

**F99  
WORLD**

**October 1978**

**Getting  
Weather-wise**

# FAA WORLD

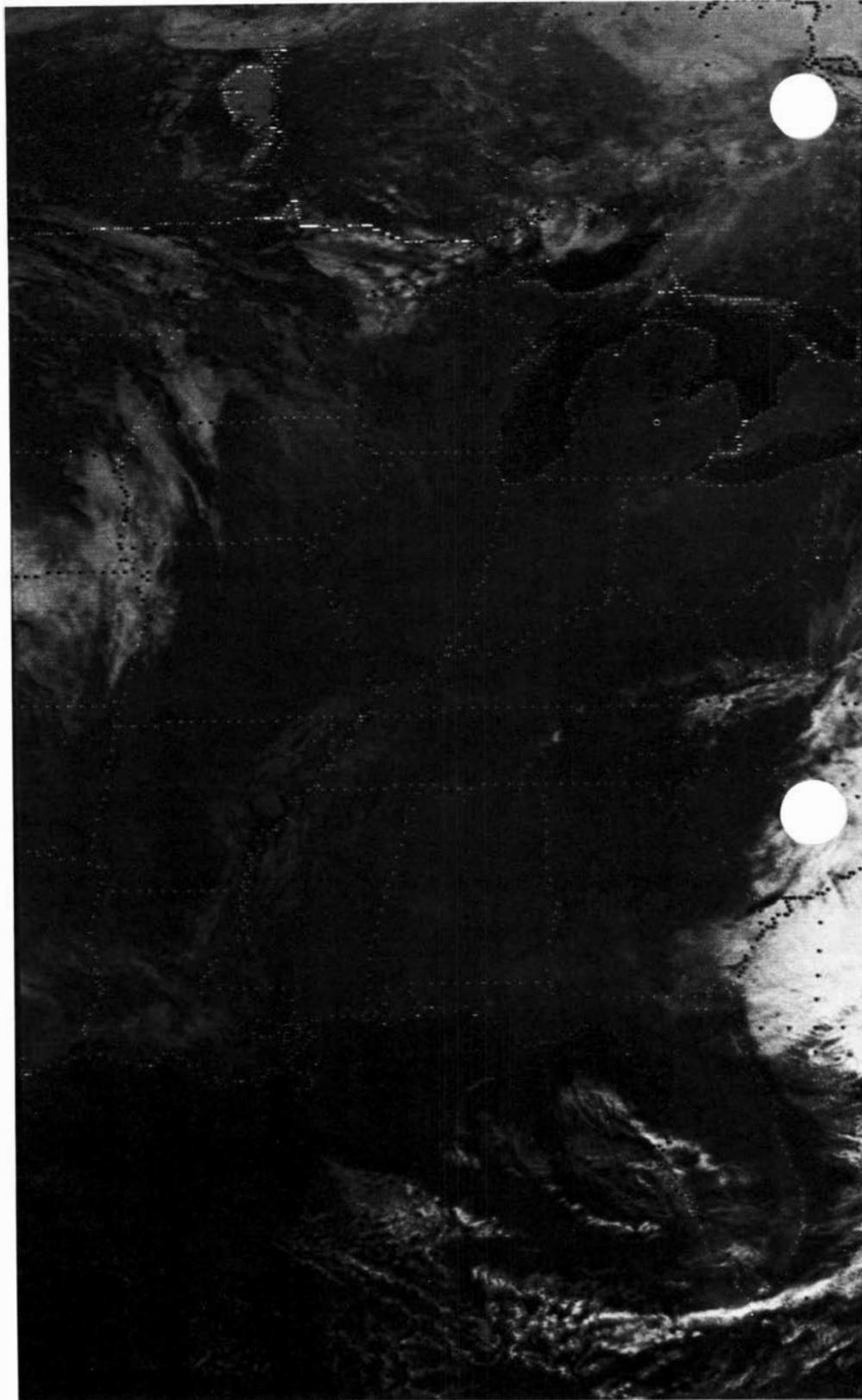
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**Back cover:** Electronics technicians Jim Boyd (left) and Stan Munson of the O'Hare AF Sector observe a Vortex Advisory System antenna as a B-727 takes off. This is just one of various weather-related programs that FAA is into, as described in the story that begins on the facing page. Photo by Neal Callahan



Atlanta ARTCC meteorologist Steve Henderson can receive a weather map on his facsimile printers from NWS radars or from the Geo-Stationary Operational Environmental Satellite, like this one, which shows the actual cloud cover over the eastern U.S. at 23,000 feet.

Photo by Alex Gai



**Y**ou just can't think about flying and safety without thinking about the weather.

The fact is, Orville and Wilbur Wright, way back in 1903, had to delay their first flight for several days because of bad weather. Then, on December 17, after their successful powered flights, while the two brothers were discussing the last flight, a gust of wind flipped their Wright Flyer upside down and damaged it extensively. It was the first weather-related airplane accident.

Aviation has come a long way in the past 75 years. True, we haven't been able to do much about the weather, but scientists in government and industry have devised ways for pilots of aircraft to be instantly alert to changes in the weather. Because of great advances in electronic sensing and reporting equipment and the expertise of the people who use it, pilots are better able to get their planes through or around severe weather.

For one thing, weather services available to pilots are getting better all the time. In mid-1977, FAA initiated an Aviation Weather Systems program for reducing the adverse effects of weather



# Getting Wise in the Ways of the Weather

throughout the National Airspace System. Reliable, more accurate and more complete information, rapidly distributed in forms directly usable to pilots, controllers and flight service station specialists in their decision-making will significantly improve aviation safety and efficiency.

As part of this program last spring, FAA and the National Weather Service (NWS) joined forces to put three meteorologists each into 13 of our 20 domestic ARTCCs. Right now, the centers involved are all east of the Rocky Mountains, where most of the severe weather occurs. But eventually, as budget authorizations permit, the remaining seven centers will get their complements of meteorologists, too.

It works this way. The Center Weather Service Unit (CWSU) at each center is equipped with two weather-radar facsimile machines that give the meteorologist a hard copy of the picture generated by any NWS remote weather radar. For instance, at Chicago, one machine might be watched to see what's happening around Cleveland, while the second might be used to watch developments near Madison, Wis.

Then, using the data from the two machines, the meteorologist can advise the sector controller of weather patterns and any hazardous conditions in his or adjacent sectors. So, if need be, the controller is able to make timely weather-wise control decisions.

At the same time, if a pilot decides he needs an update on any problematical weather, the controller can quickly furnish up-to-the-minute information on thunderstorms, turbulence, icing and so forth, anywhere along the pilot's flight path.

Meanwhile, looking toward the future in weather reporting, meteorologists at the Atlanta ARTCC are testing video returns from the three NWS radar sites that blanket the entire Atlanta Center



*Ed Scharres and Frank Smith of the Illinois Institute of Technology monitor the Vortex Advisory System being test at O'Hare International Airport. IIT has the Department of Transportation contract for the project.*

Photo by Neal Callahan

area. Each radar scope can display returns in six color intensities, and far more accurate weather determinations can be made. If the tests prove out—and the prospects are good—undoubtedly this equipment will become standard at all CWSUs. Eventually, that weather radar information may be provided directly on controllers' displays.

Another weather-reporting system the agency tested is called AV-AWOS, the acronym for "Aviation Automated Weather Observation System." Also a joint project of the FAA and NWS, this system is especially designed for higher-activity airports where total aviation weather observation is needed and can be served up automatically on a cost-effective basis.

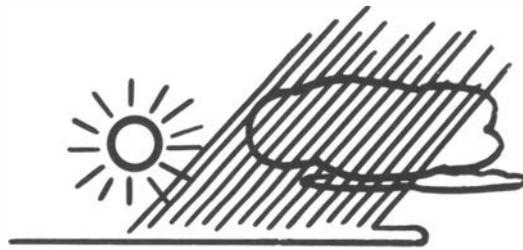
AV-AWOS uses a series of sensors linked to a minicomputer in place of people to collect weather information. It checks cloud heights, visibility, temperature, dew point, wind direction and velocity, barometric pressure, presence of thunderstorms and precipitation. The data are recorded electronically every minute and are fed

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As FAA WORLD was going to press, the agency awarded two contracts totalling \$8.7 million for weather detection and display equipment. General Time Corp. received \$7 million for color TV-type displays that will provide controllers with up-to-the-minute weather information from FAA and NWS radars. Called the Radar Remote Weather Display System, the equipment will be installed in the 20 domestic en route centers and 60 key flight service stations. EMR Telemetry was granted a \$1.7 million award for 17 additional LLWSAS. Addition of these units will bring the total number of U.S. airports with LLWSAS to 24.

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Another test site for the Low-Level Wind-Shear Alert System is Atlanta International Airport, where one of the runway approach anemometers shows a single unit for reading wind speed and direction. Electronics technician Wilbur Horton checks the device.



Controller Dale Erickson of the Atlanta International Airport Tower tests the operation of the LLWSAS display, which provides him with readouts of wind speed and direction from each anemometer.



Houston systems specialist James R. Edwards adjusts the computer that converts the LLWSAS data from the anemometers to digital form. Photo by Frank Parma

Electronics technician Ken Mitchell of the Boston AF Sector reads a computer display scope for information gathered by Logan Airport's wind-shear anemometers. Photo by Fred White



into computers that transform them into a weather report. Thus, actual local airport weather no more than one minute old is available to flight service stations or other aviation users by conventional printout or on cathode-ray tubes.

In addition, a computer-generated voice message is automatically prepared so that pilots can avail themselves of the latest local weather data by telephone or by listening to a selected radio frequency while in flight.

For less-sophisticated facilities than

AV-AWOS use merits, the agency is looking into two low-cost systems. ALWOS (Automated Low-Cost Weather Observation System) is planned for general-aviation airports with instrument approaches but without any local weather observation station. For even lower-activity airports, there is WAVE (Wind, Altimeter, Voice Equipment), which will provide just aural wind and altimeter-setting information.

AV-AWOS was tested for four months at Patrick Henry International Airport at Newport News, Va., and is scheduled for further testing at the NWS R&D center near Dulles International Airport.

The system still has a few wrinkles that must be worked out, however. For example, while precipitation can be accurately determined, the sensors picking up the information can't tell the difference between rain and snow. And cloud height reports leave something to be desired. So far, cloud levels can only be reported to 7,000 feet as opposed to the much higher levels needed. Right now, FAA is considering the use of laser-equipped sensors, which should eliminate both problems.

Another new weather information system that will greatly improve flight safety as installations are completed, first at larger airports, is the Low-Level Wind Shear Alert System (LLWSAS). Wind shear has been the cause of a number of aircraft landing and takeoff accidents—some with tragic consequences.

Wind shear is any change in wind direction or speed in a short distance. One kind of strong shear that has caused accidents is due to thunderstorms and fast-moving weather fronts. Most often, it's invisible, although it sometimes can be seen during heavy rain or snow.

There's no way to eliminate wind shear, because it's a natural phenomenon, so FAA and its counterparts in industry have done the



next best thing in developing the LLWSAS.

The heart of the system is a computer in the airport control tower that looks at wind data from several anemometers (wind-velocity indicators) located at the center of the landing area and around the airport's perimeter. The computer continually compares the airport perimeter anemometers with the one located in the center of the landing area. When a significant difference in wind speed and direction is detected—above 15 knots difference—both sound and visual alarms are triggered in the control tower. The controller then notifies pilots of the wind speed at the center-field and perimeter sites, and the pilots make their own go/no-go decision.

Currently, the system is being used at Boston, New York, Atlanta, Tampa, Houston, Oklahoma City and Denver.

Associated man-made weather phenomena are the wake vortices caused by the passage of aircraft through the air. They are most hazardous at low altitudes where little aircraft maneuvering room is available.

Of course, there's nothing new about this sort of air turbulence. It's been with us ever since the beginning of powered flight. But the phenomena became more dangerous when the large, much more powerful jet transports entered airline

*A graphic display of the turbulence created by wake vortices is this writhing smoke trail in the wake of a Hawker Sea Fury equipped with wing-tip smoke generators. The World War II fighter was performing at the Experimental Aircraft Association air show.*

inventories. These big planes, in landing and take-off operations, create a pair of counter-rotating cylindrical air masses behind them not unlike twin tornadoes. The vortices also follow in the wake of these big planes in the upper air. At altitude, though a danger, too, at least the pilot of a plane inadvertently flying into such a tornadic wake has a chance to recover. But at low altitude, during landing and takeoff operations, there is little chance to recover from the violent effects of an encounter.

So, in the absence of an operational means to locate and track aircraft wake vortices, air traffic control has had to increase the separation distance (from three to between three and six miles) between planes.

Although that may seem like a simple, straightforward solution, unfortunately, this expedient decreases airport capacity. And, in view of present and predicted demands on airport capacity, such a solution is neither practical nor economical, especially in view of continually escalating fuel costs.

After some years of experimenting, the FAA has come up with a Vortex Advisory System (VAS), with which it expects to begin a six-month test this month at O'Hare International Airport.

VAS works pretty much the same way the low-level wind-shear-detection



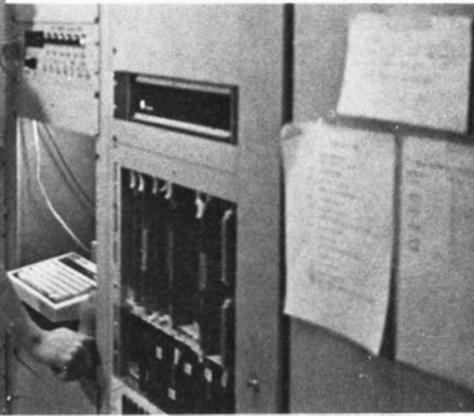
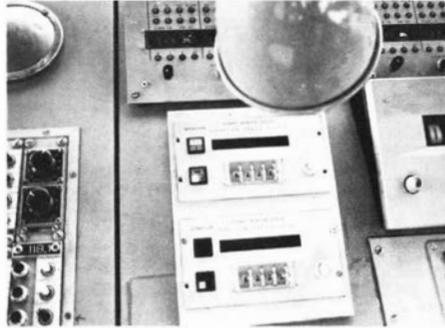
*Atlanta Center weather coordinator and flow controller Bill Beck receives a SIGMET from teletypist Helen Brown. He's seated at a keyboard that permits him to send weather information to the controller positions.*

system does. That is, it gathers and furnishes measured wind magnitude and direction to tower cab controllers. The main difference between the two systems is that VAS forwards comparative wind information only in connection with runway headings, while LLWSAS alerts tower controllers of any sudden wind difference between the center of the landing area and the airport's perimeters.

The VAS will notify the tower about the vortices in an elemental way—with a red or a green light—as to the separation between planes needed. Preliminary tests indicate that reduced aircraft separations will be possible at least 60 percent of the time during both IFR and VFR conditions. If the operational tests prove out, as project officers expect, significant increases in airport capacities will be possible.



O'Hare AF Sector technician Jim Boyd monitors the VAS operation in the tower equipment room. At right are the readouts for the controller to monitor in the tower cab, on which he can select the runway.



does, change, sometimes drastically, because of seasonal situations, atmospheric stability, terrain and other geographic factors.

EFAS position specialists monitor the weather situation in their areas by checking weather radars, weather observations, charts and forecasts and soliciting pilots for wind and temperature data, wind shear and other turbulence, icing and localized storm conditions. All of this information is reported back to pilots requesting en route weather information. Pilots everywhere are reported to be enthusiastic about the service.

Finally, we have come a long way in developing a truly "all-weather" landing capability. Today, the question is not whether we have the technology to provide safe operations down to "zero-zero" but whether the need and the expense to both the user and the agency can be justified.

Right now, we have Category IIIA landing capabilities with our instrument landing system (ILS)—where we still need to see a little bit. This involves an approach without a decision height and a runway visual range (RVR) of at least 700 feet. The challenge appears to be industry's ability to design the equipment economically for this capability. Over the past year, we have begun operating a number of new Category III ILSs.

A number of the newest jet transports can take full advantage of the Category IIIA capability and are finding it works very well. It is expected to work even better when the Microwave Landing System (MLS) comes on line with its greater accuracy and wider landing coverage. With MLS, we will be able to provide landing guidance at more sites, more economically, along with additional capabilities of electronic guidance on missed approaches.

As the next decade progresses, very likely more automatic landings will take place in both good and bad weather with the potential for safer and more reliable day-in/day-out operations.

**By Ben Lee**

Still another FAA weather service for pilots is EFAS, the acronym for En Route Flight Advisory Service. Now called "Flight Watch," EFAS became fully operational at 44 flight service stations by the end of 1977, providing weather advisories to en route pilots. The program actually got its start on the West Coast in August 1972 at the Seattle, Portland, Oakland and Los Angeles FSSs. Three years later, 26 more FSSs were equipped for EFAS reporting. The remaining 14 FSSs were brought on-line with EFAS during the ensuing months.

Weather observations made from the ground contain precise information that is valuable for landings and takeoffs. But weather en route can, and often



Electronics technician Arthur Zepeda of the Houston Intercontinental Airport Sector inspects the centerfield anemometer and its sending unit, which is part of the Low-Level Wind-Shear Alert System being tested there.

YNOITACINUMMOCI MOBYG  
 VEIUYRATILIMCILBUPAN  
 HARDSURFACEDBEACONWI  
 FEETINFORMATIONHPZNH  
 RRMRTMXCRADIOXDHNCUS  
 EOECODEGENTRYMSWORRA  
 QDRCSNORTHILZLFTIMIL  
 URGAEERAVEPNYAELCTGSF  
 EOETDOLUOVMMNTIEATAD  
 NMNRWUAHTUOSLTGNCBRN  
 CECONTROLIZBLEHTIVKU  
 YSYVAEEUTECHARTEFUAO  
 LJTEVDDCOCIACJPRINGR  
 AAHHIMEWWIVLLIGHTING  
 NIGCGSFFEVEIEQARQNCIB  
 IRITAFNGRRRLRACEDEOMR  
 MWEATHERQEHTSZNLDMOE  
 RAHWINTERSECTIONIGHT  
 EYEVOOTTROPILEHNKNLA  
 TSKUNFLRETAVIRPIENEW

# WORD SEARCH

By Paul H. Nelson  
 Electronics Technician, Springfield, Mr

All of the words or abbreviations in this month's puzzle are found on an aeronautical sectional chart. The words are easy but finding them is not. They read forward, backward, up, down and diagonally, are always in a straight line and never skip letters. The words may overlap, and letters may be used more than once.

Use the word list if you must, but try covering it first. All 65 words can be found. Circle those you do find and cross them off the list. The word "above" has been circled to get you started. When you give up, the answers may be found on page 14.

ABOVE  
 AERODROMES  
 AERONAUTICAL  
 AIRWAYS  
 ALERT  
 AREA  
 ARROWS  
 BEACON  
 CALL

CENTER  
 CHART  
 CIVIL  
 CODE  
 COMMUNICATION  
 CONTROL  
 DATA  
 EMERGENCY  
 ENTRY

ETA  
 FEDERAL  
 FEET  
 FLASHING  
 FLIGHT  
 FREQUENCY  
 GROUND  
 HARD SURFACED  
 HEIGHT

HELIPORT  
 HOMING  
 IDENTIFICATION  
 INFORMATION  
 INTERSECTION  
 LAND  
 LETTER  
 LIGHTING  
 LIMIT

LINE  
 MILITARY  
 MSL  
 NAVIGATION  
 NIGHT  
 NORTH  
 OMNI  
 PHONE  
 PRIVATE  
 PUBLIC  
 RACE  
 RADIO  
 ROUTE  
 RUNWAY  
 SECTIONAL

SERVICE  
 SOUTH  
 TERMINAL  
 TERRAIN  
 TOWER  
 UNICOM  
 VFR  
 VHF  
 VORTAC  
 WATCH  
 WATER  
 WEATHER  
 WINTER  
 ZONE

## WE NEVER PROMISED YOU A ROSE GARDEN . . .

One of the highest compliments that can be paid a member of the working press is to say he was born with printer's ink in his veins. With this in mind, then, it seems apparent that a young man who worked this year as a summer hire in the Anchorage Public Affairs Office may be destined for other things. Summing up his experience in the regional *Intercom*, he said, "I like the people I work with very much, but I dislike having to clip the newspapers because the ink gets all over my hands."

## BEAUTY IS IN THE EYE OF THE BEHOLDER . . .

Airplanes mean different things to different people. For example, pilots regard them as objects of affection, even love, while close-in



airport neighbors are somewhat less charitable in their views. But Alfred Kahn, the dynamic chairman of the Civil Aeronautics Board, looks on airplanes with the keen, practical, cost-benefit eye of the trained economist. Addressing an FAA meeting on "New Engineering & Development Initiatives" earlier this year, Mr. Kahn said, "...to me airplanes are just marginal cost with wings."

**A TICKET TO LEAVENWORTH . . .** The importance of maintaining one's cool in a crisis situation was demonstrated

rather effectively this past summer by an airline flight attendant at the Nashville Airport. Because she kept her composure, a potentially dangerous confrontation with an armed man aboard her flight was resolved peacefully, and the man subsequently surrendered to authorities. The incident began when the man carrying a concealed weapon wandered on board an airliner that was parked on the ramp. The flight attendant asked for his ticket and was told he had none. So she told him to go back to the terminal and get one, at which point he produced a gun and said, "This is my ticket." The flight attendant didn't bat an eye. She just asked the question that airline passengers hear when they book their seats, "Smoking or non-smoking?"

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# NAFEC'S IN THE GROOVE

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The agency's been groovin' and with a wingless four-engine jet, no less, for the sake of safe landings and cutting airport costs.

At the request of the office of Airports Programs, the Systems Research and Development Service (SRDS) funded a study by NAFEC's Airports Branch to take a new look at runway grooving and determine the lowest-cost approach for adequate traction under wet conditions. SRDS, under program manager Herman Daulerio, formulated the original test plan.

This summer, NAFEC's Runway Grooving Test team, headed by program manager Hector Daiutolo, began testing a variety of surfaces at the Naval Air Engineering Center in Lakehurst, N.J., where a 180-foot-long testbed was added to an existing catapult test track.

The testbed will be changed from grooved Portland Cement concrete to asphaltic concrete to other frictional surfaces. "We'll also be testing some other novel methods of roughening runway surfaces to see how effective they are," says Daiutolo.

The sections of the testbed are enclosed by small rubber dikes that permit flooding to different depths up to 0.3 inches, which would represent a serious flood condition for a runway that is crowned and grooved for drainage.

The tests consist of a Navy four-engine jet pusher car racing down the catapult track with a 60,000-pound deadload car, which continues onto the testbed. The deadload car carries a NAFEC dynamometer and a hydraulically operated B-727 wheel and brake. Its operation will simulate landing speeds up to 150 knots and wheel loads up to 35,000 pounds.

At present, there are about 500 commercial airports in the country with 1,000 to 1,500 runways used by air carriers. Most are asphaltic, but with either asphalt or cement, the runways need to be regrooved or overlaid and regrooved at least every seven to eight years. To minimize hydroplaning and maintain braking effectiveness in wet weather, the runways have  $\frac{1}{4}$  by  $\frac{1}{4}$ -inch grooves cut across their widths,  $\frac{1}{4}$  to 2 inches apart. NAFEC is looking into whether two-, three- or four-inch separations would do the job.

Four-inch spacing has already dropped out of consideration but, Daiutolo says, "The test results seem rather promising for 2½- to 3-inch spacings. They're panning out even better than we thought."

What this means, according to Daiutolo, is a savings to airport management and to the taxpayer, since up to 80 percent of grooving costs are paid through FAA's airport aid program. The present cost is 12¢ to 14¢ per square foot. If grooving spaced at 2½ inches, with tolerances to three inches, proves effective, it could result in a saving of 2¢ per square foot, or about \$20,000 for a 10,000-foot runway.

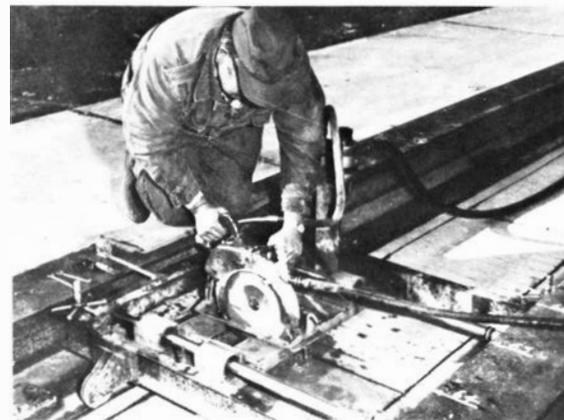
"We'll have complete data on water depths and speeds of aircraft touchdown," Daiutolo explained. "Eventually, we will be able to use our data to compute predicted braking distances. There will be two phases to

our final report. One is to get the data disseminated—families of curves, speed versus traction versus groove spacing. Then, however, there would be a followup analysis that would draw the line of acceptability for groovings and would calculate braking distances."

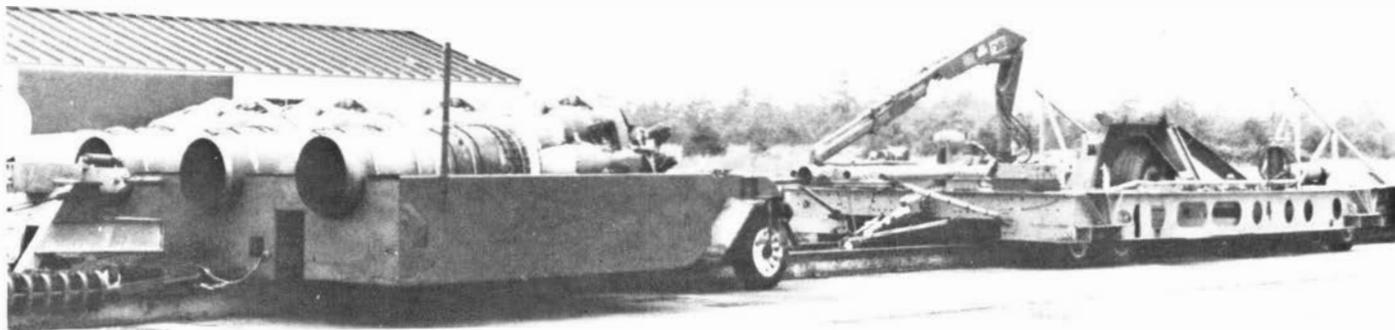
Industry and the press have had briefings on the project, and technical advisor Cole Morrow of SRDS' Airports Division has briefed Washington National Airport management on the progress of the tests. National is already interested in picking up the 2½-inch grooving the next time around.

"There's a lot of interest in this," Daiutolo noted, "and we'll come up with the guidelines."

*While commercial equipment with gangs of cutting blades is used at airports, this technician has to use a special grooving rig devised by Lakehurst engineers and technicians that can ride on the concrete screed rails of the test paving strip.*



*The wingless airplane—the jet pusher car behind the deadload car is started remotely, and the brakes on both are activated automatically by the track.*





**A RECORD-SETTER**—Seattle FSDO inspector Al Butterworth (right) congratulates Robert Mucklestone on his return from a record-setting around-the-world flight in a single-engine plane (Cessna 210) of seven days and 13 hours. Butterworth had inspected the aircraft's specially built auxiliary fuel tanks.

**THE WORD ON WOMEN**—Appearing on a one-hour Honolulu TV show to discuss FAA women at work were (left to right) Stella Menezes, Air Transportation Security Field Office; Maxine Van Slyke, Personnel Management; and Diane Kapanowski, Honolulu ARTCC, with the program's co-moderators Gypsy Norton and Stephanie Woods.



**KEY-HOLE LINKS**—Cleveland Center controller Jim Guidish (right) scored a hole-in-one in the Cleveland Center Open, which is why tournament director and controller John Protenic is presenting him with the keys to a new 1978 car for his use for one year.



**WORKHORSES, ALL**—Five NAFEC-based FIFO pilots stand before a soon-to-be DC-3. From the left, Arthur P. Pareene, Franklin L. Tennyson, Obie V. Whitehurst, DiCrispino and Harry C. Josephson have amassed among them nearly 33,000 hours in Gooney Birds. Their total flight time comes to 73,600 hours.

**PRAISE FROM THE BOSS**—For moving an air navigation facility during a critical time period with substantial savings to the government, San Diego environmental technicians (from the left) Bingham Fano, Ken Hellard, Larry Cheskaty, Norboru Kito, Matthew King and (kneeling) Harold Davison received letters from President Jimmy Carter. Kito also was cited for his contributions to major electronic modification of several ATC radar facilities.



# FACES and PLACES



**A REAL WINNER**—Following the request by 90 Federal agencies for information on the FAA Merit Promotion Panel training program produced by the Office of Personnel and Training, the Educational Technology Office of the Civil Service Commission selected FAA's material—a 15-minute videotape and a brochure—for distribution and use throughout the government. Setting up a showing are the program's creators (left to right) Polly Bryan, Tina Mallory, Darryl Runnett and (foreground) Steve Klink.

**GOOD MILEAGE**—FAA Academy instructor James T. "Butch" Kerr of the Flight Standards Branch brought N-23 down for its 50,000th takeoff and landing cycle this past spring. This figure for the Boeing 720 is the highest for any Boeing jet anywhere in the world and represents 19,800 flight hours in the 17 years since the agency purchased the four-engine plane.



**AN OLD HAND AT HYDRAULICS**—Each spring, Judy Devine, chief of New England's Training Branch, likes to take paddle in hand and go white-water rafting. This year, it was the "mild" Saco River in New Hampshire. She should know. She shot the Green River in Utah and Colorado last year.



**A FIRST**—Sandra A. Quigley, here with John Van Horn, chief of the Portland, Me., GADO, became the first woman aviation inspector in Maine this spring. She's a 1,200-hour pilot with instrument and multi-engine ratings.



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# FEDERAL NOTEBOOK

## GOVT. 'REFORM' TAKES SHAPE

At this writing, each house of Congress has passed its version of the President's "reform" bill and will shortly reconcile the differences in conference. Neither bill was what was expected after reactions surfaced in and out of Congress on the scope of the Administration's proposals. The Senate's bill was very nearly what the Administration wanted, the major exception being the retention of veterans' preference. The Senate bill enacts into law the executive order that has governed labor relations and sets up an independent Federal Labor Relations Authority, as the Administration had wanted.

■ The House bill had been expected to be stronger for Federal employee rights, but the full House rejected many of these amendments. An amendment to revise the Hatch Act was voted down, although with renewed Administration support to seek Senate passage of a separate bill. A proposal to allow employees a hearing before they are fired was knocked out, as was one to shorten the workweek of Federal fire fighters. Adverse amendments adopted include placing a ceiling on Federal employment and causing the loss by attrition of more than 100,000 jobs, disciplining repeatedly discourteous employees and setting a \$47,500 limit on military pensions combined with Civil Service salaries. On the other hand, the House retains veterans' preference, allows union informational picketing, has the government paying for a dues-check-off program, provides that the proposed Senior Executive Service be a two-year test in three agencies, permits GS-13 to 15 supervisors to receive automatic comparability raises, but--like the Senate--ties their step increases to merit,

strengthens the newly created Merit Systems Protection Board, requires an annual GAO investigation of activities of MSPB and the Office of Personnel Management, gives MSPB a veto over OPM rules that would violate merit principles and sets up a flexitime program. Among important provisions to be ironed out in conference are the standard of evidence--from "reasonable" to "substantial" to "preponderance"--to be used in firings, the kinds of protections for whistleblowers and protections against downgradings from reorganization or classification errors.

## THE RETIREMENT SCENE

First, the bad news, possibly. A new law provides that ex-spouses of Federal employees may be entitled to a portion of an employee's annuity as part of a property settlement. Previously, garnishment of Federal pay and annuities was allowed only for alimony and child support. ■ The good news is that under another new law, a widowed or divorced retiree will have one year in which to elect or decline survivor benefits for a new spouse. Until now, the retiree could not change a benefit elected. In addition, single annuitants may now have their full annuities restored when named beneficiaries predecease them.

## ON THE ROAD

The Office of Management and Budget is developing guidelines for agency reduction of non-essential travel, such as attendance at conventions. ■ The General Services Administration has proposed to OMB that per diem be raised from \$35 to \$50 and for "high cost" areas from \$50 to \$75. Legislation would have to wait until next year.



## Look Back in Time

Assisted by Floyd Bese of the Facilities Engineering Division, Aeronautical Center Director Thomas Creswell cuts open a time capsule sealed in the center wall in 1958.

**N**ostalgia and hindsight were enjoyed by employees of the Mike Monroney Aeronautical Center this past June 21, when Director Thomas J. Creswell opened a time capsule sealed 20 years earlier at the dedication of the "CAA Center."

On that date in 1958, a capsule was placed behind the dedicatory plaque on the wall of the headquarters building. It contained newspaper clippings and other items about the efforts to bring the center to Oklahoma City, a trust indenture book, a specimen of a \$1,000 trust bond and a letter written by a member of the Oklahoma City Chamber of Commerce on the prospects of the next 20 years.

Director Creswell examined the documents and read the letter, with its too-conservative prediction on the center's growth.

"By 1978, 20 years from now," the letter read, "the CAA Center facilities will have doubled, its staff tripled and the number of students going through the center each year will be five times

what it is today. As you read this in 1978, you will know how accurate this prediction has been."

In contrast, Creswell noted, the center's physical facilities have quadrupled, the staff has grown five times and student enrollment is tenfold higher.

"Through the single-minded vision of several people, many of them here today, we have accomplished not only what was expected of us but much, much more," Creswell said.

For the current generation's bow to history, Creswell had prepared his own letter that detailed the progress of the Center from 1958 to 1978 and placed it along with other current memorabilia into a new time capsule to be opened on June 21, 2000.

And many in the crowd wondered how history would adjudge our progress then.

# Heads Up

## CENTRAL REGION

**Darrell P. Conant**, an assistant chief at the Wichita, Kan., FSS, is now the chief at the Chanute, Kan., FSS . . . Selected chief of the Russell, Kan., FSS was **Max O. Sharp**, who held the same job at the Chadron, Neb., FSS . . . **Larry M. Wahl** of the Kansas City FSS is now an assistant chief at the Des Moines, Iowa, FSS . . . **Martha B. Landers** is now the deputy chief of the Kansas City FSS.

## EASTERN REGION

Washington National Airport's AF Sector has a new assistant manager in **Jerry Kaminetzky** from headquarters . . . **Larey D. Ketchner** of NAFEC is now chief of the Elmira, N.Y., Tower . . . Headquarters has yielded up **Edmund Spring** to the Andrews AFB Tower in Camp Springs, Md., as its deputy chief . . . **Carl C. Bischof** was selected as manager of the AF Sector in Norfolk, Va.; he held the same spot in Roanoke Va. . . . **Ernest P. Fernsten** replaces Bischof, coming from manager of the Buffalo, N.Y., Sector . . . Deputy chief **Russell W. Shedd** was named chief of the New York Common IFR Room . . . **Walter K. Zittle** left headquarters to become manager of the Buffalo AF Sector.

## GREAT LAKES

The South Bend, Ind., AF Sector lost its manager, **Bernard L. Thompson** to the Grand Rapids, Mich., Sector as its chief . . . **Charles F. Terry** transferred from Grand Rapids to become manager of the Columbus, Ohio, AF Sector . . . **Clarence N. Turnquist**, Chicago Midway Airport Sector manager, is now the manager of the Green Bay, Wis., AF Sector . . . **Albert H. Dedauw** has moved over to chief at the Cleveland County, Ohio, Tower, coming from the Cleveland Hopkins Tower . . . **Bela Repay** was promoted to an assistant chief's job at the Rockford, Ill., FSS . . . The Minneapolis AF Sector has gotten as its manager **Glenn A. Beckman**, manager of the Green Bay Sector . . . **Joe B. Crees** of Minneapolis has taken over the same job as manager of the Midway Airport Sector . . . **Charles A. Wilson** from Detroit is now field office chief of the Springfield, Ill., AF Sector.

## NEW ENGLAND

Chief **Ronald Ivey** of the Niagara Falls, N.Y., Tower is now chief of the Portland, Maine, Tower . . . Headquarters' **James E. Allen** has moved into the Boston Logan ACDO as its chief . . . **Barry M.**

**Wilcox**, chief of the Ponce Tower in Puerto Rico, was selected as chief of the Groton, Conn., Tower.

## NORTHWEST REGION

**John H. Rahn** of headquarters was named chief of the Bellingham, Wash., FSS . . . the new chief of the Yakima, Wash., Tower is **Robert D. Earl**.

## PACIFIC-ASIA REGION

**Arthur G. Lambert** left headquarters to become deputy chief of the Honolulu ARTCC . . . **Robert B. Wise** is now an assistant chief at the Honolulu ARTCC.

## ROCKY MOUNTAIN REGION

Hailing from the Mayaguez, Puerto Rico, Tower, **Jerry M. Cheatham** was selected chief of the Broomfield, Colo., Tower . . . A new assistant chief at the Fargo, N.D., Tower is **Duane L. Johnson** from NAFEC.

## SOUTHERN REGION

**John B. Greene**, late of headquarters, is now chief of the London, Ky., FSS . . . NAFEC's **David R. Hoffman** has taken the slot of manager of the Greer, S.C., AF Sector . . . Named an assistant chief at the Balboa, Canal Zone, ARTCC was **William G. Delaney** . . . **Howard E. Burch** is the new deputy chief of the Atlanta Municipal Airport Tower . . . **John D. Druga**, chief of the Pico del Este AF Sector in San Juan, Puerto Rico, has moved north to be chief of the Jacksonville, Fla., Sector Field Office

. . . Named deputy chief of the Charlotte, N.C., Tower was **Bernard W. Wenning** of headquarters . . . **Carlo J. Calcasola**, chief of the Groton, Conn., Tower, was selected chief of the Mayaguez Tower.

## SOUTHWEST REGION

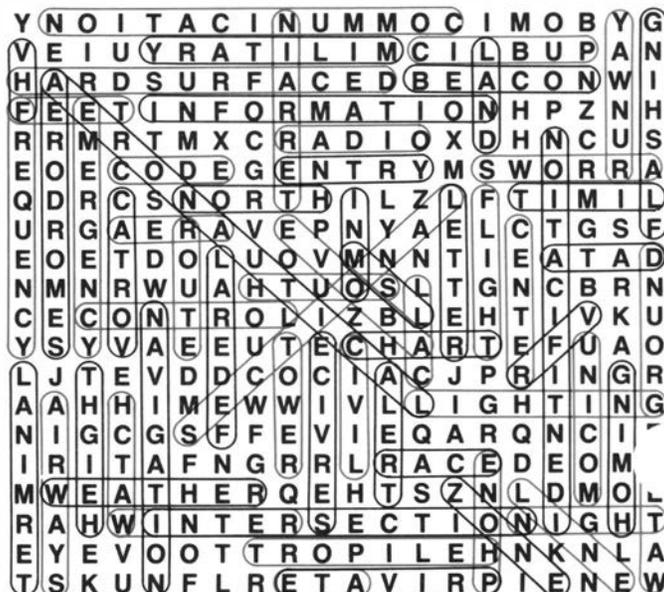
**Amadeo L. Abila** was promoted from chief of the New Orleans Lakefront Tower to assistant chief at the Moisant Tower in New Orleans . . . Out of headquarters comes **William R. Halleck**, selected as deputy chief of the Albuquerque, N.M., Tower . . . The Midland, Tex., AF Sector Field Office's own **John F. Hanna** has been chosen as its chief.

## WESTERN REGION

The Stockton, Calif., Tower's chief, **Robert L. Rowland**, has been promoted to an assistant chief's spot at the McClellan AFB RAPCON . . . **Foster J. Ruppert** of the Los Angeles TRACON got the nod as chief of the Fullerton, Calif., Tower . . . **Curtis A. Alms** was promoted from chief of the Daggett Calif., FSS to chief of the Yuma, Ariz., FSS . . . The new chief of the Tucson, Ariz., FSS is **Leonard P. Skitzki** of headquarters . . . **Louis D. Mitchell, Jr.**, of the Sioux Falls, S.D., Tower is now an assistant chief at the Burbank, Calif., Tower . . . A new assistant chief at the Tucson, Ariz., FSS is **Michael N. Liversidge** . . . The new chief of the Phoenix, Ariz., GADO is **Eldon S. Gubler** from headquarters.

## Word Search Answer

Puzzle on page 8



**T**he taxiway looked like an urban freeway on a summer Sunday—you couldn't walk between the aircraft if you dared. As far as the eye could see, puddle-jumpers stood nose to tail with turbo-props waiting to leave Wittman Field at the end of the first weekend of the Experimental Aircraft Association convention.

On that Sunday evening in July, 1,100 aircraft were cleared for takeoff in about 3½ hours—one takeoff every 11 seconds!

It was a cap to a day on which Wittman Field in Oshkosh, Wis., played host to about 9,500 aircraft—8,000 transient factory-built planes and 1,500 homebuilts, antiques and warbirds on display—and 100,000 visitors. The eight-day meeting, which attracted about 350,000 visitors and a total of around 12,000 aircraft, made Wittman Field the busiest airport in the world.

It also made the FAAers working there the busiest they'd ever been—controllers from Oshkosh and

around the region, GADO inspectors from Milwaukee, AF systems maintenance people on their home base and flight service station specialists from Green Bay, Wis., and elsewhere in the region.

Control was really manual. Long strings of aircraft of all kinds and speeds came in from the south and west, often only a quarter of a mile apart on approach. The controllers in the tower, who handled arrivals only, peered through binoculars constantly, conducted one-way radio conversations and more often than usual worked the light gun for radioless planes.

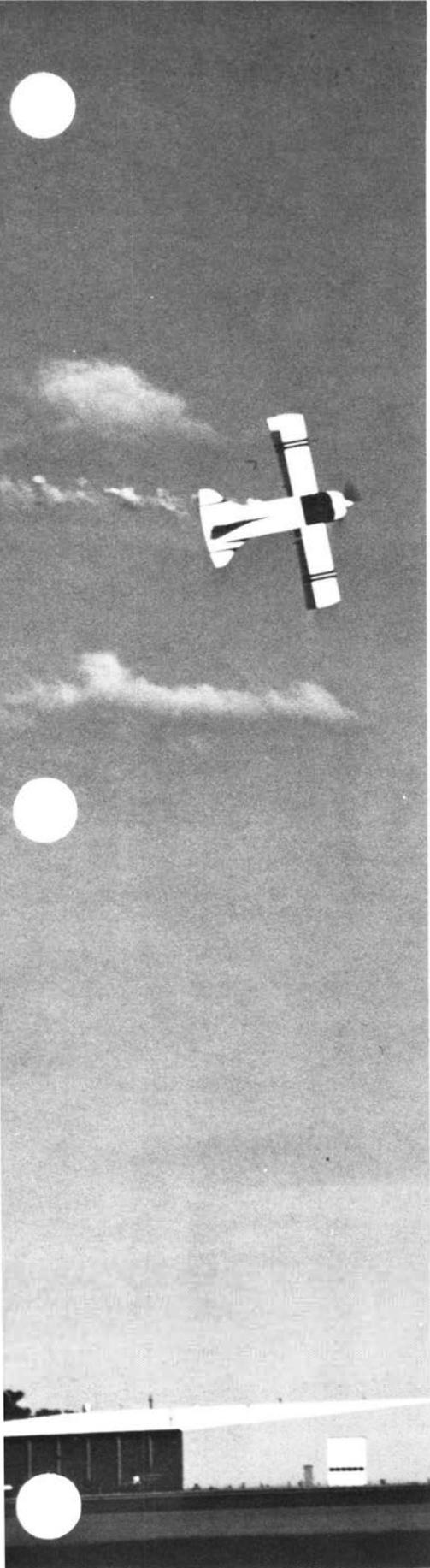
On the active runway, although they could monitor the tower on the mobile tower car radio, the controllers were on their own with red paddles as their primary tools, handling all the takeoffs.

Another mobile tower with paddle-equipped controllers handled all takeoffs and landings from the fly-by runway, which served the display aircraft.

## The Busiest Airport In the World

*The homebuilt Hyperbipe aerobat rolls out over Whittman Field, Oshkosh, Wis.*

*The controller says "go" to a P-51 Mustang taking off from the fly-by runway.*

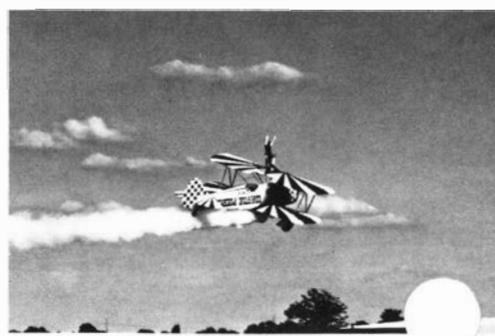




Oshkosh tower controllers try to pick out the colors and makes of incoming traffic identification. "N" numbers were ignored

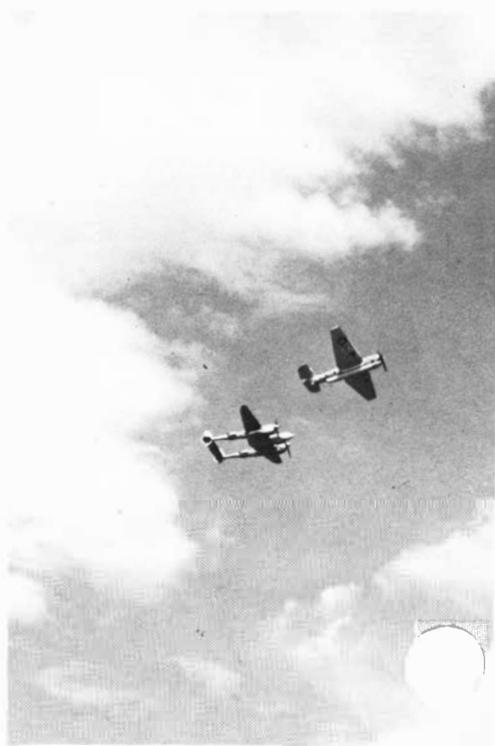
Mobile controllers watch the homebuilt "Flying Bathtub" land on the fly-by runway.

Beautiful paint jobs are the rule, like on this standard design, the Skybolt.



One EAA aerobatic performer featured a woman wingwalker.

A Lockheed P-38 (left) flies in formation with a Navy Grumman Avenger.



Soybeans surround the controllers manning the visual approach control set up at the reporting point west of Oshkosh.

This year, something new was added at the approach fix west of Oshkosh. There, in the middle of a soybean field, sat the most unusual approach control in the agency—a plywood platform on which sat a rented camping trailer, an aluminum table with two transceivers and three controllers with binoculars.

"Yellow Cessna, fall in behind the red Staggerwing and follow the railroad tracks to the pattern," went the controllers' patter. "Do not acknowledge on radio; wag your wings instead . . . Twin Beech, get back in line; no side-by-sides . . . DC-3, you're overtaking; drop your gear to maintain speed . . ."

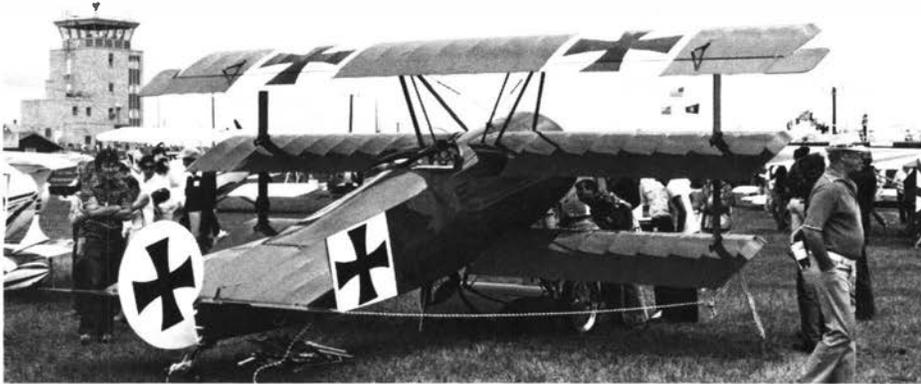
When air carrier jet service was coming in to Wittman Field, the *ad hoc* approach control would order show traffic to hold over a town to the south and the nearer traffic to fly a circle over the fix. Then, the single-file parade would resume.

The oddity of this fly-in for the controllers, FSS specialists and inspectors and the fun of it for all is the incredible mix of aircraft—from a 1912 Bellanca and odd homebuilts to a Foxjet and a Marine AV-8A Harrier. It's a nowhere-else-in-the-world experience.

Many a buff's favorite—the Beechcraft Staggerwing. Several were represented.



The unusual Rutan Quickie made its first appearance at this year's show. Depending on how you look at it, its ailerons or its elevators are in the wheel struts. It's claimed to have traveled from California on \$25 worth of gasoline at 127 mph.



Now a standard fixture at the show, this "Breezy" is one of half a dozen.



The Fokker Triplane had a glassy crimson finish that "you could eat off of."

The antique of antiques at the show was this 1912 Bellanca, which flies.



Among the exhibits and demonstrations was one of building an airplane during the show. Here, enthusiasts assemble the bottom panel of what will be a Canadian Zenair.



One of the three P-40s at the show sported an original Flying Tigers paint job.



A World War II Navy Corsair

# DIRECT LINE



**Q** In the April issue of *FAA WORLD*, there was a question from a 26-year-old bragging youth selected for General Aviation Operations Inspector. He wanted to know if he was the youngest on record for this position. I want to know how many older, more-experienced, better-qualified men were not selected mainly because of age. Why did FAA quit using the word "age" in DOT Form 3300.6—"all qualified candidates will be considered regardless of race, color, religion, sex or national origin"? Is FAA on a youth kick?

**A** There is no maximum age limit for an aviation safety inspector position, and age is not a factor in the selection process. In fact, the average age of inspectors in the 1825 series in your region is 52. As far as DOT form 3300.6 is concerned, it is our understanding that the current form in use, which is an old one, is being revised to include reference to age and handicapped status in the statement about consideration regardless of race, color, religion, sex or national origin. In your region, the Career Opportunities Announcement form already contains age and handicapped status in the statement.

**Q** A year ago, I asked why people who were assigned a field position from headquarters and within the commuting area of a regional office position announcement could not be considered for the position. The answer at the time was that an MPP study was being conducted and that possibly the commuting-area matter should be included for consideration. Has the study been completed and commuting areas included? Also, headquarters "Intercom" has been announcing SF-171 workshops. I inquired of the adjacent region's personnel and civil rights offices and was told they did not have such a program. Why isn't this agencywide? Other items in the "Intercom" state that it is important to sign SF-171s, to include PERs and WA Form 3330-2, Position Vacancy Application, to be sure of an acknowledgment. I have sent in three bids to headquarters and others to two regions, and not once did I receive an acknowledgment. Why not?

**A** As of this writing, the MPP Handbook is still being revised. Therefore, we are still operating under the current procedures, including area of consideration. The current MPP does provide, however, that if you desire to be considered for a position outside your area of consideration, you may file a Voluntary Application for Promotion Consideration (FAA Handbook 330.1A, Chapter 5, page 19, Para. (e)). The Employment Branch in headquarters conducted an SF-171 workshop at the request of employees, and the feedback indicated it was beneficial. We suggest that employees in their regions make their interest known to the appropriate servicing personnel office. The Position Vacancy Application is an optional form,

and the headquarters office does not require its submission with an employee's bid application. If an employee does submit this form, the "acknowledgment of application" should be returned to him. We regret any administrative oversight in this office concerning this matter and will take the appropriate steps to assure that it does not happen again.

**Q** I'm inquiring about the union/FAA-agreed-upon National Seniority Opportunities system. How are facilities selected for NSO listing? I work in a Level I tower and, like in most of them, we have been short at least one full-performance-level controller from our authorized complement for many years. The NSO-listed Level I towers are (1) more destitute than we in staffing, (2) their managers are more effective in requesting full staffing through NSO or (3) the FAA is playing cat and mouse with NSO, placing a Band-Aid on a cancer in a feeble attempt to placate the union. There are probably many ATCSs who would like the opportunity to bid on the unfilled slot at our facility. Why are they and us denied this staffing?

**A** Article 15, Section 2 of the PATCO/FAA agreement provides for the use of NSO procedures as one of several methods that may be used in filling vacancies at the full-performance level. There are no established criteria for the designation of facilities that are to use these procedures, nor is there any requirement that facilities be so designated. NSO procedures may be used at any facility, and the determination is made at the time a vacancy exists at a particular facility. The determination is simply predicated on the circumstances present at that time and in that facility. As for the vacancy in your facility, it was evidently determined that another method was better suited to the needs of the agency.

**Q** I served on active military duty for over 20 years—from Sept. 21, 1950, to May 18, 1956, and from Nov. 6, 1958, to Sept. 30, 1973, and I started working for FAA on July 8, 1974. My overseas tours of duty were Morocco, May 1953–May 1954; Saudi Arabia, February 1955–February 1956; Thailand, September 1966–September 1967 and again December 1968–October 1969. When I started with FAA, I was authorized six hours of annual leave per pay period. Was that correct, or should it be eight hours? When does my entitlement to eight hours begin?

**A** In determining years of creditable service (FF Supplement 990.2, 630.15, Subchapter 3, S3-2(B)), a retired member of a uniformed service who is not disabled receives credit for active military

service if it was performed in the armed forces during a war or in a campaign or expedition for which a campaign badge was authorized (FPM 296.31, Appendix B, Subchapter S211-10). On this basis, it appears that credit was given from Sept. 21, 1950, to April 28, 1952 (World War II: Dec. 7, 1941, to April 28, 1952) and from September 1966 to September 1967 plus December 1968 to October 1969 (Viet Nam, including Thailand, from July 3, 1965). These periods total three years and five months. Based on this computation, you would be authorized six hours of annual leave upon FAA appointment and eight hours in 11 years and seven months from the date of FAA appointment.

**Q** What are the criteria used in determining under the Fair Labor Standards Act whether an employee is exempt or nonexempt? Who makes this determination for general-schedule employees?

**A** The criteria for identifying the executive, administrative and professional employees who are exempt from the minimum-wage and overtime provisions of FLSA are contained in FPM Letter No. 551-7, dated July 1, 1975. The criteria for exemption of executive (e.g.: supervisory) employees have been revised in FPM Letter No. 551-13, dated Feb. 21, 1978, to provide that employees who occupy positions properly classified as supervisory under the Supervisory Grade Evaluation Guide or as foreman under the Federal Wage System Job Grading Standard for supervisors meet the executive exemption requirements of FLSA. In general, employees occupying supervisory or professional positions or those who serve as specialists in a management or general business function meet the criteria for exemption. Employees in technician occupations are normally nonexempt, unless they exercise program responsibilities or independently perform work that is very similar and comparable in level to that performed by professional employees in their field of work. In that event, such positions meet the FLSA exemption criteria. The determination as to exemption or nonexemption under FLSA is made in the Personnel Management Division at the time classification action is taken to establish or change a position.

**Q** The field placement program provides for two years of "save pay" for persons bidding out of headquarters into regional positions at a lower grade. Will priority consideration be afforded these individuals for obtaining promotion to their former grade levels during the save-pay period?

**A** Any employee who applies for and accepts a voluntary downgrade under the Field Placement Program is entitled to priority consideration for re-promotion. These downgrades are considered to be for the benefit of the agency, and agency merit promotion procedures for priority consideration for re-promotion apply.

These are described in detail in FAA Handbook 3330.1A, Para. 32. Eligible employees should submit a current SF-171 and a Performance Evaluation Record (DOT Form 3430.1) to their servicing personnel office for consideration within their employing jurisdictions. Those who desire consideration outside of their employing jurisdiction should submit a voluntary application indicating eligibility for priority re-promotion consideration to the appropriate regional or headquarters personnel office.

**Q** On May 1, 1985, I will have completed 25 years of service as a controller and will have a total of 30 years of government service. I will be 49 years old and plan to retire on 56 percent. During a discussion with co-workers, they said I would take a two-percent-per-year reduction for retiring at that age. Is this correct?

**A** When you reach 25 years of service as an air traffic control specialist or first-line supervisor, you may optionally retire at any age. Since you will be 49 and will have met the required controller service, you will be guaranteed a 50 percent annuity. Since you will have total government service of 30 years, you will receive an annuity of approximately 56 percent of your highest three years. Your annuity will not be reduced because of your age. This reduction of two percent per year only applies in the case of a Discontinued Service Retirement, which is not the case under PL 92-297.

**Q** I have worked at three VFR towers. At the second two, a controller on normal duty did the T&As. Please comment on the propriety of this in relation to the Privacy Act. I don't feel that a fellow worker should know about my use of leave. Also, I would like to know the regulations on the payment of night differential and Sunday premium pay while on a duty SF-160 "fam" flight. Sometimes I have been paid and sometimes not.

**A** Order 2730.2A, Time and Attendance, Para. 200a, states that the supervisor shall select a capable employee as T&A clerk. This permits the selection of an employee in the same job series as those for whom the T&A reports are being maintained. To discharge this function, the clerk must have access to certain information, which includes, but is not limited to, the number of hours of leave used and the type of leave to be charged. It is needed to make T&A reports for pay and leave computation. It does not violate the Privacy Act. The regulation for night differential and Sunday premium pay while on "fam" flights is cited in Order 3550.10, Para. 105. If you feel that you are entitled to compensation under this reference, ask your supervisor, for we do not know the specific circumstances of your flights. It is your supervisor's responsibility to ensure that your T&A data are recorded in a manner that will result in proper payment.

**DEPARTMENT OF TRANSPORTATION**

**FEDERAL AVIATION ADMINISTRATION**

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