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## Joining Forces for EEO

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m p l o y m e n t  
o p p o r t u n i t y

**"T**his year we will hire in proportion to the civilian labor force." With these words, Herb McLure, Associate Administrator for Human Resource Management, opened a joint meeting in Las Vegas of the agency's civil rights officers (CROs) and human resource management officers (HRMOs). They met in conjunction with the National Black Coalition of Federal Aviation Employees' 14th annual conference.

At the meeting, FAA Administrator James Busey unequivocally stated his commitment to affirmative action. While recognizing that the agency has "talked a good game" in the past, Busey said, "The facts don't bear out what we want to do by the year 2000, particularly at the management level."

Busey demanded that all managers take actions leading to meaningful results. "We are going to make positive progress during my tenure," he said.



FAA Administrator James Busey, Assistant Administrator for Civil Rights Leon Watkins, and manager of the Staffing Policy Division Wanda Reyna discuss EEO initiatives.

He endorsed setting meaningful, attainable goals and holding management accountable for the achievement of those goals. "We want a culturally mixed work force that gives us the benefit of all the talents and gifts of all our employees. I

want this EEO initiative to move forward, even within the severe budget situation. I don't want our managers to use this situation to lie back and do nothing."

The aim of the meeting in Las Vegas

By Lu Carradine and Tina Mallory-Stephens

*Lu Carradine is the Civil Rights Manager, Central Region, and Tina Mallory-Stephens is the Headquarters Civil Rights Manager.*

was to improve work relationships between CROs and HRMOs, clarify the roles and responsibilities of each group, and identify strategies for supporting FAA's affirmative action goals.

"Other agencies are not making this kind of commitment. FAA is on the cutting edge," said Leon Watkins, Assistant Administrator for Civil Rights.

Organizational development specialists Katherine Friedman, Northwest Mountain Region, and Cindy Zook, Washington Headquarters, served as facilitators for the two-day meeting in mid-September.

Participants reported that concrete results came out of the meeting. They identified issues hampering the agency's affirmative action initiative and developed strategies to aid the recruitment and retention of minorities and women.

*(Continued on page 12)*

## The Ordeal of the Electra

Three decades ago, a series of crashes involved FAA in a fierce controversy about the safety of a new airliner.

By Ned Preston

**L**ate in the afternoon of October 4, 1960, Eastern Air Lines Flight 375 prepared to leave Boston's Logan Airport for Philadelphia and points south. Fifteen of the seats were filled by Marine recruits who were no doubt thinking ahead to what might await them at boot camp. The minds of other passengers may have been on politics, for Massachusetts Senator John F. Kennedy seemed to be gaining in a close race for the Presidency.

Flight 375 was a Lockheed Electra, one of a new generation of efficient transports helping to make air travel a routine choice for many Americans. The aircraft was powered by four Allison turbine engines that sucked in air through valves mounted just behind the propellers. These turboprops did not deliver quite the speed possible to turbojets such

as the Boeing 707, but they far surpassed the performance of older piston-driven aircraft.

Several of those who watched the de-

parture of Flight 375 noticed that some of the engines emitted smoke or fire seconds after takeoff. The Electra yawed leftward, struggling to maintain its



Passengers board a Lockheed Electra in the early 1960s.

climb, and then stalled. The left wing dropped as the aircraft began a spin that ended in an almost vertical dive into the waters of Boston Harbor.

Spectators along the shore immediately launched small boats and hurried toward the sinking wreckage. Many passengers were found strapped to their floating seats, but no more than a few were still alive. Rescuers were able to release the seatbelt of a man who was holding a dead friend with one arm and

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John Clabes—Aeronautical Center

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## Vintage German Ju-52 Tri-motor on Tour

By Duncan B. Pardue

New York area air traffic controllers and aviation safety inspectors were the first FAAers to get close-up views and rides on a 1932 vintage Junkers 52 when the aircraft began a 27-city demonstration tour of the United States in September.

The aircraft, which was rescued from a junk heap in Ecuador in 1969 by American collector Lester Weaver, was bought by Lufthansa in 1984 and reconditioned. It is being flown around the United States to commemorate the 35th anniversary of the airline's operation in this country.

Before it could enter the country, however, it had to meet FAA certificate requirements. Larry Bortie of AEA-252 was in charge of this somewhat unusual task.

"It was clear from FAR 91.28b that an aircraft built in the 1930s could not support a standard airworthiness certificate," Larry said. "We were able to issue a special flight authorization certificate, which included 23 limitations."

Among the limitations are that the aircraft cannot carry passengers or cargo for hire and it must fly only under visual flight rules. It also must avoid areas of heavy air traffic and congested areas of cities, towns, and villages. Too, its special flight authorization document has to be displayed in the cabin.

Starting in 1932, Junkers began its manufacture of about 5,000 of the corrugated-skinned passenger planes. Most European airlines operated Ju-52s, which developed a reputation for ruggedness and reliability comparable to the American DC-3s.

The restored Ju-52 touring the United States was built in 1936. It was originally fitted with floats to fly Lufthansa's route between Copenhagen, Denmark, and Oslo, Norway. It was later sold to Norwegian Air Lines, only to be commandeered by the Luftwaffe in World War II. After the war it flew again in Norway until it was decommissioned in 1956. It operated as a freighter in Ecuador for a few years. Overused and under-maintained, it started to fall apart.

Birds were nesting in the fuselage when Weaver found the Ju-52 and bought the wreck for \$5,200. He had it repaired and flew it back to Miami. After being refused certification in the United States, it was sold in 1975 to aviation author Martin Caidin who further restored it and sold it to Lufthansa. It took 16 days to get the aircraft to Hamburg, Germany, where Lufthansa operates its main maintenance base. It's average speed was 110 miles an hour.



The restored Ju-52 is being flown around the United States to commemorate the 35th anniversary of the airline's operation in this country.

At Hamburg, the aircraft was stripped down completely. Much corrosion was discovered under the corrugated skin. Replacement skin had to be specially extruded. All electrical cables and hydraulic lines were replaced. Unlike later monocoque aircraft in which the outer skin carries most of the stress, the Ju-52 is constructed on a steel frame comparable to an automobile. It is powered by three 1340 Pratt & Whitney radial engines.

After leaving New York, the Ju-52 visits major cities across the United States, including Washington, DC, Atlanta, Miami, New Orleans, Houston, Dallas, Phoenix, San Francisco, Portland and Seattle. ■

Duncan B. Pardue, a member of the Public Affairs staff in Eastern Region, is a contributing editor to the region's Intercom.



Posing after a pre-flight demonstration of the Ju-52 are (L-R) John Mahoney (AEA-220), Paul Berkemose (AEA-220), Al Raffi (NY FSDO), Marty Ingram (NY FSDO), George Chespy (NY FSDO), David Malloy, Phil Gandel (AEA-250), an unidentified Lufthansa representative, Ed Krawiec (NY FSDO), and Dick Weaver (AEA-220).

## The Ordeal of the Electra from page 1



President Eisenhower selected retired U.S. Air Force Lieutenant General Elwood R. "Pete" Quesada as the FAA's first Administrator.

clutching a Bible in his other hand. He was one of only ten who survived the accident, which claimed sixty-two lives.

In Washington, meanwhile, General Elwood "Pete" Quesada was just arriving home from a trip to Moscow. As the Federal Aviation Agency's first Administrator, the general would have received the news of any major airline crash with grave concern. The circumstances of this disaster, however, made it a special test for Quesada and for the two-year old agency that he headed. The Boston crash focused national attention on an already intense debate about the 142 Electras in service.

In February 1959, less than a month after airlines began using Lockheed's graceful new turboprop, one of them had plunged into the East River while on approach to LaGuardia. Although at first blamed on a faulty altimeter, this crash proved to have been caused by factors unrelated to the aircraft's design or equipment. On September 29, however, another accident occurred.

Residents of rural Buffalo, Texas, were startled that night by a loud noise overhead. A brilliant fire appeared in the sky, and metal fragments rained down on the countryside. These objects were the remains of a Braniff Electra that had been flying at 15,000 feet with thirty-four persons onboard.

A team led by the Civil Aeronautics Board, which then had the responsibility for determining the probable cause of air carrier accidents, began the difficult investigation. Wreckage was painstakingly gathered and analyzed, revealing that the aircraft's destruction had been triggered by the failure of its left wing. No reason for this failure was apparent, however. The Braniff flight had been cruising in smooth air, with no nearby traffic that might have caused the pilot to stress the wing by a violent maneuver.

Perhaps because the reason for the Buffalo accident was still unknown, FAA took no immediate steps to restrict or modify the Electra. The need for action became unmistakable, however, when

another of the aircraft lost a wing while flying through turbulent air on March 17, 1960. Sixty-three persons died as the fuselage of the Northwest airliner embedded itself in the earth near the Indiana towns of Cannelton and Tell City.

Three days later, FAA issued an emergency directive dropping the Electra's top cruising from 373 to 316 miles per hour. On March 25 the agency further reduced this limit to 259 miles per hour and imposed other temporary restrictions to protect the aircraft from immediate danger. At the same time, FAA ordered a special inspection of all Electras and requested Lockheed to conduct an engineering reevaluation of the aircraft type. The company began an all-out effort to identify the flaw in their product and design a remedy.

In taking these measures rather than simply grounding all Electras, Quesada had relied on advice from FAA's experts and those of the National Advisory Committee for Aeronautics, the predecessor of NASA. Almost inevitably, however, such an issue places a regulatory official in a punishing crossfire between advocates and industry spokesmen. Quesada's situation was especially hazardous because his blunt, forceful leadership had already earned him a sizeable opposition. He was also vulnerable to charges of favoritism due to his former position as a Lockheed vice president, even though he had resigned from the company in a policy dispute.

In addition, Quesada faced the opposition of the Civil Aeronautics Board. The Board learned that inspectors scrutinizing the Electras discovered that almost all the aircraft had experienced some cracking of the small rivets that secured the structure of their wings. Although the percentage of damaged rivets was tiny, the Board members feared a pattern that might lead to failure. On April 12, they voted unanimously to urge the grounding of all unsuspected Electras.

News of this confidential recommendation quickly found its way to Indiana's Senator Vance Hartke, who had earlier called for the Electras' grounding while visiting the crash site in his home state. Hartke resumed his offensive, stating that he was "shocked that Quesada would take the chance of ignoring [the Board's] advice and risk further death from these planes."

The Administrator later discussed his position in an interview with FAA interviewer Charles Plank. Quesada was confident that the lower speeds would reduce the Electra's dynamic load enough to protect it from further catastrophic failures; yet he was fully aware that, if this judgment proved incorrect, the penalty to the public would be terrific.

On May 12, Lockheed announced that it had identified the cause of the two wing failures. The company concluded that both aircraft had sustained some prior damage that weakened them in the area of their power-packaged nacelles,

permitting the engines to wobble when they encountered resistance at high speed. A phenomenon that became known as the "whirl mode" stressed this oscillation to stress the wing beyond the breaking point.

Lockheed developed modifications to prevent any future reappearance of the whirl mode. Until these changes were made, however, the Electra remained highly suspect in the eyes of many. The aircraft's image as a jinx was heightened in September, when one flipped on its back after striking an embankment at LaGuardia. Although this nonfatal accident had nothing to do with structural issues, it prompted Senator Hartke to renew his attack on FAA's policy.

In this charged atmosphere, the news about the crash of Eastern Flight 375 awaiting Quesada on his October homecoming from Moscow was chilling indeed. "When I got word that this airplane had crashed in Boston Harbor," the general recalled, "I was terribly worried that we had been wrong about the Electra."

The Administrator arrived at Logan the following morning. At the urging of Crocker Snow, a state aviation official, he inspected the runway from which Eastern Flight 375 had departed. The tarmac was strewn with hundreds of dead birds, many of them chipped up as if struck by a propeller. Although he had been skeptical of Snow's interest in this phenomenon, Quesada found his attention aroused. The carcasses were particularly numerous to the left of the runway, the direction toward which the doomed Electra had veered.

An ornithologist from nearby Harvard University soon confirmed that the birds had been killed about the same time as the accident. He identified them as starlings, a species accustomed to fly no more than twelve inches from one another in dense flocks. Quesada compared this information with test data showing that a turbine aircraft engine might flame-out if only a single chicken was forced into its intake valve. Although bird ingestion had not previously seemed much of a threat to transport category planes, it now seemed likely that starlings had brought down the Eastern flight.

Quesada feared that to suggest such a cause for the Boston tragedy might subject him to severe ridicule. On the other hand, he believed it necessary to present an immediate justification for continuing his refusal to ground the Electra. He explained the bird theory carefully to reporters and was relieved to find them receptive to the judgement.

The Administrator still faced the scrutiny of Congress and the continued criticism of Hartke. On October 9 he made a bold counterattack on the Indiana Senator in a public telegram addressed to the chairman of two key oversight committees.

"It is regrettable that Senator Hartke

seeks political capital from national tragedy . . ." Quesada wrote. "[H]e pursues his consistent pattern of commenting out of a general background of technical ignorance and with no real knowledge of the specific facts involved." The Administrator went on to point out that there was as yet no evidence that structural failure caused the Boston crash and strong reasons to believe otherwise.

These reasons became even stronger with examination of the engines hauled from Boston Harbor. The discovery of avian remains inside the gaspaths combined with other evidence to support the bird ingestion theory. The Civil Aeronautics Board eventually concluded that the starlings had knocked out three of the four engines. Although two of the units quickly restarted, the abrupt sequence of power loss and recovery had rendered the aircraft uncontrollable.

The Boston tragedy prompted FAA to encourage more effective programs aimed at minimizing the bird hazard at the nation's airports. The accident also stimulated research that yielded a better understanding of the ingestion problem. Meanwhile, in the weeks following the crash, Quesada's position on the Electra gained increasing support in the media.



Stepped-up precautions against the bird hazard followed the Boston Electra crash.

At the end of 1960, FAA lifted the speed restrictions for those Electras that were modified to strengthen their wings. Until their modification was completed, the aircraft had continued to vindicate Quesada's judgement by performing safely at the lower speeds. The Electra went on to prove its high standards of airworthiness in succeeding years, and is still in service in some areas of the country. The whirl mode had been subdued, but it remained a sobering example of how unforeseen factors might combine to create a hazard undetected by even the exhaustive tests of the certification process. ■

Ned Preston is the acting FAA agency historian.

# Paving the Way for Safer Skies: FAA Promotes Global TCAS Implementation

By James P. Witeck

On August 31, 1986, a tragic midair collision occurred in the skies over Cerritos, California, which cost the lives of 67 passengers and flightcrew and 15 persons on the ground. This highly publicized tragedy, which involved an Aeromexico airlines DC-9 and a small general aviation aircraft, stimulated Congress to an almost immediate reaction and marked a turning point in aviation history.

The legislative results—the Airport and Airway Safety and Capacity Expansion Act of 1987—included provisions directing FAA to accelerate its plans to develop and implement an effective airborne collision avoidance system. Specifically, this law established targets for the installation and operation of the Traffic Alert and Collision Avoidance System (TCAS II) in all passenger-carrying aircraft (with more than 30 seats) that operate in U.S. airspace, whether operated by U.S. or foreign carriers. This schedule, somewhat adjusted in a later legislative amendment, requires a “phase-in” TCAS II implementation for U.S. carriers (ending on December 30, 1993) and the single deadline of December 30, 1993, for foreign carriers operating under a Part 129 certificate.

The FAA promotes this important safety-enhancing technology internationally. One significant way is through the U.S./FAA participation in the ICAO SSR Improvements and Collision Avoidance System Panel (SKASP), a group of international experts who develop international standards for such systems. The panel also oversees global evaluation and monitoring programs, which, for the most part, are being conducted or planned in the United States, Europe, and Japan.

Additionally, John K. McGrath, manager of FAA’s Aircraft Engineering Division (AIR-100), reaches an international audience and shares the valuable technology for TCAS-II developed by the FAA and U.S. aviation industry—a valuable tool for all pilots. The AIR-100 division is the principal architect of FAA rules related to TCAS equipment.

In a series of two three-day seminars geared to foreign civil aviation authorities and aircraft operators from every continent, McGrath leads a slate of speakers from the FAA, EUROCONTROL, Boeing Commercial Airplane, and three airlines—Northwest, United, and Japan Airlines—in explaining the TCAS functions, components, operational experience, and both its demonstrated and expected merits.

At the seminar held last May in Miami for authorities and operators from Mexico, the Caribbean, and Central South America, U.S. TCAS manufacturers in their product briefings also gave seminar participants flight demonstrations, including simulated aircraft encounters.

The most recent seminar series, September 19-21 at the Tai-Pan Ramada Hotel in Singapore, was geared to the interest of participants from Europe, Africa, the Middle East, and the Asian/Pacific rim areas. Barry Brayer, manager of the Western-Pacific Region’s Staffing and International Aviation Staff, along with FAA’s Representative in Singapore Don Schmidt and his assistant Sapphire Yong, hosted the meetings attended by approximately 165 participants from almost 40 different countries.

The U.S. Ambassador to Singapore, Robert Orr (a former governor of Indiana), made opening remarks on behalf of the United States. Speakers from the agency were Thomas Inrich, George Lyddane, Frank Rock, Alan Shinskei, and Thomas Williamson. The agenda included technical presentations, lively questions-and-answer periods, and product briefings provided by representatives of four U.S. TCAS manufacturers—Honeywell, Bendix/King, Rockwell International/Collins, and Avion Systems.

The FAA is getting out the word on the latest developments in TCAS-II technology, the word that sharing knowledge is leading the way to safer skies internationally. ■

The author, James P. Witeck, is an international programs officer in the Office of Program and Resource Management (APR). He organized both the Miami and Singapore FAA seminars “Implementing Airborne Collision Avoidance Systems.”



John McGrath (AIR-100) officially opens the FAA-sponsored seminar.



Thomas Williamson (ARD-310) explains the basics of TCAS.



(L-R) Thomas Inrich (AFS-200N); Richard Jenyns, Daniel Tillotson, George Lyddane (ANM-100); Thomas Williamson (ARD-310); Barry Brayer (AWP-4); Ambassador Orr; John McGrath (AIR-100); Frank Rock (AIR-120); Alan Shinskei (ANM-100); and Richard Edwards, Satoshi Murakami, and James Witeck (APR-101).

# Aviation Links the World

By Charles Spence

Imagine the confusion if international aviation faced the problems of border crossings that ground travel must endure. The pilot would find language barriers, opposing traffic flows, unknown and uncertain navigation and communications methods and frequencies—or maybe no methods at all.

Fortunately, this is not so. As world leaders envisioned the growth of air travel after World War II, they established the International Civil Aviation Organization, ICAO, as it is commonly called, was created in December 1944, as an intergovernmental organization. In 1947 it became a specialized agency in relationship with the United Nations.

Over the years, ICAO has proved a model for international cooperation, and proudly, the FAA has played a major role in developing world aviation to the present high standards. Despite its history and current work, few persons in the United States, and even within the FAA and DOT, are fully aware of the U.S. Mission to ICAO and its impact on air activities here and throughout the world.

“It was U.S. initiative that brought nations together to develop a means by which nations could coordinate aviation policy and look to standardizing and normalizing conditions for air transport,” says Lynn Jackson, whose section in the Office of International Aviation in the FAA serves as Secretariat for the U.S. Mission.

The United States supports 25% of ICAO’s budget, and FAA people serve on almost every technical working group. U.S. technology and expertise leave their marks on world aviation from security issues to future navigation systems and from fare structures to standards for windshield detection equipment and the military interception of civil aircraft.

For example, James Treacy in the Northwest Mountain Region’s Transport Airplane Directorate, ANM-103N, serves on a group doing studies and tests for certification of aircraft using microwave landing systems. MLS standards, frequencies, installation acceptance schedules, and other related issues all come through ICAO agreements as does almost every matter involving international air activities.

In another area, because they share the same airspace, coexistence of civil and military aircraft is fundamental, yet geographical, economic, and political influences significantly affect the air traffic environment.

Concern over the destruction of Korean Air lines flight 007 by the Soviet Union in 1983 prompted ICAO to establish a study group to develop a second edition of the manual about interception of civil aircraft. Guice Tinsley, manager of the Special Programs Branch of the Flight Standards Service, AFS-430, be-



The U.S. Mission staff, left to right: Robert D. Cook, Deputy U.S. Representative/ICAO Air Navigation Commissioner; Janet Orndorf, secretary/information assistant; Don M. Newman, U.S. Representative to ICAO; Barbara Simpson, Foreign Service secretary/administrative assistant; David L. Schiele, Foreign Service officer.

came the U.S. member of the group. The accidental shoot-down of Iran Air flight 665 by the United States in 1988 further emphasized the need for improved civil/military coordination.

Other examples of the diverse projects that FAAers work on through the international forum are the committees on future air navigation systems, noise and engine. There are working groups working on airworthiness, obstacle clearance, all-weather operations, and traffic separation minima. Study groups are looking at subjects like frequency management, human factors, fire and rescue, helicopter airborne radar approaches, and satellite-aided search and rescue.

ICAO starts committees, panels, working groups, and study groups as issues and subjects require attention. Two committees, 15 panels, and 19 study groups are now at work on various issues. Four additional study groups are tackling issues peculiar to specific regions of the world. FAA personnel serve on all but two of the 40. In one case the U.S. representative is from the National Weather Service, in the other from the Department of Commerce.

FAA specialists work on the panels and study groups in addition to their regular duties. “We draw technical people from Headquarters and the regions,” Jackson explains. “Somehow, they cram these extra duties into their days and weeks of normal responsibilities.”

Selection of FAA personnel to represent the United States on the technical bodies comes through the FAA Office of International Aviation. David DeCarne of that office forwards details about the

subject to the appropriate section of FAA, requesting an expert representative.

Organizationally the U.S. Mission to ICAO comes under the Department of State. The five-member U.S. Mission stationed in Montreal reports to the State Department’s International Organizations. Staffing at the U.S. Mission consists of: Don Newman, the U.S. Representative on the Council of ICAO, a presidential appointee with the rank of minister; Robert Cook, Deputy U.S. Representative and ICAO Air Navigation Commissioner, on assignment from the FAA to the Department of State as a senior Foreign Service officer; David Schiele, a Department of State career Foreign Service officer; Barbara Simpson, Department of State Foreign Service secretary and administrative assistant to the U.S. Representative; and Janet Orndorf, secretary and information assistant to the Air Navigation Commissioner.

FAA plays a major role in the Mission’s work. “At least 80 percent of the business we do is with FAA,” says Newman. “We are a technical organization, and that is where the focus is.”

Other government and industry interests that become involved in ICAO activities include the Inter-Agency Group on International Aviation (IGIA), which coordinates U.S. international aviation policy. Members are from the FAA, State Department, Department of Defense, Department of Commerce, Federal Communications Commission, and the National Transportation Safety Board. Membership in IGIA is at the assistant

secretary or chairman level. Each government agency also appoints ad hoc members knowledgeable in the subject when matters of major concern to their agencies are under consideration.

“When an issue comes down from ICAO, this group develops the substance and posture of a U.S. position,” explains Roberta Proffitt. As principal staff officer of IGIA, Proffitt serves as the focal point for circulating data, gathering views, and keeping the U.S. Mission in Montreal informed.

Participation is not limited to the government. Eight industry groups also help to develop the U.S. positions. These include pilot organizations from commercial carriers and general aviation, manufacturers, and airlines. Not only do these industry groups get involved during formal meetings, they also contribute during informal contacts. Newman says meaningful help for ICAO work comes from conversations with representatives from such organizations as the International Air Transport Association, International Federation of Airline Pilots Associations and the International Council of Aircraft Owners and Pilot Associations.

One of ICAO’s chief activities is promoting standardization in such aviation matters as licensing of personnel, rules of the air, aeronautical meteorology, aeronautical charts, units of measurement, nationality and registration marks, airworthiness, search and rescue, aircraft accident investigation, airports, aeronautical information services, noise and engine emissions, safe transport of hazardous cargo, and security.

(Continued on page 5)

# A Talk with Barry L. Harris, Deputy Administrator

FAA Deputy Administrator Barry Lambert Harris, a pilot and businessman, brings more than 20 years of aviation experience and strong management skills to the Federal Aviation Administration.

A commercial, multi-engine, instrument-rated pilot with 3,000-plus flying hours under his belt, Harris is no stranger to the nation's air traffic control system.

On November 6, 1989, President Bush announced that Harris was his choice for FAA Deputy Administrator.

In the recent past, he has flown 500 hours a year in both fixed-wing aircraft and helicopters, much of it in the heavily traveled skies of the Northeast.

Harris, who describes himself as a "dedicated aviation enthusiast," belongs to the Aircraft Owners and Pilots Association, National Business Aircraft Association, Experimental Aircraft Association and the National Biplane Association.

The 51-year-old Harris has extensive government and private industry-management expertise. He served as president and chief executive officer of Alliance Corporation, Portland, ME, and Community Systems, Inc., Gloucester, MA.

Harris was also a Gloucester assistant city manager and director of community programs for the Boston's Metropolitan Area Planning Council, a documentary writer-producer for WBZ-TV, Boston, and a news writer for WINS radio, New York City.

Some of Harris' broadcasting documentaries have focused on the lives of John F. Kennedy and Douglas MacArthur and current affairs issues of capital punishment and the half-way house movement.

The FAA Deputy Administrator attended Harvard and Denison universities, served in the U.S. Army and is currently an officer in the inactive Army Reserve.

The following interview, which took place Sept. 17, recounts Harris' impressions of his first year on the job.

Now that you have been here for almost a year, what is your impression of FAA? Does it live up to your preconception of the agency?

HARRIS: First of all, I don't think I came in with a lot of preconceptions.

Clearly, when the question was asked, "Where would you like to serve in this Administration?" I wanted to be here because this was an agency that dealt with something I enjoyed and knew a little bit about. And I liked Sam Skinner's style.



Deputy Administrator Barry Lambert Harris.

I think what I have found that impresses me is FAA's depth. FAA people are bright. They're motivated. They're dedicated and committed. If anything, I was very pleasantly surprised. People at the FAA don't fit the "government employee" stereotype.

How do you see your role as Deputy Administrator of the FAA? Has that role evolved since you came onboard?

HARRIS: If we look at the statutory language that creates the job, we see that the Deputy is empowered to do anything the Administrator is empowered to do—in the Administrator's absence. This means, I suppose, that I could sit in the wings like a good understudy and wait for something to happen to the Administrator.

**"... in the case of Jim Busey and Barry Harris that chemistry is pretty good."**

But, I see it a little differently. I see the role of the Deputy as providing an additional dimension to the Administrator. One person can do only so much, and two people can do so much more. Clearly, the Administrator is responsible for running the agency, and it's up to him to delegate that portion of the responsibility he wants to whomever he wants.

I think the effectiveness of the Deputy is determined by several things. One is the chemistry that exists between the Administrator and the Deputy. I think in the case of Jim Busey and Barry Harris that chemistry is pretty good.

We have a lot in common, yet our ca-

reer backgrounds are vastly different. We both grew up in the Midwest and seem to share what I suppose you could call midwestern values. He enlisted in the Navy and ended 37 years there with four stars. My career included journalism, business, and government.

In the 10 months I've been here, there has never been an issue on which I have found myself in fundamental disagreement with the Administrator. On those rare instances where issues have come to a decision point before we've had a chance to discuss them, I've been amazed at how close his calls have been to what mine would have been. This consonance of approach and opinion between us is, I think, quite remarkable. It also amazes a lot of career employees.

I might add that Jim Busey and Sam Skinner enjoy a similar relationship. I don't think anyone in the FAA hasn't noticed what a difference that makes.

Anyway, I feel comfortable that I can make a contribution. I feel comfortable that I can enhance Jim Busey's administration. And I think there is a growing trust between us that allows this synergy to be an effective, positive force in the agency.

Where do you think you can make the biggest impact?

HARRIS: Well, I guess there are several areas. This agency is typical of, I suspect, any large federal or government agency. It is populated with people who are making a career of government service, yet who see their leaders change from administration to administration.

At the FAA, these changes occur far more frequently than I think is healthy. As a result, the career people say, "Gee, I can't afford to get too far out in front of anybody on any issue, because if the administration changes or the leadership changes, then I may not be on the right side of the issue, and it may hurt my career."

I don't have a problem understanding this. I guess what concerns me is the fact that this tends to inhibit an individual's initiative within an agency. So I see my role as encouraging initiative and creativity and, at the same time, helping to protect those who are willing to take a chance. Risk-taking is the essence of creativity in management.

We've talked a lot about total quality management here in the last six months, and one of the prerequisites of the TQM process is to be able to think in different frames—to change paradigms, to think over the horizon, to see around the corner. A role I can play is to encourage the agency corporately and the people individually to do just that.

I'm also interested in our relationship with our customers. I'm interested in the way we manage the agency in terms of our employment policies, and specifi-

cally our equal opportunity employment policies.

I am interested in the role we play nationally in terms of aviation education. Then, of course, there are a whole host of day-to-day issues in which I get involved in one way or another.

You seem to have taken a particularly active role in EEO. Please discuss your strategy if you have one.

HARRIS: I think this agency has historically given lip service to the process of being an equal opportunity employer, but it's largely been lip service to a process, not to a result.

Ten or fifteen years ago, the FAA said it was going to achieve specific results by the year 2000. That was an easy cop-out then because the year 2000 was far enough away that everyone promulgating the plan knew they would be gone. The achievement was the process and not the fulfillment of the objective: to hire minorities and women.

Now we are looking at the year 2000, and it's only nine years away. Those of us who are here today are likely to be around then. It's the near-term future, and I guess what I'm saying is, we need

**"Risk-taking is the essence of creativity in management."**

to shift focus from the process to the result.

I think an aggressive EEO program is the right thing to do. I think it's the ethical thing to do. It's the moral thing to do. And it's long overdue.

Currently, the work force of the FAA does not, in numbers of women and minorities, approximate the general work force.

An agency of 50,000 people spread across the United States ought to approximate the same kinds of percentages found in the rest of the nation's work force. The fact that it doesn't tells me that there is, at best, inadvertent discrimination, or, at worst, intentional discrimination. The result is the same.

There are two ways we can approach this problem. The first is that we can embark upon a course of hiring lots of minorities and women in entry-level jobs. We hire roughly 5,000 new employees a year at the FAA. Statistically this means we replace the work force every 10 years. If we were to make sure that every year we double the percentage of incoming people targeted to bring agency demographics in line with the general work force by the year 2000, then, in theory, within five years we could be at parity.

But if you want a strategy, I'll give you one. Focus on the future!

Minority hiring at entry level gives quick numbers and makes everyone feel good. And I think we should continue to do it though that's not where my real focus is. If I want to make a lasting mark on this agency, I am convinced I must look over the horizon to a time when I am not here—when Busey, Skinner and Bush are not here. The imperative is that we set in place a mechanism to work out intent after we're gone. John Milton notwithstanding, that mechanism must involve upper-level career management. We must make certain these ranks contain a sufficient number of minorities and women. They will, by their presence and influence, guarantee the process long after I'm gone. They will guarantee it because they will be continuously empowered to refine and fulfill the agenda. Empower them and you fulfill the agenda because they are the agenda.

**"... making sure that when the choices are made, qualified minorities and women are always among the applicants."**

The trick, and it's not so much a trick as the result of serious hard work, is to train well, select carefully, and, by doing so, assure success. Indiscriminate promotion at this level—I'd call it a numbers game—dooms the participants, the program, and the agency to failure. We regress. Pure motives fall victim to unintended consequences.

Discrimination has many faces: some are obvious, some are devious, others are clever and sophisticated. The ultimately successful strategy—to achieve true and permanent equal employment opportunity—will have as many faces.

What is being done to find qualified women and minorities?

HARRIS: We've hired something like 18 additional recruiters. We're going into the schools; we're trying to get the word out that we're serious about this.

When I say that I'm not interested in the process, what I mean is that I'm not interested in allowing us to say, "Hey, we've developed this plan and this process, and that's all we have to do."

Also, I'm not talking about reverse discrimination, and I'm not talking about taking less qualified people. I'm talking about making sure that when the choices are made, qualified minorities and women are always among the applicants.

I'm not talking about quotas, either. But, we've got to accept the responsibility as an agency for making sure that minorities and women have development plans, that their development plans are implemented, and that they get the training and the opportunities to move up.



What's the biggest single issue needing the FAA's attention?

There are many issues we have to deal with, but let me take the NAS Plan as an example. The NAS Plan is coming along well. I believe some 95 percent of the NAS Plan's original programs are under contract. By 1995, much of that architecture will be in place.

What we have discovered through the NAS Plan experience, though, is that we cannot come along every 20 years and give the agency a capital investment shot in the arm and expect it to run for another 20 years.

So, we are moving to a concept of constantly upgrading and updating our own technological infrastructure. Given the fact that it takes anywhere from seven to eight years to achieve a major procurement under existing federal procurement law, it is very difficult for us to stay ahead of developing technologies.

The fact that we are not ahead is one of the things for which we're most severely criticized. We have a technically intensive capital structure, and we've got to adjust that on a continuing basis, on an annual basis.

That's what the Capital Investment Plan is all about. It means we can't just wait until everything is broken before we fix it.

I think a lot of our critics don't understand the complexity. They don't understand the requirements. I don't think they quite understand the fact that software delivery doesn't happen as quickly as we might hope. We can't rush a creative process.

Do you see a special role for yourself in general aviation?

HARRIS: I think I bring to the agency a perception of general aviation that is realistic. My background and experience is in general aviation, so I suppose I am the ranking general aviation representative in the FAA.

I think one of the problems that the general aviation community has is that it does not contribute as many dollars to the system on a direct basis as do other

components of the system, specifically the airlines.

On the other hand, in my judgment, GA activity is a national asset. General aviation nurtures the interest of youngsters in aviation. It is the source and a motivator of aeronautical engineers, scientists, and military and civil pilots. It is also an important business tool for corporations, large and small. GA is the grassroots and the pinnacle of aviation, and its contribution, in this regard, goes far beyond the dollar contribution. All you have to do is go to air shows such as Oshkosh or Lakeland, or to the NBAA [National Business Aircraft Association] annual convention, to see what general aviation is all about and what it means to this nation.

What do you like and dislike about the job of Deputy Administrator?

HARRIS: I can't think of anything else I could do each day to make 12 hours go faster than they do here. It compresses time.

On the other hand, every job has its little irritations, like the fact that the air conditioning works only in the winter and the heat works only in the summer; and the fact that the elevators run intermittently, and the escalators not at all.

But, basically, I look forward to coming into the office every day. I look forward to the daily challenges, the crisis du jour, if you will. I enjoy the people.

Is there anything that I should have asked you about that I didn't?

HARRIS: I think the FAA is going to have to start thinking in terms of taking a leadership role on environmental issues. I think the environment is going to be an area of major public policy-making in the next 10 years. If you stop to think about it, the transportation modes and the government agencies that represent or regulate them influence the environment by virtue of what they do.

Building things like airports, highways, rapid transit systems, impacts the environment. I think we've got to step up to that issue and take some responsibility.

Capacity is a major issue. While it is partly a technology issue, it is also a construction and noise issue. This makes it an environmental issue.

If democracy is based on informed choices for citizens, then is it not the role of the agency to foster the public debate? Don't we have a responsibility to make clear what the issues are so that the public can, in fact, make the proper decisions in terms of the environment versus capacity versus economic benefit? The FAA has never, in my judgment, assumed this role. It is clearly a leadership role and one to which we should commit ourselves. We must broaden our vision and start looking at the donut, instead of focusing on the hole.

Back to a point you mentioned earlier—how do we get those kind of people who can easily think in terms of different paradigms; look beyond the horizon and around the corner?

HARRIS: The FAA is an agency that has vital operational responsibilities, and I think what happens is that the operational responsibilities tend to drive the agency from a policy standpoint.

When, in fact, we have the responsibility of keeping airplanes separated in the air, of maintaining a system that's safe for a half-billion passengers a year—and these passengers are our spouses, mothers, children—this responsibility weighs pretty heavily on the corporate psyche. Nearly half of our employees are engaged directly in doing this, and when they have this enormous responsibility, they tend to be very conservative. The product we're really delivering to the public on a day-to-day basis requires ultraconservatism. Now, the question is, where do we put a creative, big-picture component in the agency?

**"We must broaden our vision and start looking at the donut, instead of focusing on the hole."**

The problem we have is knowing where it fits in and how to foster and direct it.

This is a function of leadership. It's a matter of opening the agency up to where we can have both elements. We can have an operational component that is conservative, that understands its enormous day-to-day operational responsibility. But, at the same time, we can have a research and development component that is inventive and creative; we can have a procurement component that is responsive and responsible; and we can have a management team that possesses insight and demonstrates foresight. When we create that kind of exciting environment within the FAA, the kind of people we're talking about will beat a path to our door. ■

## Aviation Links the World from page 5

ICAO is made up of an Assembly, a Council composed of 33 Member States with various subordinate bodies, and a Secretariat. One hundred sixty-one states of the world are members. The organization recognizes nine geographic regions. These are treated individually for planning facilities and services required on the ground by aircraft flying in these regions.

In each region, planning produces a network of thousands of air navigation facilities and services. Not all states have the resources of capital or trained technicians to provide the needed parts of a system. ICAO can help.

Technicians, many of them from FAA, work with nationals of many states in setting up and getting equipment operating, conducting training centers, and promoting all-important standardization. Without standardization, even air crossings of borders would be at best difficult, slow, and confusing—at worst, impossible.

As aviation technology continues to advance rapidly, not only is it necessary to set new standards, but existing ones must also be reviewed and amended. If a member state does not have the funds to develop a needed facility, ICAO can help to arrange "joint financing" or funding from the United Nations Development Program (UNDP). Facilities for North Atlantic crossing are an example of the former. Air traffic control facilities in Greenland and Iceland were developed under joint financing arrangements, and the charges to users are still subject to

ICAO approval. UNDP-funded technical assistance projects are found throughout the developing world.

Unusual circumstances can require a special meeting of the Assembly. Another special assembly convened October 22 to consider aircraft noise issues and the phase-out of stage two aircraft.

Once ICAO adopts a standard or procedure, individual states put it into effect based on timetables of the agreement. If a state chooses not to adopt the ICAO position, it may file an exemption. These rarely involve any safety issues, says Jackson. He points to many U.S. exemptions as "differences to reflect circumstances in which we have invested in certain capabilities" that may be more than what ICAO standards state.

"We lead the world in almost every aspect of air traffic control, aviation systems, information, procedures and technologies," adds Jackson. "The standards adopted through ICAO rarely come up to those we apply." While a state internally may have higher standards than those agreed to through ICAO, it may not impose these standards on foreign aircraft entering its airspace before the times established through ICAO agreements.

Issues that ICAO considers may come from the organization or from member states. "There may be times when we want a world standard," says Jackson, "and we will propose a technical committee to work on it." At other times other member states may be developing something that requires world agreement.

While ICAO sees itself as a technical organization, much of its work, nonetheless, can be seen as having a political impact, and ICAO demonstrates that achievements are possible when nations work together and make concessions to reach agreement. Although the process is often slow, more than four decades of world air transportation advancements prove its value.

Chief of the U.S. Mission, Don Newman welcomes ideas, comments, suggestions—and yes, even problems—about the international aspect of aviation. "We can be helpful if factored into the loop," he says. ■

*Charles Spence, a Gaithersburg, MD, freelance writer, is a frequent contributor to FAA World.*



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Clyde T. Williams  
David E. Williams

Technical Center  
Elmer C. Clarke  
Valentino A. Filastro  
James W. Haner  
Robert M. Johns  
Charles J. Kuck  
Herman E. Regal

### Washington Headquarters

Wayne J. Barlow  
Gwendolyn A. Browne  
Edward V. Curran  
Robert J. Dame  
Robert Demott  
Roy L. Faber  
William E. Freeman  
Lewis D. Gelfan  
Richard M. Gough  
Edwin S. Harris  
Eugene R. Ines  
David U. Johnson  
Nick A. Komons  
Jacques S. Kouchakdjian  
Charles W. Mayernik  
Keith D. McDonald  
Howard E. Murphy  
John A. Mydlow  
Bobby R.L. Norris  
James M. O'Malley  
Cesar A. Padilla  
Joseph L. Pierga  
Arthur Prigal  
Howard R. Richardson  
Raymond D. Schunter  
Barry P. Siford  
Clifford W. Vogel  
James E. Warner  
Robert E. Whittington

### Western-Pacific Region

Thomas K. Aina  
Marshall J. Blundell  
Ronald E. Braden  
John H. Calhoun  
James L. Cary  
Jerold M. Chavkin  
Jerry W. Cloud  
John P. Collier  
Joseph M. Defelice  
Lawrence K. Fay  
Jenene G. Fontes  
Olga D. Gomez  
Louise M. Hamilton  
Ralph Hodge  
Richard A. Huston  
Ronald Y. Ichimura  
Gordon W. Slade  
Gary H. Stanton  
Paul H. Story  
Leo S. Tamer  
Frederick Van Fluke  
Donald P. Watson  
Carl L. Zimbelman



The globe in New York's old marine air terminal is symbolic of world travel. ICAO was founded a short time after this photo was taken in 1940.

## Aeronautical Center

Susan N. Bounds, manager, Compensation Branch, Human Resource Management Div., promotion made permanent. **David R. Brown**, Academy 3R Instructor, Radar Section, Airway Facilities Branch, FAA Academy, promotion made permanent. **Robert L. Corcoran**, unit supervisor, Electronic Production Section, Engineering & Production Branch, FAA Logistics Center. **David L. Mollette**, unit supervisor, Electronic Production Section, Engineering & Production Branch, FAA Logistics Center. **Ed S. Stevenson**, supervisor, Flight Operations/Scheduling Section, Anchorage FIFO, promotion made permanent. **Jimmy C. Warren**, unit supervisor, Receipt and Packing Section, Storage & Transportation Branch, promotion made permanent. **Gerald W. Williams**, supervisor, Project Management Section, Program & Project Management Branch, FAA Academy.

## Alaskan Region

**Richard W. Girard**, supervisory aviation safety inspector, Flight Procedures Branch, Flight Standards Div. **Diana L. Hinshaw**, unit supervisor, Fairbanks FSDO, Flight Standards Div. **Harry F. Hahn**, unit supervisor, Anchorage AFSFO, South Alaska AFS. **Ludell Hutchings**, unit supervisor, Ketchikan, AK, AFSFO, South Alaska AFS, Anchorage, from Cold Bay. **Roger A. Motzko**, manager, Safety & Standards Branch, Airports Div., from Minneapolis. **Dotye G. Muths**, manager, Management Analysis Branch, Resource Management Div. **William M. Newman**, asst. manager, Maintenance Engineering Branch, Airway Facilities Div., from Washington Headquarters. **Gary E. Nielsen**, unit supervisor, Resource & Standards Section, Resource & Planning Branch, Airway Facilities Div., promotion made permanent. **Ronald N. Reynolds**, section supervisor, Anchorage CASFO, Air Security Branch, Civil Aviation Security Div., from Brussels, Belgium. **James E. Royse**, unit supervisor, Anchorage AFS ARTCC. **Charles J. Smith**, foreman, Bethel, AK, AFSFO, North Alaska AFS, Frankfort, promotion made permanent. **Helen Mae Wall**, unit supervisor, Air Traffic Div., from Washington Headquarters. **Jeffrey F. Wheeler**, manager, Nome, AK, FSS, from Sitka FSS.

## Central Region

**Jack E. Bowers**, area supervisor, Lambert Field TRACON ATCT, St. Louis, promotion made permanent. **Herbert L. Drayton**, section supervisor, National Communications

Center, Air Traffic Div., promotion made permanent. **Wayne E. Halter**, supervisor, Iowa/Missouri Section, Safety & Standards Branch, Airports Div. **Robert L. Hiller**, section supervisor, National Communications Center, Air Traffic Div., promotion made permanent. **Glenn L. Martin**, unit supervisor, Wichita, KS, FSDO, Airworthiness Section, Flight Standards Section, promotion made permanent. **Dean E. Matthews**, supervisor, Operations Planning Section, Resources & Planning Branch, Airway Facilities Div., promotion made permanent. **Richard C. McMillen**, manager, Investigations & Internal Security Branch, Civil Aviation Security Div., promotion made permanent. **Douglas M. Perkins**, area supervisor, Mid Continent ATCT, Wichita, KS, from Kansas City International ATCT. **Kathleen J. Person**, unit supervisor, Wichita, KS, FSDO, Operations Section, Flight Standards Div., promotion made permanent. **Phillip M. Reichart**, asst. manager, Lambert Field TRACON ATCT, St. Louis, MO, from Indianapolis ATCT. **Donald G. Torral**, unit supervisor, St. Ann, MO, FSDO, Operations Section, Flight Standards Div., promotion made permanent. **Terry D. Tupper**, unit supervisor, Kansas City, MO, FSDO, Geographic Section, Flight Standards Div.

## Eastern Region

**Frank J. Bonhace**, asst. manager/programs, Republic Airport ATCT, Farmingdale, NY, from regional headquarters. **Philip E. Brito**, Airports Program Manager, New York Airports District Office, Valley Stream. **William W. Buck**, asst. manager, Baltimore, MD, ATCT, from Lambert Field. **Willard M. Doughtery**, manager, Allegheny City FSDO, West Mifflin, PA. **Albert L. Dummam**, unit supervisor, Establishment Engineering Branch, Airway Facilities Div., Baltimore, MD, from regional headquarters. **Joseph Figliuolo III**, area supervisor, New York AFSIS, Islip, NY. **Dennis J. Heubner**, area manager, Greater Pittsburgh ATCT. **Jay A. Johnson**, manager, New York FSDO, Valley Stream, NY. **Otis M. Johnson, Jr.**, manager, Baltimore, MD, FSDO. **Robert C. Krieg**, supervisor, Control Section, Control, Reports & Analysis Branch, Accounting Div. **Barbara J. Lengyel**, unit supervisor, Resource Management Section, Resource & Planning Branch, Airway Facilities Div., promotion made permanent. **Vincent J. Lepera**, manager, Pittsburgh FSDO. **David W. Madison**, area supervisor, Washington National ATCT, promotion made permanent. **Gilbert Magan**, manager, Binghamton, NY, ATCT, promotion made permanent. **John Mayrhofer**, manager, New York TRACON, Garden City, from Washington Headquarters. **Walter R. Mitchell**, manager, Charleston, WV, AFSFO, Charleston AFS. **Walter Sheppard**, unit supervisor, New York CASFO. **David E. Townsend**, manager, Charleston, WV, FSDO. **David R. Venti**, asst. manager for training, Baltimore ATCT, from Washington Headquarters. **John E. Wilson**, area supervisor, Washington National ATCT, promotion made permanent. **Alvin H. Zito**, asst. manager, Pittsburgh FSDO, Coropolis, PA.

## Great Lakes Region

**Lisa S. Arlington**, area supervisor, Ann Arbor, MI, ATCT, from Detroit, MI, Metro ATCT. **John E. Brice II**, area supervisor, Cleveland, OH, ARTCC, promotion made permanent. **William H. Carpenter**, asst. manager, traffic management, Cleveland, OH, ARTCC, Oberlin. **Gary M. Courtney**, unit supervisor, Leelanau County, MI, AFSFO, Belleville, MI, AFS, promotion made permanent. **Frank J. Cullen**, asst. manager for program support, Bismarck, ND, AFS, from regional headquarters. **Frederic E. Doll**, systems engineer, Oberlin, OH, AFS. **Lyndin L. Foss**, unit supervisor, Bismarck, ND, AFS, promotion made permanent. **William J. Hilde**, area supervisor, Cleveland, OH, ARTCC, Oberlin, promotion made permanent. **William C. Hodges**, area supervisor, Cleveland, OH, ARTCC. **John R. Jones**, manager, Schiller Park, IL, FSDO. **Larry S. Minor**, manager, Ohio State University ATCT, Columbus. **Charles V. Nolan**, manager, Springfield, IL, FSDO, promotion made permanent. **Bertrand R. Ouellette**, manager, Pontiac, MI, ATCT, promotion made permanent. **Bobby L. Pedigo**, asst. manager for technical support, Dakota AFS, Bismarck, from Anchorage. **Donald A. Slechta**, security specialist, Chicago, IL, CASFO, Schiller Park, IL, from Des Plaines. **Ronald J. Tishma**, environmental support technician, Oberlin, OH, AFS.

## New England Region

**Paul G. Johnson**, manager, System Requirements Branch, Air Traffic Div., from Logan International ATCT.

## Northwest Mountain Region

**Philip R. Burton, Jr.**, area supervisor, Great Falls, MT, AFSIS, promotion made permanent. **Alvin R. Habostad**, manager, Seattle Aircraft Certification Office, Transport Airplane Directorate. **Robert J. Jones**, area supervisor, Boise, ID, FSS, from North Bend, OR, FSS. **Noel F. Keane**, section supervisor, Facility Operations Branch, Air Traffic Div., from Centennial Airport ATCT, Denver. **Richard L. Morgan**, maintenance mechanic foreman, Portland, OR, AFS, promotion made permanent. **Willard R. Probert**, group supervisor, Navigation Communication Installation Engineering Section, Establishment Branch, Airway Facilities Div. **William L. Ramage**, unit supervisor, Billings, MT, AFS. **Robert R. Sestak**, supervisor, Radar/Airborne Construction Engineering Section, Establishment Branch, Airway Facilities Div., from Salt Lake City, UT. **Clark D. Taylor**, area manager, Salt Lake City, UT, ATCT. **Patrick A. Terry**, area manager, Great Falls, MT, AFSIS, from Idaho Falls, FSS. **Nancy A. Trudell**, unit supervisor, Salt Lake City, UT, FSDO, from Long Beach, CA, FSDO. **Clarence B. Wilson**, asst. manager for training, Seattle Tacoma ATCT. **Edd S. Woshum**, manager, Salt Lake City, UT, ATCT, from Denver, CO, ATCT. **James H. Young**, section supervisor, Denver CASFO, from Washington Headquarters.

## Southern Region

**Robert R. Aubin**, area supervisor, Pensacola, FL, ATCT, from Tallahassee, FL, ATCT. **Joseph D. Belden**, crew chief, Jacksonville, FL, ARTCC AFS, Hilliard, from Palmec, PR, ARTCC. **Dorothy G. Bowen**, manager, Compensation Branch, Human Resource Management Div., from regional headquarters. **Donald E. Burk**, Jr., Hilliard, FL, ARTCC. **Jeffrey J. Coghlin**, staff officer, Resource Management Staff, Civil Aviation Security Div., promotion made permanent. **David J. Cognata**, area manager, San Juan CERAP. **Bryce Courtney**, asst. manager, plans & procedures, Orlando, FL, ATCT. **Hoyt L. Dunn**, manager, Atlanta, GA, Hub AFS, promotion made permanent. **James L. Garstang**, area supervisor, Greenwood, MS, AFSIS, from Jackson, TN, AFSIS. **Isaac O. Grant**, area supervisor, St. Petersburg, FL, AFSIS, from Meridian, MS, FSS. **Cecil L. Hall**, asst. manager, plans & procedures, Charlotte, NC, ATCT. **Joseph A. Hambric**, area manager, Hampton, GA, ARTCC. **Eddie C. Head**, traffic management unit supervisor, Hilliard, FL, ARTCC. **Kenny Jones**, area supervisor, Greenwood, MS, AFSIS, from Anniston, AL, AFSIS. **Luis R. Llado**, manager, Palmec, PR, AFSFO, San Juan AFS, promotion made permanent. **James P. Millon**, asst. manager for program support, Tampa, FL, AFS, promotion made permanent. **Alan B. Nesbitt**, area manager, Hartsfield International Airport ATCT. **Antonio I. Ramos**, asst. manager for technical support, San Juan, PR, AFS, from regional headquarters. **John W. Reynolds, Jr.**, section supervisor, Orlando, FL, Airports District Office. **Donald M. Ricks**, area supervisor, Macon, GA, AFSIS. **Kenneth P. Sandiford**, area supervisor, St. Petersburg, FL, AFSIS. **Don R. Simons**, area supervisor, Charlotte, NC, ATCT, from Washington National ATCT. **James A. Wells**, area supervisor, Pensacola, FL, ATCT, promotion made permanent. **Edward K. Wright**, area supervisor, Greenwood, MS, AFSIS, from Raleigh, NC, AFSIS.

## Southwest Region

**Chester E. Bedford**, supervisor, Navigation & Interfacility Engineering Section, Establishment Engineering Branch, Airway Facilities Div. **Marvin D. Benson**, supervisor, Radar/Communication/Automation Section, Systems Maintenance Engineering Branch, Airway Facilities Div. **Ashley G. Blackman, Jr.**, manager, Midland, TX, AFSFO, Austin, AFS, from Little Rock, AFS. **Edward A. Brestle**, area supervisor, Fort Worth, TX, ARTCC. **Ezell Brown, Jr.**, Houston, TX, AFSFO, Houston AFS, promotion made permanent. **Sherrill M. Carambi**, unit supervisor, Navigation & Interfacility Engineering Section, Establishment Engineering Branch, Airway Facilities Div. **Michael E. Daniel**, unit supervisor, Certificate Management Office, Flight Standards Div. **Walter M. Ernst**, Jr., manager, Certificate Management Office, Flight Standards Div. **Gary F. Fay**, asst.

manager, Albuquerque, NM, ATCT, from Aspen, CO, ATCT. **Steve M. Gallegos**, asst. sector manager, Fort Worth, TX, ARTCC AFS, from Albuquerque ARTCC AFS. **Kirk M. Hallett**, area supervisor, Gallup, NM, FSS. **Lloyd M. Halliburton**, unit supervisor, Certificate Management Office, Flight Standards Div. **William E. Jessee**, manager, Oklahoma City AFSFO, Beltway AFS, promotion made permanent. **Otis R. Key**, unit supervisor, Fort Worth, TX, FSDO. **Allen E. King**, manager, Airworthiness Branch, Flight Standards Div., from Dallas, TX, FSDO. **Ronald C. McGarry**, manager, Operations Branch, Flight Standards Div. **Harold D. Millender**, unit supervisor, Bartlesville, OK, AFSFO, Little Rock AFS, from Dallas/Fort Worth AFS. **Salvador Mugica**, area supervisor, El Paso, TX, FSS. **Bernard Mullins**, manager, Fort Worth, TX, FSDO. **Michele M. Owsley**, manager, Airplane Certification Office, Rotocraft Directorate. **Patricia A. Petosky**, manager, Midland, TX, ATCT, from Lubbock, TX, ATCT. **J. C. Pierce, Jr.**, unit supervisor, Dallas, TX, FSDO. **Alfred P. Puente**, area supervisor, Beaumont, TX, ATCT. **Louis A. Sims**, manager, Tucuman, NM, AFSFO, Albuquerque AFS, promotion made permanent. **James P. Ward**, area supervisor, Albuquerque Transition Staff, Facility Operations Branch, Air Traffic Div., from Gallup, NM, FSS.

## Technical Center

**Kaye D. Jackson**, center counsel, Assistant Chief Counsel's Office. **Rick A. Marinelli**, technical program manager, Airports Technology Branch, Airports Div., promotion made permanent.

## Washington Headquarters

**David T. Bailey**, manager, Aircraft Interfacility & Safety Branch, Contracts Div., Logistics Service. **Allen F. Beard**, manager, Maintenance Processor Branch, Automation Engineering Div., Associate Administrator for NAS Development, promotion made permanent. **Lauraine Clark**, manager, Advanced Automation Branch, Contracts Div., Logistics Service. **James F. Coffey**, chief, Frankfurt FSD, Flight Standards Staff, Flight Standards Service, from the Aeronautical Center. **Richard L. Danz**, manager, Airspace Capacity Planning Program, System Capacity & Requirements Office. **William T. Dixon**, staff officer, Field Evaluation Staff, Associate Administrator for Airway Facilities. **Ralph W. Dorley, Jr.**, program manager, Airspace Capacity Planning Program, System Capacity & Requirements Office, from Washington National ATCT. **Algie W. Guy**, manager, Advanced Automation Branch, Contracts Div., Logistics Service. **Brian S. Isham**, manager, Aircraft Interfacility & Safety Branch, Contracts Div., Logistics Service. **Ronald L. La Marche**, asst. manager, programs, Traffic Flow Management Branch, Operations Div., Air Traffic Operations Service, from Milwaukee, WI. **Benny L. McGlamery**, manager, Flight Information & Obstructions Branch, Airspace-Rules & Aeronautical Information Div., Air Traffic Opera-

tions Service, from Orlando, FL. **Howard R. McLaughlin**, manager, Automation Software Div., Air Traffic Plans & Requirements Service, from Technical Center. **William F. Petruzel**, manager, Technical Analysis & Support Branch, Technical Programs Div., Flight Standards Service, promotion made permanent. **Ned S. Reese III**, branch manager, Field Development Program Div., Office of Air Traffic Program Management, from Denver ARTCC, Longmont, CO. **Paul T. Steucke**, manager, Public & Employees Communications Div., Assistant Administrator for Public Affairs, from Anchorage, AK. **John H. Timmerman**, manager, Air Traffic Advanced Automation Systems Requirement Branch, Advanced Systems & Facilities Div., Air Traffic Plans & Requirements Service.

## Western-Pacific Region

**Nina Adams**, asst. manager, Human Resource Management Div. **William J. Alcalá**, asst. manager, Los Angeles ARTCC AFS, Palmdale, from Edwards AFB AFSFO. **Ruthann C. Couch**, area supervisor, Oakland, CA, TRACON. **Paul B. Crampton**, asst. manager for technical support, Golden Gate AFS, Hayward, promotion made permanent. **Robert M. Dasio**, unit supervisor, San Jose, CA, FSDO, promotion made permanent. **Douglas M. Irwin**, unit supervisor, Las Vegas, NV, CASFO Phoenix, AZ, CASFO, promotion made permanent. **Rebecca Lee**, area supervisor, Los Angeles, CA, ATCT, promotion made permanent. **Laurence A. Marinell**, asst. manager for training, Sacramento, CA, AFS, promotion made permanent. **Delcie A. Mokulehua**, unit supervisor, Honolulu, HI, AFS, Hawaii-Pacific, promotion made permanent. **Nina L. Nance**, manager, Planning & Program Management Branch, Flight Standards Div. **Gary M. Olson**, area supervisor, Red Bluff, CA, FSS, promotion made permanent. **Todd A. Smith**, area supervisor, Santa Barbara, CA, ATCT, promotion made permanent. **Jesse R. Stevenson**, manager, Airworthiness Branch, Flight Standards Div. **Katherine A. Warner**, section supervisor, Contracts & Payables Branch, Accounting Div. **Thomas C. Williams**, area supervisor, Sacramento, CA, FSS, promotion made permanent.

The information in this feature is extracted from the Personnel Management Information System (PMIS) computer. Space permitting, all actions of a change of position and/or facility at the first supervisory level and its branch manager in offices are published. Other changes usually cannot be accommodated because there are thousands each month.

## Recognizing 'FAA's Most Precious Resource'

By Lisa Avoni



Joseph Del Balzo, Executive Director for System Development, speaks at the FAA Technical Center's annual employee awards ceremony.

It's no secret that employees are the FAA's most precious resource. Think about it: Without dedicated and talented FAA employees, who would run the agency, control air traffic, or repair malfunctioning systems? In short, who would oversee the nation's entire air traffic control system or conduct research to make the skies safer? With so much being accomplished with such a relatively small work force, employee recognition is not only well deserved, but also an essential way to show employees the importance of their contributions.

Performing the functions of air traffic controllers, secretaries, engineers, scientists, administrative officers, and many other jobs, all its employees play a vital role in meeting the agency's mission.

The FAA is no stranger to the employee awards concept. One example is the awards ceremony—"Awards for Professional Achievement and Excellence"—Executive Director for System Development Joseph Del Balzo (AXD-13) stated at the FAA Technical Center 13 years ago, which has been shaped and refined into an annual celebration of employee excellence. In the 13-year period, 994 center employees have been nominated through the program, and 156 employees have been selected as recipients for awards.

"Technical Center employees are proud of their work," remarked its Director Harvey Safer, "and that is reflected by the quality of their performance."

"The program features the aspects of peer nomination and selection," said Frank Elbertson, program chairperson and manager of the Appraisal and Planning Staff at the center. "What greater honor can there be than to be selected for an award by a group of your peers?"

Del Balzo carried the awards program idea with him to the Eastern Region and recently to Washington Headquarters, where AXD just celebrated an annual awards program honoring employees in all three of its organizations: System Engineering and Development, NAS Development, and the Technical Center.

The program is based on the trickle up theory. Each of the three organizations holds its own awards program, and the selectees from each organization then become the nominees for 15 AXD categories. The emphasis is all three programs is placed not only on winning an award, but also on being nominated for an award.

Employees, who nominate their co-workers, and committee members, who work diligently to bring the entire effort together, are the basis for the program's success. ■

Lisa Avoni is a public-affairs specialist in the FAA Technical Center. Currently she is the Intecon editor.

# EEO

from page 1

The group, which agreed to begin conducting joint staff meetings to support their programs, developed a number of recommendations to recruit, select, promote, and retain women and minorities and to eliminate cultural disadvantages in the workplace. Several of the recommendations will be refined by special work groups.

CROs and HRMOs also decided to conduct joint monthly telcons to open up communications and insure consistency in policy and program interpretation and implementation.

The CRO and HRMO group will meet at least annually in conjunction with one of the special emphasis group conferences to promote a unified approach to affirmative action and equal employment opportunity. Finally, CROs and HRMOs committed themselves to developing joint goals and objectives to achieve a culturally balanced work force for the FAA.

How did some of the participants view the progress made at the meeting? Wanda Reyna, Headquarters Staffing Policy Division had this to say: "Now we



Herb McLure, Associate Administrator for Human Resource Management, and Leon Watkins, Assistant Administrator for Civil Rights, enjoy a photo break. Joe Alvarez, manager, Western-Pacific Human Resource Management Division, and Ken Smith, civil rights officer, Alaskan Region, pause for refreshments.



Fanny Rivera, manager, Headquarters Human Resource Management Division, and Ray Salazar, Director, Center for Management Development, attended the meetings.

know what the problems are. I am encouraged that we are going to be team players."

Art Montoya, Southern Region Civil Rights Officer, added, "We have formed partnerships where we share common concerns."

The essential role of the Chief Counsel's Office in affirmative action and equal employment opportunity was clarified by Irene Mields, senior attorney at Headquarters, who also summarized recent court decisions that upheld the use of affirmative action programs to achieve race and gender balance. She encouraged the partnership of CROs, HRMOs, and the General Counsel's organization in their common cause of achieving an appropriate balance. ■

*At their joint meeting, in conjunction with the National Black Coalition of Federal Aviation Employees 14th annual conference, CROs and HRMOs committed themselves to a working partnership based on the following operating norms:*

- We are open, candid, and trusting.
- We talk straight and deal directly.
- We look for opportunities to share.
- We coordinate and concur across program lines.
- We reinforce each other.
- We are visible partners.
- We commit time to the partnership.
- We assume the best and forgive mistakes.
- We approach problems and seek closure with positive, creative, and strategic thinking.

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## Joining Forces for E E O

q u a l i t y  
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p o r t u n i t y

**"T**his year we will hire in proportion to the civilian labor force." With these words, Herb McLure, Associate Administrator for Human Resource Management, opened a joint meeting in Las Vegas of the agency's civil rights officers (CROs) and human resource management officers (HRMOs). They met in conjunction with the National Black Coalition of Federal Aviation Employees' 14th annual conference.

At the meeting, FAA Administrator James Busey unequivocally stated his commitment to affirmative action. While recognizing that the agency has "talked a good game" in the past, Busey said, "The facts don't bear out what we want to do by the year 2000, particularly at the management level."

Busey demanded that all managers take actions leading to meaningful results. "We are going to make positive progress during my tenure," he said.



FAA Administrator James Busey, Assistant Administrator for Civil Rights Leon Watkins, and manager of the Staffing Policy Division Wanda Reyna discuss EEO initiatives.

He endorsed setting meaningful, attainable goals and holding management accountable for the achievement of those goals. "We want a culturally mixed work force that gives us the benefit of all the talents and gifts of all our employees. I

want this EEO initiative to move forward, even within the severe budget situation. I don't want our managers to use this situation to lie back and do nothing."

The aim of the meeting in Las Vegas

By Lu Carradine and Tina Mallory-Stephens

Lu Carradine is the Civil Rights Manager, Central Region, and Tina Mallory Stephens is the Headquarters Civil Rights Manager.

was to improve work relationships between CROs and HRMOs, clarify the roles and responsibilities of each group, and identify strategies for supporting FAA's affirmative action goals.

"Other agencies are not making this kind of commitment. FAA is on the cutting edge," said Leon Watkins, Assistant Administrator for Civil Rights.

Organizational development specialists Katherine Friedman, Northwest Mountain Region, and Cindy Zook, Washington Headquarters, served as facilitators for the two-day meeting in mid-September.

Participants reported that concrete results came out of the meeting. They identified issues hampering the agency's affirmative action initiative and developed strategies to aid the recruitment and retention of minorities and women.

(Continued on page 12)

## The Ordeal of the Electra

Three decades ago, a series of crashes involved FAA in a fierce controversy about the safety of a new airliner.

By Ned Preston

**L**ate in the afternoon of October 4, 1960, Eastern Air Lines Flight 375 prepared to leave Boston's Logan Airport for Philadelphia and points south. Fifteen of the seats were filled by Marine recruits who were no doubt thinking ahead to what might await them at boot camp. The minds of other passengers may have been on politics, for Massachusetts Senator John F. Kennedy seemed to be gaining in a close race for the Presidency.

Flight 375 was a Lockheed Electra, one of a new generation of efficient transports helping to make air travel a routine choice for many Americans. The aircraft was powered by four Allison turbine engines that sucked in air through valves mounted just behind the propellers. These turboprops did not deliver quite the speed possible to turbojets such

as the Boeing 707, but they far surpassed the performance of older piston-driven aircraft.

Several of those who watched the de-

parture of Flight 375 noticed that some of the engines emitted smoke or fire seconds after takeoff. The Electra yawed leftward, struggling to maintain its



Passengers board a Lockheed Electra in the early 1960s.

climb, and then stalled. The left wing dropped as the aircraft began a spin that ended in an almost vertical dive into the waters of Boston Harbor.

Spectators along the shore immediately launched small boats and hurried toward the sinking wreckage. Many passengers were found strapped to their floating seats, but no more than a few were still alive. Rescuers were able to release the seatbelt of a man who was holding a dead friend with one arm and

(Continued on page 12)

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November/December 1999

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John Clabes—Aeronautical Center

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## Vintage German Ju-52 Tri-motor on Tour

By Duncan B. Pardue

New York area air traffic controllers and aviation safety inspectors were the first FAAers to get close-up views and rides on a 1932 vintage Junkers 52 when the aircraft began a 27-city demonstration tour of the United States in September.

The aircraft, which was rescued from a junk heap in Ecuador in 1969 by American collector Lester Weaver, was bought by Lufthansa in 1984 and reconditioned. It is being flown around the United States to commemorate the 35th anniversary of the airline's operation in this country.

Before it could enter the country, however, it had to meet FAA certificate requirements. Larry Bottie of AEA 252 was in charge of this somewhat unusual task.

"It was clear from FAR 91.28b that an aircraft built in the 1930s could not support a standard airworthiness certificate," Larry said. "We were able to issue a special flight authorization certificate, which included 23 limitations."

Among the limitations are that the aircraft cannot carry passengers or cargo for hire and it must fly only under visual flight rules. It also must avoid areas of heavy air traffic and congested areas of cities, towns, and villages. Too, its special flight authorization document has to be displayed in the cabin.

Starting in 1932, Junkers began its manufacture of about 5,000 of the corrugated-skinned passenger planes. Most European airlines operated Ju-52s, which developed a reputation for ruggedness and reliability comparable to the American DC-3s.

The restored Ju-52 joining the United States was built in 1936. It was originally fitted with floats to fly Lufthansa's route between Copenhagen, Denmark, and Oslo, Norway. It was later sold to Norwegian Air Lines, only to be commandeered by the Luftwaffe in World War II. After the war it flew again in Norway until it was decommissioned in 1956. It operated as a freighter in Ecuador for a few years. Overhauled and under-maintained, it started to fall apart.

Birds were nesting in the fuselage when Weaver found the Ju-52 and bought the wreck for \$5,200. He had it repaired and flew it back to Miami. After being refused certification in the United States, it was sold in 1975 to aviation author Martin Caidin who further restored it and sold it to Lufthansa. It took 16 days to get the aircraft to Hamburg, Germany, where Lufthansa operates its main maintenance base. Its average speed was 110 miles an hour.



The restored Ju-52 is being flown around the United States to commemorate the 35th anniversary of the airline's operation in this country.

At Hamburg, the aircraft was stripped down completely. Much corrosion was discovered under the corrugated skin. Replacement skin had to be specially extruded. All electrical cables and hydraulic lines were replaced. Unlike later monocoque aircraft in which the outer skin carries most of the stress, the Ju-52 is constructed on a steel frame comparable to an automobile. It is powered by three 1340 Pratt & Whitney radial engines.

After leaving New York, the Ju-52 visits major cities across the United States, including Washington, DC, Atlanta, Miami, New Orleans, Houston, Dallas, Phoenix, San Francisco, Portland and Seattle. ■

Duncan B. Pardue, a member of the Public Affairs staff in Eastern Region, is a contributing editor to the region's Intercom.



Posing after a pre-flight demonstration of the Ju-52 are (L-R) John Mahoney (AEA-220), Paul Berkemose (AEA-220), Al Raff (NY FSDO), Mary Ingram (NY FSDO), George Chepoy (NY FSDO), David Malloy, Phil Gandel (AEA-250), an unidentified Lufthansa representative, Ed Krawiec (NY FSDO), and Dick Weaver (AEA-220).

## The Ordeal of the Electra from page 1



President Eisenhower selected retired U.S. Air Force Lieutenant General Elwood R. "Pete" Quesada as the FAA's first Administrator.

clutching a Bible in his other hand. He was one of only ten who survived the accident, which claimed sixty-two lives.

In Washington, meanwhile, General Elwood "Pete" Quesada was just arriving home from a trip to Moscow. As the Federal Aviation Agency's first Administrator, the general would have received the news of any major airline crash with grave concern. The circumstances of this disaster, however, made it a special test for Quesada and for the two-year old agency that he headed. The Boston crash focused national attention on an already intense debate about the 142 Electras in service.

In February 1959, less than a month after airlines began using Lockheed's graceful new turboprop, one of them had plunged into the East River while on approach to LaGuardia. Although at first blamed on a faulty altimeter, this crash proved to have been caused by factors unrelated to the aircraft's design or equipment. On September 29, however, another accident occurred.

Residents of rural Buffalo, Texas, were startled that night by a loud noise overhead. A brilliant fire appeared in the sky, and metal fragments rained down on the countryside. These objects were the remains of a Braniff Electra that had been flying at 15,000 feet with thirty-four persons onboard.

A team led by the Civil Aeronautics Board, which then had the responsibility for determining the probable cause of air carrier accidents, began the difficult investigation. Wreckage was painstakingly gathered and analyzed, revealing that the aircraft's destruction had been triggered by the failure of its left wing. No reason for this failure was apparent, however. The Braniff flight had been cruising in smooth air, with no nearby traffic that might have caused the pilot to stress the wing by a violent maneuver.

Perhaps because the reason for the Buffalo accident was still unknown, FAA took no immediate steps to restrict or modify the Electra. The need for action became unmistakable, however, when

another of the aircraft lost a wing while flying through turbulent air on March 17, 1960. Sixty-three persons died as the fuselage of the Northwest airliner embedded itself in the earth near the Indiana towns of Canneton and Tell City.

Three days later, FAA issued an emergency directive dropping the Electra's top cruising from 373 to 316 miles per hour. On March 25 the agency further reduced this limit to 259 miles per hour and imposed other temporary restrictions to protect the aircraft from immediate danger. At the same time, FAA ordered a special inspection of all Electras and requested Lockheed to conduct an engineering reevaluation of the aircraft type. The company began an all-out effort to identify the flaw in their product and design a remedy.

In taking these measures rather than simply grounding all Electras, Quesada had relied on advice from FAA's experts and those of the National Advisory Committee for Aeronautics, the predecessor of NASA. Almost inevitably, however, such an issue places a regulatory official in a punishing crossfire between advocates and industry spokesmen. Quesada's situation was especially hazardous because his blunt, forceful leadership had already earned him a sizeable opposition. He was also vulnerable to charges of favoritism due to his former position as a Lockheed vice president, even though he had resigned from the company in a policy dispute.

In addition, Quesada faced the opposition of the Civil Aeronautics Board. The Board learned that inspectors scrutinizing the Electras discovered that almost all the aircraft had experienced some cracking of the small rivets that secured the structure of their wings. Although the percentage of damaged rivets was tiny, the Board members feared a pattern that might lead to failure. On April 12, they voted unanimously to urge the grounding of all uninspected Electras.

News of this confidential recommendation quickly found its way to Indiana's Senator Vance Hartke, who had earlier called for the Electras' grounding while visiting the crash site in his home state. Hartke resumed his offensive, stating that he was "shocked that Quesada would take the chance of ignoring [the Board's] advice and risk further death from these planes."

The Administrator later discussed his position in an interview with FAA interviewer Charles Planck. Quesada was confident that the lower speeds would reduce the Electra's dynamic load enough to protect it from further catastrophic failures; yet he was fully aware that, if this judgment proved incorrect, the penalty to the public would be terrific.

On May 12, Lockheed announced that it had identified the cause of the two wing failures. The company concluded that both aircraft had sustained some prior damage that weakened them in the area of their power-packaged nacelles,

permitting the engines to wobble when they encountered resistance at high speed. A phenomenon that became known as the "whirl mode" allowed this oscillation to stress the wing beyond the breaking point.

Lockheed developed modifications to prevent any future reappearance of the whirl mode. Until these changes were made, however, the Electra remained highly suspect in the eyes of many. The aircraft's image as a jinx was heightened in September, when one flipped on its back after striking an embankment at LaGuardia. Although this nonfatal accident had nothing to do with structural issues, it prompted Senator Hartke to renew his attack on FAA's policy.

In this charged atmosphere, the news about the crash of Eastern Flight 375 awaiting Quesada on his October homecoming from Moscow was chilling indeed. "When I got word that this airplane had crashed in Boston Harbor," the general recalled, "I was terribly worried that we had been wrong about the Electra."

The Administrator arrived at Logan the following morning. At the urging of Crocker Snow, a state aviation official, he inspected the runway from which Eastern Flight 375 had departed. The tarmac was strewn with hundreds of dead birds, many of them chucked up as if struck by a propeller. Although he had been skeptical of Snow's interest in this phenomenon, Quesada found this attention arousing. The carcasses were particularly numerous to the left of the runway, the direction toward which the doomed Electra had veered.

An ornithologist from nearby Harvard University soon confirmed that the birds had been killed about the same time as the accident. He identified them as starlings, a species accustomed to fly no more than twelve inches from one another in dense flocks. Quesada compared this information with test data showing that a turbine engine might flame-out if only a single chicken was forced into its intake valve. Although bird ingestion had not previously seemed much of a threat to transport category planes, it now seemed likely that starlings had brought down the Eastern flight.

Quesada feared that to suggest such a cause for the Boston tragedy might subject him to severe ridicule. On the other hand, he believed it necessary to present an immediate justification for continuing his refusal to ground the Electra. He explained the bird theory carefully to reporters and was relieved to find them receptive to the judgement.

The Administrator still faced the scrutiny of Congress and the continued criticism of Hartke. On October 9 he made a bold counterattack on the Indiana Senator in a public telegram addressed to the chairman of two key oversight committees.

"It is regrettable that Senator Hartke

seeks political capital from national tragedy . . ." Quesada wrote. "[H]e pursues his consistent pattern of commenting out of a general background of technical ignorance and with no real knowledge of the specific facts involved." The Administrator went on to point out that there was as yet no evidence that structural failure caused the Boston crash and strong reasons to believe otherwise.

These reasons became even stronger with examination of the engines hauled from Boston Harbor. The discovery of avian remains inside the gaspaths combined with other evidence to support the bird ingestion theory. The Civil Aeronautics Board eventually concluded that the starlings had knocked out three of the four engines. Although two of the units quickly restarted, the abrupt sequence of power loss and recovery had rendered the aircraft uncontrollable.

The Boston tragedy prompted FAA to encourage more effective programs aimed at minimizing the bird hazard at the nation's airports. The accident also stimulated research that yielded a better understanding of the ingestion problem. Meanwhile, in the weeks following the crash, Quesada's position on the Electra gained increasing support in the media.



Stepped-up precautions against the bird hazard followed the Boston Electra crash.

At the end of 1960, FAA lifted the speed restrictions for those Electras that were modified to strengthen their wings. Until their modification was completed, the aircraft had continued to vindicate Quesada's judgement by performing safely at the lower speeds. The Electra went on to prove its high standards of airworthiness in succeeding years, and is still in service in some areas of the country. The whirl mode had been subdued, but it remained a sobering example of how unforeseen factors might combine to create a hazard undetected by even the exhaustive tests of the certification process. ■

Ned Preston is the acting FAA agency historian.

# Paving the Way for Safer Skies: FAA Promotes Global TCAS Implementation

By James P. Witeck

On August 31, 1986, a tragic midair collision occurred in the skies over Cerritos, California, which cost the lives of 67 passengers and flightcrew and 15 persons on the ground. This highly publicized tragedy, which involved an Aeromexico airlines DC-9 and a small general aviation aircraft, stimulated Congress to an almost immediate reaction and marked a turning point in aviation history.

The legislative results—the Airport and Airway Safety and Capacity Expansion Act of 1987—included provisions directing FAA to accelerate its plans to develop and implement an effective airborne collision avoidance system. Specifically, this law established targets for the installation and operation of the Traffic Alert and Collision Avoidance System (TCAS II) in all passenger-carrying aircraft (with more than 30 seats) that operate in U.S. airspace, whether operated by U.S. or foreign carriers. This schedule, somewhat adjusted in a later legislative amendment, requires a “phase-in” TCAS II implementation for U.S. carriers (ending on December 30, 1993), for foreign carriers operating under a Part 129 certificate.

The FAA promotes this important safety-enhancing technology internationally. One significant way is through the U.S./FAA participation in the ICAO SSR Improvements and Collision Avoidance System Panel (SICASIP), a group of international experts who develop international standards for such systems. The panel also oversees global evaluation and monitoring programs, which, for the most part, are being conducted or planned in the United States, Europe, and Japan.

Additionally, John K. McGrath, manager of FAA’s Aircraft Engineering Division (AIR-100), reaches an international audience and shares the valuable technology for TCAS-II developed by the FAA and U.S. aviation industry—a valuable tool for all pilots. The AIR-100 division is the principal architect of FAA rules related to TCAS equipment.

In a series of two three-day seminars geared to foreign civil aviation authorities and aircraft operators from every continent, McGrath leads a slate of speakers from the FAA, EUROCONTROL, Boeing Commercial Airplane, and Japan Airlines—in explaining the TCAS functions, components, operational experience, and both its demonstrated and expected merits.

At the seminar held last May in Miami for authorities and operators from Mexico, the Caribbean, and Central/South America, U.S. TCAS manufacturers in their product briefings also gave seminar participants flight demonstrations, including simulated aircraft encounters.

The most recent seminar series, September 19-21 at the Tai-Pan Ramada Hotel in Singapore, was geared to the interest of participants from Europe, Africa, the Middle East, and the Asian/Pacific rim areas. Barry Brayer, manager of the Western-Pacific Region’s Planning and International Aviation Staff, along with FAA’s Representative in Singapore Don Schmidt and his assistant Sapphire Yong, hosted the meetings attended by approximately 165 participants from almost 40 different countries.

The U.S. Ambassador to Singapore, Robert Orr (a former governor of Indiana), made opening remarks on behalf of the United States. Speakers from the agency were Thomas Intrich, George Lyddane, Frank Rock, Alan Shinsaki, and Thomas Williamson. The agenda included technical presentations, lively questions-and-answer periods, and product briefings provided by representatives of four U.S. TCAS manufacturers—Honeywell, Bendix/King, Rockwell International/Collins, and Avion Systems.

The FAA is getting out the word on the latest developments in TCAS-II technology, the word that sharing knowledge is leading the way to safer skies internationally. ■

The author, James P. Witeck, is an international programs officer in the Office of Program and Resource Management (APR). He organized both the Miami and Singapore FAA seminars “Implementing Airborne Collision Avoidance Systems.”



John McGrath (AIR-100) officially opens the FAA-sponsored seminar.



Thomas Williamson (ARD-310) explains the basics of TCAS.



(L-R) Thomas Intrich (AFS-200N); Richard Jenyns, Daniel Tillotson, George Lyddane (ANM-100); Thomas Williamson (ARD-310); Barry Brayer (AWP-4); Ambassador Orr; John McGrath (AIR-100); Frank Rock (AIR-120); Alan Shinsaki (ANM-100); and Richard Edwards, Satoshi Marukami, and James Witeck (APR-101).

# Aviation Links the World

By Charles Spence

Imagine the confusion if international aviation faced the problems of border crossings that ground travel must endure. The pilot would find language barriers, opposing traffic flows, unknown and uncertain navigation and communications methods and frequencies—or maybe no methods at all.

Fortunately, this is not so. As world leaders envisioned the growth of air travel after World War II, they established the International Civil Aviation Organization, ICAO, as it is commonly called, was created in December 1944, as an intergovernmental organization. In 1947 it became a specialized agency in relationship with the United Nations.

Over the years, ICAO has proved a model for international cooperation, and proudly, the FAA has played a major role in developing world aviation to the present high standards. Despite its history and current work, few persons in the United States, and even within the FAA and DOT, are fully aware of the U.S. Mission to ICAO and its impact on air activities here and throughout the world.

“It was U.S. initiative that brought nations together to develop a means by which nations could coordinate aviation policy and look to standardizing and normalizing conditions for air transport,” says Lynn Jackson, whose section in the Office of International Aviation in the FAA serves as Secretariat for the U.S. Mission.

The United States supports 25% of ICAO’s budget, and FAA people serve on almost every technical working group. U.S. technology and expertise leave their marks on world aviation from security issues to future navigation systems and from fare structures to standards for windshear detection equipment and the military interception of civil aircraft.

For example, James Treacy in the Northwest Mountain Region’s Transport Airplane Directorate, ANM-103N, serves on a group doing studies and tests for certification of aircraft using microwave landing systems, MLS standards, frequencies, installation acceptance schedules, and other related issues all come through ICAO agreements as does almost every matter involving international air activities.

In another area, because they share the same airspace, coexistence of civil and military aircraft is fundamental, yet geographical, economic, and political influences significantly affect the air traffic environment.

Concern over the destruction of Korean Air lines Flight 007 by the Soviet Union in 1983 prompted ICAO to establish a study group to develop a second edition of the manual about interception of civil aircraft. Guice Tinsley, manager of the Special Programs Branch of the Flight Standards Service, AFS-430, be-



The U.S. Mission staff, left to right: Robert D. Cook, Deputy U.S. Representative/ICAO Air Navigation Commissioner; Janet Orndorf, secretary/information assistant; Don M. Newman, U.S. Representative to ICAO; Barbara Simpson, Foreign Service secretary/administrative assistant; David L. Schiele, Foreign Service officer.

came the U.S. member of the group. The accidental shoot down of Iran Air flight 665 by the United States in 1988 further emphasized the need for improved civil/military coordination.

Other examples of the diverse projects that FAAs work on through the international forum are the committees on future air navigation systems, noise and engine. There are working groups working on airworthiness, obstacle clearance, all-weather operations, and traffic separation minima. Study groups are looking at subjects like frequency management, human factors, fire and rescue, helicopter airborne radar approaches, and satellite-aided search and rescue.

ICAO starts committees, panels, working groups, and study groups as issues and subjects require attention. Two committees, 15 panels, and 19 study groups are now at work on various issues. Four additional study groups are tackling issues peculiar to specific regions of the world. FAA personnel serve on all but two of the 40. In one case the U.S. representative is from the National Weather Service, in the other from the Department of Commerce.

FAA specialists work on the panels and study groups in addition to their regular duties. “We draw technical people from Headquarters and the regions,” Jackson explains. “Somehow, they cram these extra duties into their days and weeks of normal responsibilities.”

Selection of FAA personnel to represent the United States on the technical bodies comes through the FAA Office of International Aviation. David DeCarme of that office forwards details about the

subject to the appropriate section of FAA, requesting an expert representative.

Organizationally the U.S. Mission to ICAO comes under the Department of State. The five-member U.S. Mission stationed in Montreal reports to the State Department’s International Organizations. Staffing at the U.S. Mission consists of: Don Newman, the U.S. Representative on the Council of ICAO, a presidential appointee with the rank of minister; Robert Cook, Deputy U.S. Representative and ICAO Air Navigation Commissioner, on assignment from the FAA to the Department of State as a senior Foreign Service officer; David Schiele, a Department of State career Foreign Service officer; Barbara Simpson, Department of State Foreign Service secretary and administrative assistant to the U.S. Representative; and Janet Orndorf, secretary and information assistant to the Air Navigation Commissioner.

FAA plays a major role in the Mission’s work. “At least 80 percent of the business we do is with FAA,” says Newman. “We are a technical organization, and that is where the focus is.”

Other government and industry interests that become involved in ICAO activities include the Inter-agency Group on International Aviation (IGIA), which coordinates U.S. international aviation policy. Members are from the FAA, State Department, Department of Defense, Department of Commerce, Federal Communications Commission, and the National Transportation Safety Board. Membership in IGIA is at the assistant

secretary or chairman level. Each government agency also appoints ad hoc members knowledgeable in the subject when matters of major concern to their agencies are under consideration.

“When an issue comes down from ICAO, this group develops the substance and posture of a U.S. position,” explains Roberta Proffitt. As principal staff officer of IGIA, Proffitt serves as the focal point for circulating data, gathering views, and keeping the U.S. Mission in Montreal informed.

Participation is not limited to the government. Eight industry groups also help to develop the U.S. positions. These include pilot organizations from commercial carriers and general aviation, manufacturers, and airlines. Not only do these industry groups get involved during formal meetings, they also contribute during informal contacts. Newman says meaningful help for ICAO work comes from conversations with representatives from such organizations as the International Air Transport Association, International Federation of Airline Pilots’ Associations and the International Council of Aircraft Owners and Pilot Associations.

One of ICAO’s chief activities is promoting standardization in such aviation matters as licensing of personnel, rules of the air, aeronautical meteorology, aeronautical charts, units of measurement, nationality and registration marks, airworthiness, search and rescue, aircraft accident investigation, airports, aeronautical information services, noise and engine emissions, safe transport of hazardous cargo, and security.

(Continued on page 8)

# A Talk with Barry L. Harris, Deputy Administrator

FAA Deputy Administrator Barry Lambert Harris, a pilot and businessman, brings more than 20 years of aviation experience and strong management skills to the Federal Aviation Administration.

A commercial, multi-engine, instrument-rated pilot with 5,000-plus flying hours under his belt, Harris is no stranger to the nation's air traffic control system.

On November 6, 1989, President Bush announced that Harris was his choice for FAA Deputy Administrator.

In the recent past, he has flown 500 hours a year in both fixed-wing aircraft and helicopters, much of it in the heavily traveled skies of the Northeast.

Harris, who describes himself as a "dedicated aviation enthusiast," belongs to the Aircraft Owners and Pilots Association, National Business Aircraft Association, Experimental Aircraft Association and the National Biplane Association.

The 51-year-old Harris has extensive government and private industry-management expertise. He served as president and chief executive officer of Alliance Corporation, Portland, ME, and Community Systems, Inc., Gloucester, MA.

Harris was also a Gloucester assistant city manager and director of community programs for the Boston's Metropolitan Area Planning Council, a documentary writer-producer for WBZ-TV, Boston, and a news writer for WINS radio, New York City.

Some of Harris' broadcasting documentaries have focused on the lives of John F. Kennedy and Douglas MacArthur and current affairs issues of capital punishment and the half-way house movement.

The FAA Deputy Administrator attended Harvard and Denison universities, served in the U.S. Army and is currently an officer in the inactive Army Reserve.

The following interview, which took place Sept. 17, recounts Harris' impressions of his first year on the job.

Now that you have been here for almost a year, what is your impression of FAA? Does it differ from your preconception of the agency?

HARRIS: First of all, I don't think I came in with a lot of preconceptions.

Clearly, when the question was asked, "Where would you like to serve in this Administration?" I wanted to be here because this was an agency that dealt with something I enjoyed and knew a little bit about. And I liked Sam Skinner's style.



Deputy Administrator Barry Lambert Harris.

I think what I have found that impresses me is FAA's depth. FAA people are bright. They're motivated. They're dedicated and committed. If anything, I was very pleasantly surprised. People at the FAA don't fit the "government employee" stereotype.

How do you see your role as Deputy Administrator of the FAA? Has that role evolved since you came onboard?

HARRIS: If we look at the statutory language that creates the job, we see that the Deputy is empowered to do anything the Administrator is empowered to do—the Administrator's absence. This means, I suppose, that I could sit in the wings like a good understudy and wait for something to happen to the Administrator.

**"... in the case of Jim Busey and Barry Harris that chemistry is pretty good."**

But, I see it a little differently. I see the role of the Deputy as providing an additional dimension to the Administrator. One person can do only so much, and two people can do so much more. Clearly, the Administrator is responsible for running the agency, and it's up to him to delegate that portion of the responsibility he wants to whomsoever he wants.

I think the effectiveness of the Deputy is determined by several things. One is the chemistry that exists between the Administrator and the Deputy. I think in the case of Jim Busey and Barry Harris that chemistry is pretty good.

We have a lot in common, yet our ca-

rear backgrounds are vastly different. We both grew up in the Midwest and seem to share what I suppose you could call midwestern values. He enlisted in the Navy and ended 37 years there with four stars. My career included journalism, business, and government.

In the 10 months I've been here, there has never been an issue on which I have found myself in fundamental disagreement with the Administrator. On those rare instances where issues have come to a decision point before we've had a chance to discuss them, I've been amazed at how close his calls have been to what mine would have been. This consonance of approach and opinion between us is, I think, quite remarkable. It also amazes a lot of career employees.

I might add that Jim Busey and Sam Skinner enjoy a similar relationship. I don't think anyone in the FAA hasn't noticed what a difference that makes.

Anyway, I feel comfortable that I can make a contribution. I feel comfortable that I can enhance Jim Busey's administration. And I think there is a growing trust between us that allows this synergy to be an effective, positive force in the agency.

Where do you think you can make the biggest impact?

HARRIS: Well, I guess there are several areas. This agency is typical of, I suspect, any large federal or government agency. It is populated with people who are making a career of government service, yet who see their leaders change from administration to administration.

At the FAA, these changes occur far more frequently than I think is healthy. As a result, the career people say, "Gee, I can't afford to get too far out in front of anybody on any issue, because if the administration changes or the leadership changes, then I may not be on the right side of the issue, and it may hurt my career."

I don't have a problem understanding this. I guess what concerns me is the fact that this tends to inhibit an individual's initiative within an agency. So I see my role as encouraging initiative and creativity and, at the same time, helping to protect those who are willing to take a chance. Risk-taking is the essence of creativity in management.

We've talked a lot about total quality management here in the last six months, and one of the prerequisites of the TQM process is to be able to think in different frames—to change paradigms, to conquer the horizon, to see around the corner. A role I can play is to encourage the agency corporately and the people individually to do just that.

I'm also interested in our relationship with our customers. I'm interested in the way we manage the agency in terms of our employment policies, and specif-

cally our equal opportunity employment policies.

I am interested in the role we play nationally in terms of aviation education. Then, of course, there are a whole host of day-to-day issues in which I get involved in one way or another.

You seem to have taken a particularly active role in EEO. Please discuss your strategy if you have one.

HARRIS: I think this agency has historically given lip service to the process of being an equal opportunity employer, but it's largely been lip service to a process, not to a result.

Ten or fifteen years ago, the FAA said it was going to achieve specific results by the year 2000. That was an easy cop-out then because the year 2000 was far enough away that everyone promulgating the plan knew they would be gone. The achievement was the process and not the fulfillment of the objective: to hire minorities and women.

Now we are looking at the year 2000, and it's only nine years away. Those of us who are here today are likely to be around then. It's the near-term future, and I guess what I'm saying is, we need

**"Risk-taking is the essence of creativity in management."**

to shift focus from the process to the result.

I think an aggressive EEO program is the right thing to do. I think it's the ethical thing to do. It's the moral thing to do. And it's long overdue.

Currently, the work force of the FAA does not, in numbers of women and minorities, approximate the general work force.

An agency of 50,000 people spread across the United States ought to approximate the same kinds of percentages found in the rest of the nation's work force. The fact that it doesn't tells me that there is, at best, inadvertent discrimination, or, at worst, intentional discrimination. The result is the same.

There are two ways we can approach this problem. The first is that we can embark upon a course of hiring lots of minorities and women in entry-level jobs. We hire roughly 5,000 new employees a year at the FAA. Statistically this means we replace the work force every 10 years. If we were to make sure that every year we double the percentage of incoming people targeted to bring agency demographics in line with the general work force by the year 2000, then, in theory, within five years we could be at parity.

But if you want a strategy, I'll give you one. Focus on the future!

Minority hiring at entry level gives quick numbers and makes everyone feel good. And I think we should continue to do it though that's not where my real focus is. If I want to make a lasting mark on this agency, I am convinced I must look over the horizon to a time when I am not here—when Busey, Skinner and Bush are not here. The imperative is that we set in place a mechanism to work out intent after we're gone. John Milton notwithstanding, that mechanism must involve upper-level career management. We must make certain these ranks contain a sufficient number of minorities and women. They will, by their presence and influence, guarantee the process long after I'm gone. They will guarantee it because they will be continuously empowered to refine and fulfill the agenda. Empower them and you fulfill the agenda because they are the agenda.

**"... making sure that when the choices are made, qualified minorities and women are always among the applicants."**

The trick, and it's not so much a trick as the result of serious hard work, is to train well, select carefully, and, by doing so, assure success. Indiscriminate promotion at this level—I'd call it a numbers game—dooms the participants, the program, and the agency to failure. We regress. Pure motives fall victim to unintended consequences.

Discrimination has many faces: some are obvious, some are devious, others are clever and sophisticated. The ultimately successful strategy—to achieve true and permanent equal employment opportunity—will have as many faces.

What is being done to find qualified women and minorities?

HARRIS: We've hired something like 18 additional recruiters. We're going into the schools; we're trying to get the word out that we're serious about this.

When I say that I'm not interested in the process, what I mean is that I'm not interested in allowing us to say: "Hey, we've developed this plan and this process, and that's all we have to do."

Also, I'm not talking about reverse discrimination, and I'm not talking about taking less qualified people. I'm talking about making sure that when the choices are made, qualified minorities and women are always among the applicants.

I'm not talking about quotas, either. But, we've got to accept the responsibility as an agency for making sure that minorities and women have development plans, that their development plans are implemented, and that they get the training and the opportunities to move up.



What's the biggest single issue needing the FAA's attention?

There are many issues we have to deal with, but let me take the NAS Plan as an example. The NAS Plan is coming along well. I believe some 95 percent of the NAS Plan's original programs are under contract. By 1995, much of that architecture will be in place.

What we have discovered through the NAS Plan experience, though, is that we cannot come along every 20 years and give the agency a capital investment shot in the arm and expect it to run for another 20 years.

So, we are moving to a concept of constantly upgrading and updating our own technological infrastructure. Given the fact that it takes anywhere from seven to eight years to achieve a major procurement under existing federal procurement law, it is very difficult for us to stay ahead of developing technologies.

The fact that we are not ahead is one of the things for which we're most severely criticized. We have a technically intensive capital structure, and we've got to adjust that on a continuing basis, on an annual basis.

That's what the Capital Investment Plan is all about. It means we can't just wait until everything is broken before we fix it.

I think a lot of our critics don't understand the complexity. They don't understand the requirements. I don't think they quite understand the fact that software delivery doesn't happen as quickly as we might hope. We can't rush a creative process.

Do you see a special role for yourself in general aviation?

HARRIS: I think I bring to the agency a perception of general aviation that is realistic. My background and experience is in general aviation, so I suppose I am the ranking general aviation representative in the FAA.

I think one of the problems that the general aviation community has is that it does not contribute as many dollars to the system on a direct basis as do other

components of the system, specifically the airlines.

On the other hand, in my judgment, GA activity is a national asset. General aviation nurtures the interest of youngsters in aviation. It is the source and a motivator of aeronautical engineers, scientists, and military and civil pilots. It is also an important business tool for corporations, large and small. GA is the grassroots and the pinnacle of aviation, and its contribution, in this regard, goes far beyond the dollar contribution. All you have to do is go to air shows such as Oshkosh or Lakeland, or to the NBAA [National Business Aircraft Association] annual convention, to see what general aviation is all about and what it means to this nation.

What do you like and dislike about the job of Deputy Administrator?

HARRIS: I can't think of anything else I could do each day to make 12 hours go faster than they do here. It compresses time.

On the other hand, every job has its little irritations, like the fact that the air conditioning works only in the winter and the heat works only in the summer, and the fact that the elevators run intermittently, and the escalators not at all.

But, basically, I look forward to coming into the office every day. I look forward to the daily challenges, the crisis *du jour*, if you will. I enjoy the people.

Is there anything that I should have asked you about that I didn't?

HARRIS: I think the FAA is going to have to start thinking in terms of taking a leadership role on environmental issues. I think the environment is going to be an arena of major public policy-making in the next 10 years. If you stop to think about it, the transportation modes and the government agencies that represent or regulate them influence the environment by virtue of what they do.

Building things like airports, highways, rapid transit systems, impacts the environment. I think we've got to step up to that issue and take some responsibility.

Capacity is a major issue. While it is partly a technology issue, it is also a construction and noise issue. This makes it an environmental issue.

If democracy is based on informed choices for citizens, then is it not the role of the agency to foster the public debate? Don't we have a responsibility to make clear what the issues are so that the public can, in fact, make the proper decisions in terms of the environment versus capacity versus economic benefit? The FAA has never, in my judgment, assumed this role. It is clearly a leadership role and one to which we should commit ourselves. We must broaden our vision and start looking at the donut, instead of focusing on the hole.

Back to a point you mentioned earlier—how do we get those kind of people who can easily think in terms of different paradigms, look beyond the horizon and around the corner?

HARRIS: The FAA is an agency that has vital operational responsibilities, and I think what happens is that the operational responsibilities tend to drive the agency from a policy standpoint.

When, in fact, we have the responsibility of keeping airplanes separated in the air, of maintaining a system that's safe for a half-billion passengers a year—and these passengers are our spouses, mothers, children—this responsibility weighs pretty heavily on the corporate psyche. Nearly half of our employees are engaged directly in doing this, and when they have this enormous responsibility, they tend to be very conservative. The product we're really delivering to the public on a day-to-day basis requires ultraconservatism. Now, the question is, where do we put a creative, big-picture component in the agency?

**"We must broaden our vision and start looking at the donut, instead of focusing on the hole."**

The problem we have is knowing where it fits in and how to foster and direct it.

This is a function of leadership. It's a matter of opening the agency up to where we can have both elements. We can have an operational component that is conservative, that understands its enormous day-to-day operational responsibility. But, at the same time, we can have a research and development component that is inventive and creative; we can have a procurement component that is responsive and responsible; and we can have a management team that possesses insight and demonstrates foresight. When we create that kind of exciting environment within the FAA, the kind of people we're talking about will beat a path to our door. ■

## Aviation Links the World from page 5

ICAO is made up of an Assembly, a Council composed of 33 Member States with various subordinate bodies, and a Secretariat. One hundred sixty-one states of the world are members. The organization recognizes nine geographic regions. These are treated individually for planning facilities and services required on the ground by aircraft flying in these regions.

In each region, planning produces a network of thousands of air navigation facilities and services. Not all states have the resources of capital or trained technicians to provide the needed parts of a system. ICAO can help.

Technicians, many of them from FAA, work with nationals of many states in setting up and getting equipment operating, conducting training centers, and promoting all-important standardization. Without standardization, even air crossings of borders would be at best difficult, slow, and confusing—at worst, impossible.

As aviation technology continues to advance rapidly, not only is it necessary to set new standards, but existing ones must also be reviewed and amended. If a member state does not have the funds to develop a needed facility, ICAO can help to arrange "joint financing" or funding from the United Nations Development Program (UNDP). Facilities for North Atlantic crossing are an example of the former. Air traffic control facilities in Greenland and Iceland were developed under joint financing arrangements, and the charges to users are still subject to

ICAO approval. UNDP-funded technical assistance projects are found throughout the developing world.

Unusual circumstances can require a special meeting of the Assembly. Another special assembly convened October 22 to consider aircraft noise issues and the phase-out of stage two aircraft.

Once ICAO adopts a standard or procedure, individual states put it into effect based on timetables of the agreement. If a state chooses not to adopt the ICAO position, it may file an exemption. These rarely involve any safety issues, says Jackson. He points to many U.S. exemptions as "differences to reflect circumstances in which we have invested in certain capabilities" that may be more than what ICAO standards state.

"We lead the world in almost every aspect of air traffic control, aviation systems, information, procedures and technologies," adds Jackson. "The standards adopted through ICAO really come up to those we apply." While a state internally may have higher standards than those agreed to through ICAO, it may not impose these standards on foreign aircraft entering its airspace before the times established through ICAO agreements.

Issues that ICAO considers may come from the organization or from member states. "There may be times when we want a world standard," says Jackson, "and we will propose a technical committee to work on it." At other times other member states may be developing something that requires world agreement.

While ICAO sees itself as a technical organization, much of its work, nonetheless, can be seen as having a political impact, and ICAO demonstrates that achievements are possible when nations work together and make concessions to reach agreement. Although the process is often slow, more than four decades of world air transportation advancements prove its value.

Chief of the U.S. Mission, Don Newman welcomes ideas, comments, suggestions—and yes, even problems—about the international aspect of aviation. "We can be helpful if factored into the loop," he says. ■

*Charles Spence, a Gaithersburg, MD, freelance writer, is a frequent contributor to FAA World.*



## Retirees

### Aeronautical Center

Joe D. Brown  
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James J. Burke  
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Ronald D. Fenter  
William E. Filling  
Dorothy J. Freshman  
Betty R. Fogle  
Willie N. Francis  
Dorothy M. Gatloff  
Lennie R. Haraway  
Daniel M. Harrington  
Junior L. Helton  
Elier C. Heyn  
Walter C. Hurst  
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Raymond Maggia  
Claude R. Mee  
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Mary Alice Smith  
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Paul Wood  
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The globe in New York's old marine air terminal is symbolic of world travel. ICAO was founded a short time after this photo was taken in 1940.

## Aeronautical Center

Susan N. Bounds, manager, Compensation Branch, Human Resource Management Div., promotion made permanent. **David R. Brown**, Academy 3R instructor, Radar Section, Airway Facilities Branch, FAA Academy, promotion made permanent. **Robert L. Corcoran**, unit supervisor, Electronic Production Section, Engineering & Production Branch, FAA Logistics Center. **David L. Molette**, unit supervisor, Electronic Production Section, Engineering & Production Branch, FAA Logistics Center. **Ed S. Stevenson**, supervisor, Flight Operations/Scheduling Section, Anchorage FTO, promotion made permanent. **Jimmy C. Warren**, unit supervisor, Receipt and Packing Section, Storage & Transportation Branch, promotion made permanent. **Gerald W. Williams**, supervisor, Project Management Section, Program & Project Management Branch, FAA Academy.

## Alaskan Region

**Richard W. Girard**, supervisory aviation safety inspector, Flight Procedures Branch, Flight Standards Div. **Diann L. Hinchey**, unit supervisor, Fairbanks FSDO, Flight Standards Div. **Harry F. Hahn**, unit supervisor, Anchorage AFSFO, South Alaska AFS. **Ludell Hutchings**, unit supervisor, Ketchikan, AK, AFSFO, South Alaska AFS, Anchorage, from Cold Bay. **Roger A. Motzko**, manager, Safety & Standards Branch, Airports Div., from Minneapolis. **Doty G. Muths**, manager, Management Analysis Branch, Resource Management Div. **William M. Newman**, asst. manager, Maintenance Engineering Branch, Airway Facilities Div., from Washington Headquarters. **Gary E. Nielsen**, unit supervisor, Resource & Standards Section, Resource & Planning Branch, Airway Facilities Div., promotion made permanent. **Ronald N. Reynolds**, section supervisor, Anchorage CASFO, Air Security Branch, Civil Aviation Security Div., from Brussels, Belgium. **James E. Royle**, unit supervisor, Anchorage AFS ARTCC. **Charles J. Smith**, foreman, Bethel, AK, AFSFO, North Alaska AFS, Fairbanks, promotion made permanent. **Helen Mae Wall**, unit supervisor, Air Traffic Div., from Washington Headquarters. **Jeffrey E. Wheeler**, manager, Nome, AK, FSS, from Sitka FSS.

## Central Region

**Jack E. Bowers**, area supervisor, Lambert Field TRACON ATCT, St. Louis, promotion made permanent. **Herbert L. Drayton**, section supervisor, National Communications

Center, Air Traffic Div., promotion made permanent. **Wayne E. Halter**, supervisor, Iowa/Missouri Section, Safety & Standards Branch, Airports Div. **Robert L. Hiller**, section supervisor, National Communications Center, Air Traffic Div., promotion made permanent. **Glenn L. Martin**, unit supervisor, Wichita, KS, FSDO, Airworthiness Section, Flight Standards Section, promotion made permanent. **Dean E. Matthews**, supervisor, Operations Planning Section, Resources & Planning Branch, Airway Facilities Div., promotion made permanent. **Richard C. McMillen**, manager, Investigations & Internal Security Branch, Civil Aviation Security Div., promotion made permanent. **Douglas M. Perkins**, area supervisor, Mid Continent ATCT, Wichita, KS, from Kansas City International ATCT. **Kathleen J. Person**, unit supervisor, Wichita, KS, FSDO, Operations Section, Flight Standards Div., promotion made permanent. **Phillip M. Reichart**, asst. manager, Lambert Field TRACON ATCT, St. Louis, MO, from Indianapolis ATCT. **Donald G. Terrell**, unit supervisor, St. Ann, MO, FSDO, Operations Section, Flight Standards Div., promotion made permanent. **Terry D. Tupper**, unit supervisor, Kansas City, MO, FSDO, Geographic Section, Flight Standards Div.

## Eastern Region

**Frank J. Bombace**, asst. manager/programs, Republic Airport ATCT, Farmingdale, NY, from regional headquarters. **Philip F. Brito**, Airports Program Manager, New York Airports District Office, Valley Stream. **William W. Buck**, asst. manager, Baltimore, MD, ATCT, from Lambert Field. **William D. Daugherty**, manager, Allegheny City FSDO, West Mifflin, PA. **Albert L. Dummman**, unit supervisor, Establishment Engineering Branch, Airway Facilities Div., Baltimore, MD, from regional headquarters. **Joseph Figliolo III**, area supervisor, New York AFS, Islip, NY. **Dennis J. Heubner**, area manager, Greater Pittsburgh ATCT. **Jay A. Johnson**, manager, New York FSDO, Valley Stream, NY. **Odys M. Johnson, Jr.**, manager, Baltimore, MD, FSDO. **Robert C. Krieg**, supervisor, Control Section, Control, Reports & Analysis Branch, Accounting Div. **Barbara J. Lengyel**, unit supervisor, Resource Management Section, Resource & Planning Branch, Airway Facilities Div., promotion made permanent. **Vincent J. Lepora**, manager, Pittsburgh FSDO. **David W. Madison**, area supervisor, Washington National ATCT, promotion made permanent. **Gilbert Magnan**, manager, Binghamton, NY, ATCT, promotion made permanent. **John Mayrhofer**, manager, New York TRACON, Garden City, from Washington Headquarters. **Walter B. Mitchell**, manager, Charleston, WV, AFSFO, Charleston AFS. **Walter Sheppard**, unit supervisor, New York CASFO. **David E. Townsend**, manager, Charleston, WV, FSDO. **David R. Venti**, asst. manager for training, Baltimore ATCT, from Washington Headquarters. **John E. Wilson**, area supervisor, Washington National ATCT, promotion made permanent. **Alvin H. Zito**, asst. manager, Pittsburgh FSDO, Coraopolis, PA.

## Great Lakes Region

**Lisa S. Arlington**, area supervisor, Ann Arbor, MI, ATCT, from Detroit, MI, Metro ATCT. **John E. Brice II**, area supervisor, Cleveland, OH, ARTCC, promotion made permanent. **William H. Carpenter**, asst. manager, traffic management, Cleveland, OH, ARTCC, Oberlin. **Gary M. Courtney**, unit supervisor, Leelanau County, MI, AFSFO, Belleville, MI, AFS, promotion made permanent. **Frank J. Cullen**, asst. manager for program support, Bismarck, ND, AFS, from regional headquarters. **Frederic E. Doll**, systems engineer, Oberlin, OH, AFS. **Lyndin L. Foss**, unit supervisor, Bismarck, ND, AFS, promotion made permanent. **William J. Hilde**, area supervisor, Cleveland, OH, ARTCC, Oberlin, promotion made permanent. **William C. Hodges**, area supervisor, Greenwood, OH, ARTCC. **John R. Jones**, manager, Schiller Park, IL, FSDO. **Larry S. Minor**, manager, Ohio State University ATCT, Columbus. **Charles V. Nolan**, manager, Springfield, IL, FSDO, promotion made permanent. **Bertrand R. Ouellette**, manager, Pontiac, MI, ATCT, promotion made permanent. **Bobby L. Pedigo**, asst. manager for technical support, Dakota AFS, Bismarck, from Anchorage. **Donald A. Slechta**, security specialist, Chicago, IL, CASFO, Schiller Park, IL, from Des Plaines. **Ronald J. Tshma**, environmental safety technician, Oberlin, OH, AFS.

## New England Region

**Paul G. Johnston**, manager, System Requirements Branch, Air Traffic Div., from Logan International ATCT. **Phillip R. Burton, Jr.**, area supervisor, Great Falls, MT, AFS, promotion made permanent. **Alvin R. Habbestad**, manager, Seattle Aircraft Certification Office, Transport Airplane Directorate. **Robert J. James**, area supervisor, Boise, ID, FSS, from North Bend, OR, FSS. **Noel F. Keane**, section supervisor, Facility Operations Branch, Air Traffic Div., from Centennial Airport ATCT, Denver. **Richard L. Morgan**, maintenance mechanic foreman, Portland, OR, AFS, promotion made permanent. **Wilford R. Probert**, group supervisor, Navigation Communication Installation Engineering Section, Establishment Branch, Airway Facilities Div. **William L. Ramage**, unit supervisor, Billings, MT, AFS. **Robert R. Sestak**, supervisor, Radar/Automation Construction Engineering Section, Establishment Branch, Airway Facilities Div., from Salt Lake City, UT. **Clark D. Taylor**, area manager, Salt Lake City, UT, ATCT. **Patrick A. Terry**, area manager, Great Falls, MT, AFS, from Idaho Falls FSS. **Nancy A. Trudell**, unit supervisor, Salt Lake City, UT, FSDO, from Long Beach, CA, FSDO. **Clarence R. Wilson**, asst. manager for training, Seattle-Tacoma ATCT. **Edd S. Woslund**, manager, Salt Lake City, UT, ATCT, from Denver, CO, ATCT. **James H. Young**, section supervisor, Denver CASFO, from Washington Headquarters.

## Southern Region

**Robert R. Aubin**, area supervisor, Pensacola, FL, ATCT, from Tallahassee, FL, ATCT. **Joseph D. Belden**, crew chief, Jacksonville, FL, ARTCC AFS, Hilliard, from Palmer, PR, ARTCC. **Dorothy G. Bowden**, manager, Compensation Branch, Human Resource Management Div., from regional headquarters. **Donald E. Buck**, Jr., Hilliard, FL, ARTCC. **Jeffrey J. Coghill**, staff officer, Resource Management Staff, Civil Aviation Security Div., promotion made permanent. **David J. Cognata**, area manager, San Juan CERAP. **Bryce Courtney**, asst. manager, plans & procedures, Orlando, FL, ATCT. **Hoyt L. Dunn**, manager, Atlanta, GA, Hub AFS, promotion made permanent. **James L. Garstang**, area supervisor, Greenwood, MS, AFS, from Jackson, TN, AFS. **Isaac O. Grant**, area supervisor, St. Petersburg, FL, AFS, from Meridian, MS, FSS. **Cecil L. Hall**, asst. manager, plans & procedures, Charlotte, NC, ATCT. **Joseph A. Hambrite**, area manager, Hampton, GA, ARTCC. **Eddie C. Head**, unit supervisor, Dallas, TX, FSDO. **Alfred P. Praetie**, area supervisor, Beaumont, TX, ATCT. **Louis A. Sims**, manager, Tucuman, NM, AFSFO, Albuquerque AFS, promotion made permanent. **James P. Ward**, area supervisor, Albuquerque Transition Staff, Facility Operations Branch, Air Traffic Div., from Gallup, NM, FSS.

## Southwest Region

**Chester E. Bedford**, supervisor, Navigation & Interfacility Engineering Section, Establishment Engineering Branch, Airway Facilities Div. **Marvin D. Benson**, section supervisor, Radar/Communication/Automation Section, Systems Maintenance Engineering Branch, Airway Facilities Div. **Achley G. Blackman, Jr.**, manager, Midland, TX, AFSFO, Austin, AFS, from Little Rock, AFS. **Edward A. Brestle**, area supervisor, Fort Worth, TX, ARTCC. **Ezell Brown, Jr.**, Houston, TX, AFSFO, Houston AFS, promotion made permanent. **Sherrill M. Czarniecki**, unit supervisor, Navigation & Interfacility Engineering Section, Establishment Engineering Branch, Airway Facilities Div. **Michael E. Daniel**, unit supervisor, Certificate Management Office, Flight Standards Div. **Walter M. Ernst**, unit supervisor, Certificate Management Office, Flight Standards Div. **Gary F. Fay**, asst.

manager, Albuquerque, NM, ATCT, from Aspen, CO, ATCT. **Steve M. Gallegos**, asst. section manager, Fort Worth, TX, ARTCC AFS, from Albuquerque ARTCC AFS. **Kirk M. Hallett**, area supervisor, Gallup, NM, FSS. **Loyd M. Halliburton**, unit supervisor, Certificate Management Office, Flight Standards Div. **William E. Jessee**, manager, Oklahoma City AFSFO, Bethany AFS, promotion made permanent. **Ohio R. Key**, unit supervisor, Fort Worth, TX, FSDO. **Allen E. King**, manager, Airworthiness Branch, Flight Standards Div., from Dallas, TX, FSDO. **Ronald C. McGarry**, manager, Operations Branch, Flight Standards Div. **Harold D. Millender**, unit supervisor, Barksdale AFB, LA, AFSFO, Little Rock AFS, from Dallas/Fort Worth AFS. **Salvador Mugica**, area supervisor, El Paso, TX, FSS. **Bernard Mullins**, manager, Fort Worth, TX, FSDO. **Michele M. Owsley**, manager, Airplane Certification Office, Rotocraft Directorate. **Patricia A. Petoski**, manager, Midland, TX, ATCT, from Lubbock, TX, ATCT. **J. C. Piore, Jr.**, unit supervisor, Dallas, TX, FSDO. **Alfred P. Praetie**, area supervisor, Beaumont, TX, ATCT. **Louis A. Sims**, manager, Tucuman, NM, AFSFO, Albuquerque AFS, promotion made permanent. **James P. Ward**, area supervisor, Albuquerque Transition Staff, Facility Operations Branch, Air Traffic Div., from Gallup, NM, FSS.

## Technical Center

**Kaye D. Jackson**, center counsel, Assistant Chief Counsel's Office. **Rick A. Marinelli**, technical program manager, Airports Technology Branch, Airports Div., promotion made permanent.

## Washington Headquarters

**David T. Bailey**, manager, Aircraft Interfacility & Safety Branch, Contracts Div., Logistics Service. **Allen F. Beard**, manager, Maintenance Processes Branch, Automation Engineering Div., Associate Administrator for NAS Development, promotion made permanent. **Lauraine Clark**, manager, Advanced Automation Branch, Contracts Div., Logistics Service. **James F. Coffey**, chief, Frankfurt IFO, Flight Standards Staff, Flight Standards Service, from the Aeronautical Center. **Richard L. Dantz**, manager, Airspace Capacity Planning Program, System Capacity & Requirements Office. **William T. Dixon**, staff officer, Field Evaluation Staff, Associate Administrator for Airway Facilities. **Ralph W. Dority, Jr.**, program manager, Airspace Capacity Planning Program, System Capacity & Requirements Office, from Washington National ATCT. **Algie W. Guy**, manager, Advanced Automation Branch, Contracts Div., Logistics Service. **Brian S. Isham**, manager, Aircraft Interfacility & Safety Branch, Contracts Div., Logistics Service. **Ronald L. La Marche**, asst. manager, programs, Traffic Flow Management Branch, Operations Div., Air Traffic Operations Service, from Milwaukee, WI. **Benny L. McGlamery**, manager, Flight Information & Obstructions Branch, Airspace Rules & Aeronautical Information Div., Air Traffic Opera-

tions Service, from Orlando, FL. **Howard R. McLaughlin**, manager, Automation Software Div., Air Traffic Plans & Requirements Service, from Technical Center. **William F. Petruzzol**, manager, Technical Analysis & Support Branch, Technical Program Div., Flight Standards Service, promotion made permanent. **Ned S. Reese III**, branch manager, Field Development Program Div., Office of Air Traffic Program Management, from Denver ARTCC, Longmont, CO. **Paul T. Steucke**, manager, Public & Employees Communications Div., Assistant Administrator for Public Affairs, from Anchorage, AK. **John H. Timmerman**, manager, Air Traffic Advanced Automation Systems Requirement Branch, Advanced Systems & Facilities Div., Air Traffic Plans & Requirements Service.

## Western-Pacific Region

**Nina Adams**, asst. manager, Human Resource Management Div. **William J. Alcalá**, asst. manager, Los Angeles ARTCC AFS, Palmdale, from Edwards AFB AFSFO. **Ruthann C. Couch**, area supervisor, Oakland, CA, TRACON. **Paul B. Crampton**, asst. manager for technical support, Golden Gate AFS, Hayward, promotion made permanent. **Robert M. Diano**, unit supervisor, San Jose, CA, FSDO, promotion made permanent. **Douglas M. Irwin**, unit supervisor, Las Vegas, NV, CASFO Phoenix, AZ, CASFO, promotion made permanent. **Rebecca Lee**, area supervisor, Los Angeles, CA, ATCT, promotion made permanent. **Laurence A. Marinell**, asst. manager for training, Sacramento, CA, AFS, promotion made permanent. **Delice A. Mokutehua**, unit supervisor, Honolulu, HI, AFS, Hawaii-Pacific, promotion made permanent. **Nina L. Nance**, manager, Planning & Program Management Branch, Flight Standards Div. **Gary M. Olson**, area supervisor, Red Bluff, CA, FSS, promotion made permanent. **Todd A. Smith**, area supervisor, Santa Barbara, CA, ATCT, promotion made permanent. **Jesse R. Stevenson**, manager, Airworthiness Branch, Flight Standards Div. **Katherine A. Warner**, section supervisor, Contracts & Payables Branch, Accounting Div. **Thomas C. Williams**, area supervisor, Sacramento, CA, FSS, promotion made permanent.

## Recognizing 'FAA's Most Precious Resource'

By Lisa Aveni



Joseph Del Balzo, Executive Director for System Development, speaks at the FAA Technical Center's annual employee awards ceremony.

It's no secret that employees are the FAA's most precious resource. Think about it: Without dedicated and talented FAA employees, who would run the agency, control air traffic, or repair malfunctioning systems? In short, who would oversee the nation's entire air traffic control system or conduct research to make the skies safer? With so much being accomplished with such a relatively small work force, employee recognition is not only well deserved, but also an essential way to show employees the importance of their contributions.

Performing the functions of air traffic controllers, secretaries, engineers, scientists, administrative officers, and many other jobs, all its employees play a vital role in meeting the agency's mission. "The FAA is no stranger to the employee awards concept. One example is the awards ceremony—"Awards for Professional Achievement and Excellence"—Executive Director for System Development Joseph Del Balzo (AXD-1) stated at the FAA Technical Center 13 years ago, which has been shaped and refined into an annual celebration of employee excellence. In the 13-year period, 994 center employees have been nominated through the program, and 156 employees have been selected as recipients for awards.

"The program is based on the trickle up theory. Each of the three organizations holds its own awards program, and the selectees from each organization then become the nominees for 15 AXD categories. The emphasis in all three programs is placed not only on winning an award, but also on being nominated for an award. Employees, who nominate their co-workers, and committee members, who work diligently to bring the entire effort together, are the basis for the program's success."

"Technical Center employees are proud of their work," remarked its Director Harvey Safer, "and that is reflected by the quality of their performance." "The program features the aspects of peer nomination and selection," said Frank Elbertson, program chairperson and manager of the Appraisal and Planning Staff at the center. "What greater honor can there be than to be selected for an award by a group of your peers?"

The information in this feature is extracted from the Personnel Management Information System (PMIS) computer. Space permitting, all actions of a change of position and/or facility at the first supervisory level and to branch manager in offices are published. Other changes usually cannot be accommodated because there are thousands each month.

Lisa Aveni is a public affairs specialist at the FAA Technical Center. Currently, she is the Intronex editor.

## EEO from page 1

The group, which agreed to begin conducting joint staff meetings to support their programs, developed a number of recommendations to recruit, select, promote, and retain women and minorities and to eliminate cultural disadvantages in the workplace. Several of the recommendations will be refined by special work groups.

CROs and HRMOs also decided to conduct joint monthly telcons to open up communications and insure consistency in policy and program interpretation and implementation.

The CRO and HRMO group will meet at least annually in conjunction with one of the special emphasis group conferences to promote a unified approach to affirmative action and equal employment opportunity. Finally, CROs and HRMOs committed themselves to developing joint goals and objectives to achieve a culturally balanced work force for the FAA.

How did some of the participants view the progress made at the meeting? Wanda Reyna, Headquarters Staffing Policy Division had this to say: "Now we



Herb McLure, Associate Administrator for Human Resource Management, and Leon Watkins, Assistant Administrator for Civil Rights, enjoy a photo break. Joe Alvarez, manager, Western-Pacific Human Resource Management Division, and Ken Smith, civil rights officer, Alaskan Region, pause for refreshments.



Fanny Rivera, manager, Headquarters Human Resource Management Division, and Ray Salazar, Director, Center for Management Development, attended the meetings.

know what the problems are. I am encouraged that we are going to be team players."

Art Montoya, Southern Region Civil Rights Officer, added, "We have formed partnerships where we share common concerns."

The essential role of the Chief Counsel's Office in affirmative action and equal employment opportunity was clarified by Irene Miels, senior attorney at Headquarters, who also summarized recent court decisions that upheld the use of affirmative action programs to achieve race and gender balance. She encouraged the partnership of CROs, HRMOs, and the General Counsel's organization in their common cause of achieving an appropriate balance. ■

*At their joint meeting, in conjunction with the National Black Coalition of Federal Aviation Employees 14th annual conference, CROs and HRMOs committed themselves to a working partnership based on the following operating norms:*

- We are open, candid, and trusting.
- We talk straight and deal directly.
- We look for opportunities to share.
- We coordinate and concur across program lines.
- We reinforce each other.
- We are visible partners.
- We commit time to the partnership.
- We assume the best and forgive mistakes.
- We approach problems and seek closure with positive, creative, and strategic thinking.

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