direct result of our commitment to advancing technology. We're hard at work developing the technologies which will meet the needs of the future. For example, we're advancing processor and sensor technologies today for the defense systems of the 1990's.

To detect and track the next generation of threats in heavy ECM environments, we're working with advanced doppler processing and spread spectrum techniques which will enhance radar survivability and performance. And our new cylindrical antenna concepts will provide low sidelobes with high system mobility.

We're working to miniaturize millimeter wave systems for the missiles of tomorrow.

We're exploring digital beam forming as a technique to reduce the cost and increase the capabilities of electronic scanning antennas.

We're developing new fiber optic laser sensors and systems, improving their sensitivity and dynamic range. We'll employ them to improve navigation systems and undersea listening devices.

From sensors to systems, Sperry is constantly developing new techniques for the future.

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While others get older, Eagles get better.

The McDonnell Douglas engineering team that brought the world the multi-nation/multi-mission Phantom applied the same foresight in the growth-oriented design of the F-15 Eagle.

They wrapped the awesome power of two Pratt & Whitney engines into a light and nimble airframe with the internal strength of a giant. They provided extra electricity to power future systems. They left space for new systems yet to be devised. They've added more internal fuel to give greater range for new missions.

Working with the legendary genius inherent in the Hughes radar, the Eagle has been given new ability to analyze the formations it may face, new ability to find and strike ground targets at night and in all weather.

Tanks that fit the fuselage like new skin have been added to give the Eagle intercontinental range and potential for reconnaissance and counter-measures effectiveness.

McDonnell Douglas development teams continue to improve the Eagle, keeping the best of what they have, adding the best of what is new. They are demonstrating that the Eagle is not only superior in the air but, even with an acquisition cost competitive with other less capable aircraft, is superior to all others for the air defense, rapid deployment, and high-value-interdiction tactical air missions of the U.S. Air Force.

F-15 Eagle

MCDONNELL DOUGLAS