AUGUST 1974

FAA WORLD

Service to Man in Flight

FROM DREAMS TO DESIGNS

FAA WORLD

AUGUST 1974 VOL. 4, NO. 8

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FAA WORLD is published monthly for the employees of the Department of Transportation/Federal Aviation Administration and is the official FAA employee publication. It is prepared by the Public & Employee Communications Div., Office of Information Services, FAA, 800 Independence Ave., Washington, D.C. 20591. Articles and photos for FAA WORLD should be submitted directly to regional FAA public affairs officers:

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The cover: *A meeting of minds—FAA officials listen to a Transportation Systems Center project manager review TSC efforts on an applied research assignment. Other TSC officials are at the back of the room.*
—Photo by Don Braun

The Upbeat Future

Aviation is alive and well despite the fuel shortages that the industry faced last winter. Many of our aviation forecasts of last year have had to be adjusted in light of the fuel shortage, but only slightly.

Air carrier flight operations dropped over six percent almost immediately after the oil embargo, although domestic passenger traffic increased. This can be explained in large part by very high load factors—more seats filled on each flight—and the diversion of travelers from autos to air. There's also the suspicion that many international travelers switched to domestic vacations because of uncertain overseas fuel supplies.

General aviation has had its share of problems, many of them similar to those confronting air carriers and most service industries. High fuel costs have plagued it, but shortages have been spotty and not very inhibiting. Student pilots starts have dropped, but the production of general aviation aircraft that began an upturn three years ago has not let up, nor is it expected to for some time to come.

Overall, our preliminary forecasts for this year are a bit down from last year's forecasts for the period through 1980. Beyond that, to 1985, our new high-range preliminary forecasts outstrip last year's, based on the assumption of energy independence by then and a higher level of economic growth.

Total aircraft operations at FAA-controlled airports up to 1980 might range from one to nine percent below the pre-energy-shortage forecasts, but could pick up in the following five years to 20 percent above. The most pessimistic assumptions would put operations four percent below.

Instrument operations at towers for the near term would follow the same pattern as above, but by 1985 should soar to between 75 and 100 percent higher than the current levels of 25 million. The growth rate for instrument operations is higher than for aircraft operations due to the impact on general aviation of the new TCA procedures, expanded radar service and faster and more-sophisticated aircraft.

At the ARTCCs, the new preliminary high-range forecast for IFR aircraft handled tracks with last year's, showing a 25 percent increase by 1980 and a 65 percent rise to 38 million by 1985.

Compared to the above, flight services are expected to be

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Transportation Systems Center:

FROM DREAMS TO DESIGNS

When an idea's time has come, the Transportation System Center goes to work. The center is across the Charles River from Boston in Cambridge, Mass., and lies somewhere between the drawing board and the factory in its efforts to push existing technology to new frontiers of application.

This facility tackles a variety of technical projects given it by FAA. For instance, among other FAA assignments, the center is working on the aeronautical satellite and automation projects to develop systems and hardware that will meet the needs outlined by FAA.

In all likelihood, the center will not invent anything like the transistor, for example, but it will call upon its own corps of experts—many with advanced degrees in electronics, math and physics—and contractors to develop prototype systems. Riding herd on these projects, the center works with the contractors and NAFEC to test the "black boxes," radar antennas, communications gear, computer programs and other devices and systems to see how well they work.

"We're not talking about research in the classic, academic sense," says John D. Hodge, director of the center's Office of Transportation Systems Concepts. "It's research in very much the applied sense. In other words, looking at new ways of doing business in the transportation area."

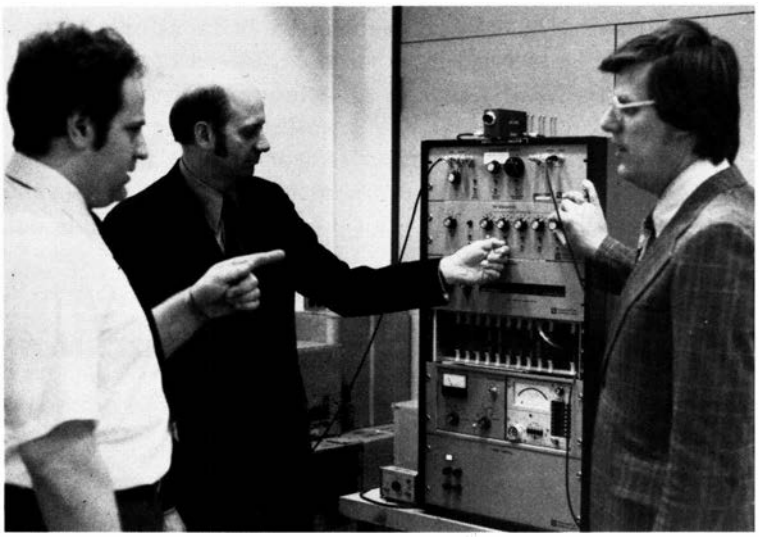
Reporting to DOT's Assistant Secretary for Systems Development and Technology, the center works for "clients" in the Department—all of DOT's other modal agencies, in addition to FAA.

While the center's major effort for FAA is conducted for the Systems Research and Development Service, other offices and services are involved in efforts at TSC, such as the Office of Systems Engineering Management, Office of Aviation Medicine and the Office of Environmental Quality.

One such TSC project for OSEM is the study, development and testing of an automated terminal service—air traffic control at an airport without a control tower. Although installation of such a service is estimated to cost about the same as a tower, operation and maintenance costs are figured at only about 10 percent of those for a tower. TSC's role in this project is to investigate and test different concepts for the service, based on techniques that are available right now and on applications yet to be developed from current techniques. To illustrate, remote communications is a technique ready for use today. The discrete-address beacon system and intermittent positive control, through which indi-

A Link Trainer inherited by TSC from NASA forms a backdrop for Robert Meier (left), chief of the SRDS Communications Div., and Robert Hubbard, TSC program manager on airborne pilot-warning indicators. The trainer is used to gauge pilot reactions to simulated collision courses.

"Bench testing" for the AEROSAT project is done in TSC's lab using an electronic console. At right, Joseph Gutwein, AEROSAT project chief for TSC, explains the testing to FAA's Keith McDonald, acting chief of the AEROSAT D in Systems Engineering Management. At left is electr engineer David Goldfein of the TSC technical staff.

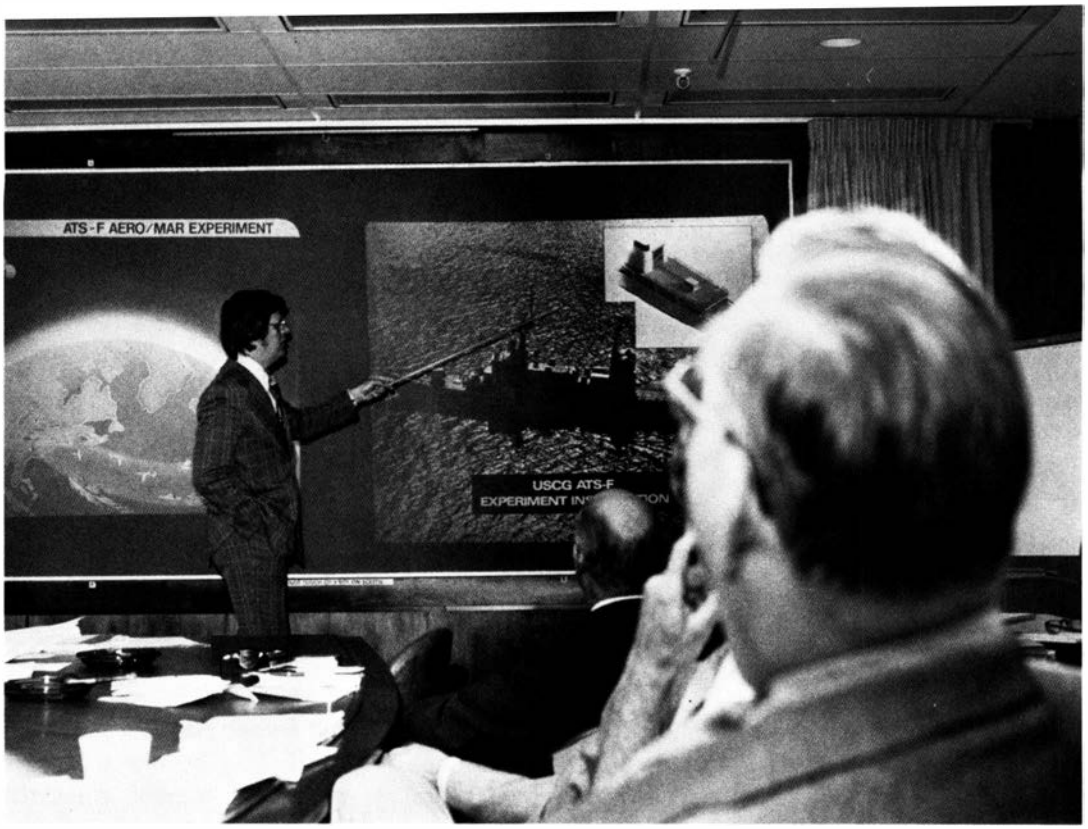


vidualized control information can be exchanged, are still in the development stage. TSC will look at both the new and the old techniques, bring them together and pursue practical ways of developing them into a new system.

Center specialists visit FAA facilities to get a first-hand feel for the environment in which their work is applied. Louis Kleiman, manager of the Air Traffic Control Beacon System Improvement project, visited the Los Angeles ARTCC and the Aeronautical Center, where he saw on radarscopes the problems caused by interference with radar beacon signals. He even took a familiarization course in air traffic control at the Aero Center. "I could really see how important it is to have clear beacon targets on the scope," he said. "That target is the end product of all the complex engineering that goes into improved beacon-antenna designs." Kleiman is currently working with contractors on four new antenna designs which will be field tested shortly.

Of the center's 620 employees, about 100 wo. on FAA projects. Originally, the six-building complex was the National Aeronautics and Space Administration's Electronics Research Center. After the space program was cut back, the center was transferred to DOT in July 1970, and its experts re-directed their efforts to the problems of transportation on earth.

Atop TSC's roof, Dr. Bernhard Kulke (left), TSC team leader, discusses a radar beacon antenna with Louis Kleiman, TSC beacon project manager. A transponder on the roof of a nearby building is used to simulate the interrogation of an airborne transponder by the beacon antenna at the center.



During the spring meeting between FAA and TSC, the latter's AEROSAT chief, Joseph Gutwein, points out electronic gear to be used on a Coast Guard ship on the high seas during experiments in air traffic control, using a satellite placed in stationary orbit over the Atlantic Ocean.

TSC has a small electronics laboratory and an aircraft simulator used for "bench testing" hardware and design concepts to help the center solidify its ideas before writing contracts for large-scale development efforts. It also has a computer, which is used in a variety of projects.

Two times a year, FAA officials meet in Cambridge with TSC project managers for a review of the center's programs. After this year's spring meeting, Walter Luffsey, who is chief of the SRDS Program Management Staff and SRDS's coordinator of the TSC-FAA partnership, reflected on the center's contribution to FAA. "TSC is a real asset to us," he said, "because it has a pool of highly qualified people who can take a hard look at an idea and come up with the best ways of developing it into reality."

With more planes, more pilots and more passengers coming along all the time, aviation safety and efficiency are more dependent than ever on advanced technology and sensible planning. Wake-vortex avoidance, central flow control, collision avoidance, passenger and cargo movement, visibility measurement, airport surface traffic control, data link, microwave landing systems—all these are being worked on by the Transportation Systems Center. Real needs and real results—that's what TSC is all about.

—By Don Braun

HEADS UP

ALASKAN

George Woodbury has been selected as a new personnel officer in the regional office.

CENTRAL

The new chief of the Grand Island, Neb., SS is *Jack Gehring* . . . selected as assistant chief at the Bellevue, Neb., RAPCON is *Harold Simpson* . . . *Arthur Harris* is a new team supervisor at the St. Louis Tower.

NORTHWEST

Dick Bobb has been named chief of the Troutdale, Ore., Tower . . . the new chief of the Paine Field Tower in Everett, Wash., is *Charlie Crum* . . . *William (Bud) Byerly* has been selected as chief of the Boeing Field Tower in Seattle . . . *Lee Bragg* is now chief of the Yakima, Wash., Tower . . . *Joe Harrell,* deputy chief at the Seattle Center, will trade desks with *Paul DeVries,* assistant chief of the regional Operations, Procedures and Airspace Branch . . . *Reuben Powell* is the new chief of the regional Airway Facilities Program and Planning Branch, having come from the New England Region.

SOUTHERN

James Walters is now deputy chief at the Atlanta Tower, having moved from the Rocky Mountain Region.

SOUTHWEST

Selected as chief of the regional Training Branch is *Arnold Anderson* . . . the new chief of the McAlester, Okla., FSS will be *John Wilder* . . . *Keith Lindsey* has been named supervisory air-carrier operations inspector for the Houston, Tex., ACDO.

WESTERN

David Des Armier of the Los Angeles TRACON is taking over an assistant chief's position at the Ventura, Calif., Tower . . . *Jim Johnson* has been selected as Fresno, Calif., AF Sector Nav/Com Unit supervisor . . . *Jim Williams* has transferred to the Los Angeles Tower as an assistant chief . . . *George Ochs* has reported aboard as chief of the Daggett, Calif., FSS . . . Long Beach, Calif., AF Sector has a new assistant manager in *Herman Matthew.*

Central figures in Upward Mobility, including the 13 selected interns, are: (left to right on first step) Veta Donock, SRDS; Catherine Bracy, Personnel Operations Div.; Leon Watkins, Director of Civil Rights; James Dow, Acting Deputy Administrator; George Reeves, Director of Personnel; (others, left to right) Jere Styer, AMS; Constance Hansbrough, AAF; Don Lang, Logistics; Howard Richardson, Director of Training; Ola Melvin, SRDS; Mary Powers, AMS; Jane Mehrtens, AAS; Jeannie Hansohn, Personnel Operations Div.; Susan Dion, AAF; Catherine Maus, AAA; Judith Lott, SRDS; Robert McCarthy, Personnel Operations Div. chief; Judith Bain, AAA; and John Buck, program coordinator.

A NEW PATH UPWARD

FAA Headquarters launched a novel Upward Mobility Program this spring that may well set a pattern for other agency and governmental units in providing career advancement opportunities.

Thirteen candidates were selected for this program for target jobs as accounting technicians, management assistants, program assistants and personnel assistants. Other target career fields are expected to be explored next year.

The New England Region has already adopted a very similarly structured program for administrative assistants. Called NEAT (New England Administrative Training), the program launched four interns on new careers last fall. (See FAA WORLD, July, p. 10)

The Headquarters program was announced at the beginning of the year for GS-4 through GS-8 and WG-3 through WG-11 employees who had three years of Federal service, including one year in the FAA. It provides for on-the-job and formal training and the opportunity for advancement until the interns reach GS-9, at which time they will be eligible to bid on jobs in related professional series.

One of the most significant aspects of the program is in the selection process, according to program coordinator John Buck. "Ours and the NEAT programs are probably the first such for developmental specialist positions in the Federal government to use an assessment center. This is a technique that has been used for a few years by FAA and a few other agencies in selecting personnel for professional and high managerial-level positions, such as in the Executive Development Program."

Buck explained that in an assessment center, a group of candidates is asked to play roles to solve a simulated problem related to the skills and abilities required by the target jobs. Their behavior is observed and rated by a specially trained assessor panel.

"An employee's past experience is of little help in predicting how well he or she will perform the skills required in new, unrelated work. The assessment center is the most reliable, unbiased test we have to measure potential for new kinds of work. Ours was designed to measure such target job factors as analytic, organizational and interpersonal abilities, as well as writing and arithmetic skills," Buck concluded.

"I had no idea how I was doing during the whole time," said Judith Bain, a secretary who is now a intern in the Accounting Operations Divison of th Office of Accounting and Audit. Jane Mehrtens, now in the Management and Evaluation Branch of the Airports Service, added, "The whole thing seemed mysterious. It was challenging and interesting, but it was the first time I had ever heard of an assessment center process."

In addition to the assessment center, the exhaustive selection process involved interviews, an essay concerning target job preferences, and supervisory evaluations.

Robert McCarthy, chief of the Personnel Operations Division and one of the prime movers of the program, expressed satisfaction with the range and quality of the employees selected. "The selection panel really chose a wide variety of people. Their ages range from 23 to 51; four are minorities; three were already attending college at night—the rest are high school graduates; and the jobs they left ranged from communications equipment and computer operators to secretaries. One thing they all have in common, however, is a clear idea of where they want to go and a strong motivation and ability to get there," McCarthy said.

As a result of what is considered a successfu selection process, the Office of Personnel and Trai ing is expected to issue a set of guidelines that will suggest to the field the use of assessment centers

in patterning their own upward mobility programs.

The interns' training will be primarily on-the-job, based on the requirements of the target positions and the needs of the trainees, but there will be two weeks or more of formal classroom work, including opportunities for courses at the Civil Service Commission, at the Department of Agriculture, night classes at local colleges and in-house courses.

Larry Covington, chief of the Training and Career Development Branch, discussed the need to anticipate problems and educate the many different people affected by the Upward Mobility Program about its goals and methods. He added, "We are now starting to evaluate the selection process, and, hopefully, that will enable us to do an even better job next year. In line with this, we have contracted with two psychologists to do a two-year follow-on study. Besides following the interns' careers, we want to know what effect selection to the program will have on their attitudes and values, thus possibly permitting early detection of problems in future programs."

Reflecting on the overall approach, Director of Personnel George Reeves said, "We are seeking to improve career advancement opportunities for all FAA employees through current studies of FAA career ladders and the merit-promotion system and through such affirmative-action concepts as Upward Mobility and the "150" programs. These will continue so long as they meet employees' responsible interests and aspirations."

EDITORIAL *(Continued from Page 2)*

the fastest growing segment. There could be a 75 percent rise by 1980 and a near tripling by 1985, compared with today. The high range is the same as last year's forecast of 95 million by 1980 and assumes that general aviation will be stimulated somewhat by higher operating costs in other modes of transportation. Beyond 1980, the forecast is brighter than last year's; that is, 150 million flight services rather than 137 million, as was forecast a year ago.

I think it all goes to show that aviation is a vigorous industry that will withstand the fuel and economic dislocations and will require a still-greater measure of FAA's unique services.

ALEXANDER P. BUTTERFIELD
Administrator

IT WAS THE REAL THING

Rarely is a facility put to the test so soon after its baptising as was the case with the nation's first certificated hospital heliport at the Missoula, Mont., Community Hospital.

A Johnson Flying Service helicopter, invited for the ceremonies, was simulating an emergency pickup when a real emergency came along. It had to fly out to clear the landing pad for an Air Force helicopter that came in to pick up a 14-day-old child that needed heart surgery and was to be flown to Spokane, Wash.

Community Hospital is the first in the nation to be certificated for a heliport, based on safety standards established by FAA. The landing pad had been in use for two years, but a new regulation required it to meet the standards, since it is serviced by Johnson Flying Service, a CAB-certificated carrier. There are three other FAA-certificated heliports located in California and New York, none at hospitals. All other pads for CAB-certificated helicopters are at regular airports.

Allen Butterworth, Rocky Mountain airport certification specialist, who attended the ceremonies, explained that certification is based on standards that include floodlighting, landing-zone lighting, the type of pad and the presence of a wind sock, fencing and clear approaches.

—By Al Barnes

FACES and PLACES

DOUBLE COUP — *AF Sector chief Herb Foster broke the tape in the half-mile race for the 46-55 age group at the Kauai County Masters Track Meet in Hawaii, then a few minutes later entered and won the mile run.*

ZIG-ZAG QUEEN — *Racing driver Diane Cadenhead, San Diego FSDO clerk-steno, took second honors in VW slalom events at the Orange County International Raceway. In a field of 10, she was* ***beaten by her husband.***

NO CONTEST—*EEO officer Dave Bonnick has Fred Jaeger of the Planning Office cold at second base during a recent softball game between a pickup team from the New England Regional Headquarters and a standing team from the Airway Facilities Division. At right is Mike Nagle from AF.*

GONE TO THE DOGS—*North Bend, Ore., FSS specialist Bob Perry (left) has joined co-worker John Leonard in the consuming hobby of raising, training and showing their champion, coursing and show dogs. Leonard owns three of the four Borzois and bot' ~eyhounds. They are enlarging their kennels.*

GET THE GATE—*Air Traffic Service Director Ray Belanger studies a map of Africa with controllers who were headed for Dakar, Senegal, to assist in the Global Atmospheric Research Program-Atlantic Tropical Experiment (GATE) sponsored by the UN's World Meteorological Organization. Left to right are Headquarters ATS special assistant Robert Christopher; James Kelly, Washington ARTCC; Rod Gonzalez, Miami ARTCC; Frank Alexander, Washington ARTCC; Al Beauregard, Miami ARTCC; and Belanger.*

VAMPIRES NOTE — *Jim Drawdy, GFET in the Environmental Support Unit of the Miami AF Sector may well have a record: Over the last 30 years, he has donated eight gallons, three pints of blood to a Dade County blood bank.*

ACCIDENT PREVENTION BOOSTER—*A Certificate of Appreciation is presented to Louise Krane by Eastern Region Deputy Director James Bispo for her support of the program in the Harrisburg, Pa., area. She also promoted the Flight Instructor of the Year program and sponsored the 1974 awards dinner at considerable personal expense. Flight Standards Division chief Brian Vincent looks on.*

DIFFERENT MIKES—*In addition to calling the shots for planes around the Phoenix, Ariz., Tower, controller Merlin (Curly) Gantz announces for horse shows around the country, including such major events as the Western National Stock Show, the All Arabian Show, National Arabian Show and the National Morgan Show, as well as state fairs.*

CREEPY CRAWLY CREATURES — *Rather than photos on his desk, J. L. Lanterman, Hobart, Okla., AF Sector Field Office chief, prefers tarantulas, scorpions or giant grasshoppers — safely encased in clear plastic— or stones or prize minerals collected on his rock-hunting trips.*

DESIGNED FOR THE JET AGE

Dulles' terminal-mobile lounge idea still unrivaled

Operator-leader George Burgess extends a transition device of a conventional mobile lounge out to meet the door of a jetliner parked on the jet apron.

When the renowned architect Eero Saarinen reflected on his design for what would later be called Dulles International Airport, back in 1961, he echoed Louis Sullivan's famous "Form follows function." His opus, that he thought was the best he had ever done, was truly the epitome of functionality and beauty, for it mated a magnificent but compact terminal with the maximum in passenger and airline convenience in the form of the mobile lounge.

Said Saarinen, "I think we faced this job as a architect's problem in total relation to the present world. We tried to give a completely logical, imaginative and responsible answer to that problem.

"No one asked us to grapple with the problem of a jet-age terminal beyond the question of pure architecture. But, I believe the architect has to assume that kind of responsibility. We decided to make a fundamental analysis of the whole problem of a large terminal for jets. It was a hard-boiled problem, and we wanted to solve it in a hard-boiled way."

Solve it he did. When studies were conducted in 1959, the average walking distance for passengers in a large terminal was 950 feet, and the maximum distance for one making an interconnecting flight exceeded 4,000 feet. With the need for parking space for airliners, terminals were stretching out and adding "finger" wings.

What Saarinen did was to eliminate the need to bring the still-bigger jets anywhere near the terminal. He arrived at the concept of the mobile lounge —a departure lounge on wheels, a part of the terminal that detaches itself from the building and travels out to wherever the plane is conveniently parked or serviced. As a result, Dulles' soarin roofed terminal building is only 600 feet long. passenger can make it from car to plane in as little as 116 steps.

At left, the newer Plane-Mate lounge is parked near the maintenance area at Dulles. The protuberances atop it are the screw jacks on which the lounge raises and lowers itself. The transition device for the Plane-Mate (above) is a completely enclosed, full-width walkway that can be angled to mate with all jetliners, including the 747, L-1011 and DC-10.

Actually, the mobile-lounge idea provided even greater convenience. According to Huge Gudger, chief of the Mobile Lounge Branch, interconnecting passengers are sometimes transferred directly from one flight to another via the lounge without going through the terminal. This is done for the convenience of the passengers and the airlines, for example, when an arriving flight is late and has passengers for another waiting flight. In addition, arriving passenger lounges are programmed to dock at the gates nearest the down escalator, resulting in the fewest steps possible from plane to baggage.

The benefits of the system are still broader. It permits a more concentrated terminal building; reduces the heavy cost of taxiing jet planes, a definite plus in this period of fuel shortages; eliminates jet noise, fumes and blast from the terminal area; is easier on aircraft maneuvering and eliminates the need for precision parking; divorces operational facilities from passenger-handling facilities and thus reduces congestion; and, in addition to providing the maximum in passenger comfort, completely shelters the travelers from the elements while walking.

The mobile lounge at 38 tons net is the largest ground passenger vehicle on rubber tires. Dulles has two types: the conventional—the original—which accommodates 100 passengers with 72 seats in its 54-foot length, and the Plane-Mate, which was designed for the higher Boeing 747, L-1011 and DC-10 and holds 150 passengers with 91 seats in its 49-foot length. Both vehicles are 16 feet wide.

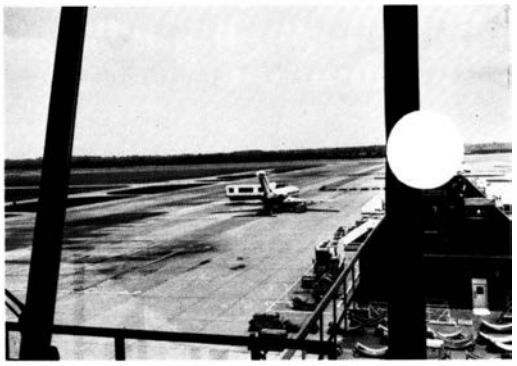
The conventional lounge, which is two-ended like a ferry boat and drives from both ends, uses a pair of catwalks, or "transition devices," to reach the plane's door. It can adjust them from 9½ feet to about 13½ feet vertically. The Plane-Mate has a single driver's cab and a single, full-width walkway that extends out to the plane with a bellows. It adjusts from about 6½ feet to over 18 feet on a pair of screw jacks that permits the lounge itself to rise. The passenger door on the 747 is 15 feet above the ground. Dulles sports 21 conventional lounges and a dozen Plane-Mates.

Mobile lounge operator-leader George Burgess

Passengers start to gather in a mobile lounge after the first call, relaxing in air conditioned comfort. There are 72 seats, with standing room for 28 more plus carry-on luggage.

The business end of a conventional mobile lounge with its staircase unfolded. It can serve for easy access of flight crews to the ground.

Mobile lounge controller Bob Church talks to airline operations, as controller Harold Blaylock feeds data to the terminal from the mobile lounge control tower.



Below the lounge control tower on the jet apron, a 727 gets attention from a conventional lounge next to the airline service buildings.

locked the controls in the cab of a conventional lounge docked at the terminal. Burgess is in charge of training and trouble-shooting for the operation, as well as an operator, particularly for special events, like hauling dignitaries.

He unplugged the power cable that supplies the lounge with lighting, heating and air conditioning while parked and started the diesel engine on the end facing the runways. In the single power unit of the Plane-Mate, he'd have to back out the monster vehicle but would be aided by a TV monitor of the roadway behind, in addition to mirrors.

As he started out toward the runways, Burgess radioed ground control for clearance to cross the field. This living room on wheels fools some unsophisticated passengers, he explained. He's been asked, "Which is the sunny side?" and more than one little old lady having boarded the lounge has asked, "When are we taking off?" One man boarding the lounge from an arriving flight had asked Burgess hopefully, "Do you go to the Statler Hotel?"

Past the runways, Burgess turned toward a long line of low airplane service buildings on the jet apron, in the middle of which stood a control tower —not the ATC tower, however. This was the mobile lounge control tower. Controllers Bob Church and Harold Blaylock were on duty in the cab.

Blaylock sat at a teletypewriter posting flight arrival and departure information that is automatically entered on the announcement board in the terminal building. This information can be checked for accuracy by the closed-circuit TV monitor next to him.

Church described the tower's operation: "The airlines advise me in advance of flight arrivals and departures and the number of lounges needed via this hot-line telephone. We monitor the airline frequencies. When a plane calls in 12 miles out, we've got 15 minutes until they're ready to unload and we have the lounges ready. That's when we post the arrival time to airline operations and assign which of the 24 gates is to be used.

"Then we call the mobile lounge supervisors in the terminal with that information and the ramp location, who, in turn, make out a trip ticket and assign the driver. Here we make out a lounge data strip, similar to a flight data strip. We even have a "shrimp boat" setup to keep track of which lounges are at the terminal and at which gate and which are here at the ramp."

"The system works beautifully," says branch chief Gudger, "just as it was designed to. I understand Montreal uses mobile lounges and that some have been ordered for Madrid, but I'm surprised that the concept hasn't carried more momentum."

Burgess backs a Plane-Mate away from the terminal, using mirrors and a small television monitor that shows the roadway behind. The conventional lounge is double-ended.

Federal Notebook

EMPLOYEE CIVIL RIGHTS

Because of the Supreme Court decision this spring that a Federal employee can be fired without a prior hearing for criticizing fellow employees, supervisors or their agencies in public, the American Civil Liberties Union has asked the Senate Subcommittee on Constitutional Rights to draft legislation to protect our free speech. ACLU proposes restrictions only for such as national security, confidential relationships, patent information, invasion of privacy and impairing civil rights. Both houses are considering legislation. AFGE and NFFE are also seeking Congressional remedy.

■ Sen. Quentin Burdick (ND) is seeking co-sponsors for a bill to restore political action rights to Federal employees, and Rep. Thaddeus Dulski (NY), chairman of the Post Office and Civil Service Committee has introduced a bill to revise the Hatch Act. The latter would permit us to run for partisan elective office, participate in political meetings, distribute or publish campaign literature and originate or sign nominating petitions. ■ Sens. Sam Ervin, Jr. (NC), and Charles Percy (III), chairman and member of the Government Operations Committee, have launched a bill to protect an individual's right to privacy of information about himself via the establishment of a Federal Privacy Board. This board would oversee the handling of such information by governments and private organizations and would be empowered to hold hearings subpoena documents, issue cease-and-desist orders and recommend legal suits. The Civil Service Commission has ordered the deletion from Form 171 question 29 on medical conditions. The move is designed to protect the privacy of personal medical records. Though present supplies of the form have the question, applicants no longer have to answer it.

SURVIVOR ANNUITY STILL COSTS

The houses of Congress can't agree on how to make the survivor annuity program more equitable. The House would eliminate entirely the pension reduction required to provide for a spouse. The Senate version, which would cost half of that of the House's, would restore the full annuity when the spouse dies before the retiree or when there's a divorce. The Senate rejected the House measure without calling for a conference. The House likely will call for one rather than accept the Senate version.

FASTER APPEALS

The Civil Service Commission has implemented a new one-shot CSC appeal system that is hoped will cut appeal processing time from about 300 days to 90 days or less. Appeals from adverse actions will no longer be handled by agencies first. Basically, if the employee finds the CSC appeal result unsatisfactory, he can seek judicial review in the Federal courts. ■ Rep. Patricia Schroeder (Colo) has introduced a bill that would require agencies to give employees selected for firing full hearings and decisions before firing; provide for a one-shot agency appeal; full due process, including cross-examination and transcripts; the right to subpoena agency witnesses; appeals hearings conducted by administrative law judges, the next step being the Federal courts; and continuing the 30-day advance notice rule prior to firing.

Controllers work their positions at the new homebuilt T-shaped console at the Santa Ana, Calif., Airport Tower. The old, high-angle turrets next to the cab windows obstructed the view and limited equipment servicing access.

GETTING THE JOB DONE

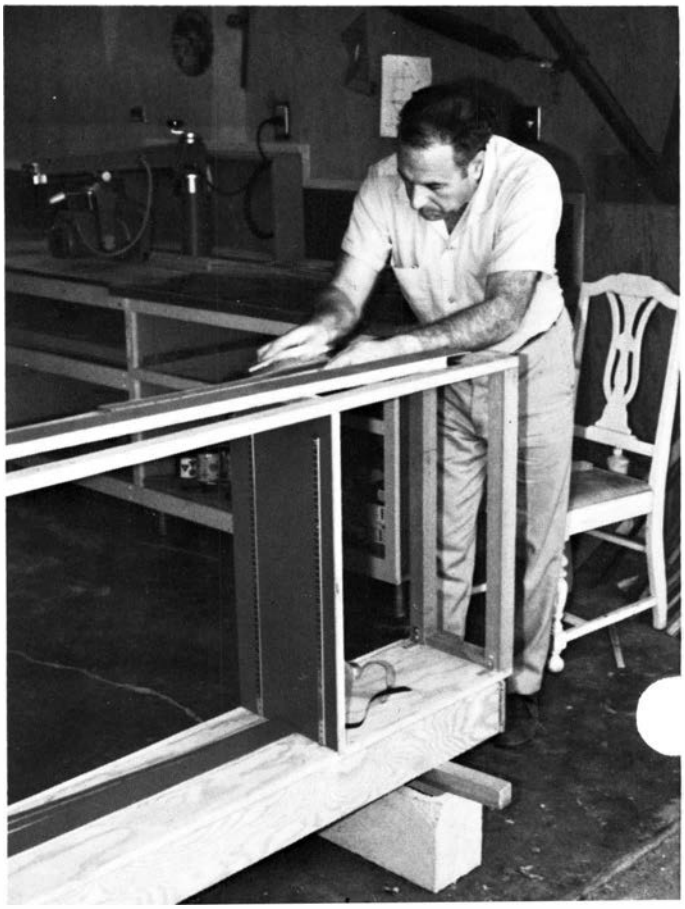
When you've got more than 200 projects under way at any given time, you've got to push ahead. This is what faces Western Region's Facilities Establishment Branch of the Airway Facilities Division, which can't afford to let problems with any one block progress.

The cab modernization for California's Santa-Ana-Orange County Airport Tower was all geared up—the design of its new consoles had been completed—but a funds freeze forced the delay of an Invitation to Bid, whereby the job would have been done by a private contractor. Since the length of the delay was not known, it was decided to go ahead with constructing the consoles with the staff available in the branch.

Olin Heikkola of the Electronics Section and Jack Crenshaw of the Environmental Section were the assigned project engineers. Sal Claramunt, civil engineering technician, accepted the task of doing the carpentry in his own garage.

One of Claramunt's challenges was to build the consoles in small enough units to be carried up the narrow staircase in the tower. As the sawdust mounted in Claramunt's garage, Douglas Booth, assistant project engineer from the Electronics Section, began plotting the relocation of the electronic equipment into the new consoles. His problem was

Civil engineering technician Sal Claramunt does some finish sanding on part of the assistant chief's desk.



The nearly completed assistant chief's desk combines runway and control position visibility with monitor panels.

that there was to be no new equipment; the existing tower equipment would have to be transferred without interrupting service at the nation's second busiest tower.

The novel configuration for the tower cab positions was conceived by chief Jack Denend and his staff. They built a cardboard model to sell the idea of a T-shaped operating console with positions on both sides of the base of the "T", the base being parallel to the runways.

With this layout, the controllers at each position could perform all of their duties without leaving the immediate position area and see everything from cars parked at the base of the tower to aircraft flying overhead. The assistant chief's desk, with all monitoring panels and override capability, would have an unobstructed view of the control positions and the runway traffic patterns. The design caused no trade-off in maintenance accessibility, but rather made it easier for technicians to get to terminal boards and the back of the equipment.

Six months after the inception of the idea, the dismantled consoles were shipped to the tower. For the next two months, coordination, cooperation and patience were the order of the day. The old consoles were replaced by the new, section by section, while technicians moved nests of patch cords within terminal cabinets, keeping the equipment operating. From time to time, the controllers would hold a section of equipment for the technician making last-minute adjustments, all the while continuing to serve the 1,700 aircraft operations daily. The installation technicians were Jim Randall and Jack Wimmer, with the final interface wiring accomplished by Jay Jacobson, Jose Lliteras and Alan Chew.

When the job was completed last November, the team effort had resulted in savings of about $15,000 to the agency and had kept the tower continuously on the air.

—By Bob Huber

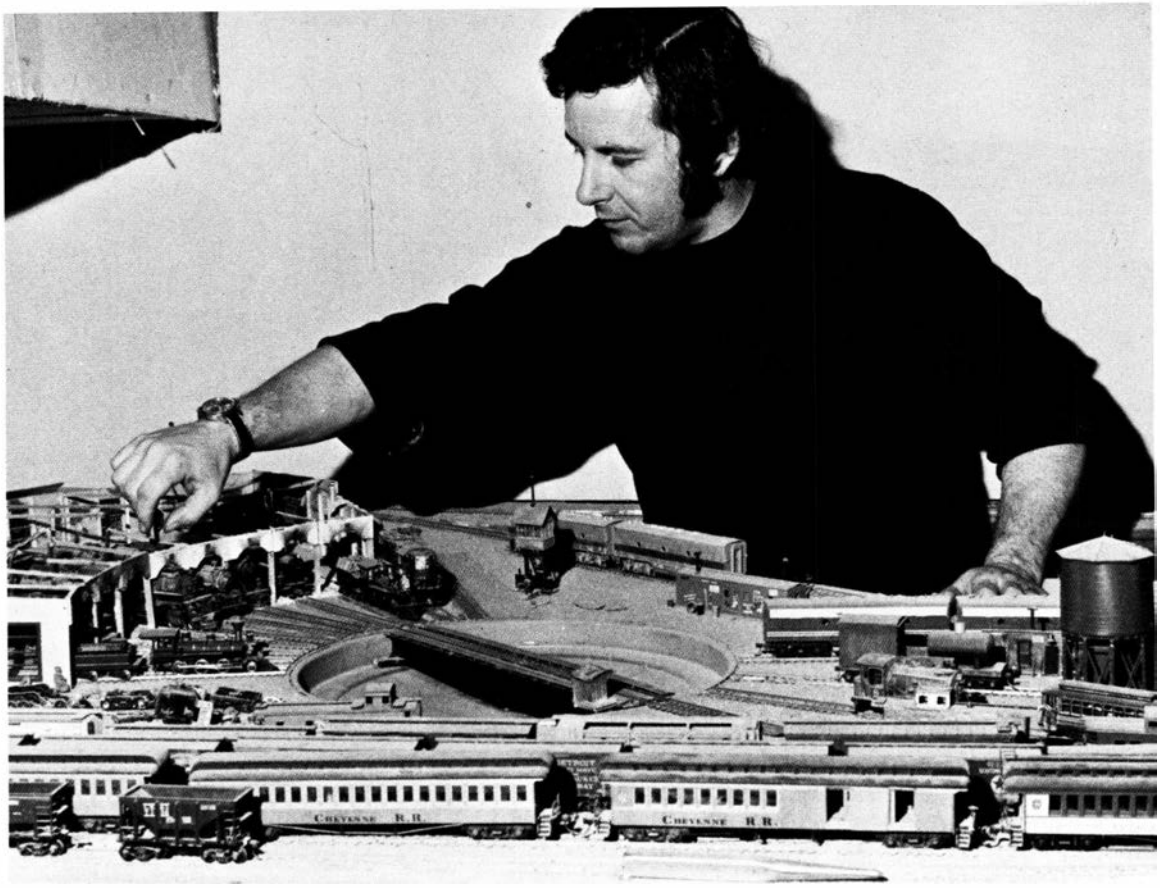
SMALL WORLD

SILENT SPRING . . . History and literature are replete with stories about a terrible "hush" or "stillness" which fell over the land before some extraordinary event, such as an earthquake, volcanic eruption or tidal wave. Now Tom Higgins of SRDS in Washington thinks he knows why. In a recently published report on sonic boom studies in Texas, he notes that song birds were completely silent four to eight seconds before a sonic boom was heard. This silence, he adds, coincided with the arrival of a seismic signal propagated through the ground which, in effect, served as an early warning system for birds and other wildlife . . . but not people. Nature lovers will be happy to know the effects of the sonic boom were short lived and the song birds were all back in tune within 10 seconds of the event.

ROPE TRICK . . . Give some people enough rope and they'll hang themselves. Still others will use it to save themselves. Take the recent case of a Cessna 210 pilot who was having trouble extending his retractable landing gear on approach to El Paso's Sunland Airport. When he reported his predicament to the El Paso, Tex., FSS, specialist Len Juska said, "If only you had a rope, your passenger could lasso the gear leg that's giving you problems, pull it into position and hold it there until you're on the ground." Well, the whole point of this little story is that the pilot did have a rope, his passenger twirled a lariat like Will Rogers in his prime, and the plane made a safe and uneventful landing.

X-RATED FLIGHTS . . . The U.S. Attorney in Cleveland has taken a local pilot to court on behalf of FAA asking $6,000 in civil penalties for violations of FAR 91.79 and 91.9. In case you're not up on your FARs, 91.79 covers minimum safe altitudes and 91.9 careless or reckless operation. The pilot is charged with flying too low over a Cleveland-area nudist camp last summer, not once, not twice but eight separate times.

X-RATED FLIGHTS (CONT.) . . . Seattle's Space Needle boasts of its "spectacular view," but patrons still weren't prepared for the sight of a "streaker" hanging from the struts of a light plane. The plane made two trips around the 550-foot-high structure and then flew off. Some patrons reportedly applauded the show but not FAA, which is investigating the incident.



ATCS Vinton Lampton's busy hands make an adjustment to a locomotive in the roundhouse of his HO-gauge train layout. He handmade the rolling stock, buildings and switches.

The Busiest Hands in Town

It's an old adage that the busiest people always seem to find the time to do still more. It's something about organizing one's time. If that's the case, Vinton Lampton is a master organizer and a glutton for keeping busy.

His recreation is work. In fact, he considers his shift as a controller at the Detroit City Airport Tower just the aperitif for his day. "I love this job more every day," he says. "I have so much fun working, the guys tend to think I'm goofing off." One secret to his cramming a bit more living into each day than seems believable is that he only needs as little as three hours of sleep a day.

So, while many of us arrive home after a hectic day, looking forward to taking it easy, perhaps relaxing with a glass of something before dinner, Lampton may be making his own wine, cooking, sewing and tailoring, building airplanes in his garage or a powered model in his basement, repairing his truck or other family cars, making furniture or reupholstering it or reconstructing or adding to his HO-gauge trains—which include 150 homebuilt cars, 300 buildings, 20 locomotives and 80 handmade switches.

Those are just some of the ongoing jobs. He has also built a color TV set and a cabinet for it, fabricated a backyard swimming pool, built a large, two-bedroom home for his mother (except for the heating plant) and did most of the work on homes for a brother and an uncle.

What's in the wind? When he completes the single-seat Buecker-Jungmeister I bi-plane taking shape in his garage and takes lessons in flying a tail-dragger and in aerobatics, so he can fly it, Lampton wants to build a two-story Tudor house for his own family—wife Sharon, children Kathy and Kenney and their two dogs and one rabbit.

Most of Lampton's projects started because he couldn't afford to buy what he could make, because he couldn't buy what he wanted or because he could make it better.

His sewing and tailoring began after he stitched up a canvas top for a 1931 Ford hotrod. "The things I learned in drafting and architectural drawing classes, plus work in a machine shop, carried over to sewing," he said. "So, I made patterns from freezer paper and went to work." After the Ford, he found himself recovering a couch and some chairs. Then he sewed several sports coats for himself some dresses for his wife.

Lampton actually has two airplanes in his garage. The first, a two-seat Cavalier low-wing monoplane

Mrs. Olga Krynski, Detroit City Tower secretary, visiting the controller, admires some of the detail of the lining of a sports coat made by Lampton, whose touch is everywhere. He cast in plastic each of the bricks in the wall behind them and then assembled the wall itself.

of French design, he gave up on because he wanted something with more aerobatic capabilities. He had two buyers for the half-finished craft, but the energy ortage hurt him. One prospective buyer couldn't ıload his luxury car to buy it, and the other in the depths of the crisis couldn't get the plane hauled. Lampton was thinking about devising a carrier for his truck and hauling it himself.

The second plane, an 8/10ths-scale World War II German trainer is already completed, except for instruments, brakes, fuel tank and the engine. He's already purchased a Lycoming 290 cu. in. ground power unit that he's overhauling on his home-built pool table.

As to his cooking, it tends to be Italian or Mexican

Perhaps he didn't have time to change out of his home-tailored sports jacket before getting to work on his home-built scaled-down Buecker-Jungmeister aerobat. Here, Lampton fits the lower wing into slots on the plane.

Another wall of Lampton-molded bricks is the backdrop for his culinary activity. He's whipping up an Italian dish on a range he installed, along with the oven at right.

dishes, though, according to his wife, he's a hamburger king.

Lampton worked as a switchman for 15 years in the telephone company before he joined FAA. He had learned to fly, earning commercial and instrument certificates, but could not find a flying job. His wife suggested that he could succeed without flying by becoming an air traffic controller, which he did.

Flying lessons and then rotating shifts at the tower prevented his getting his electrical engineering degree. He had been working full time at night at Ma Bell and going to school full time during the day, while working on his projects. However, he has taken 11 Academy correspondence courses since joining FAA four years ago and now has four more lined up. Yes, that sounds like Vinton Lampton.

It may be his workbench is loaded down with another project, for Lampton here is assembling the brakes for his aerobatic aircraft atop his homebuilt pool table.

DIRECT LINE

Q. Will a jet aircraft back up if the thrust reversers are left open and power applied to the engine?

A. It's not the usual question for "Direct Line", but we aim to please. Here's the answer provided by Flight Standards. Reversing the thrust of a turbojet- or turbofan-powered airplane may, indeed cause the airplane to back up. The possibility of this depends on the interplay of a number of varying conditions, including (1) The percentage of the total forward thrust that is applied to reversing. (2) The degree that the exhaust and/or fan flow paths are deflected forward in opposition to the normal aft flow pattern. In some airplanes, the engine installation is critical with regard to the possible reingestion of exhaust gases under certain operating conditions (like in crosswinds), and limiting forward deflection is necessary to avoid this. (3) The power condition (throttle setting) that may be engaged during the thrust-reversal operation. The normal employment of reverse thrust is for braking or landing, but this requirement may not necessarily always result in a configuration that will also be capable of backing up that airplane.

Q. In the April issue of FAA WORLD in "Federal Notebook," there was reported a decision of the Comptroller General (B-174522) that a Federal employee using a privately owned camper-trailer as a place of lodging while on official business may claim per diem. It seems that this would be advantageous to the government and quite a savings, but how much is the per diem and the lodging rate for such temporary travel?

A. The per diem allowance for use of a mobile dwelling (trailer, camper and mobile home) during temporary duty travel consists of a maximum of $12 for meals and incidental expenses, plus reimbursement for the average cost of (1) parking and utility fees if the latter is separate, or (2) rental and parking fees and necessary utility fees. The maximum per diem rate payable is $25.

Q. Last year, my facility chief told me that he would be unable to rate his employees as high as they had been rated in the past. Therefore, I did not complain about the decline in my ratings, assuming that all of us would receive about the same rating. I was astonished to learn that three of my coworkers received various awards within six months. I was told at a previous duty station that before any award could be justified, you must score the very highest in all areas and receive recommendation for commendation from users of your service. I checked around the local fixed-base operators, and no such recommendations had been made. Is the chief falsifying records?

A. In 1972, when DOT adopted and implemented the PER system, employees were informed in a variety of ways of the revised rating philosophy aimed at achieving greater realism in the annual rating process. After PER was installed and explained, many supervisors began to rate employees more in line with the letter of their performance standards. In many cases, this resulted in less-inflated ratings. Your regional office reports that as a result of your letter, employee ratings at your facility were reviewed and found to be consistent with current PER philosophy and criteria. The primary portion of the PER involved in award determinations is Part II, Performance. Criteria for performance awards vary, but generally require that an employee exceed or far-exceed requirements set forth in his major job assignments. Positive user comments would be helpful to support an award; however, they are not a deciding factor, as implied. Specific awards criteria information can be found in Orders 3450.7B and 3430.3A. Your region reports that during Fiscal 1974, two awards were given at your facility, both of which were properly documented and met required criteria.

Q. We would like to know the name, grade and sex of who actually answers the questions in "Direct Line." Our bet is that you are white, male and over grade 12.

A. You're right and you're wrong. No one person answers the queries; in fact, this is the first time the editor has had a crack at answering one—he certainly doesn't have the expertise to know everything about AT, AF, personnel, travel, etc., etc. The answers are provided by people in the headquarters and regional operating offices appropriate to the subject asked about. From personal knowledge, I know that they are male and female, black and white. Some are below GS-12, some are well above. Of course, policy clearance is provided by more rarified grades. Finally, you lose your bet: the editor only meets two-thirds of your criteria.

Q. A real-estate transaction was made in my behalf in July of 1969. At that time, the lender's Loan Origination Fee was a reimbursable expense. A year later, the Comptroller General ruled that the fee was part of the finance charge and not reimbursable. I was asked by the accounting division to make

prompt remittance of the non-reimbursable item. After having read a "Direct Line" answer on this subject in the March issue, I asked my savings & loan about it. Their answer includes the opinion that the fee is not a finance charge but rather a fee for setting up the mortgage. Now, can I recover the fee?

A. I'm afraid not. The fee charged for the mortgage loan covers the cost of their doing business, which is the same as a finance charge, regardless of what they want to call it. The Comptroller General continues to rule that the fee is, in effect, a finance charge and is not reimbursable.

Q. A journeyman controller performing the same job in the same location for several years requested a new PER for bidding purposes. Ninety days had passed since his last PER. He wasn't under my supervision for his last PER, but he had been for over 90 days. In accordance with Handbook 3430.3A, I submitted the old PER form in its entirety plus new Parts I and IV, with the statement, "For bidding purposes." The regional personnel office now says that I must complete Part II. As I understand it, Part II Performance is what the employee has done for the whole year, not for a shorter period.

A. True. Part II evaluations reflect the supervisor's assessment of the employee's actual work performed over the past year. Once the evaluation is made, discussed with the employee and concurred in by the second-level supervisor, it becomes the official record for that rating year. Unless the rating supervisor erred in making the evaluation, there is no legal way the agency can change the assigned ratings in Part II. The evaluation of the skills. knowledge and abilities listed in Part IV, which should correlate fairly well with the Part II evaluations, are used in the agency's operating programs, like MPP and other position-change actions. It seems only fair that when an employee makes a significant gain in performance for 90 or more days following the annual evaluation, he should be able to be credited with that improved performance if he bids on a job. For that reason, it was decided to permit updating Part IV ratings under the conditions outlined in Handbook 3430.3A, paragraph 44c.

Q. Please supply the rules concerning premium pay in the two following situations: (1) An employee works eight hours each day of the following weeks—Tuesday through Sunday, Wednesday through Monday, Thursday through Tuesday and Friday through Wednesday. How many hours of overtime pay is due for each week? (2) An employee works from 2200 local time Saturday until 0600 Sunday; another employee works from 2200 Sunday until 0600 Monday. How many hours of Sunday premium pay is due each employee?

A. In the first question, you are actually talking about more than four workweeks. Since a workweek begins at 0000 on Sunday, the rundown is as follows: He would work Tuesday through Saturday of the first week; second week —work Sunday and Wednesday through Saturday; third week—work Sunday and Monday and Thursday through Saturday; fourth week—work Sunday through Tuesday and Friday and Saturday; fifth week—work Sunday through Wednesday and Saturday. In this situation, then, no overtime would be paid, since the employee did not work more than eight hours in one day or 40 hours in any one week. In the second question, both employees would receive eight hours Sunday premium pay, assuming in both cases these are regularly scheduled tours.

Q. My husband is being treated for leukemia. He had his annual physical in November. Had a blood test been required then, his condition could have been discovered and treated immediately instead of four months later when the symptoms put him in the hospital. As a controller receiving these physicals, he had always assumed that they were enough to give him a clean bill of health. Not so. I think a blood test should have been mandatory. I feel that the government and FAA in particular have some responsibility for my husband's present condition. Even though we have medical and hospital insurance, there are untold other expenses not covered, and I feel that the government's responsibility should be extended to cover them.

A. The Federal Air Surgeon has reviewed the case with the regional flight surgeon. It is difficult to be positive, but your husband's illness may have begun only a short time before his symptoms appeared, and it is unlikely that any routine blood examination accomplished months before would have shown anything. Although sometimes against the wishes of some controllers, we have insisted upon more comprehensive examinations during the annual evaluation rather than less. The Air Surgeon believes that early detection should result in better control of employee health, longer careers and improved flying safety, although certain illnesses may not be detected by routine screening procedures. Personnel has checked all known references but, unfortunately, can determine no further financial entitlement for medical or related expenses.

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.

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Mrs. Betty Vail, manager of the Lebanon, N.H., Regional Airport, got a demonstration of her new crash-fire-rescue truck, obtained with 82 percent ADAP funding for compliance with the Airport Certification Program. Flanking her are Bill Depuy (left), airports certification safety inspector in the Airports Division, and Don Saunders, chief of the Lebanon Flight Service Station.