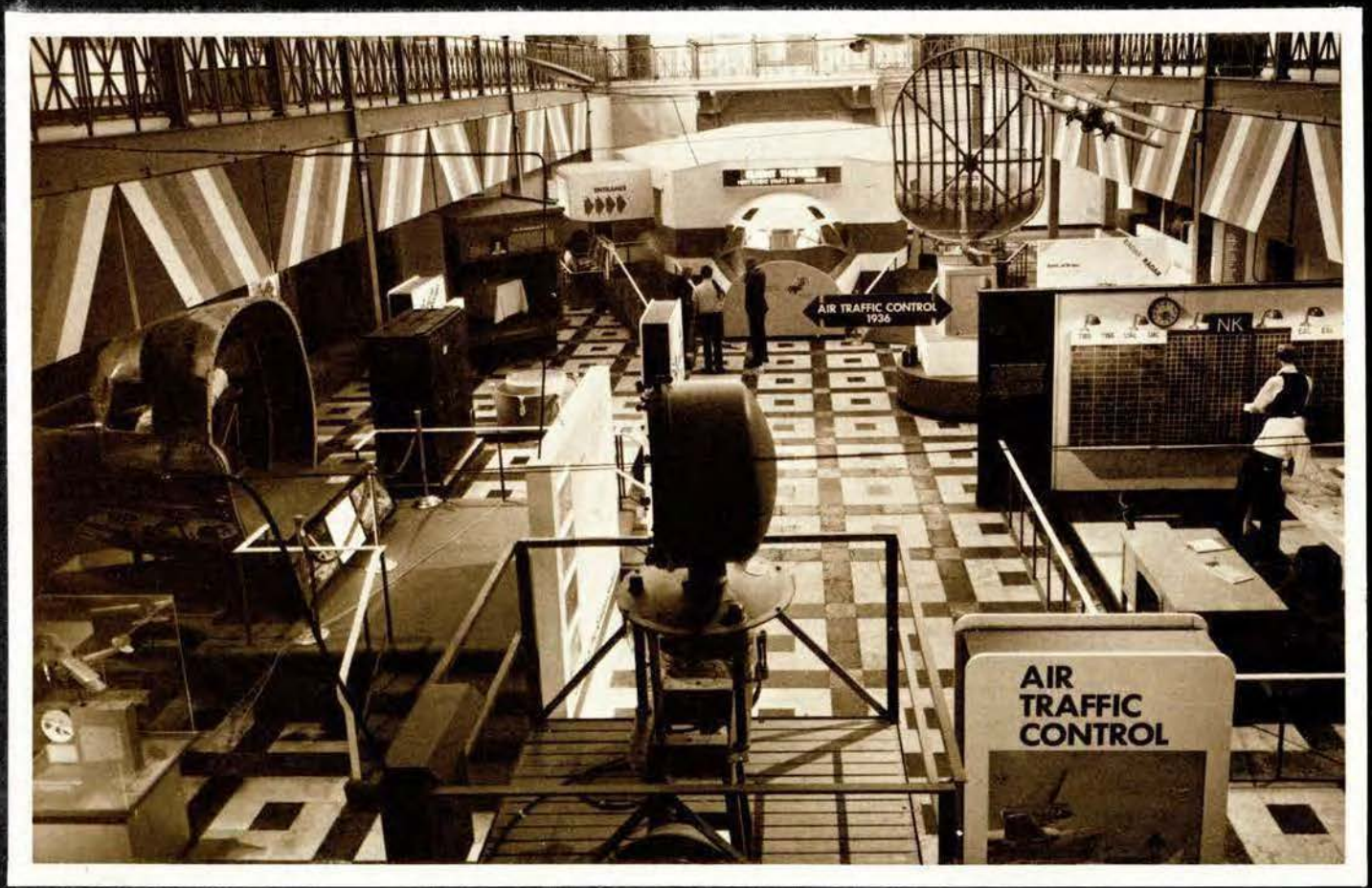
FEBRUARY 1974

FAA WORLD

Service to Man in Flight



PRESERVED FOR POSTERITY

FAA WORLD

FEBRUARY 1974 VOL. 4, NO. 2

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The cover: *The antique and the state of the art—The Smithsonian Institution's winter-spring exhibit offers a vivid, short history of air traffic control and its hardware development.*

Meeting the Crisis Head On

The energy crisis has been a subject of growing concern to everyone in aviation circles. Although it is difficult to predict the ultimate effect of recent decisions by the President and the Federal Energy Office, the energy shortage is quite real, and it seems likely to remain a serious problem for some time, regardless of what happens on the diplomatic front.

Because the aviation industry is a significant consumer of fuel, FAA has taken positive steps to conserve fuel without compromising aviation safety. Despite these measures, the energy problem will require that everyone in the aviation community be prepared to make sacrifices until domestic energy production can be increased and methods for tapping new energy sources are perfected. Reasonable self-restraint and a spirit of cooperation will go a long way toward lessening the economic and personal hardships.

To conserve as much fuel as possible and minimize the effects on users of the system, all phases of aircraft operations and air traffic control have been carefully reviewed, and where necessary, changes have been made. Last month, new flow-control procedures were set up at Chicago-O'Hare International Airport to reduce the time spent in holding patterns and provide more-economical routings, speeds and altitude assignments. Changes are also being made in gate-holding and taxiing procedures to eliminate fuel waste. In another recent action, the FARs were amended to permit increased use of simulators in airline-proficiency checks and flight training. Together, these measures could save as much as a million gallons of fuel daily while increasing aircraft operational efficiency.

There's a comprehensive fuel conservation program for FAA, as well—for example, low-priority flight training has been cancelled; where possible, training has been shifted from aircraft to simulators; and flight hours in Academy-conducted courses have been reduced. These actions are designed to save over two million gallons of fuel initially and more than four million gallons in each succeeding year.

As a responsible member of the Federal family and the aviation community, the FAA must take the lead in conserving energy. And each of us, as citizens, should be prepared to play an active role; the cumulative effect of our individual efforts will be far-reaching.

Alexander P. Butterfield
ALEXANDER P. BUTTERFIELD
Administrator

CHANGE OF ADDRESS: FAA employees should send their changes of mailing address for FAA WORLD to the control point in the region or center where they are employed: AAC-44.3; AAL-52.1; ACE-20; AEA-20; AGL-13; ANA-11; ANE-14; ANW-14.7; APC-42; ARM-5; ASO-67.1; ASW-67.23; AWE-15; and Headquarters employees, AMS-112. You should not send change-of-address information to Washington. If you move from one region or center to another, you should submit your change of address to the region or center to which you move.

PRESERVED FOR POSTERITY

Photos by Dick Farrar

The unsung, unseen and absolutely indispensable aspect of modern aviation is how the Smithsonian Institution describes air traffic control. Now, however, the song is being sung in the National Air and Space Museum—an exhibition dedicated to its history and operations opened on November 16.

Through a series of simulation exhibits, actual equipment and photographs, the show depicts the evolution of air traffic control from the days of bonfires and beacon lights to the current era.

As the visitor enters the west wing, he faces the deck and lights of the top of an airway beacon that originally stood at Whitewater Hill, Calif., the last one in the Western Region. To the right, a light gun is displayed along with photos of Archie League, former Assistant Administrator for Appraisal, from the days when he directed air traffic at St. Louis-Lambert Airport with semaphore flags.

At the left, a pair of mannequins "fly" the cockpit of a DC-3 in 1936, simulating the chatter, the advisories from airline-operated air/ground radio stations and the navigation received from four-course radio transmitters. Adjacent is an actual Low Frequency Four-Course Radio Range transmitter that was the first one commissioned in the Western Region at Daggett, Calif., in 1936. The very first of these "beam" transmitters went into service at Bellefonte, Pa., in 1927.

Opposite is a mockup of the 1936 Newark Airport Center, the nation's first ARTCC, established by American, Eastern, TWA and United Airlines and then taken over by the Bureau of Air Commerce. Life-size mannequins perform their chores at the map table, the blackboard and on the telephone with an airline dispatcher. The recorded conversations represent the ground side of the DC-3's flight.

World War II brought radar, and 1948 saw the installation of the first civilian airport surveillance radar. Dominating the center of the exhibition is a rotating ASR-1 antenna and a static display of an ASR-1 radar that was the last one decommissioned, that happening at Charleston, W. Va., in December 1972. It had a range of 30 miles and was incorporated with ground control approach.

Illustrating the changing scene in the National Aviation System is a filmed "talking head" exhibit. A mannequin seated at the breakfast table talks of his life as an airway technician, beginning as a young man in the 1920s and aging before your eyes in a few minutes from 20 to 70. A film of actor Cliff Robertson projected on the face of the mannequin brings it to life.

Anchoring the rear of the exhibition is the nose of a modern jet that fronts a theater resembling the interior of an airliner. Visitors sit in aircraft seats

From the pilots' end: Simulation of flying a 1936 DC-3 on a four-course radio beam, replete with pilot chatter and air/ground communications from a commercial station.

From the ground side: The Newark Air Traffic Control Center, set up in 1936 by four airlines, exchanged information with a commercial air/ground station for relaying to pilots. It was the first ARTCC in the U.S.

and take a short "flight" between Pittsburgh and Washington, narrated by TV personality Rod Serling. The show includes the pilots in the cockpit ahead of the seats and multiple-screen presentations on how modern air traffic control works behind the scenes. On either side of the theater are simulations of controllers at terminal and enroute radar scopes, which are seen inside the theater by mirror reflections at appropriate points during the flight.

Between these exhibits are displays of vintage and modern photographs of air traffic control equipment and operations.

The exhibition, which will form the core of a larger exhibit in the National Air and Space Museum building to be opened in 1976, will run through the spring.

This Four-Course Radio Range transmitter was commissioned in 1936 in Daggett, Calif. Pilots rode in on its beam. At right rear is a talking mannequin/electronic technician.

The ASR-1 radar and antenna that was CAA's first civilian radar equipment. It came into use in 1948.

Federal Notebook

BANKING LEAVE

It's now law that your unused annual leave at the end of the year may not be lost under certain circumstances. The biggest benefit is that in your year of separation or retirement, you will be paid for current accrual beyond the ceiling, normally 240 hours. In addition, use-it-or-lose-it leave can be carried over if you scheduled it and couldn't take it because of the press of government business or illness or if you lost it through administrative error.

PAY CHANGES UP THE FLAGPOLE

The bill introduced by House Civil Service Committee chairman Rep. Thaddeus Dulski (NY) to establish a full pay-comparability system has been undergoing hearings that have included leaders of Federal employee unions. The bill would revoke the President's authority to delay or determine the size of pay raises mandated by the system. ■ Rep. Jerome Waldie (Calif), chairman of the House Civil Service Employee Benefits Subcommittee, has introduced a bill that would pay a 10 percent premium to employees required to remain in an on-call status away from their place of work, extending to all Civil Service workers the same benefit recently legislated for doctors and nurses under the VA. ■ Deleted from the Social Security law signed last month was an amendment to permit garnishment of military and Civil Service salaries in child-support and alimony cases. Nevertheless, Congress may take up the proposal again this year.

SCRAPPING A FRIEND IN COURT?

The House Select Committee on Committees has recommended abolishing the House Post Office and Civil Service Committee. Under the plan, the Civil Service functions for pay, benefits, classification and travel would be transferred to the House Labor Committee and postal matters to the House Government Operations Committee. Federal union leaders oppose the idea in terms of hampering employee legislation and splitting off the support of postal unions on matters of common concern.

SPEEDING COMPENSATION

The General Accounting Office has criticized the employee injury compensation program and proposed methods for speeding payments. The preferred plan would permit an agency to retain an injured employee in pay status at reduced rates pending approval of the claim by the Office of Federal Employees Compensation. Legislation would be required, and a number of bills have been introduced.

STRIKE ONE

The suit brought by the Natl. Treasury Employees Union (formerly NAIRE) and the Natl. Assn. of Letter Carriers to eliminate taxation of employee pension contributions until retirement was denied by a U.S. District Court. The unions will appeal.

MORE HEALTH CARE

A bill to amend FEHBA by Rep. Waldie would permit employees and annuitants eligible for Medicare to elect supplementary coverage.

MILEAGE RISE ASKED

It's probably higher now, but in December, General Services Administration said it costs you 13.7¢ a mile to run your car. As a result, GSA is asking Congress to boost mileage rates to as high as 16¢.

MAKING THE CONNECTION

With Leased Lines

Twixt aircraft in flight and FAA's ground support is a communications maze whose scope few may be aware of. About $50 million a year and 1.8 million miles of leased circuits is what it takes to support the National Aviation System.

The reliance on these lines for air/ground communications is such that outages for even a few minutes could leave aircraft "stranded" for long distances. "Lines" is somewhat of a misnomer for these circuits, since they involve microwave systems, underground and overhead cables, oceanic cables, communications satellites and even the open-wire lines on telephone poles.

These lines interconnect the ARTCCs, remote communications air/ground sites (RCAGs), towers and FSSs. In fact, each ARTCC has a complex interphone system with enough switching equipment, lines and interconnections to provide telephone service to a city of more than 15,000 people.

"Our air traffic control system is dependent on the quality and the reliability of leased communications services and equipment from commercial carriers," points out Air Traffic Service Director Ray Belanger. The Bell System Long Lines, Western Union and other carriers are, indeed, full-fledged partners with the FAA in providing the circuitry, switching equipment, teletypewriters, control channels and lines for ATC communications and coordination.

The FAA technicians and telephone linemen share a cooperative dedication rarely found elsewhere. It's not unusual to see them slogging it out together to restore service at a remote facility. Their job may be man-made or nature-made.

What plagues them most are those outages deliberately or inadvertently caused. It may be vandalism, like bullet holes in cables and insulators used for target practice—endemic during the hunting season. A back-hoe digs trenches in a hurry, but it also can rip out a 600-pair underground cable with one swoop of its bucket.

Nearly 18,000 cable pairs were ripped apart when this bridge in Denver collapsed during flooding. FAA technicians and telephone linemen had the circuits back in operation in just a few hours. Microwave links filled in till then.

Leased services workshops between FAA and utility companies keep them abreast of trends in communications.

Charlie Gobs, from the Washington ARTCC sector, recalls an outage at the Bucks Elbow remote site in Virginia. A farmer, digging a grave for a dead cow, unwittingly cut through an underground cable, completely isolating the RCAG.

The job also comes in for a bit of humor at times, though you can be sure that Bill Kangas didn't think so at the time in his own case. When a navaid at a remote site went into alarm, the Rawlins, Wyo., sector technician had to drive in a blinding snowstorm. Somehow, his truck picked up a bit of stray barbed wire that wrapped itself around the driveshaft. Extricating it left him drenched and muddy. Rather than muddy up the equipment room when he arrived, he stripped off his outer clothing with keys in his pocket and tossed them into the engine room. A sudden gust of wind slammed the door, leaving Kangas coatless, shirtless and pantsless locked out in a blizzard. He eventually found his way back into the building.

Nature's destructive force frequently takes its toll on the communications lines, and when it does, all hands turn to. Recognizing FAA's dependence on them for fast, reliable service, the telephone companies give a high priority to restoration of air traffic control circuits.

When the South Platte River flooded, causing Denver's 15th Street Bridge to collapse, 17,800 cable pairs were torn out, interrupting 39 RCAG circuits serving 23 sites and 28 ARTCC interphone circuits. Routing over microwave systems was begun immediately. Within an hour, the first RCAG circuit was restored; within five hours, 30 RCAG and interphone circuits were back in operation.

At times, there are quirks in the system that little can be done about. Albert Crawford, an electronic technician at the Martinsburg, W. Va., FSS never did find out why he was getting intermittent music on one of the incoming lines. The trouble couldn't be isolated, vanishing as suddenly as it appeared.

At the Oakland Center, controller Bob Wainwright was holding down a midwatch position when the center's intercom loudspeakers broadcast a phone call from a traveling businessman to his wife. He was supposedly delayed in Chicago on business, but he let slip that he actually was in Las Vegas. A slammed receiver on the receiving end aborted the conversation and any further trouble on the center's lines.

The growth and sophistication of the ATC system creates ever-increasing demands for leased-communications services. To seek better ways to manage the hefty budget involved, improve the efficiency of the circuits and take advantage of innovations and new techniques, leased-services workshops are held periodically. Such terms as 2400 bits, C-1 channel conditioning, two-digit code, 1142 circuits and type 7 lines are bandied about as fiscal management and operational expediencies are resolved, often in a free-wheeling atmosphere. The costs involved are regulated by tariffs filed by the commercial carriers with the Federal Communications Commission or the state public-utility commissions.

FAA is second only to the Department of Defense as a user of leased lines. About 1.1 million miles of the system is devoted solely to voice communications, while the balance serves teletypewriters and computer circuitry.

While the reliability of leased lines approaches 99 percent, and FAA and the telephone companies strive to close in on that missing percentile, human fallibility always seems to step in and deny that goal. Take this instance as an example, where all the parties, for obvious reasons shall remain nameless: A contractor, installing an underground cable for a telephone company at an airport under the supervision of an FAA inspector, had completed a splice, covered it up and, in marking its location with a "Buried Cable" sign, drove the stake right through the cable just buried.

Systems Command control officer James Hutchins (seated at test director's table) explains the handling of long distance flights to the flow-control evaluation team.

MANAGING THE FUEL PINCH

FAA's answer to conserving aviation fuel will be implemented next month as a result of a dry simulation in flow control conducted at FAA headquarters.

Controllers and supervisors from five regions gathered at the Air Traffic Control Systems Command Center (ATCSCC) in Washington in November to work out flow-control procedures that would save critically short supplies of fuel, minimizing the effect on airline operations, while maintaining the efficiency and safety of the ATC system.

A pair of alternative plans built around arrival times at impacted airports evolved from the headquarters dress rehearsal. These "Air Traffic Fuel Economy Plans" provided for managing aircraft in holding patterns adjusted to a predetermined limit, in some cases as little as half of the normal airborne delays. To achieve this, aircraft flow to an affected airport would be limited to the known hourly capacity of the airport. It would mean that planes would be kept on the ground at their departure terminals, but only when airborne delays were reaching the predetermined ceilings.

Added to these flow-control procedures for absorbing delays at departure points are holding planes at the boarding gates and delaying engine startup to minimize delays on taxiways and heads of runways. FAA's plans also include the increased use of optimum aircraft cruising speeds and optimum altitudes, direct routings when possible, taxiing with fewer engines, the increased use of simulators for training and check flights and encouraging sponsors to accelerate the construction of airport runway and taxiway improvements, with coordination of all construction and maintenance activities to avoid unnecessary disruptions to aircraft operations.

These plans are expected to save about 840,000 gallons of jet fuel a day, about 2.7 percent of total U.S. consumption.

The plans are designed to maintain an orderly pace of traffic to an airport affected by weather or other local conditions, centrally governed by the central-flow-control function of the Systems Command Center. They are based on the maximum safe holding level within the airport's area, determined by the servicing ARTCC, and landing capacity, determined by the airport. Then, "Expected Departure Clearance Times" would be issued well in advance of the proposed departure times.

Copies of the plan judged preferable for implementation were provided to the evaluators for further discussion at their facilities, and comments from industry, field facilities and regional headquarters were accommodated in the analysis prior to the live test. At the same time, automation requirements were defined for an existing prototype computer program at the Systems Command Center.

Robert Simmons, Air Traffic Automation participant, squats in front of the table to check the computer-output test data with an evaluation team member.

Participants in the headquarters simulation were Joseph Wilson, ATCSCC chief; James Hutchins, Joseph Regan and James Lang, systems command control officers; O. E. Falsetti, ATCSCC data systems officer; Robert Simmons, AT Automation Planning Branch; Don Soderholm, Minneapolis Center; Mike Ciancanelli, Great Lakes Regional Office; Tom Rauner, O'Hare Tower; Don Schurch, Cleveland Center; Curley Schneider, Chicago Center; Maurice Hasecuster, Indianapolis Center; George DeFeo, New York Center; John Richardson, Washington Center; Curt Clower, Atlanta Center; Guy Jones, Atlanta Tower; Hal Brown, Kansas City Center; Dave Lee, Southwest Regional Office; and Byron Zirkle and Jack Glaze, Fort Worth Center. Their operations were observed by personnel from the Air Transport Association.

Order 7210.7B, which implements the new procedures on March 1, provides details and direction for field facilities.

JMB in a recent session—Administrator Butterfield is seated at far end of the table with chairman Alan Armstrong; clockwise from Armstrong are: Dave Allen (Special Assistant to the Administrator), John O'Leary (hidden), Bill Abernathy (with glasses), Barbara Jennings, Ellis McElroy, Elizabeth Walker, Arnold Schwartz, Don Johnson, Kay Keener, Lowell Johnson, Ted DeWeese, Jane Golden, Charles Hoch and Don Braun (FAA WORLD reporter).

FEED YOUR PIPELINE TO THE TOP

Pipelines are in the news these days. At FAA Headquarters there is a different kind of pipeline that runs between younger Headquarters employees and top FAA management.

The Junior Management Board is a conduit of communication and cooperation between up-and-coming younger employees and the older veterans who hold the reins of power in FAA. The board was established in the spring of 1971 primarily as a problem-solving group. Its 16 members are selected by the board itself for one-year terms from nominees submitted by Office and Service directors. They are drawn from a cross-section of technical and professional occupations and must be under age 35.

In a recent meeting with the JMB, Administrator Butterfield was asked and agreed to allow board representatives to sit in on the Administrator's staff meetings on a regular basis. In making the request, JMB chairman Alan Armstrong of the Office of Labor Relations said he felt that board participation in such meetings would put JMB in closer touch with major issues discussed in the highest councils of FAA management.

In the past, JMB has studied and reported on performance evaluation; an FAA ombudsman; and the four-day, forty-hour workweek. Current studies include career development; implementation of Corson Committee recommendations; and the FAA directives system. The board tackles projects on its own initiative or at the request of FAA management.

"We would welcome suggestions and ideas from younger employees in the regions," said Armstrong. "In this way JMB could also serve as a pipeline from young employees agencywide to top management in Washington."

The group's philosophy is moving toward the view that JMB should make short, rather than long-term studies of specific issues. "I think we can also serve as a sounding-board for top management when they want our views as younger employees on an issue," said Armstrong.

JMB's formal link with top management is through the Associate Administrator for Administration, although it is not subordinate to that office. It is, in fact, independent.

Given Administrator Butterfield's keen interest in young employees and his belief in the need for more of them in FAA, the Junior Management Board has a ready-made mandate to infuse top management with its ideas and recommendations.

FACES and PLACES

DECOMMISSIONED DIAPER—*Sharon Patterson got back her diaper from Harold John, Idaho Falls Tower chief, when the Mud Lake, Ida., airstrip became a designated airport and was given a proper windsock. Sharon's parents installed the diaper as a windsock in the field's earlier days.*

A SWITCH IN TIME—*Richard Nelson (top), Bernard Weinstein and Leo Wapelhorst (not shown), NAFEC engineers, designed a solid-state electronic switch that instantly restores radar or beacon-tracking when one of a pair goes out of commission. The first facility to have the device installed is the Jacksonville TRACON.*

AND ONE MAKES FIVE—*As the previous year's Minute-Man flag flutters above, Texas Savings Bonds director T. Guy Brown pins a fifth gold star on a new pennant for the Southwest Region's repeating accomplishment in the 1973 campaign. Holding the flag are FAA's bond chairman Charles Fulkerson (left) and Region Director Henry Newman.*

SAFETY WORDSMITH—*Al Lowman of the* Detroit News *(center) holds a certificate of appreciation from Region Director John Cyrocki for his promotion of aviation safety and the accident-prevention program in his newspaper column. Presenters are accident-prevention specialist Carl Borchers (left) and FSDO chief Russ Bivens.*

EXCITING DISPLAY—*Eastern Region Director Robert Stanton (left) looks over the latest headquarters lobby Information Center display on "FAA Careers" with illustrator Steve Marks of the Visual Aids Unit (center), who did the center mural, and his chief, Michael Bellezza.*

GOLDEN HEEL AND TOE—*A knee injury last year put Denver Center controller Charles Hunter out of the distance-running business and into race-walking. In just a few months, he became the tenth man in history to walk 100 miles in 24 hours, doing it in a championship event at Columbia, Mo., and finishing second in a 57-man field.*

LIFESAVERS RECOGNIZED—*Mrs. L. Jo King (left), Cordova, Alaska FSS specialist, and Shreveport, La., controller Calvin Losey (not shown), were honored last fall by the Aircraft Owners and Pilots Assn. for saving general aviation pilots and passengers. Making the presentations was former Asst. Administrator for General Aviation John Baker.*

UP THE LADDER—*Mrs. Georgia Blue joined the ranks of flight service station specialists at the Crescent City, Calif., FSS, following 10 years as a telecommunications specialist at Atlanta and the Oakland ARTCC. She completed eight months of basic certification at the Fresno FSS.*

PAPER AND TIME SAVER—*Lloyd Wolfe (right), of the Documentation Methods Branch in the Office of Management Systems, received a Federal Paperwork Management Award from Murray Smith of the Association of Records Executives and Administrators. Wolfe was cited for saving $3 million in forms processing, cutting use of forms by one-third and saving 2,899 manhours involved in making out reports.*

GRASS-ROOTS CONFABS SEEK FERTILE IDEAS

Nothing stays the same in air traffic control. It's an ever-changing world, and the day-to-day experiences of controllers constantly raise new questions, new problems and new answers. The same is true of flight service station work. Thousands of flights each day, new equipment on the ground and in the air, new airplanes and expanding route systems all affect the air traffic control system and the FAA people who make it work.

Where does the ATC specialist turn when he has an idea for changing the techniques of his job for the better?

COPCOM and FSSCOM, born in 1963 and 1967, respectively, are two ways for the specialist to get his ideas straight to top management with the fewest detours. The Controllers Operations and Procedures Committee and the Flight Service Station Operations and Procedures Committee meet once a year in separate sessions to scrutinize technical issues related to ATC and flight-service work and to make recommendations directly to FAA management at Headquarters.

There are regional committees of both types, whose members are chosen by fellow ATC specialists and by management and who meet each year before sending their chairmen to the national session.

Regional and national COPCOMs discuss an agenda of technical issues supplied by Washington Headquarters as well as many non-agenda issues generated by firing-line employees. FSSCOM develops its own agenda.

In their November meetings at Washington, COPCOM and FSSCOM made recommendations on such items as noise-abatement flight procedures, the use of area navigation, control techniques to enhance fuel conservation, reducing wordiness in transmissions, oceanic separation, message handling, weather dissemination, pilot briefings and letters of agreement between fixed-base operators and FSSs.

Each regional COPCOM is composed of one member for each enroute center, an equal number of terminal members and co-chairmen for the two options. They serve for two years. Regional FSSCOMs are composed of six members who serve for three years. Committee members are responsible for collecting recommendations from ATC specialists, while the chairmen screen the suggestions for duplications and suitability.

The whole idea of the system is to get grassroots suggestions from controllers and flight service station specialists based on their working experience and to catapult these suggestions to high-level Air Traffic managers without the usual delays of formal communication channels. To get an idea heard in Washington, the regional COPCOM or FSSCOM member is the person to contact. Both of these programs have been highly successful in improving the National Airspace System, according to Air Traffic officials. They encourage even more participation by ATC specialists to keep up the present successful record.

COPCOM's enroute group—clockwise, from left foreground: Charles Kelly, New York; Gary Sanada, Honolulu; Harold Smith, Seattle; Constantine Limber, Cleveland; Joe Bunch, Jacksonville.

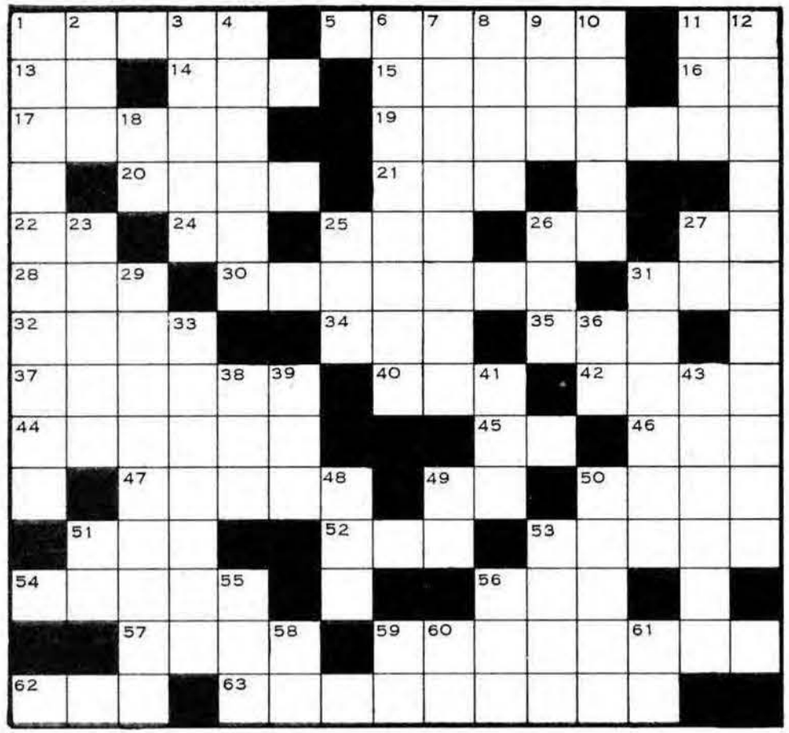
COPCOM and FSSCOM held their national sessions in Washington last November. Here, COPCOM's terminal group confers. Clockwise, from left foreground: Teofesto Tobosa, Honolulu Tower; Jerry O'Neill, Kansas City; Robert Pound, Air Force representative; Jim Sinon, Baltimore; Jim Goussy, Orange County Tower, Calif.; Ernest Bates, Eielson RAPCON, Alas.; John Mathews, Army representative; Ron Miller, Navy representative; Don Millward, Salt Lake City; Frank Price, Chattanooga; Ron Rooker, Columbus.

WXword Puzzle

By George Ochs, Paso Robles, Calif., FSS

Answers on Page 18

Refs: ETF-R2 Glossary/Contractions, Webster's Seventh New Collegiate Dictionary



ACROSS

1. Showers Aloft
5. Upside Down
11. WX Collection
13. Precipitation (WX Contraction)
14. To Function
15. Keen
16. Not (Pre)
17. Mr. (Span)
19. Slope
20. Duets
21. Assistance
22. Obstruction to Visibility
24. Caribbean IFSS (Abbr)
25. Destination Time
26. Direction 135
27. Cold Precipitation (Contr)
28. Electric Charge Particle
30. Clear Transmission (Adj)
31. Climbing Vine
32. Vertical Circle
34. Not Banking (Abbr)
35. FAA Service
37. Arab Enemy
40. Fish
42. Implement
44. Steel Hardness
45. For example (Abbr)
46. Texas Border Ident.
47. Artery From Heart
49. Nautical mph (Abbr)
50. Precipitation
51. Below (Abbr)
52. High-Altitude Turbulence (Abbr)
53. Flat Boat
54. Composure
56. Senator (Abbr)
57. Examination
59. Altering
62. Attempt
63. Not Measured

DOWN

1. Visual Distance
2. Frozen Precipitation
3. Crowd
4. Dawn
6. Opposite of Positive
7. Changing Visibility
8. By God
9. Color
10. Indian Group
11. Our Star
12. High-Pressure System
18. State (Abbr)
23. Lasso
25. Eastern Daylight Local Time (Abbr)
26. Washington State FSS (Abbr)
27. Intravenous (Abbr)
29. State of Being Regular
31. Line of Equal Pressure
33. Indian Baby
36. FSS Operating Position
38. Ever (Poetic)
39. Left/Right Turn (Abbr)
41. Permit
43. Source
48. High Clouds Castellanus (Abbr)
49. Nautical mph (Abbr)
50. Distance
51. Tramp (Colloq Abbr)
53. Not Straight
55. Direction 120
56. FAA Award (Abbr)
58. Tail Spin (Abbr)
59. Mares Tail (Aviation WX)
60. Her Majesty (Abbr)
61. Identification (Abbr)

DIRECT LINE

Q. According to Order 7210.3A, paragraphs 2201 and 2202, can a specialist without a Pilot Briefers Certificate deliver weather information to a pilot and count it as a brief? Paragraph 2202 states that we shall not count single items of information, such as a weather report, that are requested by the pilot. Was it the intent of the paragraph that if the pilot requests the information it cannot be counted as a brief, but if he is given the weather report without his requesting it, it is a legal pilot brief? As a result of this word "requested," many station counts are being inflated.

A. Air Traffic Specialists in stations must obtain a Certificate of Authority for Pilot Weather Briefing from the National Weather Service to provide this service. A forthcoming change to Handbook 7210.3B will include this requirement. Developmental specialists without this certificate may brief only while monitored by an instructor; then, the brief is countable. The purpose of paragraph 2202 is to obtain a legitimate pilot-briefing count. A specialist could, without some restraints, volunteer a single item of unnecessary weather information for the explicit purpose of taking a briefing count. This would invalidate statistical data used by the agency for planning, staffing and other purposes. On the other hand, a single item of pertinent weather information could be instrumental in causing a pilot to divert his flight, thus qualifying for a briefing count. The facility chief and agency evaluations personnel are responsible for monitoring facility activity counting. In those instances where illegal counts are taken, serious consequences result.

Q. I am a GS-11 electronic technician working at a border facility that is within 65 nautical miles of a foreign Level III airport. The VOR I work on forms essential fixes on two of that airport's Standard Instrument Departures. These fixes meet the criteria as defined for TERP facilities on page 2 of the December 1972 Position Classification Guide for electronic technician positions GS-856. All shutdowns requested through the U.S. ARTCC are coordinated with the foreign ARTCC. The airspace above 10,000 feet over this VOR is controlled by the foreign ARTCC. There is pressure on this facility from two ARTCCs. Shouldn't this position be graded at the GS-856-12 level?

A. Your position is properly classified in accordance with the CSC Position Classification Standard issued in October 1962, which recognizes systems certification work on a VOR at the GS-11 level. The DOT guide you referred to is not applicable to the classification of your position since it is intended to apply to facilities in the U.S. National Airspace System only. The foreign airport you cite is not part of that system. Additionally, accordingly to the DOT guide (page 2), for a navigational aid to be considered as a TERPS facility, it must either be critical to the formation of an approach, holding or reporting fix as published in the Department of Commerce and Department of Defense Instrument Approach Procedures or it must be critical to the formation of standard instrument departures as published by these departments in the Standard Instrument Departures. The charts you submitted with your inquiry do not meet this requirement. Yours is not a unique situation. There are other locations where navigational aids associated with Level III or IV airports are not recognized as TERPS becase the critical fixes and SIDs are not published in the documents specified by the DOT guide.

Q. My facility has gone to a new schedule, consisting of three teams—one assistant chief, one team leader and 12 controllers on each team. It is my understanding that the region directed us to change. One day each week, we will have 14 on day shift, 14 in training, 11 on the evening shift and three on the mid-shift. Eleven is our minimum coverage. What happens when one or two people call in sick on the evening shift? Our entire controller complement has already been committed to eight hours that day. There is no one available for overtime. I am aware of emergency overtime situations, but it does not make a whole lot of sense to commit the entire crew to this type of schedule. Why was this change ordered?

A. The regional supplement implements Order 1100.126B, Standard Organization of Air Traffic Control Terminal Facilities. In addition to promoting more effective facility management and clearly identifying the appropriate chain of command, the overlap of groups one day each week is considered to be one of the greatest assets to be realized from the three-group concept. Its disadvantages are considered to be far outweighed by its advantages. For example, terminal facilities have historically had difficulty getting more than a few controllers together at one time to accomplish such needed programs as team briefings, personnel meetings and classroom training. With the one-day overlap, these, as well as improved communications between employees and management, can be realized. Understandably, any program designed to have all personnel in a duty status at sometime during the same 24-hour period could result in occassional staffing shortages. It is felt, however, that ample latitude is provided in implementing the guidelines to deal with this possibility. Facility chiefs have the prerogative of scheduling the overlap on any shift of any day in the week, taking advantage of reduced workload on evening shifts, operationally current first-line supervisors and holdover and emergency overtime.

Q. I recently bid on the multiple position Academy Instructor, for which vacancies were advertised. The pluses on my 171 were a QWI, a BA degree and an Official Letter of Commendation in 1971, Letters of Commendation in 1972 and 1973 and eight Academy and agency-issued certificates for courses completed, including Facility Instructor Training. Two of the Letters of Commendation were as a result of my performance as a Facility Instructor. I am a GS-13. I was not one of those selected. I feel that I could assume that if I were Indian, Black, female or had a Spanish surname, I could file a formal grievance under EEO. However, my only "qualification" was that I am 53—which was intimated as the cause of nonselection. Do you believe, based on the information presented here, that I have a just cause for grievance? With whom should I file it?

A. The Merit Promotion Program does not guarantee that an employee will get a promotion, but it does give an employee an opportunity for fair consideration. Your question of complaint regarding non-selection for an Academy Instructor position may be pursued through the agency grievance procedure as outlined in Handbook 3770.2A, chapter 5. This procedure requires that an employee first present his complaint either orally or in writing to his immediate or next-higher-level supervisor and seek informal resolution. However, according to CSC regulations, Federal Personnel Manual chapter 335, paragraph 5-3a, non-selection from a group of properly ranked and certified candidates is not a basis for grievance. As you have already indicated, your allegation of discrimination based on age is not acceptable grounds for filing a discrimination complaint.

Q. Quoting from a previous Direct Line answer: "Individuals are selected for promotion based on their qualifications for the positions and from being among the best qualified. If this is so, how did an individual who never held the appropriate subordinate positions get selected for an office chief's job? Other competent bidders have been left by the wayside.

A. The selection for the specific position mentioned in your query was made in accordance with the agency's Merit Promotion Program. The person selected was, in fact, identified as one of the best-qualified among all the qualified candidates referred to the selecting official. Moreover, the Civil Service Commission made a review of this particular promotion-action selection and found that it complied in all respects with the agency's MPP procedures.

Q. How long should it take for the final results of a suggestion to reach the suggestor? I have three suggestions that were accepted at the regional level, but for over a year, there has not been any answer, award or statistics revealing the final disposition. It's very discouraging.

A. Suggestions from Airway Facilities personnel cover, for the most part, recommended electronic or plant-equipment modifications that may take a great deal of time. Regional divisions turn them over to the appropriate engineering branch for evaluation, testing and recommendation. If non-adoption is recommended, the suggestion, evaluation and a letter of appreciation is returned to the suggestor, prior to which the recommendations are discussed with him. Suggestions requiring little or no field testing or lengthy research and subsequently recommended for adoption are forwarded to AAF-1, with the process taking four to five weeks. Should field testing be required at other locations, the period is longer and the employee is so notified. Forwarding a recommended suggestion to Washington adds to the time, considering that AAF-1 has final adoption and implementation responsibility for any suggestion that modifies equipment. AAF in Washington is now in the process of automating the employee suggestion system to speed up its handling. Any further information on your particular suggestion would require the suggestion number, dates, etc., and we recommend that it be pursued directly through Airway Facilities.

Q. If I work an 8 to 4 shift on a given day and leave on a SF-160 flight at 10:00 p.m. local time to arrive at my destination at 5:30 a.m. local time, may I call the day I arrive the travel day? It is one hour between my center and the airport by car. I've looked at all the regs about SF-160 travel and I can't find the answer.

A. Your inquiry is worded in a manner that prevents a specific answer. You failed to point out if you are traveling on a duty day, a regular day off or on annual leave. In addition, you don't give the times that you accomplished the commuting, the actual flight time or the time spent between flights. Each of these must be spelled out for a direct answer. We recommend you refer to Order 7210.3B, Facility Management, and go to your supervisor for assistance.

Is there something bugging you? Something you don't understand? Tell it to "Direct Line." We don't want your name unless you want to give it, but we do need to know your region. We want your query, your comment, your idea—with specifics, so that a specific answer can be provided. All will be answered in this column, in the bulletin-board supplement and/or by mail if you provide a mailing address.

Better two-way communication in FAA WORLD's "Direct Line" is what it's all about.

Jack Barnes of the Airway Facilities staff is not the Birdman of O'Hare—he's just checking one of the many owls used there to frighten birds from perching on navigation aids and other equipment.

PERCHED SCARECROWS

Bird-aircraft collisions have come in for direct attention from the FAA, but other avian matters of concern to the Airway Facilities segment have lacked resolution.

Most land birds like to perch—anywhere there are lofty toeholds, like at airports. Unfortunately, around most airports, trees and other natural perches have been removed as hazards to aviation, leaving the birds with nowhere to roost—except on Runway Visual Range equipment, Instrument Landing System monitors, glide-slope antennas and other suitable man-made attractions. The Airport Surveillance Radars and other movable antennas escape their unwanted attentions. A swinging perch may be to their liking, but not a revolving one. Perhaps it gets them dizzy.

The problem is not just their presence—a bird sitting on an antenna can create a signal imbalance —but what they leave behind. The technicians have a job before their job in cleaning up the bird droppings. FAA many years ago set out to solve this problem, but complete success has eluded the agency, try as it may.

Two approaches have been employed. Sticky "gunk" has been put on some of the perching places, but often it's been a toss-up as to whether it's more trouble for the technicians to clean off the "gunk" or the droppings before getting to work. At O'Hare International Airport, where pheasant, hawks, starlings, sparrows, red-winged blackbirds and others abound, Hugh Weeks, deputy Airway Facilities sector chief, says the sticky "gunk" problem has been solved to some extent by putting it on a plastic tube which is slipped over whip-type antennas.

Papier maché owls, resembling the predator of many other birds, have been used as scarecrows with considerable success in some areas, while in others, the birds find the owls only another good perch. George Sendek, Airway Facilities technician at the Cleveland sector, originated the idea and won an award for it.

Sendek believes unvarnished owls work best, but some more pragmatic technicians do varnish them to last longer. The owls are not government issue, but are purchased by the facilities at local sporting goods stores and paid for out of imprest funds.

One of the formerly choice "dropping off" places for birds was the vehicle-mounted bucket used by window washers for swabbing the tower-cab windows at Madison, Wis. The "gunk" cure was as bad as the disease, but the owl worked. O'Hare doesn't have that particular problem, however. The washer vehicle is 200 feet up—a bit too breezy up there for a perch.

CROWD-PLEASING RECIPE

The stomachs of business people on the road are frequently assaulted by mass-produced objects that pretend to pass for food—tasteless pastries, aptly named "sinkers" and other cardboard victuals. It was thus a double delight for the region directors and other top FAA officials from Washington when they gathered in Denver last fall and were treated to homemade pastries during their coffee breaks.

Cookies and other goodies were baked by women employees of the Rocky Mountain Regional Office. Among the most popular treats were the Six-Weeks Muffins of Mrs. Donna Welch, secretary in the Budget Division. Following the conference, many employees sought out Mrs. Welch for the recipe, which follows. Her husband, five children and three dogs all attest to the muffins' tastiness—the bowl of Six-Weeks Muffin batter never lasts beyond three weeks.

SIX-WEEKS MUFFINS

1 box (15-oz.) of raisin bran
1 cup melted shortening or oil
3 cups of sugar
4 beaten eggs
1 quart of buttermilk
5 cups of flour
5 teaspoons of baking soda
2 teaspoons of salt

Mix the raisin bran, sugar, flour, soda and salt in a large bowl. Add the eggs, shortening and buttermilk and mix well. Store in a covered container in the refrigerator to use as needed. The batter will keep for six weeks.

Fill muffin tins that have been coated with shortening two-thirds full and bake in a pre-heated oven at 375° to 400°, depending on your oven type, for 15 to 20 minutes.

This amount of batter makes five-dozen muffins, depending on the size of the muffin tins.

John Kriz, son of Marjorie Kriz of the Great Lakes public affairs staff, is no giant dwarfing the Decatur, Ill., Airport Tower—he's stroking a birdie on a miniature-golf course that features a replica of the actual tower, pictured above. The airport sports a new FSS and two golf courses; the second one being a nine-hole, par-3—no drivers allowed.

WXword Answer from page 13

V	I	R	G	A	■	I	N	V	E	R	T	■	S	A
I	C	■	R	U	N	■	E	A	G	E	R	■	U	N
S	E	N	O	R	■	■	G	R	A	D	I	E	N	T
I	■	D	U	O	S	■	A	I	D	■	B	■	■	I
B	N	■	P	R	■	E	T	A	■	S	E	■	I	C
I	O	N	■	A	U	D	I	B	L	E	■	I	V	Y
L	O	O	P	■	■	L	V	L	■	A	T	S	■	C
I	S	R	A	E	L	■	E	E	L	■	T	O	O	L
T	E	M	P	E	R	■	■	■	E	G	■	B	R	O
Y	■	A	O	R	T	A	■	K	T	■	R	A	I	N
■	B	L	O	■	■	C	A	T	■	B	A	R	G	E
P	O	I	S	E	■	C	■	■	S	E	N	■	I	■
■	■	T	E	S	T	■	C	H	A	N	G	I	N	G
T	R	Y	■	E	S	T	I	M	A	T	E	D	■	■

SMALL WORLD

WRITE ON, BROTHER . . . The quote-of-the-year award could very well go to an unidentified FAA spokesman in Memphis. Asked whether FAA had spotted a reported UFO in the area, he noted that about 15 years ago one of the guys saw something in the sky he couldn't explain, and the Air Force sent him 15 feet of paper to fill out. As a result, he added, I don't think anybody here is going to see anything unfamiliar ever again.

THEY WENT THAT-A-WAY . . . "Controllers tend to be a quite-normal group which differs substantially from the general male population only in that they are brighter than average and have a tendency to respond in a somewhat more exclusively masculine manner to most situations than is typical of men-in-general," according to CAMI psychologist Dr. Roger Smith. This masculine response shows up in tests designed to measure controllers choices of alternative professions (pilot, auto racer, pro athlete), preference in entertainment (poker, night clubs) and principal off-duty activity (working on cars, oprating machinery). In addition, Dr. Smith notes an unusually large number of controllers check off a test item indicating they would like to be "Pursuing bandits in a sheriff's posse"!

HIS AND HERS . . . After that, a word about women controllers seems in order. Two researchers from Eastern Michigan University who analyzed data from personality tests administered to all ATC applicants have concluded that there is "little practical difference" between male and female applicants. "Our data show that the person applying for an ATC position has essentially the same personality structure, whatever his/her sex may be," they say. "And such a person is a superior individual in many respects, above average in intelligence, superego control and practicality, no matter what the make up of his/her X and Y chromosomes."

RALLY 'ROUND THE FLAGG . . . Turning to homebuilts, the South Bend GADO says it has one of the oldest—if not the oldest—amateur-built airplanes in the country under its supervision. Known as the Flagg F-13, it is an exact replica of the Boeing P-12, a single-seat bi-wing airplane that was one of the most widely-used fighters in the years between the World Wars. Built in 1933, this one has been flying ever since.

Heald gets the lowdown on a homebuilt's bottom while the pilot, also prone, looks on. Assisting is Seattle GADO maintenance inspector Alan Butterworth.

A NEW WINGSIDE APPROACH TO INSPECTION

Service to the public in the most-efficient manner has been a hallmark of FAA. Ernest Heald, principal maintenance inspector at the Seattle GADO, with his wife on the team, has put a new wrinkle into getting the job done better.

Heald tends to recertification of homebuilt aircraft on Saturdays by means of fly-ins. Instead of handling the recertification process on an individual basis for each of the district's 174 homebuilts, as was formerly done, Heald arranged for the fly-ins at western Washington airports so that several planes could be checked in a single day. The idea has gained the plaudits of participating pilots who, in addition to getting the necessaries done, have enjoyed what has become a social atmosphere, with opportunities to exchange ideas with fellow homebuilder-pilots and even help them with problems.

In addition to maintenance inspector Alan Butterworth, Heald's wife, who is the Northwest Region's stockroom supervisor, makes it out to the ramp with a typewriter to help expedite the recertification right on the spot.

The highly successful program is expected to continue this year.

Mrs. Ernest Heald sets up shop on the wing of a homebuilt at the Arlington, Wash., Airport to get the recertification paperwork done with the pilot. Her husband, the principal maintenance inspector, waits at the right.

Inspector Butterworth checks a wing strut support bolt on a homebuilt brought to a Saturday recertification fly-in.

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Reflecting the changing face of America, buffalo graze nearly in the shadow of the Billings ASR-7 antenna, west of the Billings Logan International Airport, Montana.