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The Tilt Rotors Are Coming

By Charles Spence

"It's not a hybrid; it deserves to be called a truly revolutionary vehicle."

That's the way Dr. Raymond Colladay, the Associate Administrator of Aeronautics and Space Technology, National Aeronautics and Space Administration, introduces the proposed Bell-Boeing Vertol V-22 tilt rotor aircraft. The occasion was a recent FAA/NASA/DOD Tilt Rotor Applications Study Forum held on Capitol Hill in Washington.

The tilt rotor's wingtip-mounted engines and prop-rotor systems swivel, allowing the aircraft to take off and land vertically like a helicopter and, once airborne, fly like a modern turboprop aircraft.

Tilt rotor development is well under way, bringing new challenges to almost every office of the FAA. Its unique characteristics mean new approaches to aircraft and pilot certification, air traffic control, airport design, crew training and maintenance of the vehicle, which is built with a "very high content" of composite materials.

The concept of the tilt rotor has been around since the mid-1950s when Bell Helicopter Co. designed the XV-3 for test purposes. Six years ago, Bell Helicopter Textron and Boeing Vertol were given a contract from the Department of Defense to produce six prototype tilt rotor aircraft that will be known as the V-22. The XV-15, a tilt rotor technology demonstrator, has been flying successfully since 1977.

"We have finally invested money into a plane that will support all forces," Richard L. Rumpf, assistant secretary of the Navy, told the forum.

In addition, the commercial potential of the aircraft has been acknowledged by study participants. It takes off and lands at small facilities; its speed exceeds that of a helicopter, reaching more than 300 miles per hour; and sound levels are below those of a comparable fixed-wing aircraft or helicopter.

The FAA-sponsored Rotorcraft Master Plan in 1983 recognized the tilt rotor as offering a potential for improvement of interurban air transportation.

Two years later, then Administrator Donald D. Engen proposed a joint civil tilt rotor study for FAA, the National

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An aviation free-lance writer, Mr. Spence was senior vice-president for public relations at the AOPA and served 15 years with Hearst newspapers.

How's Your Boss Doing?

By Dawn Phillips

No one's perfect, you may have mused to yourself, so why should only supervisors rate employees on their performance? It's a good point that is on its way to being resolved through a national FAA Employee Input System.

It was launched this past summer with a test in two regions via a questionnaire that asked employees to assess their supervisors' human resource management. (See FAA WORLD, August 1987, page 4.) Feedback from the questionnaire compiled at the workgroup level was supplied last month to the supervisors rated.

If the test is successful, the program will be adopted in stages nationally beginning in 1988. It represents a fairly new concept for the Federal Government, although numerous organizations in FAA have been independently experimenting with this type of program for some time.

The objective in both cases has been the same: continued improvement in the management of people, and Administrator McArtor has made clear his support for "people programs."

FAA is not alone in developing such a

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A specialist in the Career Management Division of the Office of Organizational Effectiveness, Ms. Phillips is responsible for FAA's employee appraisal program.

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Russ Fogelman, then supervisor of the Radar Unit at the Amarillo, Texas, Airway Facilities Sector Field Office, discusses features of the employee input questionnaire at an employee advisory group meeting at headquarters last February. A cross-section of employees from all regions was represented. Fogelman is now at the Albuquerque ARTCC.

How's Your Boss Doing? *continued from page 1*

system. IBM, a company often cited for its good human resource management practices, has been using a similar management tool for more than 25 years. Other companies have been adding similar programs more recently.

In government, however, FAA may be among the leaders. It came to us as a recommendation from a group of agency supervisors and managers to the Administrator's Management Team (AMT) in 1986. Seeing the results of local FAA efforts and believing that such a program had great potential for improving supervisory practices and employee satisfaction, the AMT bought the idea.

A common core of human resource management (HRM) performance elements has been established for all FAA supervisors, and these became the focus of employees' assessments.

In the questionnaire that went out to 10 sites in the Great Lakes and Western-Pacific regions, the employee was asked to volunteer answers to questions specific to his or her supervisor's HRM performance during the last year. The employee then mailed the responses to a contractor which consolidated them and sent them to the supervisor.

In the first year of a national implementation, only the supervisor being rated would see his or her questionnaire results. At some point, full implementation will involve sending the responses to the supervisor's rating official for identification of HRM strengths and weaknesses.

Dick Rice, manager of the Career Management Division, Office of Organizational Effectiveness, which is developing this program, says that the test results will determine what the final process will look like and when it will be implemented nationally. At minimum, the program is expected to be a resource for supervisory development.

"If the test is successful," Rice adds, "the feedback also will be a resource for the supervisor's rating official in appraising HRM performance."

The work group that helped develop this program included employee participation group members, supervisors, managers and nonsupervisory employees, among whom were members of the technicians' union, PASS (Professional Airways Systems Specialists) and the flight service specialists' union, NAATS (National Association of Air Traffic Specialists).

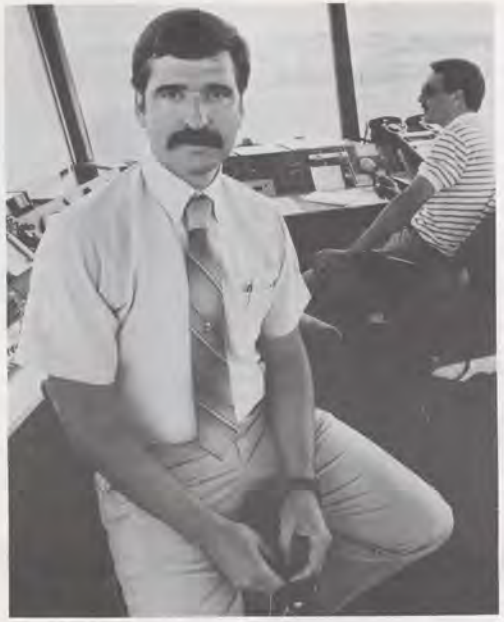
Reactions to the idea and the test itself have been positive thus far. Bob Bebout, a supervisor in the General Aviation Unit of the Los Angeles Flight Standards District Office, looks upon the program as an opportunity to improve his own supervisory skills, adding, "This is a positive step—one that will give teeth to our human relations efforts."

Jarillyn Newman, a secretary in the Western-Pacific Airway Facilities Division, who participated in the test, believes that "most employees will appreciate the opportunity and will be objective on their input. It gives all employees an even chance to have a say."

Evaluations of the test will reduce the number of questions being asked from 81 to about 40 and will look at the following aspects:

- Ensuring employee anonymity. No names appear on the questionnaire other than the supervisor's, and the responses are mailed by the employee to the contractor. All responses on a particular supervisor are averaged and reported that way.
- Second-level supervisor's HRM performance. The test should show whether or not employees feel they know enough about this individual's performance to provide reliable input.
- Use of employee input. How do rating officials consider the feedback when appraising supervisors on their HRM performance and how are they using the results along with other inputs to plan developmental activities.
- The minimum number of responses needed. While participation is voluntary, there will be a minimum number of responses to the questionnaire needed to ensure validity. Although many supervisors may have only a few people reporting to them, the data may still be important as feedback, but its validity is lessened.

In sum, the supervisory feedback program offers employees an opportunity to influence their work lives and supervisors a yardstick to evaluate their HRM performance. The bottom line to Dick Rice is that it is a progressive program leading to increased agency effectiveness and employee satisfaction. ■



Controller Saves Non-Pilot

"*This is nine-five-five-eight-Juliet,*" called an apprehensive woman's voice to the Groton-New London, Conn., Tower. "*My husband must be having a heart attack or something. I don't know how to land this plane.*"

A seven-minute life-or-death drama was unfolding for controller Gerard Tremblay and non-pilot Elizabeth Mohr in a Piper Cherokee that had just taken off over Long Island Sound. Initially, ATCS Kimberly Kochis responded to ask the aircraft's position, while ATCS Wayne Gilford notified emergency units and Tremblay called adjacent air traffic facilities.

Because he is a certified flight instructor, Tremblay then took over talking to Mrs. Mohr, first determining her location.

"*OK, 58 Juliet, can you turn around and bring it back toward the shoreline, toward Connecticut?*" Tremblay asked.

For 25 seconds there was silence. "You gotta understand what she was going through," he said later. "She was probably very concerned about her husband. She probably had a very tight, very tense grip, which would key up the microphone."

Mrs. Mohr came back on the radio, indicating that she was making for the coast. But again cockpit noises followed—a minute and a half of relative silence during which Tremblay could not communicate with her because she had the microphone's transmitter button jammed in. Repeatedly, Tremblay tried to get through with instructions and cautions about the microphone.

Mohr: "*I see the airport now.*"

It became obvious that Mrs. Mohr had learned a lot from flying with her husband frequently. She required guidance, not blow-by-blow instructions.

Tremblay: "*OK Cherokee 58 Juliet, you're doing great. What I'd like you to do is come around and circle the airport. Come right overhead the airport and make a right turn and line up with the runway. Please be careful not to key the mike for long periods of time. Can you land the airplane?*"

Mohr: "*Yes, sir.*"

Tremblay: "*OK. That's great, Cherokee 58 Juliet. If you'd like, you can bring it straight in, and you're clear to land on Runway 5. You have a gentle wind coming from the tail. . . .*

"*Pull up the nose just a little bit. You're coming in a little bit low. . . . Just ease off on the power, and let her come down slowly. . . . Reduce the power, hold up the nose, bring the power off, bring the power all the way off. OK, beautiful, 58 Juliet. . . .*

Mrs. Mohr's remarkable control started to come apart after touching down. She had brought the plane in well, although a little fast, and bounced twice before settling squarely on the runway.

Tremblay believes that at this point, Mrs. Mohr was so relieved to be on the ground and so concerned with her husband that further instructions fell on deaf ears.

The airplane started to veer off the runway, while Tremblay was trying to get her to cut all the power and fuel supply and to apply the brakes.

"*On the tops of the pedals are the brakes. Gently slide your feet up and put the brakes on. Right next to the throttle is a red [fuel] knob. Pull that knob back. Pull the red knob all the way back. . . . Push right rudder, 58 Juliet, right rudder. Push the right pedal, right pedal. . . .*"

As the Cherokee neared parked planes, he tried to ask her to steer with the rudder, but to no avail. He thinks it may have been lucky that she hit two airplanes, for the resilient impacts slowed the aircraft and stopped the engine, averting a possible crash into an immovable object. The rescue team had Mrs. Mohr out of the airplane within seconds. As a result, Mrs. Mohr sustained only minor injuries. Her husband had suffered a fatal heart attack.

The afterglow brought ATCS Tremblay local, state, national and even international media attention—a call from an Australian radio network and a writeup in a British newspaper. It was wide recognition for a job well done. ■

Turnout for Top Flight Standards Facility

There was a big turnout for the mid-August luncheon honoring the Scottsdale/Phoenix, Ariz., Flight Standards District Office, which won the Flight Standards Field Office Facility of the Year Award for 1986. Pictured are facility personnel and Region Director H.C. McClure holding the top award, signed by then Administrator Donald Engen, an Award for Outstanding Performance of Aviation Standards Safety Programs, signed by Associate Administrator for Aviation Standards Anthony Broderick, and a Western-Pacific Certificate of Merit. From the left are B. Calendine, D. Leer, H.C. McClure, G. Biegas, C. Kandziora, T. Howerton, N. Milinski, R. Behm, A. Bieber, B. Bieber, D. Eichof, L. Wolfer, O. Culp, P. Cuisinier, D. Hennies, T. Blatz, E. Prentice, E. Newberry, J. Noel, L. Giles, I. Curtis, M. Warth, R. Grasel, T. Forte', A. Adams and D. Judd.

A Chance To Fly Higher

Have you yearned to be on the cutting edge of aerospace technology, to be a person with the right stuff, a high-tech role model? Because FAA has a high proportion of technically skilled personnel, many FAAers may have what it takes to become an astronaut.

The National Aeronautics and Space Administration (NASA) is seeking pilot astronaut candidates and mission specialist candidates to support the Space Shuttle Program.

The basic five-person crew—consisting of the commander, the pilot and three mission specialists—will perform missions of up to 30 days in the Space Shuttle Orbiter, which includes the deployment and retrieval of satellites, servicing satellites, operating specialized laboratories and eventually developing and maintaining a permanent space station. On occasion, the crew may also include payload specialists and additional mission specialists.

Both pilots and mission specialists must have bachelor's degrees from accredited institutions in engineering, biological science, physical science or mathematics. Not qualifying are degrees in technology (such as engineering technology, aviation technology and medical technology), psychology (except clinical, physiological or experimental psychology), nursing, social sciences or aviation and aviation management or similar fields.

For pilot astronauts, an advanced degree is desirable, and the quality of academic preparation is important. The candidate must have at least 1,000 hours pilot-in-command time in jet aircraft, and flight test experience is a plus. Also required is passage of a NASA Class I space physical, which is similar to a military or civilian Class I flight physical. The pilot astronaut must have distant visual acuity of 20/50 or better uncorrected, correctable to 20/20 and a maximum blood pressure of 140/90. Height must be between 64 and 76 inches.

In addition to the degree, mission specialist astronauts must have three years of related, progressively responsible professional experience. An advanced degree is desirable and may be substituted for part or all of the experience requirement. This candidate must pass a Class II space physical, have distant visual acuity of 20/100 or better uncorrected, correctable to 20/20 and blood pressure not exceeding 140/90 and must be between 60 and 76 inches in height.

All applicants must be citizens of the United States.

Applications for the Astronaut Candidate Program are accepted on a continuous basis and must be updated annually when requested to stay in the running for selection as a candidate.

Final selectees will require interviews and medical evaluations. Resulting selection rosters may be used for the selection of additional candidates for one year.

Those selected as astronaut candidates will undergo a one-year training and evaluation period at the Johnson Space Center in Houston, Texas. In addition to basic astronaut training, the candidates will be assigned technical or scientific responsibilities, allowing them to contribute to ongoing programs. Pilot astronaut candidates will maintain their proficiency in NASA aircraft.

Selection as an astronaut candidate does not ensure selection as an astronaut, and candidates may be placed in other NASA positions. Upon successful completion of the training period and selection, the civilian astronaut will become a federal employee and expected to remain with NASA for five years. Pay grades will be GS-11 to GS-14, depending on the candidate's qualifications.

If all this sounds like you, you may obtain information on application procedures from the Staffing Policy Division, Office of Personnel and Technical Training in Washington headquarters. Call FTS 8-267-8013. ■

Retiree Address Changes

FAA retirees or spouses who moved or wish to discontinue receiving FAA WORLD must request the changes of the region from which the FAAer retired, which is where the mailing list is maintained.

Write to the public affairs office:

FAA Alaskan Region HQ, 701 C St., Box 14, Anchorage, AK 99513.

FAA Central Region HQ, 601 E. 12th St., Kansas City, MO 64106.

FAA Eastern Region HQ, Fitzgerald Federal Bldg., JFK Airport, Jamaica, NY 11430.

FAA Great Lakes Region HQ, 2300 E. Devon Ave., Des Plaines, IL 60018.

FAA New England Region HQ, 12 New England Executive Park, Burlington, MA 01803.

FAA Northwest Mountain Region HQ, 17900 Pacific Highway S., Seattle, WA 98168.

FAA Technical Center, Atlantic City Airport, NJ 08405.

FAA Western-Pacific Region HQ, P.O. Box 92007, Worldway Postal Center, Los Angeles, CA 90009.

Retirees from Washington Headquarters should send changes to FAA WORLD, APA-330, 800 Independence Ave. SW, Washington, DC 20591.

The Aeronautical Center, Southern Region and Southwest Region do not now have an active retiree mailing list.

Clyde Pittman of Great Lakes' Airway Facilities Division inputs information on an area's navigation aids that may be affected by a Notice of Proposed Construction or Alteration.

Paperwork Blizzard Melts Away

By Marjorie Kriz

As computers proliferate in the agency, more and more work is shifting from piles of paper to little green letters on a screen. In many cases, work is also being done faster, more accurately and more efficiently than in the days of the "paper shuffle."

One example of the benefits of computerization is in a prototype local area network (LAN) being tested in the Great Lakes Region. Here, personal computers have been programmed to replace the paperwork blitz required in conducting obstruction evaluation and airport airspace analysis (OE/AAA) programs.

A second prototype went on line in the New England Region last month and is undergoing initial testing. It will be able to share information with FAA's new Computer-Aided Engineering Graphics (CAEG) system.

In early 1983, Glen Bales from the Eastern Region's Air Traffic Division envisioned an automated solution to a "paper shuffle" that he and his staff faced every day. Being responsible for the conduct of the OE/AAA programs in his region, Bales realized that a major percentage of the manpower used for these programs was being spent in efforts to initially screen the thousands of proposals for construction or alteration that his region received annually.

As a result, he and Ed Caldwell—now in Washington headquarters—developed a conceptual automated screening program, which was demonstrated to a group of OE/AAA personnel from other regions and Washington headquarters. This group recommended the expansion of the concept and the development of a program suitable for all regions to use.

Due to budgetary constraints, it was necessary to mount a "grass roots" effort that eventually involved personnel from the Eastern, Southwest, New England and Great Lakes regions and Washington headquarters to make a national OE/AAA automated screening device a reality. Because the OE/AAA programs are multi-disciplinary, contributions of time and energy have been made by people from Air Traffic, Airports, Flight Standards and Airway Facilities. In addition, several Management Systems managers from these same regions have kept the effort alive by making equipment and resources available when needed.

Although several other methods were explored, the regionally based LAN proved to be the most usable, cost-effective system.

In early 1985, the services of DOT's Transportation Systems Center (TSC) were sought to develop the LAN and to assist each of the regions in adapting it to their specific regional networking plans. Although two of the program elements—or modules—for discipline-specific computations had been separately developed, TSC developed a third required module and the translator programs that assure all of the modules work together within the LAN.

Since the first of the year, the development and testing of the prototype LAN in the Great Lakes Region has required a sizable effort from that region's Air Traffic, Flight Standards and Airway Facilities divisions and from the Chicago Airports District Office. When the test period is over and all glitches have been overcome, the computerized evaluation program will be made available for use throughout the agency. The goal of everyone involved is to begin full-scale installation and implementation in all the other regions this fall.

The Great Lakes Region's assistant public affairs officer, Ms. Kriz is a former reporter and has been published in the Chicago Tribune *and* Chicago History *magazine.*

The prototype system works like this: Each FAA Form 7460-1, Notice of Proposed Construction or Alteration, is received, verified and entered into the computer network by Air Traffic's Airspace Branch. The network sends the information to Airway Facilities' Program and Planning Branch, Flight Standards' Flight Procedures Branch and one of the Airports Division's airport district offices (ADO). Which ADO gets the work depends upon the state in which the construction is proposed. The test, however, involves only the Chicago ADO, which is responsible for airport development in Illinois and Indiana.

An IBM AT computer in the word processing center on the ground floor of the regional office is dedicated solely as a network file server—a computer that controls and manages the LAN. However, the network design allows the individual work stations in the operating services to be any IBM-compatible computer, such as the Leading Edge or Compaq.

At the Chicago ADO, Phil Smithmeyer, an airports engineer in the Illinois section, and Darwin Rowell, a senior in aero technology at Bowling Green State University in Ohio, who was a summer aide, had previously entered the necessary airport data into the computer. Also working on the test with them was Irene Zomerman, another airports engineer in the ADO.

Data entry can take several hours because latitude and longitude, runway configuration and length (current and proposed) and an airport reference point (geometric center of the airport) must all be calculated. For most of the 250 public-use airports in Illinois and Indiana, much of this information is already known, but it still must be entered into the computer. The Chicago ADO's calculations and its input to the network can take up to four hours per airport if not previously known.

"Eventually, once everyone is on line, Air Traffic's evaluation form can be put into the computer," Smithmeyer explained. "Here, we will be able to order our analyses, which can be done at night in batches. When we turn up in the morning, the work is all done."

Obstruction analyses are now done both the old way and the new as part of the test. Eventually, virtually all paperwork could be eliminated and records kept on computer storage devices.

Tom Hilquist in Flight Standards is leading that division's PROSE analyses in the tests. PROSE stands for "preliminary regional obstruction screening evaluation," an automated program developed in Great Lakes Region that identifies objects which may conflict with existing or planned instrument approach procedures or instrument flight altitudes. PROSE will soon be available to other flight procedures branches and can be interfaced with the OE/AAA local area network.

Also being added to the evaluation network is CONFLIX, an automated program developed in the Great Lakes Region 10 years ago, according to Clyde Pittman of Airway Facilities. CONFLIX identifies objects that may conflict with FAA systems such as navigation aids, communications devices, radar systems and instrument landing systems.

In Air Traffic, Roger Ferguson has been working with the other regional participants and TSC to tie the whole network together. In addition, Ferguson has developed the response forms the OE/AAA network will produce for mailing when cases are completed.

Smithmeyer said no great amount of training was necessary to work on the test program since Airports people already are sufficiently computer literate to work up database calculations and put them into the computer. However, some of the other participants had no computer experience at the outset. They have all learned, mostly on their own, whatever was necessary to make positive contributions to the project.

Everyone connected with this effort has expressed the conviction that the OE/AAA automated screening device will not only eliminate much of the paperwork blizzard, but will also allow the FAA to greatly improve the accuracy and speed of its responses to the users of the nation's airspace. ■

Amelia Earhart stands in front of the Lockheed L-10 Electra in which she and navigator Fred Noonan disappeared in July 1937, somewhere in the western Pacific Ocean, attempting an equatorial circumnavigation of the globe. Smithsonian Institution photo

A 'Shining Adventure'

Amelia Earhart's Last Flight

By Edmund Preston

Fifty summers ago, the Coast Guard cutter *Itasca* spent the first night of July anchored off Howland Island, a tiny splinter of land in the central Pacific Ocean. The ship was waiting for Amelia Earhart, who intended to land her specially designed Lockheed Electra 10E on the island.

The 2,500-mile stretch from New Guinea to Howland was the most dangerous leg of a challenging eastward journey that the famous aviator had begun from Miami one month earlier. She hoped to become the first to fly around the globe using an equatorial route.

Itasca's radio operators began to pick up the first faint messages from the Electra shortly after 2:00 a.m. Dawn brought a clear day, and the growing strength of Earhart's transmissions seemed to indicate that she was approaching rapidly.

At 6:45, the pilot reported her distance as about 100 miles from the island, but within less than an hour she was clearly in trouble. "We must be on you but we cannot see you," Earhart broadcast. "Gas is running low." The Coast Guard crew received her last, garbled message at 8:44. Shortly after, their ship left Howland to begin a full-speed search. Other vessels and aircraft soon joined in a massive but futile hunt.

Among the many Americans distressed by the Electra's disappearance was Secretary of Commerce Daniel G. Roper, who tendered his department's facilities for any possible assistance. The gesture was natural, for FAA's predecessor organizations within Commerce had taken a friendly interest in Earhart's career from the time of her sudden rise to fame in 1928. As the first woman to cross the Atlantic by air, "Lady Lindy" became the center of vast adulation. Although only a passenger on the flight, Earhart soon compiled her own impressive list of piloting attainments. In addition to speed and altitude records, she became the first woman to fly alone across the Atlantic and the first aviator to solo from Hawaii to California.

A few have viewed Earhart's flying as a series of stunts designed to boost the cause of women's rights or simply her own interests. Some critics focus on George P. Putnam, a writer and publisher who became a guiding influence on the aviator even before marrying her in 1932. An "inveterate, hard-headed promoter," to use the words of Earhart's sister, Putnam skillfully extracted maximum publicity from his wife's achievements. Sometimes he faced rebellion from "A.E.," who vetoed a scheme to sell reproductions of the hat she wore on her triumphant return from the 1928 flight.

Those who dismiss Earhart as a mere self-advertiser tend to ignore the fervor of the era's campaign to raise America's "air mindedness." In a series of books and articles, she extolled the future of air travel and urged women to take an active role in this exciting new field. Earhart lamented aviation's lack of public understanding in a 1929 letter to Clarence Young, Assistant Secretary of Commerce, whom she thanked for commending her "feeble efforts at air propaganda." The modest phrase typified a paradox described by historian Joseph J. Corn: Female aviators demolished the idea that women were too timid to be aerial pioneers, yet they also used their femininity to "domesticate" flying and so increase its acceptance.

Joining the staff of Transcontinental Air Transport, Earhart worked directly to reduce the female sales resistance then considered a major obstacle to mass airline travel.

Earhart enjoys a ticker tape parade on New York following her solo flight across the Atlantic Ocean in 1932.

She formed a friendship with another Transcontinental official, Eugene Vidal, often showing him poetry that she submitted to magazines under a pen name. Earhart became a vice president of Ludington Lines, organized by Vidal and Michael F. Collins in a briefly successful effort to introduce low-cost, hourly service. Her association with Vidal continued after their airline was absorbed by Eastern Air Lines in 1933.

Both were friends of the family of President Franklin D. Roosevelt, a connection that soon helped Vidal become director of the Commerce Department's Bureau of Air Commerce. Earhart served as a dollar-a-year technical consultant to Director Vidal but resigned in August 1935 to pursue prospects in commercial aviation.

Meanwhile, air safety problems and blatant internal conflict were helping to make the Bureau of Air Commerce a political liability for the New Deal. According to Fred D. Fagg, Vidal's successor, the President wished to name a new director before the election of 1936. Due to the intercession of Earhart and Mrs. Roosevelt, however, Vidal was permitted to remain until March 1, 1937.

During the latter part of his tenure at Commerce, Vidal assisted in preparations for Earhart's first round-the-world attempt, a westward venture that began with a long hop from California to Hawaii. One historian has concluded that he was instrumental in reviving government plans to build an emergency landing strip on Howland Island, instead of another island less suited for the Electra's second stop.

Even more directly concerned with the flight was Superintendent of Airways William T. Miller, who coordinated arrangements with other agencies in Washington. Miller attended to matters ranging from Navy aircraft mechanics to dynamite for frightening off Howland Island's resident seagulls. Using the Bureau of Air Commerce's facilities at Oakland, he helped smooth Earhart's flight to Hawaii on March 17. Two days later, Putnam received word that his wife had crashed in flames on takeoff for Howland. The stricken husband handed the telephone to Miller and walked uncertainly from the room.

The fire soon proved a false report, but the accident was real. Miller reported to Secretary of Commerce Roper that Earhart was "calm and collect[ed]," but damage to the Electra delayed her second attempt by over two months. Because of seasonal weather changes, she now decided to reverse her itinerary and fly eastward from Florida. The new flight plan placed the formidable Pacific Ocean toward the end of Earhart's fatiguing journey.

Another adverse circumstance was the absence of Miller, who was on a mission to Australia. Feeling the loss of the superintendent's familiarity with the Pacific and key personnel, Putnam asked that he stop off in California on his way back to Washington. The Commerce Department replied that Miller was needed in the capital, but would lend assistance from there. By this time, the Electra was a week away from reaching Lae, New Guinea.

Flaws in coordinating the Lae-to-Howland flight reduced Earhart's chances of finding the isolated island. Besides the calculations of her navigator, Fred Noonan, she was relying on an airborne direction finder and radio communications with the Coast Guard.

Yet her attitude toward the radio arrangements was "most casual to say the least," in the opinion of the *Itasca*'s captain. His crew planned to use their ship's direction finder to help bring the Electra in, unaware that Earhart had eliminated the cumbersome trailing antenna needed to send low-frequency signals that their unit could accept. Another direction finder on Howland Island operated on high frequencies, but proved useless because her transmissions were too brief. In any case, Earhart was apparently able to pick up almost none of the Coast Guard's messages.

"All of us would give a million to know what happened those last hours," wrote an *Itasca* crew member to a friend, soon after the Electra's loss.

One of those who thought he knew the answer was Eugene Vidal, who obtained an appointment to tell his theory to President Roosevelt. No record of this conversation survives, but Vidal later outlined his views in an oral history interview.

Earhart had told him she planned to search for Howland Island until she had only enough fuel left for four hours of flight. She would then turn back to the Gilberts, a chain of British-owned islands some 500 miles to the west. Vidal believed that Earhart was forced to implement this emergency plan, in part, because her direction finder malfunctioned. He also cited her shift from the use of "we" to "I" as evidence that something had happened to disable Fred Noonan or his navigational equipment.

Aspects of Vidal's theory are difficult to accept. Before turning back for the Gilberts, he believed, Earhart was methodically "working back and forth, north and south, trying to find Howland just as she had planned to do." It is true that her last message reported a north-south course, yet she had previously been circling. *Itasca* crewmen considered this "poor policy" because "one soon loses their reckoning when running circles."

The record contradicts Vidal's belief that Earhart stopped using the pronoun "we" in her final transmissions. It also seems improbable that a pilot with four hours' fuel reserve would report that "gas is running low." A Coast Guard dispatch estimated that she had barely enough fuel to reach Howland under prevailing conditions.

If the Electra landed in the Gilberts, as Vidal believed, one must explain why no trace of it was found there. One writer claims that Earhart's attempt to reach British territory ended in the Marshalls, where she was captured by the Japanese. Like other sensational theories linking her with espionage, this idea lacks convincing documentation despite the opening of pertinent records to research.

Probability still favors the conclusion that Earhart ran out of fuel while searching for Howland. "Far to the west of us was a cloud bank," reads the Coast Guardsman's 1937 letter. "She may have gotten lost in that and missed the island in the morning sun.... I am firmly convinced that she crashed upon going down and went right to the bottom, for by this time, we should have found her if she had floated at all."

Earhart's loss contributed to a wave of disillusion with dangerous long-distance flying, and the Bureau of Air Commerce was criticized for permitting the flight. In reply to a congressional inquiry, Director Fagg stated that Earhart's application met safety standards at the time, but noted that rules for over-water operations had since been tightened. The trip had been approved as an aeronautical field test, Fagg wrote, with scientific benefits expected from reports on weather conditions and the performance of the Electra's instruments.

Despite this official explanation, scientific data-gathering had been only a minor aspect of Earhart's last flight. She herself described it as a "shining adventure, beckoning with new experiences, added knowledge of flying, of peoples—of myself." The flight would make her more useful to a planned program of aviation education at Purdue University. In addition, she believed women should win greater independence by duplicating male feats and occasionally attaining goals that men had not yet reached. She has been remembered in this vein, as a daring aerial trailblazer whose life and disappearance continue to stir the imagination. ■

Earhart sought a level of achievement that would encourage other women to reach for a place in aviation. Here, she's in the casual clothes she wore for her last flight.

Dr. Preston is a member of the FAA history staff, Office of Public Affairs. He is currently finishing work on the fifth volume in the FAA narrative history series, Troubled Passage: The Federal Aviation Administration, 1973-1977.

Tilt Rotors *continued from page 1*

Bell's Tilt Rotor aircraft, built as test vehicles under a Department of Defense contract, have performed well for a decade.

Aeronautics and Space Administration and the Department of Defense. FAA's focus on the study and tilt rotor development is being led by Craig Beard, director of the Office of Airworthiness.

That study is nearly completed, and forum participants' enthusiasm for introduction of the civilian tilt rotor continues unabated despite a host of obstacles to overcome.

"The tilt rotor will be one of the most important technologies to bring our bacon out of the fire for airport capacity," declared Administrator Allan McArtor in an opening address to the forum, where results of the two-year study were released to the public.

Airport facilities are seen as one of the key factors in permitting the civil tilt rotor to become operational.

The "vertiport"—a term coined by Boeing—will require only about one-fourth as much space as a typical shopping mall, according to Ron Reber, Bell's V-22 deputy program manager. That's roughly one city block. Where even that much space is at a premium, one option is to place the facility over existing express roads. The primary differences between a tilt rotorport and a heliport are in the sophistication of the terminal and a requirement for gates to permit simultaneous takeoffs and landings.

The Port Authority of New York and New Jersey plans to begin looking for suitable sites within the next 10 months. Seven such "demand centers" will be needed within New York City, according to Port Authority studies.

Although admittedly not competitive with jet aircraft in speed, the tilt rotor offers significant advantages for travelers in reduced ground time at one or both ends of a trip, resulting in an overall reduction in travel time. This, the experts agree, means a ground facility near the originating departure point, the ultimate destination or both and a primary trip segment of under three hundred miles—about one hour's flight time.

According to the New York study, five vertiports will be needed in Boston, four in Washington, D.C., and at least four others elsewhere in the Northeast. Officials of New York are already talking with transportation leaders in other major cities to generate immediate support and action for tilt rotor facilities.

An important element in ground-facility preparation, which has been an ongoing project in FAA's Office of Airport Standards, is the development of a new heliport design guide. This is an update of a decade-old standard guide, following consultation and review by the industry. It is expected to be published by the end of this year.

Basic standards in the revised guide, obviously, will need to be adapted for the vertiport, while serving for the standard heliport. Robert Donahue, Associate Administrator for Airports, told the forum audience that the FAA "must become more proactive in airport development and not just reactive."

The applications study pointed out that en route tilt rotor operations are seen much the same as those for current turboprop aircraft operating in below-like the 1,353-foot-tall twin towers of the World Trade Center and the television antenna spearing the airspace at 1,472 feet atop the Empire State Building—20,000-foot levels. Departures and arrivals will be a different story, however. To operate the tilt rotor into major metropolitan areas, there must be air traffic control facilities, regulations and operational procedures.

Take New York City as an example. According to the Port Authority study, with "demand centers" located within densely built and populated areas, tilt rotor aircraft will be funneled below conventional aircraft arriving and departing LaGuardia, Kennedy, Newark and surrounding general-aviation airports.

When meteorological conditions result in instrument flight, high structures—present difficulties for airspace and air traffic control planners.

Terminal control areas will have to be lowered to ground level, in the view of consultants at Hoyle, Tanner and Associates, which conducted the study for the Port Authority.

Before the tilt rotor can be operational, however, it must be certificated. For more than five years, development of certification standards has been underway in the Southwest Region, the certification directorate for rotorcraft and where Bell is located. In 1982, Jim Honaker, the region's V/STOL flight analyst, started to write the certification document. In May of the following year, a first rough draft was released to aircraft and parts manufacturers, users like offshore oil companies and foreign governments, as well as appropriate FAA offices for comment.

A public review of the draft standards was held by the Southwest Region in June. At that review, four "TIPs"—Technical Issue Panels—were formed, one each for flight, propulsion, systems and airframe. The panel members reviewed the draft, setting a November deadline for submitted comments. Then the revision work starts over, with an expected release date of June 1988.

"The document is broad enough to cover all types of aircraft in the 'powered lift' category," says Larry Andriesen, manager of the Aircraft Certification Division in the Southwest Region.

He admits the certification is going to be difficult. "It's not a plane; it's not a helicopter. It's new, and if we do not give grandma the same level of safety and comfort she had when she got off the jetliner, then we will have failed.

"It's a landmark to have a certification document before an aircraft," Andriesen says, adding that there is concern that the certification standards should not inhibit development of the civil version. In this respect, there is the chicken and egg dilemma. Without definitive standards, designers and manufacturers are groping more, and without an aircraft, the FAA must attempt to prejudge engineering.

This is resulting in one of the closest coordination and team efforts seen between industry, FAA and the military.

First flights of the first six military versions—designated the V-22 "Osprey" for the bird that dives deep and can carry more than twice its own weight—are scheduled for next summer. The military hopes to acquire 913 of the aircraft, although Congress has not yet decided on the funding.

To convert the military version to civilian use will require a number of engineering changes. Right now, the tilt rotor is a military vehicle that does not have all the amenities the public expects. For example, there is a need to develop pressurization and an airliner-type passenger interior.

The FAA/NASA/DOD study identifies a potential for six different versions of the tilt rotor, ranging from an eight-passenger corporate vehicle to a 75-passenger transport.

By 1999, it is expected that military production will be complete enough to permit accelerated deliveries of civilian versions, although introduction of the new technology to the civilian market will likely have been under way for some time.

By the year 2000, market surveys indicate, 4.7 million passengers will be transported in and out of the New York area annually by tilt rotor. The figure could go as high as eight million if prices are not too high.

According to the Port Authority study, ticket costs on the tilt rotor are expected to be higher than for conventional aircraft. However, if the cost of ground transportation is added at one or both ends of the trip, the difference between the tilt rotor and conventional aircraft becomes less. Add a flat $20 for the value of time saved and the two become close in cost.

In addition to the corporate and airline markets, the study foresees uses in police and fire support, medical emergencies, offshore drilling and all-cargo operations that can slice additional hours off overnight parcel services.

Once operational, the tilt rotor will be the next major step in shrinking the time of travel. In this respect, the Navy's Rumpf says, "We look at the application of this technology the same as we did the development of the jet engine."

In the civil market, this means instead of a cab-jet-cab trip of three hours from Philadelphia to Boston, the tilt rotor will go from downtown to downtown in 51 minutes, from Dallas to Houston in 44 minutes instead of two-and-a-half hours and from Chicago to Kansas City in 61 minutes instead of three hours.

There still are many unanswered questions and many procedural, technical and political hurdles that need to be cleared. "This is the time when somebody has to bite the bullet," says NASA's Dr. Colladay. "I want to chalk this one up as a success. The nation needs it; the public needs it."

Jack Horner, president of Bell, remarks that "one does not get many opportunities in a lifetime to be part of a first. The tilt rotor is a first."

The clock is ticking for FAA to meet the challenges of being ready, as Administrator McArtor says, "to fit the plane into the system." ■

A Gathering of Hands

When a dipole antenna phasing check was needed on Andrews Air Force Base's ATCBI-5 because of target losses, personnel from the sector field offices at Andrews, Baltimore-Washington Airport, Dulles Airport, Washington National Airport and from the Mode S Program, Communications and Surveillance Div., Program Engineering and Maintenance Service, pitched in on two weekends in 95-degree heat last summer to fix it. The expertise was needed because the phasing check is new and requires special test equipment. Helping were Bob Young (left), Capital AF Sector; Jim Moe (center), APM-520; and Joe Cooper, Dulles; as well as Charles Patterson, DCA; John Marks, Baltimore; Dan Schnore DCA; and Norbert Flatow, acting manager, Washington National Sector Field Office.

People

Aeronautical Center

■ **Arthur F. Evett,** unit supervisor, Engineering and Production Branch, FAA Depot, promotion made permanent.

■ **David W. Fleming,** manager, Environmental Systems Engineering Branch, National Airway Engineering Field Support Sector, Maintenance Engineering Division, Program Engineering and Maintenance Service.

■ **Carolyn E. Hohmann,** manager, Management Programs Staff, Aviation Standards National Field Office.

■ **Ronnie D. Maynard,** supervisor, Operations Section, Supply Management Branch, FAA Depot.

■ **David H. Settle,** unit supervisor, Revision and Development Section, Air Traffic Branch, FAA Academy, promotion made permanent.

Alaskan Region

■ **Maurice W. Blatt,** area supervisor, Fairbanks Flight Service Station, from the Yakutat FSS.

■ **Edward M. Kiss,** assistant manager for program support, North Alaska Airway Facilities Sector, Fairbanks.

■ **Robert B. Smoddy,** field office unit supervisor, North Alaska AF Sector.

Central Region

■ **Rosalyn R. Asbury,** area manager, Columbia, Mo., Automated Flight Service Station.

■ **Kenneth A. Eaker,** unit supervisor, St. Louis Airway Facilities Sector.

■ **Gary M. Lewis,** area supervisor, St. Louis Tower, Lambert Field.

■ **John H. Mayorga,** assistant manager for training, St. Louis Tower, Lambert Field.

■ **David S. Mezurashi,** manager, Grand Island, Neb., AF Sector, from the Dakota AF Sector, Bismarck, N.D.

■ **John S. Parker, Jr.,** unit supervisor, Wichita, Kan., AF sector.

■ **Jerald E. Strentz,** manager, Vandalia, Ohio, Manufacturing Inspection District Office, from the Kansas City MIDO.

■ **Richard F. Yotter,** supervisor, Project Support Section—Foreign, Project Support Office, Aircraft Certification Office, promotion made permanent.

Eastern Region

■ **Robert L. Brady,** area supervisor, Wilkes-Barre, Pa., Tower, from the Allentown, Pa., Tower.

■ **Randolph Clark,** area supervisor, Charleston, W.Va., Tower, promotion made permanent.

■ **Patrick T. Corkery,** unit supervisor, Trenton Airway Facilities Sector Field Office in Morristown, N.J., Tri-State AF Sector, from Newark, N.J., AFSFO.

■ **John W. Cuthel,** supervisor, Navaids/Visaids Section, Construction Engineering Branch, AF Division.

■ **Raymond C. DeMatteo,** area supervisor, New York TRACON, Garden City, N.Y., promotion made permanent.

■ **William S. Friel,** assistant manager for technical support, Charleston AF Sector, promotion made permanent.

■ **Steven R. Kelley,** area supervisor, New York TRACON, promotion made permanent.

■ **Howard D. Mansfield,** area supervisor, New York TRACON, promotion made permanent.

■ **Steven W. Marotta,** area supervisor, New York TRACON, promotion made permanent.

■ **Robert A. Martin, Sr.,** unit supervisor, Albany, N.Y., General Aviation District Office.

■ **Gilbert J. Rugulo,** aviation safety inspector, Teterboro, N.J., Flight Standards District Office, promotion made permanent.

■ **Nicholas A. Sabatini,** assistant manager, Flight Standards Division.

■ **William M. Sacrey,** manager, Baltimore GADO, from the Office of Flight Standards, headquarters.

■ **Paul J. Scott,** assistant manager, Millville, N.J., Automated Flight Service Station, from Philadelphia FSS.

■ **Judith Hahn Terrana,** manager, Parkersburg, W.Va., FSS, from the DuBois, Pa., FSS.

■ **Thomas E. Thompson,** assistant manager, Empire AF Sector, Syracuse, N.Y., from the Program Engineering and Maintenance Service, headquarters.

Great Lakes Region

■ **Bruce A. Delamarter,** area supervisor, Flint, Mich., Tower.

■ **Francis J. Donahue,** manager, Chicago Civil Aviation Security Field Office.

■ **Richard A. Graham,** unit supervisor, Indiana Airway Facilities Sector, Indianapolis.

■ **Arthur T. Hill III,** area manager, Chicago O'Hare Tower.

■ **William J. Jessop,** area supervisor, Cincinnati, Ohio, Flight Service Station, promotion made permanent.

■ **Thomas C. Johnson,** area supervisor, Kankakee, Ill., Automated FSS.

■ **Gary M. Klingler,** area manager, Detroit Metro Tower.

■ **Wanda F. Loncar,** area manager, Kankakee AFSS.

■ **David R. Malueg,** manager, Decatur, Ill., FSS, from the Wausau, Wis., FSS.

■ **William E. Nash,** assistant manager, plans and programs, Chicago O'Hare Tower.

■ **Richard N. Ouellette,** area supervisor, Pontiac, Mich., Tower, from the Appleton, Wis., Tower.

■ **Michael J. Pattin,** area supervisor, Minneapolis-St. Paul, Minn., International Airport Tower, from the Detroit Metro Tower.

■ **John M. White,** assistant manager for automation, Indianapolis ARTCC, from the Air Traffic Plans and Requirements Service, headquarters.

■ **George D. Williams,** assistant manager, Chicago ARTCC.

New England Region

■ **Raymond W. German,** manager, Evaluation Branch, Air Traffic Division, from the Boston ARTCC.

■ **Jerry A. Johnson,** assistant manager, Boston ARTCC, from the Chicago ARTCC.

■ **Walter J. Moor,** manager, Plans, Programs & Evaluation Branch, Flight Standards Division.

■ **Richard E. Roberts,** supervisor, Environmental Support Unit, Boston ARTCC Airway Facilities Sector, promotion made permanent.

■ **Leonard A. Steele,** unit supervisor, Bedford, Mass., AF Sector Field Office, Boston AF Sector, promotion made permanent.

Northwest Mountain Region

■ **James E. Collins,** area manager, Seattle, Wash., ARTCC.

■ **Francis E. Davis,** assistant manager, Air Traffic Division.

■ **Dennis E. Davis,** manager, Casper, Wyo., Automated Flight Service Station, from the Air Traffic Operations Service, headquarters.

■ **Ronald L Erickson,** manager, Great Falls, Mont., Tower, from the Salt Lake City, Utah, ARTCC.

■ **James W. Gates,** area supervisor, Seattle AFSS, from Hoquiam, Wash., FSS.

■ **Frank Helander,** unit supervisor, Denver, Colo., Flight Standards District Office.

■ **Herb J. Johnson,** assistant manager, Billings, Mont., Airway Facilities Sector, from Great Lakes AF Division.

■ **Robert M. Jurgensen,** assistant manager, quality assurance, Seattle ARTCC.

■ **Richard R. Lien,** manager, Resource Management Branch, Air Traffic Division, from the Seattle-Tacoma Tower.

■ **Lonny G. Nordberg,** area supervisor, Salt Lake City Tower.

■ **Charles L. Smith,** manager, Great Falls AF Sector Field Office, Billings AF Sector, from the Denver AF Sector.

■ **Richard D. Wilder,** assistant manager for program support, Seattle AF Sector.

Southern Region

■ **Merrill M. Butler,** assistant manager, Atlanta, Ga., Flight Service Station.

■ **John K. Corpening,** supervisor, Radar Automation/Communications Unit, Hapeville, Ga., Technical Inspection Field Office, Evaluation Branch, Airway Facilities Division.

■ **Harold H. Downey,** area manager, Miami, Fla., ARTCC.

■ **Armand G. Estrada,** manager, Savannah, Ga., Tower, from the Isla Verde Tower, San Juan, Puerto Rico.

■ **Gary L. Henry,** area supervisor, Louisville, Ky., Automated FSS, from the Cleveland, Ohio, AFSS.

■ **Robert S. Hickman,** area supervisor, Atlanta ARTCC.

■ **James E. Kellett,** manager, Pensacola, Fla., FSS, from Macon, Ga.

■ **Anthony F. Kijek,** unit supervisor, South Florida Flight Standards District Office, Miami, promotion made permanent.

■ **Sammie S. Mogy,** area supervisor, Anderson, S.C., AFSS, from the Florence, S.C., FSS.

■ **Charles R. Pinkerton,** deputy manager, Airway Facilities Division.

■ **Robert A. Reeves,** area manager, Memphis, Tenn., Tower.

■ **Jefferson B. Rutledge,** area supervisor, Executive Airport Tower, Fort Lauderdale, Fla., from the Air Traffic Operations Service, headquarters.

■ **Robert J. Sturdevant,** area supervisor, Atlanta ARTCC.

■ **William R. Thomas,** manager, Memphis ARTCC AF Sector, promotion made permanent.

■ **John S. Tokarz, Jr.,** assistant manager for technical support, Tampa, Fla., AF Sector.

■ **Samuel E. Weatherly,** area supervisor, New Bern, N.C., FSS, promotion made permanent.

■ **William D. Wood,** deputy manager, Air Traffic Division.

Southwest Region

■ **James R. Ary,** manager, Oklahoma City Airway Facilities Sector Field Office, from the Houston, Texas, AF Sector.

■ **Steven F. Ashmore,** area supervisor, El Dorado, Ark., Flight Service Station, from Little Rock, Ark., FSS.

■ **Jackie W. Coley,** manager, Santa Fe, N.M., AF Sector Field Office, Albuquerque, N.M., AF Sector, from the FAA Depot.

■ **Curtis L. Denson, Jr.,** area supervisor, Houston ARTCC.

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.

■ **Thomas M. Doyle,** area manager, Dallas-Fort Worth, Texas., Tower, from the Salt Lake City, Utah, Tower.

■ **Harold E. Duncan,** manager, Lake Charles, La., AF Sector Field Office, New Orleans AF Sector, from the El Paso, Texas, AF Sector.

■ **Lonam R. Fogleman, Jr.,** assistant manager for program support, Albuquerque AF Sector.

■ **Thomas Gassert,** assistant manager, Fort Worth ARTCC AF Sector, from the Dallas-Fort Worth Airport AF Sector.

■ **Linda J. Goldstein,** area supervisor, Albuquerque ARTCC.

■ **Steven G. Hannah,** area supervisor, Carlsbad, N.M., FSS, from the Conroe, Texas, Automated FSS.

■ **Billy L. Henderson,** assistant systems engineer, Fort Worth ARTCC AF Sector.

■ **Terry A. Klagmann,** area supervisor, Houston Intercontinental Airport Tower.

■ **Matthew P. McCorey,** area supervisor, Lubbock, Texas, Tower, from the FAA Academy.

■ **Steward M. Nethery,** area supervisor, Meacham Field Tower, from the Tulsa, Okla., Tower.

■ **Ronald H. Peay,** chief, Investigations & Internal Security Branch, Civil Aviation Security Div.

■ **William F. Pritchard,** area supervisor, San Angelo, Texas, AFSS, from the San Antonio, Texas, FSS.

■ **Billy J. Privett,** area supervisor, Fort Worth AFSS.

■ **Sandra G. Rathbun,** area supervisor, Lufkin, Texas, FSS, from the Tulsa FSS.

■ **Gerald J. Revuelto,** area supervisor, Houston ARTCC.

■ **Charles E. Saunders,** assistant manager, Fort Worth ARTCC, from AT Div.

■ **Charles J. Smith, Jr.,** area supervisor, Meacham Field Tower, from New Orleans Lakefront Tower.

■ **Rene Suarez,** area supervisor, Little Rock Tower, from the San Antonio Tower.

■ **Tom E. Taylor,** unit supervisor, Amarillo, Texas, AF Sector Field Office, Albuquerque AF Sector.

■ **Joyce T. Thomas,** assistant manager for training, Jonesboro, Ark., AFSS, from the Fort Worth AFSS.

■ **Roland G. Young,** area supervisor, Houston ARTCC.

■ **Frank Zaccaria,** area supervisor, Albuquerque ARTCC.

Technical Center

■ **Thomas A. Choyce,** technical program manager, Airborne Collision Avoidance & Data Link Systems Branch, Engineering Division.

■ **Stephen N. Devlin,** technical program manager, ATC Systems Branch, Engineering Division.

■ **Roland L. Jau,** supervisor, Contracts Administration Section, Contracts Branch, Acquisition & Materiel Services Division, promotion made permanent.

■ **Carl B. Jezierski,** technical program manager, Airborne Collision Avoidance & Data Link Systems Branch.

■ **Howard J. Mason,** deputy manager, Technical Facilities Division.

■ **John L. Wiley,** technical program manager, Flight Information Systems Branch, Engineering Division.

Washington Headquarters

■ **Donald E. Mullikin,** manager, Aircraft Safety & Airport Technology Division, Program Engineering & Maintenance Service.

■ **Richard L. Rodine,** manager, Safety & Compliance Division, Office of Airport Standards

■ **Robert G. Ross,** assistant manager, Contracts Division, Acquisition & Materiel Service.

■ **Richard A. Weiss,** manager, Current Landing Systems Program, Navigation & Landing Division, Program Engineering & Maintenance Service.

Western-Pacific Region

■ **Sandra L. Acquistapace,** area supervisor, Oakland, Calif., Flight Service Station, from the Salinas, Calif., FSS.

■ **Leonard J. Bartoszek,** area supervisor, John Wayne Airport Tower, Santa Ana, Calif, from the MCAS TRACON, El Toro, Calif.

■ **James A. Bass,** area supervisor, Miramar NAS TRACON, San Diego, Calif., from the MCAS TRACON.

■ **Lawrence A. Beal,** area supervisor, Honolulu Tower, promotion made permanent.

■ **David R. Bowmann,** supervisor, Environmental Support Unit, Fresno, Calif., AF Sector Field Office, Sacramento, Calif. AF Sector.

■ **Richard B. Browder,** assistant manager, Honolulu AF Sector.

■ **Gene L. Daniel,** manager, Honolulu AF Sector.

■ **Donald B. Frazeur,** systems engineer, Los Angeles ARTCC AF Sector.

■ **Rory M. Geil,** unit supervisor, Nav/Landing Program Section, Establishment Engineering Branch, Airway Facilities Division.

■ **Allen L. Haeggquist,** group supervisor, Phoenix, Ariz., Flight Standards District Office.

■ **Jimmie L. Haralson,** manager, Hawthorne, Calif., AFSS.

■ **Robert F. Harik,** manager, Edwards Air Force Base, Calif., RAPCON, from the Burbank, Calif., Tower.

■ **Donald W. Isaacs,** manager, Los Angeles ARTCC AF Sector.

■ **Michael S. Johnston,** area supervisor, Edwards AFB RAPCON.

■ **Francis G. Judd,** manager, Red Bluff, Calif., FSS, from the Sacramento, Calif., FSS.

■ **Verna J. King,** unit supervisor, Los Angeles AF Sector.

■ **Richard S. Leary,** area supervisor, San Diego AFSS, from Lancaster FSS.

■ **Curtis J. McCloskey,** unit supervisor, Reno, Nev., AF Sector Field Office.

■ **Edward P. Moy,** unit supervisor, ATC Automation & Flight Information Program Section, Establishment Engineering Branch, AF Division.

■ **Richard E. Rippe,** manager, Mather Air Force Base, Calif., AF Sector Field Office, from McClellan AFB.

■ **Antonio Rivas,** area supervisor, MCAS TRACON, El Toro, Calif., from the Fullerton, Calif., Tower.

■ **Donald W. Roberts,** assistant manager for training, Oakland TRACON.

■ **Daniel S. Sato,** assistant supervisor, Diamond Head AF Sector Field Office, Honolulu ARTCC AF Sector.

■ **Archie O. Snowden,** area manager, Oakland TRACON.

■ **Ronald M. Swope,** area manager, Burbank Tower.

■ **Powell R. Underwood,** unit supervisor, CSIF Program Section, Establishment Engineering Branch, AF Div.

Addendum

Credit for the photos of the Memphis ARTCC in the ATC Facilities of the Year story in FAA WORLD, July, page 6, belongs to ATCS Howard Raiford.

Retirees

AERONAUTICAL CENTER
Davis, Ira A.
Fisch, Theodore J.
Free, Harold E.
Goodnight, E. Jean
Oldfield, Edwin J.
Payne, Edna M.
Statton, Thomas W.
Streeter, Lewis A.
Waddle, Elsaleen H.
Wilson, Carl W.

ALASKAN REGION
Hussey, Elwood K.

CENTRAL REGION
Brewer, Carl, Jr.
Cousat, Darrell P.
Devries, Keith E.
Fogerty, Robert W.
Hrabko, Bonnie S.
Price, Helen
Short, Byron C.
Smith, Clyde E.
Wescott, E.L.
Zaemes, Theodore

EASTERN REGION
Erickson, Carl A.
Ferguson, James M.
Foster, Mary W.
Kowalewski, Edward P.
Miller, Robert
Schillaci, Daniel J.
Townsend, George B., Jr.

GREAT LAKES REGION
Chestnut, James V.
Fulcher, James R.
Hiles, Bruce A.
Hodek, Patricia N.
Kass, John H.
Marks, Gordon H.
Spence, Theodore G.
Sproston, Lauren D.

NEW ENGLAND REGION
Moran, George A.
Peczka, Emil L.
Scott, John F.

NORTHWEST MOUNTAIN REGION
Bales, David E.
Crouse, James R.
Doehle, Lowell E.
Rogers, Roy C.

SOUTHERN REGION
Britt, James O.
Copeland, James L.
Dobso, Stephen J., Jr.
Greutman, Paul J.
Hefner, James C.
Holland, Billy S.
Hunter, Thomas D.
Laug, George W.
Marcantonio, Joseph P.
O'Hara, Joseph W.
Peine, Alan C.
Sammons, Shirley J.
Sanford, Raymond P.
Stromwall, Dean A.
Trullinger, Leonard L.

SOUTHWEST REGION
Alexander, Delbert W.
Gonzalez, Amrea L.
Harris, James C.
Kendall, Robert L.
McMillin, Annie K.
Schaffer, Richard T.
Shrout, Silas E.

TECHNICAL CENTER
Casey, Francis K.
Channell, Willis N.
Deberry, Rosemarie H.
Ertel, Joseph R.
Hertz, Pearl K.
Horton, Wilson V.R.
Moore, Robert

WASHINGTON HEADQUARTERS
Chirillo, Gennaro
Conway, Bill J.
Gurley, Revere W.
Poritzky, Siegbert
Sawyer, Robley E.
Verdin, Peter J.

WESTERN-PACIFIC REGION
Brown, Albert K.
Edwards, Oscar H.
Froehler, Robert R.
Ito, Nancy Y.
Liston, Warren K., Jr.
Paresa, Louis V., Jr.
Ragan, Roberta B.
Rohde, Charles E.
Silva, Alfonso R.
Suppan, Larry P.
Takahashi, James Y.

Federal Notebook

TAKE YOUR LUMPS WITH LUMP SUM

Many retirees have opted to exercise the lump-sum option on their annuities, withdrawing a single payment equal to their contributions to civil service retirement. Their regular annuities are then reduced between 7 and 13 percent.

All prospective retirees should be aware that about 90 percent of the lump sum is subject to income tax. What many may not be aware of is that if you retire below the age of 55, you will be assessed a 10 percent penalty on the lump sum, something that the Internal Revenue Service neglected to mention in its comprehensive guide to federal retiree taxes, Publication 721. There's no way out, either. You are not permitted to roll the lump sum over into an individual retirement account or use income averaging to reduce the tax bite. However, Sen. Spark Matsunaga (D-Hawaii) has introduced a bill to eliminate the 10 percent penalty.

LEAVE SHARING UPDATE

A companion bill to the one introduced in the House for permitting employees to donate leave to other employees facing emergencies has been introduced in the Senate (S-1595) by Sen. Pete Dominici (R-NM).

IN CASE YOU HAD ANY DOUBTS

According to the Advisory Committee on Federal Pay, federal white collar pay rose 124 percent during the period 1970-1987, while the consumer price index rose 183 percent, federal bluecollar pay rose 165 percent, military pay rose 175 percent and postal workers under collective bargaining received an overall average of 207 percent.

BUT IT DEPENDS ON HOW YOU LOOK AT IT

The Labor Department's Bureau of Labor Statistics (BLS) has answered a request of the House and Senate appropriations committees by developing a new white-collar pay survey. The plan has been endorsed by the Office of Management and Budget and the Office of Personnel Management. It would increase the number and size of private sector companies used for comparison and take into account benefits, thereby showing less of a disparity between federal and private pay than the 23.74 percent federal shortfall reported under the current survey. BLS's plan would replace the current survey in two years.

AND AN EXPERIMENT IN PAY

A bill has been introduced by Rep. Gary Ackerman (D-NY) that would authorize up to 10 demonstration projects covering 15,000-25,000 employees to test alternative pay systems. It is "intended as a first step in closing the pay gap between federal and private sector employees." Employee pay would not be reduced under the experiments.

WHAT'S GOOD FOR THE RETIRED GOOSE...

A propos of the problem with catastrophic Medicare coverage for federal retirees (see "Federal Notebook," September), a variety of bills have been introduced to provide equity for federal annuities, which are taxed when Social Security benefits are generally untaxed. HR-1691 and 1938 would equate the tax treatment. HR-146, 366, 700 and 1041 would provide a partial exclusion from taxes for retirees over 65.

WHISTLEBLOWER BILL GAINS

The House Civil Service Subcommittee has approved Rep. Patricia Schroeder's (D-Colo) HR-25, which would make the Office of Special Counsel (OSC) the representative of federal employees who believe they are the target of whistleblower retaliation. It would also permit employees to bypass OSC with an appeal directly to the Merit Systems Protection Board and then federal courts.

SELF-INCRIMINATION CAN HURT

The U.S. Court of Appeals has ruled that a federal employee who pleads guilty to a criminal charge can be fired even if it hasn't been proved in court that he or she committed a crime. The court accepted an agency's argument that it had lost confidence in the employee's trustworthiness and that the plea might have an adverse impact on other employees.

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of Transportation

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Administration**

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