

# Aerospace World

By Suzann Chapman, Associate Editor

## USAF's Bosnia Plans Unfold

US Air Forces in Europe and Air Mobility Command more than two years ago began planning for possible peace operations in the Balkans. In December, those plans were put into effect.

USAF troops at European and Stateside bases joined forces to reinvigorate two dilapidated Cold War airports in central Europe, reenergize Rhein-Main AB in western Germany, and establish the air link for Operation Joint Endeavor.

On November 28—the day after President Clinton's major address on the planned deployment of 20,000 US troops to support NATO's Joint Endeavor in Bosnia-Herzegovina—a USAF team led by Col. Neal Patton, 16th Air Force vice commander, was on its way to a former MiG fighter base at Tuzla, Bosnia, to survey the airfield.

Tuzla and Hungary's Tazsar AB, an active MiG-21 fighter base, were selected to serve as the main forward airlift centers for the operation. A substantial force of USAF combat aircraft at Aviano AB, Italy, continued to provide the NATO force with control of the air. Air Force special operations units were based further south at Brindisi, Italy.

Throughout the next few weeks, USAF active-duty and reserve personnel and units supported the NATO operation in a variety of ways, from airlift operations to combat air patrol and from airborne surveillance and reconnaissance to aerial refueling and satellite communications.

Colonel Patton on December 6 returned to Tuzla as the commander of the 4100th Air Base Group (Provisional) aboard a C-130 from Ramstein AB's 86th Airlift Wing. He brought a team of USAF personnel, many from Ramstein's 1st Combat Communications Squadron, to prepare the airfield for round-the-clock operations.

## Joint STARS Ready for Balkan Duty

Some 450 members of a joint USAF-Army unit—the 4500th Joint STARS Squadron (Provisional)—arrived at

*An Army Humvee is unloaded from a US Air Force C-130 at Sarajevo Airport. Bad weather has been a challenge to the NATO peacekeeping mission in Bosnia-Herzegovina, and some flights scheduled to land in the northern town of Tuzla had to be diverted to the Bosnian capital.*



AP photo by Enric F. Marti

Rhein-Main AB on December 15 with two E-8 Joint STARS (Joint Surveillance and Target Attack Radar System) aircraft.

Though still in development, Joint STARS aircraft flew forty-nine combat missions in Operation Desert Storm in 1991, tracking Iraqi forces, vehicles, and fixed and mobile Scud missiles.

The system includes a modified Boeing 707, with a radar antenna housed under the fuselage, and mobile ground stations that forward the surveillance data to field units. Joint STARS has the ability to detect and track ground movements with such precision that the unit can distinguish between wheeled and tracked vehicles. It also provides ground-threat data to flying units, complementing Airborne Warning and Control System aircraft.

The Air Force expects delivery of the first production models this month. However, for Joint Endeavor, military crews will conduct all operations on the two preproduction models, with some seventy-five Northrop Grumman personnel providing technical backup, as needed, according to Air Force officials.

USAF Col. Robert DeBusk, 4500th JSS commander, said that the current Joint STARS aircraft are even more effective than those used in Desert Storm because of improved computer software and radar functions. He added that if any of the warring factions decide to break the Bosnia peace pact, "they can't hide."

Squadron Vice Commander Army Col. Jeff Wright called Joint STARS "one of the more sophisticated, complex, and revolutionary systems" providing support to all commanders.

## New Momentum for the B-2

The outlook for procurement of new B-2 bombers appeared to have brightened as a result of the words and deeds of Congress and the President.

Congress approved a Fiscal 1996 defense appropriations bill containing some \$500 million in B-2 funds that the Administration had not sought. The bill did not specify use of the money. House lawmakers said the ultimate goal was new procurement.

President Clinton accepted the bill, seeming to crack the door for more bombers. In a December 20 interview with the *Los Angeles Times*, he expressed a more favorable view of bomber purchases.

"You know I have mixed feelings about the B-2," he told *Times* reporter Ralph Vartabedian. "I think it's a good plane, but I don't think we need as many as the Congress wants to build."

The President then added, "I signed the bill; there are going to be more B-2s built."

Congress in 1992 capped procurement at twenty bombers, and the Clinton Administration has always resisted subsequent moves to increase that number. In the *Times* interview, he announced that "there are circumstances under which I could go along with building some more." He did not specify the circumstances and said procurement must be con-



**At Bell Helicopter Textron's Flight Research Center, Arlington, Tex., a crane moves the wing and nacelle structure of a V-22 Osprey into place on the aircraft's fuselage, signaling the start of final assembly. Bell Boeing officials say production of the tiltrotor aircraft is on schedule.**

sidered in light of overall defense needs and budget levels.

Defense Secretary William J. Perry in the past has said that he might want to tap the B-2 funds to finance US operations in Bosnia.

## One Plus One Approved

Those pre-All-Volunteer Force open-bay barracks and common la-

trines will pass into history now that DoD has approved the "one plus one" standard for single enlisted personnel. However, a DoD release cautioned that "transformation of old barracks into 1990s-style singles living will not happen overnight."

The Pentagon announced December 11 that Defense Secretary William J. Perry had "signed off" on the new housing standard on November 6. Just weeks before, the USAF-led push for the new department-wide standard seemingly had stalled, prompting Air Force officials to say the service would continue to pursue "one plus one" independently.

Recent studies, including the 1995 USAF Quality-of-Life survey, indicated that young recruits ranked gaining more privacy and space as top concerns.

Under the new standard, single enlisted members at permanent duty locations will live in mini-apartments with two individual sleeping rooms (each about 118 square feet), plus a kitchenette and bathroom shared with only one other person. According to DoD, the apartments will "normally accommodate two service members in the ranks of E-1 through E-4, or one person ranked E-5 or above."

Each service will implement the latest standard "wherever possible beginning with Fiscal Year 1996 construction." The DoD release stated that during the next twenty years, the number of E-1s to E-4s who will have "the opportunity" to live in the new-style rooms will increase from about 50,000 to more than 275,000. Additionally, the number of barracks spaces

## Everyday Heroes

Members of the Air Force occasionally find themselves in situations calling for quick reaction and calm thinking. In this, they often excel, as the following recent award and actions demonstrate.

SrA. Lisa Natola, who works in the Wilford Hall Medical Center's Human Resources Office, received the Airman's Medal on October 26 for heroism she displayed when she pulled an injured driver from a burning car in 1993.

A1C Kyle Clay, AFRES, a financial services specialist with the 94th Airlift Wing, Dobbins ARB, Ga., helped save the life of a pregnant Georgia woman who lost a leg in a traffic accident in November. He credited first-aid field training during a recent weekend drill with spurring his quick and successful reactions. The woman survived and gave birth to a four-pound baby. Both are OK, according to Airman Clay.

SSgts. Gary Duclo and Neri LaMadrid, on temporary duty in October in Japan from the 83d Aerial Port Squadron, Portland, Ore., rescued a six-year-old Japanese girl as she slid down a nearly vertical, fifty-foot rocky incline off a hiking trail on Mount Nokogiri. Sergeant LaMadrid brought the child back up the cliff. She spent seven days in the hospital and recovered fully.

In November, Capt. Timothy Finnegan, 353d Special Operations Group, Kadena AB, Japan, helped save an Okinawan boy who was trapped under a van that had flipped over. The Captain managed to pick up the van far enough to slip a rock underneath it to relieve some of the pressure on the child. When other men arrived, they righted the vehicle. The two-year-old boy was expected to remain in the hospital for at least two months.

AFRES TSgts. Ray J. Korizon and Paul W. Vojtech and SSgt. Vince Bobowski, from the 928th Maintenance Squadron, O'Hare IAP/ARS, Ill., helped contain a bus fire and save its passengers in October while on temporary duty at Hickam AFB, Hawaii. They were driving along a highway when they heard an explosion and saw smoke and flames from a tour bus in front of them. They borrowed a garden hose and several fire extinguishers to help put out the fire.



*The 552d Fighter Squadron, 27th Fighter Wing, Cannon AFB, N. M., recently accepted these F-16s, marking the beginning of Air Combat Command's movement of aircraft to streamline maintenance and logistics. The 27th FW will be retiring its F-111s throughout 1996.*

served by central latrines will fall from 116,000 to less than 1,000.

### Fighter Squadrons to Move

Air Combat Command announced in December that it intends to shift more fighters among three ACC bases and cancel the move of additional aircraft to an Air Force Materiel Command base. The goal was to streamline maintenance and logistics for each system.

ACC officials said the moves, scheduled for mid-1996, will align similar aircraft, such as Block 40 F-16s with other Block 40s.

Eighteen Block 50 F-16C/D aircraft will move from Cannon AFB, N. M., to Shaw AFB, S. C., increasing Shaw's F-16 inventory to seventy-eight. Six Block 40 F-16C/D aircraft will move from Pope AFB, N. C., to Cannon, which will then have sixty F-16C/Ds. Eighteen A/OA-10 aircraft will move from Shaw to Pope, increasing its force of A/OA-10s to forty-two. The planned movement of six F-16C/Ds to Hill AFB, Utah, has been canceled.

As a result of these moves, the full-time military manpower authorizations at the three ACC bases also will change. Cannon's and Shaw's authorizations will increase by 104 and sixty-four, respectively. Pope will lose eighty-six.

### UAVs: Wave of the Future

Air Force Chief of Staff Gen. Ronald R. Fogleman told defense reporters in November that the Air Force is

looking for a cost-effective way to bridge the gap between future unmanned aerial vehicle capability and today's tactical reconnaissance requirement—but he sees UAVs as “the wave of the future.”

General Fogleman stated that the Air Force is firmly committed to UAVs for near-real-time and real-time battlefield intelligence and reconnaissance. However, until UAVs really come on line, he said, the best way to find a cost-effective alternative is “to have a little competition.”

He would like to see the Air National Guard's reconnaissance pod being developed for the F-16 to compete with the Marine Corps' advanced tactical airborne reconnaissance system (ATARS) or another system. He emphasized competition to reduce the cost of the system ultimately procured, stating that the ATARS price had not changed until the ANG program began.

### Benefits to Low C-17 Buy Rates

Addressing another area—airlift—General Fogleman told reporters that he saw advantages to buying C-17 airlifters at a low per-year rate.

The Chief of Staff's statement runs counter to conventional wisdom, which holds that only large-scale production of USAF's newest airlifter will produce significant economies of scale and therefore generate relatively large reductions in cost.

The General, however, suggested that advantages should be calculated

not only in terms of cost. For the Air Force, he said, slower production would keep the C-17 line open longer, “and that gives you some options in the outyears to look at . . . whether you need more [C-17s] or whether you start to use this basic airframe for other things.”

He added that buying C-17s at the maximum production rate—probably fifteen per year—would, “in theory,” produce efficiencies, but the savings would not be as dramatic as in the past when, for example, the service procured fighter aircraft at a rate of 180 per year. He said new “lean production” methods used by prime contractor McDonnell Douglas had already reduced costs.

### F-22 Threat Environment Tough to Test

The concept for initial operational test and evaluation for the new F-22 fighter is still being developed, with first flight more than a year away, but USAF's lead F-22 tester knows he will face “severe limitations” testing the aircraft in a likely threat environment.

Lt. Col. Erwin C. Catts of the Air Force Operational Test and Evaluation Center, Kirtland AFB, N. M., spoke on December 6 at an industry conference on integrated avionics.

Colonel Catts said that evaluators will use modeling and simulation, hardware-in-the-loop testing, and open-air testing. He noted that the F-22's closely coupled avionics drive the need for the Air Force to test the fighter as an entire system and avoid separate assessments of subsystems.

Colonel Catts pointed out, however, that he does not have an actual adversary against which the F-22 may be tested, and there will be no live missile firings. Additionally, he said that test range infrastructure cannot accurately mirror the F-22's likely dense battlefield environment.

The Colonel said testers will conduct open-air tests to the extent possible and then put results in a full-mission simulator.

“Now, with a man in the loop and a dense environment [created in the simulator], I can get a prediction of what the likely performance of the F-22 will be against the then-current and -future threat,” he said. He also said that AFOTEC supports the acquisition of adversary aircraft and missiles.

### Satellites “Talking” to Satellites

December 15 marked the start of “a new era for spacebased communi-

cation," according to a Pentagon release, which announced that two military satellites had "cross-linked" in space. That means two Milstar communications satellites "talked" to each other, transmitting messages between them without first sending the data through ground stations, thus providing more secure transmission.

Milstar was developed by USAF's Space and Missile Systems Center, Los Angeles AFB, Calif., to provide secure, jam-free communications and worldwide connectivity to authorized users, said the release. It added that Milstar's successful message transmission "represents a crucial step in the evolution of the program."

When completed in 2000, the Milstar constellation of four satellites in geosynchronous orbit will provide communications worldwide, relying on only one initiating ground station.

The ground station, located on friendly soil, would transmit a message to one Milstar, which would then use its intersatellite communication antenna—the "cross-link"—to route the message to other Milstars. The satellites would cross-link messages around the constellation, as needed, then downlink them to destination terminals, potentially on some future battlefield.

The first cross-linked message was a statement by Gen. John M. Shalikshvili, Chairman of the Joint Chiefs of Staff, praising this latest US command-and-control advantage.

### F-117 Slated for Upgrades

A USAF official told reporters that



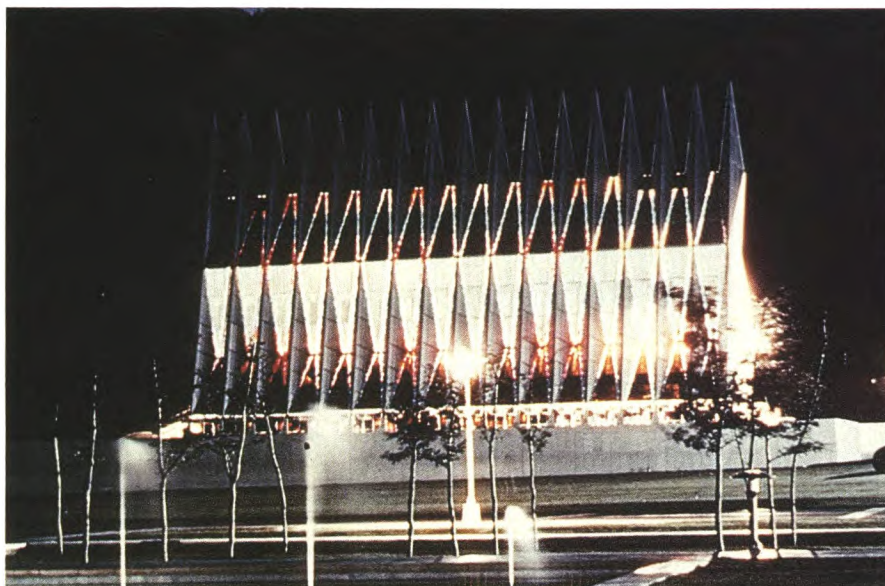
**Beginning this year, Rockwell International Corp.'s AGM-130s will incorporate the latest INS/GPS autonomous guidance and infrared technology. Above, Texas Instruments conducts an operations test on an AGM-130 with an F-15E from Seymour Johnson AFB, N. C.**

the service hopes to include in the 1998 program objective memorandum support for midlife improvements to the F-117 Stealth fighter.

The unnamed official, speaking in mid-December, would not reveal the specific recommendations of a study on F-117 upgrades. He did note that the study took more than a year to complete and focused on aircraft survivability and target-kill capability, using two combat scenarios. One featured Syria and another Iraq, he said, with both set in 2010.

Areas covered included radar cross section (RCS), electronic warfare countermeasures, weapons, targeting, information in the cockpit, communications, and antennas. In all, the study reviewed more than 100 different technologies, with thirty or forty related to RCS reduction.

The official emphasized that the study results were not final and that plans called for USAF officials to brief senior ACC officers later in December. The Air Force thinking today is that it will phase out the Nighthawks after 2018.



**The US Air Force Academy Cadet Chapel at Colorado Springs, Colo., has won the 1996 American Institute of Architects' Twenty-Five Year Award—the first time a government project has earned the honor. The architecture firm of Skidmore, Owings, and Merrill designed the chapel. It was completed in 1962.**

### USAF Recruits Keep Quality High

The Pentagon announced that all of the services met their 1995 recruiting goals but that every service except the Air Force experienced a small decline in quality, as measured by the Armed Forces Qualification Test.

The Army, Navy, and Marine Corps showed "small decreases" in the percentage of enlistees scoring in the top four categories of the AFQT, said Fred Pang, assistant secretary of defense for Force Management Policy. By contrast, the percent of Air Force recruits in these categories rose between 1994 and 1995, he said.

The Pentagon official said the services recruited a total of 168,010 first-time enlistees in Fiscal 1995. Quality remains high, he said, noting that ninety-six percent were high school graduates and seventy-one percent scored above average on the AFQT (scoring in categories I to IIIA).

DoD goals for quality require ninety percent to have high school diplomas

and sixty percent to score above average on the test. "High-quality" recruits, in DoD parlance, are those who meet both requirements. Sixty-seven percent of overall Fiscal 1995 recruits were in the high-quality category, compared to sixty-eight percent for Fiscal 1994.

**Full Accounting: 567 Lost Forever**

The Pentagon announced in mid-November the results of an "extensive analysis" of individual cases of Americans missing in action from the Vietnam War. Begun in 1994, the study groups the remaining 2,202 MIA cases into three broad categories. One category comprises 567 MIA cases that the Pentagon said "cannot be resolved."

The largest category comprises 1,476 cases that require further pursuit. A second category with 159 cases is on hold, pending "receipt of additional information to develop new leads."

The "cannot be resolved" category includes those service members lost at sea, buried on riverbanks that have since eroded, and killed in explosions that destroyed their remains. The DoD statement said that the analysis indicated that those individuals had perished and no future effort would lead to a return of their remains.

Fifty-eight analysts independently reviewed each of the 2,202 cases (the number of open cases as of July 21), then shared their views to reach



**Lt. Col. Roger T. Turcotte, 391st Fighter Squadron commander at Mountain Home AFB, Idaho, passed the 2,000-hour mark in an F-15E in December. Colonel Turcotte has been flying the dual-role fighter since 1988 and now holds the record for the most flying time in that aircraft.**

USAF photo by SrA. Greg Vaughan

a coordinated position that DoD said identifies "the best next steps to move cases toward resolution." Analysts were drawn from the Defense POW/MIA Office in Washington, D. C., and the Joint Task Force—Full Accounting and the Central Identification Laboratory, both in Hawaii.

They reviewed historical data of each loss; information collected by the US government; information gathered through joint investigations with

Vietnam, Laos, and Cambodia; and data turned over to the US by those governments. DoD said the analysis "represents the first time such an exhaustive assessment has been conducted since the end of the Vietnam War."

**Tricare Prime Reduces Cap**

The maximum annual total paid by non-active-duty enrollees in the DoD managed-care health plan, known as Tricare Prime, has dropped from \$7,500 per fiscal year to \$3,000 per twelve-month enrollment period, as of November 1, according to a December Air Force release.

Called a "catastrophic cap," the yearly total includes Tricare Prime enrollment fees, inpatient and outpatient cost shares, and copayments for such things as visits to civilian doctors. Once they reach the "cap" of \$3,000, enrollees owe nothing more for care received through the Prime network of providers until the next annual enrollment period.

Through December, Tricare services were active in five of the twelve health-service regions. The latest region to issue a Tricare contract, according to a December USAF statement, includes Mississippi, Florida, Georgia, Alabama, Tennessee, South Carolina, and the eastern third of Louisiana.

The award of this Tricare contract went to Humana Military Healthcare Services of Louisville, Ky., for \$3.78 billion, covering 5.5 years, including



**A Russian Strategic Rocket Forces delegation and Maj. Gen. David L. Vesely (second from right), commander of 14th Air Force, observe a Titan IV lifting off from Vandenberg AFB, Calif., in December. It was the first Titan IV launch for the 4th Space Launch Squadron since an unsuccessful attempt in August 1993.**

a six-month start-up period and five one-year options. Air Force officials said the original starting date might change from May 1 to July 1, since the contract award had been delayed.

**Splitting Command and Control**

As part of the trend toward management and organizational streamlining, the Air Force created a "super" command-and-control officer out of three separate career fields—but the merger didn't take.

Two years into the attempted consolidation of the air traffic control, air weapons control, and operations management career fields, an Air Force review group found that the plan had not worked. The group determined that the service had never established a requirement for this type of multiquarified officer and that the specialties were too technically diverse.

The Air Force announced devolution of the "super" command-and-control career field into three separate fields. The service plans to:

- Reestablish the separate field of air traffic control.
- Restore air weapons control—now to be called "air battle management"—as a separate field.
- Create a new field, combat control.
- Eliminate operations management, more commonly known as the command post field.

The personnel manager of the "super," or 13BX, career field, Maj. Leah

Barrera, said that personnel officials will help the nearly 1,000 people in operations management find jobs in the "sister career fields that broke away." She added that others will fill shortage career fields. They will receive a list of potential career fields next month.

Major Barrera said, "In retrospect, there wasn't enough need for an officer with the breadth this field offered when weighed against the high technical skills needed for successful air traffic control, air battle management, and combat control demands in the next century."

**Spy Imagery Merger Proposed**

DoD and the Central Intelligence Agency proposed to Congress creation of a new National Imagery and Mapping Agency (NIMA) that would consolidate the resources responsible for imagery and mapping products taken largely from intelligence satellites into one organization under the Defense Department. The target date for NIMA stand-up is October 1, 1996.

The proposed concept would merge the Defense Mapping Agency, DoD's Central Imagery Office, CIA's National Photographic Intelligence Center, all imagery support resources of the Defense Intelligence Agency, and resources of the Defense Airborne Reconnaissance Office and National Reconnaissance Office associated with imagery exploitation and dissemination, according to a DoD statement. The new agency would employ about

9,000, with the majority—some 7,000 employees—coming from DMA alone.

Critics of the proposal believe that the merger might shift too much emphasis to military intelligence-gathering at the expense of political and diplomatic coverage. Proponents feel that the move will provide much-needed near-real-time intelligence to battlefield commanders, without sacrificing other requirements. A DoD statement said, "Specific details of the agency will be developed in close consultation with the Congress."

Navy Rear Adm. Joseph J. Dantone, Jr., currently NRO's deputy director for Military Support, was named director of the NIMA Implementation Team. Leo Hazlewood, the CIA's deputy director for Administration, and Dr. Annette J. Krygiel, director of the Central Imagery Office, were selected as deputy directors.

**DoD, CIA Cooperate on Space**

The Defense Department and Central Intelligence Agency announced on December 15 further collaboration with the creation of a Joint Space Management Board.

The JSMB, according to a DoD release, will integrate policy, requirements, architectures, acquisition, and funding for defense and intelligence space programs. The goals are to make joint use of available space resources and to use "integrated architectures [for future space systems] to the maximum extent possible."

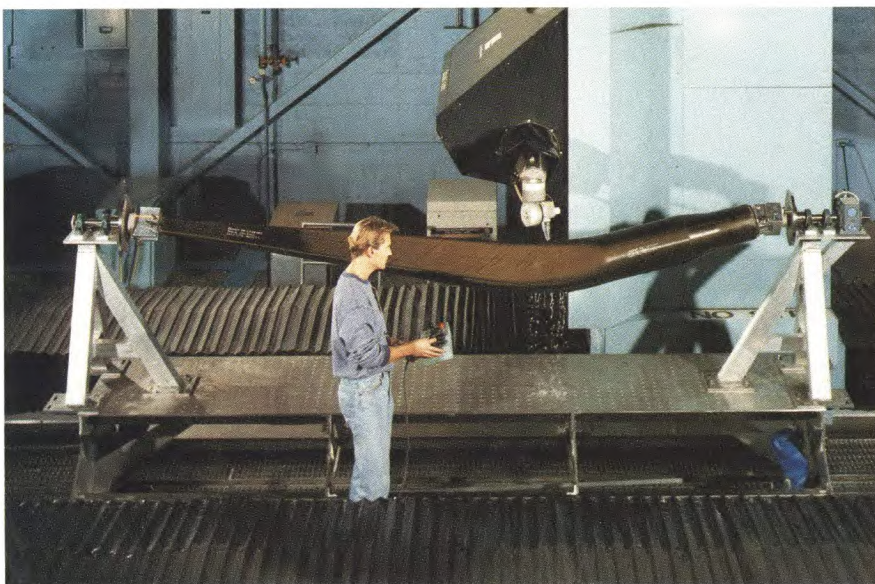
While providing executive management for DoD and CIA space programs, the board will oversee the National Security Space Architect. It will have co-chairs, the under secretary of defense for Acquisition and Technology and the deputy director of Central Intelligence. The co-chairs will oversee an executive committee that includes the vice chairman of the Joint Chiefs of Staff and the executive director, Intelligence Community Affairs.

**Newark AFB Privatizes**

The Air Force announced December 15 that maintenance activities performed at Newark AFB, Ohio, have been contracted to private industry.

Rockwell International has won a contract estimated at \$264 million for depot-level maintenance and repair activities. Wyle Laboratories won a cost-reimbursable contract estimated at \$19 million for selected metrology and calibration work. Both contracts cover a transition period plus four one-year options.

According to a USAF release, both contractors must extend the right of



*A Lockheed Martin Tactical Aircraft Systems employee monitors an ultrasonic scanner during inspection of a pivot shaft that will move an F-22's horizontal stabilizers. The scanner, linked to a computer-aided design file, allows single-sided inspection of the shaft while maintaining accuracy on three axes.*



*In October, the Delaware Aviation Memorial Foundation dedicated this statue to the Women's Airforce Service Pilots. It is located at the Greater Wilmington Airport, Del.—called New Castle AAB in World War II—where the first Women's Auxiliary Ferrying Squadron trained.*

Another boon to industry, according to the AIA president, will be continued internationalization, either through foreign acquisitions or teaming. He views this as a positive trend that offers cost- and technology-sharing benefits, as well as ready expansion into world markets.

However, he emphasized that the difficult period for industry is not over. The difficulties will end "only when there is in place a stable, adequately funded, defense modernization program and the advanced technology systems now languishing in R&D status become real, live, production projects," Mr. Fuqua said.

#### **The Art of Dropping Leaflets**

The Army and Air Force dropped more than ten million leaflets on the Iraqi army during Desert Storm—but they still have to practice.

"The ability to drop a desired number of leaflets onto a desired area requires a real joint effort," said Army Maj. Andy Eisemann of Alpha Company, 8th Psychological Operations Battalion (Deployed).

During the first leaflet drop since the beginning of Operation Southern Watch, C-130 crew members Cpts.

first refusal for their employment openings to federal employees displaced by these contracts. Additionally, the base has employee-assistance programs to help employees with job searches.

Some employees have already taken advantage of a Job Training Partnership Act grant. The \$2.75 million grant has provided training in new or upgraded skills for hundreds of base employees, the release stated. Nearly 200 other employees were placed in DoD positions under the Priority Placement Program. [See "Civilian Drawdown, Hard and Fast," January 1996, p. 28.]

#### **A More Competitive Industry**

The post-drawdown US aerospace industry will be leaner, more efficient, and financially and technologically sound, stated Aerospace Industries Association President Don Fuqua at the AIA's thirty-first Annual Review and Forecast on December 13.

"From the technical standpoint, the aerospace industry of the new millennium will be more competitive than at any time in its history," he noted. The last ten years have produced flexible manufacturing approaches that will elevate competitiveness factors—such as cost, reliability, and reduced design-to-market time—to an equal status with performance.

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Pete Fry and Steve Hedden, serving with the 4410th Airlift Squadron in southwest Asia on their first flight over the region, noted the difficulty of spotting ground targets in the desert.

Throughout the flight, Sgt. Colin Sullivan continually updated weather conditions to pinpoint the precise location to drop the leaflets so that they would drift over the targeted troops.

During a drop, an Army or Air Force member tossed one or more boxes, each attached to a static line, out the aircraft's rear door. The static line "exploded" the box, creating a leaflet "cloud."

According to Major Eisemann, the Desert Storm leaflet drops contributed heavily to the surrender of tens of thousands of Iraqi troops.

**ESC Field Tests TASR**

Electronic Systems Center at Hanscom AFB, Mass., field tested a prototype battlefield situational awareness receiver, called the Tactical Automated Situation Receiver (TASR), successfully relaying a missile warning to a "threatened unit" within two minutes at its most recent "Fort Franklin" field encampment.

The prototype TASR system includes a laptop computer base unit and portable remote receivers—all commercially available components. ESC officials said that production TASR units should cost less than \$5,000 per unit.

The computer generates warning messages and transmits them via modem to cellular paging transmitters. The remote receivers in the field pick up and filter the messages, displaying only the information the user needs, based on the receiver's location.

The receivers include a handheld Apple Newton portable processor, a Global Positioning System receiver, and an alphanumeric paging card packaged in a rugged platform.

Plans call for procurement of thousands of TASR systems. "Eventually, they will be carried by every maneuver unit, every ship, and every aircraft and will provide a common joint platform for battlefield situational awareness," said Capt. William J. Szarek, TASR program manager.

The demonstration took place during Fort Franklin IV, one of several ESC field encampments that demonstrated USAF's command, control, communications, computer, and intelligence systems' interplay with those of other services.

**Six Teams Net Quality Awards**

The Air Force has recognized six USAF teams for helping to enhance USAF processes and products, according to USAF Chief of Staff Gen. Ronald R. Fogleman.

The six winners were selected from a field of twenty nominated for the Chief of Staff Team Quality Awards by the Air Staff, major commands, Air Force Reserve, and Air National Guard.

The following were winners:

- The 18th Wing team at Kadena AB, Japan, for introducing a new F-15 maintenance process and standardized pilot training and discrepancy reporting procedures.

- The 42d Air Base Wing's Logistics Supply Squadron team, including members from the 908th Airlift Wing, at Maxwell AFB, Ala., for reducing the unanticipated demands for C-130 aircraft parts from seventy percent to thirty-seven percent.

- The 34th Training Wing team at the US Air Force Academy, Colo., for identifying excess steps and reducing processing time for cadet disenrollment by seventy-nine percent.

- The 52d Security Police Squadron team at Spangdahlem AB, Germany, for using community-oriented policing methods to improve its security operations for entry to the flight line.

- A team from the 46th Component Repair Squadron at Eglin AFB,

Fla., for improving liquid nitrogen cart services to meet aircraft sortie generation needs.

- The 39th Security Police Squadron team at Incirlik AB, Turkey, for developing and implementing programs that helped reduce the base's crime rate, which was one of the highest in USAF.

**News Notes**

- On December 15, the President nominated Gen. Joseph W. Ralston, Air Combat Command commander, to be vice chairman of the Joint Chiefs of Staff, replacing Adm. William A. Owens, who announced his retirement. At press time, Congress had not approved the nomination and the Air Force had not announced a replacement for the ACC post.

- Nominated for a fourth star, Lt. Gen. (Gen. selectee) Eugene E. Habiger, USAF's deputy chief of staff for Personnel, also had been tapped, pending Senate confirmation, as commander in chief of US Strategic Command at Offutt AFB, Neb., succeeding Adm. Henry G. Chiles, Jr., who will retire.

- The United Kingdom signed a memorandum of understanding with DoD in December to participate as a collaborative partner for the concept demonstration phase of the Joint Advanced Strike Technology (JAST) program. A proposed JAST short take-off and vertical landing aircraft offers

**Senior Staff Changes**

**RETIREMENT:** M/G Nolan Sklute.

**PROMOTIONS:** To be **Major General:** Thomas R. Case, Donald G. Cook, Charles H. Coolidge, Jr., John R. Dallager, Richard L. Engel, Marvin R. Esmond, Bobby O. Floyd, Robert H. Foglesong, Jeffrey R. Grime, John W. Hawley, Michael V. Hayden, William T. Hobbins, John D. Hopper, Jr.

Raymond P. Huot, Timothy A. Kinnan, Michael C. Kostelnik, Lance W. Lord, Ronald C. Marcotte, Gregory S. Martin, Michael J. McCarthy, John F. Miller, Jr., Charles H. Perez, Stephen B. Plummer, David A. Sawyer, Terryl J. Schwalier, George T. Stringer, Gary A. Voellger.

**CHANGES:** B/G Orin L. Godsey, from Chief of Safety, Hq. USAF, Washington, D. C., to Chief of Safety, and Dir., Air Force Safety Center, Kirtland AFB, N. M., replacing Col. Bernard B. Burkland, Jr. . . . **Col. (B/G selectee) Glen W. Moorhead II**, from Spec. Ass't to Supreme Allied Cmdr., Europe, SHAPE, NATO, Mons, Belgium, to Cmdr., 50th Space Wing, Falcon AFB, Colo., replacing Col. Simon P. Worden.

**SENIOR ENLISTED ADVISOR (SEA) RETIREMENT:** CMSgt. Kenneth C. Maynard.

**SEA CHANGE:** CMSgt. David Hill, to SEA, Hq. AIA, Kelly AFB, Tex., replacing retired CMSgt. Kenneth C. Maynard.

**SENIOR EXECUTIVE SERVICE RETIREMENTS:** Renan del Villar, Linda I. Garmon, JoAnne L. Krus, Ida J. Newman, Bruce A. Thomson. ■



a potential supersonic future carrier-borne aircraft to replace the Royal Navy's Sea Harrier, said a Pentagon statement.

■ The 347th Transportation Squadron's Air Delivery Flight at Moody AFB, Ga., became the first Air Combat Command flight to air-drop loads from a C-5 aircraft when it supported Air Mobility Command's 436th Airlift Wing, Dover AFB, Del., by loading and successfully dropping ten pallets ranging in weight from 2,520 to 15,000 pounds. Moody's fifteen-person "rigger" team normally works with C-130s.

■ Air Force officials said that joint pilot training will transfer to Vance AFB, Okla., with activation of the 8th Flying Training Squadron on July 1. Navy instructor pilots currently at Reese AFB, Tex., which will close in 1997, will begin to transfer to Vance next month. The 8th FTS will fly T-37B Tweet trainers. Navy instructors for joint T-1 Jayhawk pilot training with the 32d FTS at Vance will begin transferring from Reese by April.

■ The 4th Space Launch Squadron, 30th Space Wing, Vandenberg AFB, Calif., successfully launched the first Titan IV from Vandenberg in more than two years, boosting a classified payload into polar orbit on December 5. A Titan IV launched from the base in August 1993 exploded a few minutes into the flight. Three of the nation's largest expendable boosters launched from Cape Canaveral AS, Fla., in 1995. Current plans call for five launches each in 1996 and 1997.

■ The recent chief master sergeant promotion list gave SMSgt. Elaine Taylor, of the 56th Transportation Squadron at Luke AFB, Ariz., the distinction of becoming the first woman to make chief in the transportation career field. Noting that her career had been difficult and challenging because it was not typical for a woman, she said, "I've had to prove myself on many occasions, but that makes reaching this milestone that much more gratifying."

■ The 1995 colonel's board selected 650 out of 5,061 eligible officers for promotion to O-6. The selection rate for in-the-promotion-zone line officers was forty-two percent; Judge Advocate and Medical Service Corps, each at fifty-three percent; Biomedical Science Corps, thirty-three percent; and Nurse Corps, thirty-nine percent.

■ A November Air Force Return-to-Fly board selected ninety-four bomber and fighter pilots to return to the cockpit.

■ An Officer Training School board

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reviewed 1,572 records, then chose eighty-eight active-duty enlisted members and 184 civilian applicants to enter OTS in 1996.

■ Military personnel serving in Operation Southern Watch stopped receiving the Southwest Asia and National Defense Service Medals on December 1. Instead, they will now receive the Armed Forces Expeditionary Medal.

■ Air Force members who participated in Operations Desert Shield

and Desert Storm from August 2, 1990, through August 31, 1993, may be eligible for the new Kuwait Liberation Medal, offered by the government of Kuwait.

■ Although program costs have risen, according to USAF education officials, tuition assistance rates will remain the same for most degrees to avoid any negative impact on recruiting and professional development. Officials noted they would soon an-

Photo by Nate Leong



*The 159th Fighter Squadron (ANG), 125th Fighter Group, at Jacksonville IAP, Fla., has begun a conversion from F-16s to F-15s. Nose art for the F-15B "Wing Bird" includes the logo for a National Football League team, the Jacksonville Jaguars, as well as a version of the squadron's lightning bolt logo.*

■ nounce changes that would make assistance for doctoral and duplicate degrees, such as a second master's degree, more strict.

■ Three Air Force Reserve installations officially have changed names. The Reserve portion of former Grissom AFB, Ind., has become Grissom ARB. Homestead ARB, Fla., became an Air Reserve Station when it gave up its airfield to Dade County as part of the 1993 base realignment and closure actions. The 301st Fighter Wing now resides at Carswell ARS, its portion of NAS/JRB Fort Worth, Tex.

■ Though the Air Force Suggestion Program saved the service about \$250 million in Fiscal 1995, program officials said that statistics show that only a minute portion of USAF personnel actively participated. Officials launched a reengineering effort in October 1995 to review commercial industry programs and "expectations at all levels, from wing commander to airmen." They expect to test a new program by July.

■ "Microtubes" technology developed by Phillips Laboratory researchers at Edwards AFB, Calif., and used for microminiature plumbing, filtration, and structural applications, recently became the focus of a cooperative research and development agreement signed by Environmental Robots, Inc., of Albuquerque, N. M. They will use the technology to develop and produce robots small enough to propel

themselves through the human bloodstream for microelectromechanical and medical applications.

■ At Vandenberg AFB, Calif., 14th Air Force activated a twenty-four-hour Space Operations Center on November 27 to provide continuous command and control of its globally based space units. According to a 14th Air Force release, the center is similar in design and function to Air Operations Centers and will enable the com-

mander to engage USAF space forces for real-world contingencies or exercises while simultaneously preparing to execute others.

■ At Andrews AFB, Md., in November, the Air Force Office of Special Investigations dedicated the building used to train AFOSI agents to Lt. Gen. Joseph F. Carroll, the agency's first director.

■ Maj. (Dr.) James R. Stewart, 366th Aerospace Medicine Squadron commander, was named one of America's fifty most positive physicians—the only military doctor chosen—by the Positive Medicine Project, based in Philadelphia, Pa., and supported by the American Hospital Association and the American Medical Association.

### Obituary

Ruth A. Eaker, widow of Gen. Ira C. Eaker, the late aeronautical and Air Force pioneer, died at Malcolm Grow Medical Center, Andrews AFB, Md., on December 13 after a long illness. Born in 1908, she married then-Captain Eaker in 1931. During World War II, when General Eaker was in Europe, she remained in Washington, D. C., helping with bond rallies and official hosting duties. In later years, Mrs. Eaker continued to participate in civic and charitable activities, including serving on the board of trustees of the US Air Force Academy's Falcon Foundation and as a charter board member of the Air Force Retired Officers' Community. She was buried at Arlington National Cemetery. ■

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