

#### **FAA WORLD**

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The cover: FAAers getting their kicks away from the job. "Mush, you Malemutes" is the call of ET Bill Chambers, Everett, Wash., who races dogsleds with son George. Jim Carroll jogs and races with the Maine Masters when not honchoing the Portland, Me., CS/T. Maintenance technician Wayne Roderick, Pocatello, Ida., has a railroad empire of 25 locomotives and 300 cars in his basement.



#### The Present Is Our Prologue

With Fiscal 1973 underway, FAA faces a new day of progress that is but a continuation of the plans and work of yesterday. Our programs will go on unimpeded as the growth of aviation drives us on. In fact, we are in the midst of an upturn in aviation growth that will see total aircraft operations increase this year by 8%, the number of IFR (Instrument Flight Rules) aircraft handled by our system rise 5% and IFR operations handled by our towers up 9% over last year.

We are pressing on with our programs of improvements to the aviation system in terms of equipment, personnel and procedures. Some of the more important new facilities that will be commissioned in Fiscal 1973 are 18 airport traffic-control towers, 18 airport surveillance radars, 64 instrument-landing systems and 44 automated radarterminal systems.

In the area of landing systems, we have completed plans for developing a new microwave landing system. Six firms are under contract to develop feasibility-demonstration models this year. Prototype development and operational evaluation of the system is planned to begin in 1974 and initial operational deployment in 1978.

In another aspect of the wave of the future to which FAA belongs, funds have been requested to finalize plans for experimental satellite tests needed to define the role of satellites in future traffic-control systems.

Our efforts will be expanded in the short-haul aircraft area, and we will just about double our expenditures as we seek to further reduce noise and emission pollution. At the same time, we will carry on our flight-safety criteria and accident-prevention programs.

All of this points toward the need to double the capacity of the airport/airway system by 1980 and to quintuple it by 1995; this we will do. "Service to man in flight" is what it's all about.

JOHN H. SHAFFE

# Skinning the Cat\* and other NAFEC tasks

\*Category IIIA—Landing conditions in which the pilot has no external visual cues, and runway visibility range is 700 feet.



Exploring and experimenting in areas where man has had very little experience, an FAA team at NAFEC has launched a program to significantly extend all-weather landing technology. This is just one of some 225 projects underway at the eight-square-mile facility.

"Developing recommendations on a total system for landing in Category IIIA after months of testing will be a big step forward in instrument flying—an evolutionary rather than a revolutionary process," explained James R. (Mike) Nelson, chief of the Terminal Navigation Branch, which is within the Systems Research and Development Service at Washington headquarters.

As project manager back in 1968, Nelson flew a C-141 Starlifter in simulated all-weather landings at NAF-EC along with the regular test pilots.

"To the uninitiated who had heard that we made successful automatic landings, the job had been done," Nelson said wryly. "This is akin to those skeptics who witnessed the flight of the Wright brothers and couldn't envision the improvements to come."

In a visit to FAA's test-and-evaluation facility near Atlantic City, one could see heavy earth-moving equipment rumbling around its 10,000-foot main runway in a \$1.8 million refurbishing project. The first U.S.-manufactured Category III airport system is being installed there this year. The hardware package for it includes three transmissometers, which send runway-visibility information to the air-traffic-control tower; radar that reports traffic on the airstrip; runway lights; localizer and glideslope transmitters; and antennas. The airborne system and the way it inter-

NAFEC's Instrument Landing Systems Section chief, John Aleo, watches earth-moving equipment refurbishing the 10,000-foot main runway, while standing next to a transmissometer, which measures runway visibility.

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Controller Art Filius is observed by STOL simulation project manager John Maurer (center) and Experimentation Branch supervisor Howard Slattery. Filius works a computer data-base problem using New York geography to work simulated Manhattan STOLport and JFK STOLstrip traffic.

faces with the human elements will be the keys to making the entire system work.

The making of a test Category III airport at NAFEC will coincide with the establishment of Dulles International Airport as a commissioned Cat III facility, except that Dulles' components are foreignmade. Also, Atlanta concurrently will be commissioned as a Cat II to get reliability data for the Cat III system.

Managing the effort at NAFEC is Air Force Lt. Col. Edwin Johnson, a trim veteran of Vietnam combat-flying in F4 Phantoms. He maintains operational proficiency with the Air Force in C-141s out of McGuire AFB, New Jersey, while on loan to FAA.

"No military aircraft is certified for Cat III at this time," Johnson mentioned. "Experience in that environment is rather meager. Our primary goal here will be to achieve automatic touchdown with a ground-based fail-survival instrument-landing system." He explained that the guidance system will include back-up equipment, permitting the monitoring equipment to switch to alternate transmitters.

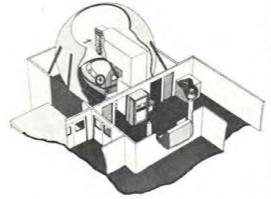


While Johnson will be looking at the total system to develop recommendations on how a Cat III airport is to be used, a co-worker will handle the groundbased ILS system. He is John Aleo, eight of whose dozen years at NAFEC have been with the ILS. Of Johnson, he says:

"Very few people equal his experience in blind landings," Aleo says. "Johnson knows what the rules are and what the equipment has to be and the necessary safety checks. If you ever saw the movie his group starred in, covering Cat III low-visibility



Managing the NAFEC program for Category IIIA landings is USAF Lt. Col. Edwin Johnson (right), discussing forthcoming flight tests with Richard Cleary, project engineer for flight controls and displays. The tests will be flown in the FAA Convair 880, which carries electronics packages to add inertial information to the glideslope signal. Jess Terry of pilot training is in the cockpit.



Creating realistic collision-avoidance simulation is possible with NAFEC's new specially designed simulator. The projection system with a 20-foot-diameter dome creates a realistic midair situation as close as 200 feet. Project manager Paul Rich (left) and assistant manager Warren Crook operate the console that monitors how well a pilot is flying the "aircraft." It will help in designing a general-aviation pilot-warning indicator.



landings in San Bernardino, Calif., it would frighten you. You see the runway when the wheels hit!"

The only way the operations succeeded, Aleo said, was the obvious excellence of the safety checks that Johnson had incorporated in those tests. Besides making films of their work, the Cat III group will report on numerous psychological, physiological, biomedical and other human factors associated with the work of test crews, test equipment and a test Category III airport. After initial flying of the system in FAA's Convair 880 in fair weather, an Air Force C-141 with new-generation cockpit displays will be flown for real-time experience in fog. A new high-resolution radar that presents a realworld runway picture in the cockpit in zero-zero weather will also be evaluated to see whether it provides additional assurance to the pilot that the ILS is indeed bringing him down safely.

"By January," Johnson said, "the elements will be debugged and we'll ask U. S. airlines to fly with us as technical observers and to bring in their new sophisticated jumbo jobs. The more hazardous testing will be done by the agency, of course."

Turning from the Cat III project, we looked in on a handful of other progams underway at the 5,054acre test facility.

We found SRDS program manager Robert Mc-Guire talking with two aerospace engineers who conduct airport runway-friction testing.

"We have to face the challenge of large aircraft coming into slippery runways and know whether the runways are able to accept them," McGuire said.

The engineers, Charles Grissel and Bill Hiering, recently completed a runway-friction survey of 31 runways at 10 major airports. They have four different vehicles being evaluated for collecting brakeslip data, one of which—a diagonal-brake vehicle—has panel pushbuttons for selecting a variety of brake combinations for the wheels. Grissel and Hiering are gathering data on how runways made of

An eight-element Alford O-ring localizer antenna that rises only 6½ feet will be used to test Category III landings. ILS Section chief John Aleo, inspecting the new antenna, says it's a major factor in evolving all-weather landings.





Engineers Julius Gassmann (left) and Richard Hill are working on devices to detect fuel-leak fires that burn holes in engine burner cans.

asphalt, concrete, portland cement and aggregates affect braking under wet and dry conditions.

Above the building that houses the frictionengineers' equipment, we met Paul Rich, manager of Visual Collision Avoidance, who showed us a laser that is helping him line up optics for testing. He blew smoke into the setup to make the onemillimeter-diameter beam visible. Rich then showed us a GAT-2 flight trainer almost surrounded by a globe 20 feet in diameter. It should have cost us 10 times its \$90,000, he said. By scrounging a complete projection system from an F-111B simulator and other parts, he and assistant project manager Warren Crook put together what will soon permit them to simulate realistic mid-air collisions and study what the pilot does about it. "We'll measure the pilot's eyes-see how he's looking, what he concentrates on, how he scans his panel, looks for other aircraft and uses runway lights," Rich explained. The optics alignment was for this project.

At a nearby test site were Richard Hill and Julius Gassmann looking at the eight burner cans of a J-57 jet engine on a test B-57 aircraft. They are testing devices to warn of fuel leaking and burning through the cans. They've tested numerous

devices in the search for an effective way of detecting this high-intensity flame that could put an airplane in jeopardy.

At the experimentation branch, we saw the training of en route controllers with pilot simulators. A new program is underway to determine the effect of short-takeoff-and-landing (STOL) traffic on high-density terminal areas. Supervisor Howard Slattery showed us 60 rated controllers, pilots and project people busy following a "scenario" to develop a data base of conventional traffic worked on radar, to which would be added STOL traffic. In the second phase, the program will put STOL strips around major airports.

Simultaneous with our NAFEC visit was the announcement that FAA had leased the Atlantic City airport terminal for 10 years, with annual renewal rights. A new R&D test bed for evaluating new or augmented automated air-traffic-control terminal systems is being established. Called the Terminal Automation Test Facility (TATF), its operation will evaluate various methods of expanding the capabilities of the basic automated radar terminal system (ARTS III) presently being installed at 61 major airports.

—Text and photos by Thom Hook



Observing part-time employees working as simulator operators at a radar scope is Howard Slattery of NAFEC's Experimentation Branch. These FAAers respond to instructions from controllers in another room on problems in adding STOL traffic to conventional air traffic.



- Q. Other Federal agencies have a system of gradual retirement. Under this system, prospective retirees are permitted to take Leave Without Pay for as long as six months to determine the desirability of retiring. Since FAA does not have a similar gradual retirement plan, is there any way that LWOP can be granted to a prospective retiree to determine the desirability of retiring?
- A. The "Direct Line" column in the June issue of FAA WORLD provided some reasons why FAA is not considering the establishment of a trial or gradual retirement program at this time. Tying up positions for this purpose could prove too costly a venture for the agency. Similarly, the granting of extended LWOP involves certain costs and burdens to economical and efficient operations. For example, positions are encumbered and needed services are lost; an obligation exists to provide employment at the end of the leave period; full credit for six months of each year of absence toward retirement must be granted; and free coverage of group life insurance and health benefits for up to one year must be provided. Finally, in the granting of extended LWOP, there should be reasonable expectation that the employee will return to his position at the end of the approved period with increased job ability, or with improved health, or in furtherance of a program of interest to the agency. In other words, the granting of LWOP looks toward the return of the employee to his position, rather than to his loss by retirement from the Federal service. During this austerity period, FAA has no plans to establish a system in which LWOP would be utilized to provide a trial retirement program.
- Q. What is the appropriate penalty for possible misuse of FAA identification?
- A. FAA regulations provide that an employee's Deciding Official will determine if an action warrants a disciplinary action. A decision would be made after full review of the circumstances of the incident and would be dependent upon many facts. Concerning the possible penalties, anything from a reprimand to dismissal

on a first offense may be applied, depending on the seriousness of the misuse. For further details, see Handbook 3750.4, "Conduct and Discipline."

- Q. What is the policy regarding acceptance of a fee to speak before a public group?
- A. Each case of this kind must be considered on an individual basis to determine if a particular action is compatible with appropriate regulations. In general, off-duty employees are free to address groups with or without compensation when the information discussed is available to the general public. For clarifying information on this subject, an employee should consult Order 3750.3A, "DOT Regulations on Employee Responsibility and Conduct," which conveys a copy of the Part 99 Regulations.
- Q. Washington Directive 7210.3A, Facility Management, page 22, paragraph 113, states in the second sentence: "Control personnel assignments shall be consistent with the policy that terminal and enroute specialists shall not work more than six consecutive eight-hour days without a calendar day off." The same paragraph further states that "the same personnel shall not work more than 10 consecutive hours and shall have an eight-hour break between shifts."
  Do you know of any directive that pertains to the flight service option in the same vein?
- A. The policy on work schedules as stated in paragraph 113 applies only to terminal and enroute specialists. There is no directive making it applicable to flight specialists, since they are not actually involved in the control of air traffic.
- Q. Why is it that FAA management goes all out to further the careers of technical employees but doesn't seem to care about the careers of the rest of us?
- A. The Management Training School at Lawton, Okla., is a most recent and ambitious step in our continuing efforts by which employees can upgrade their supervisory and managerial skills. The Executive Development Program (Agency Order 3110.13), announced in January, also represents a significant step in that direction. While the first priority of effort is to executive development, subsequent efforts will be directed toward programs for supervisors and middle managers. Our ultimate goal is to establish a total agency career system for first-line supervisors, middle managers and executives so that employees may advance, each according to his own career aspirations and achievements.

This is your forum. If you have any queries, write to "Direct Line," MN-30. Your questions are handled in the strictest confidence: No names are used or passed along, but please sign your letters.



The Equipment Doctors

Troubleshooting scan-converter equipment is displaychannel crew chief Dave Lattanzio.



Technician Gene Stevens gets the voltmeter and oscilloscope ready before starting the diagnosis for a maintenance job he's doing on the microwave-link terminal

Like a medical doctor, the FAA technician approaches today's complex equipment with a "bag" of diagnostic tools and a fund of knowledge. Whereas the physician uses a thermometer to check the patient's temperature, the technician may roll up his oscilloscope to check the equipment's electrical current or voltage. Both are trying to figure out what's wrong so they can cure the trouble.

By studying the screen on the oscilloscope or the dial of a voltmeter, the technician gets a visual picture of the electrical health of the equipment. Since he knows what the normal pattern or reading should be, he knows that he's located the trouble when it's askew.

The oscilloscope is a tried-and-true tool for troubleshooting, but today, particularly when he is working on highly sophisticated computer equipment, the technician is likely to start his diagnosis using some other technique.

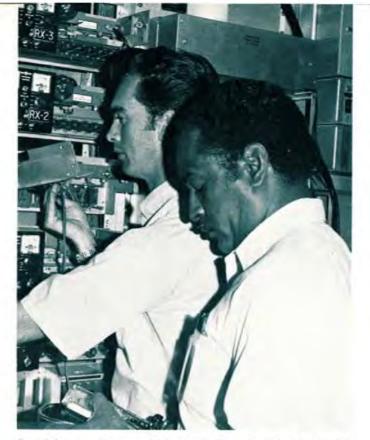
For instance, when Robert Trauger, a computer crew chief at the Washington En Route Center, is troubleshooting the huge IBM 9020 computer complex, he is likely to begin as a doctor would by asking the computer itself what is wrong. This is done by running a test tape on the computer. The tape checks out the hardware by testing all possible response combinations. The error, or trouble, is then printed out by the machine.

Referring to the computer affectionately as "he," Trauger said, "He gives us a general idea of where the trouble is; then we may run additional diagnostic tapes to further localize the malady. Then again, we might be able to go right in with an oscilloscope to pinpoint the bad circuit."

At this point, Trauger explained, the technician wouldn't try to repair the errant circuit—he'd merely pull the circuit card and snap a new one into place, pretty much as ballyhooed in some recent television-set commercials.

I was looking things over at the Washington Center with the Airway Facilities Sector Assistant Manager, Charles Gobs, who was subbing that day for Manager R. E. Mikesell, Jr.

We were in the basement of the center, surrounded by electronic gear, when he pointed to a steel cabinet with its doors open. "Take a look at this computer update equipment. This is the CUE you hear the controllers talking about. With this,



Repairing a microwave-link terminal at the Washington En Route Center are technicians Doug Huskins (left) and George Brown, who is keeping his eyes on a voltmeter.



A test tape is loaded into a malfunctioning computer by computer crew chief Bob Trauger.



General facilities equipment technician Ed Miller inspects the fuel solenoid on the engine generator which supplies center with electricity in case of a commercial power failure.

they can query the computer or update it without leaving the control position."

Electronic technician William Dutton, hard at work on the CUE, answered some questions for us. He explained that several control sectors had reported that they were unable to enter messages into the computer. He said that he already knew generally the site of the trouble and was pinpointing it by following up with a logic diagram, which is the dataprocessing equivalent of a blueprint.

We left him studying the diagram and the highly complex machine it represented.

As we continued our tour of the center's behindthe-scenes working spaces, we stopped in the flightstrip-printer shop to watch Jim Davis put a machine through its paces. He hooked up the printer to a testing console to check for spacing, timing and capitalization and to see that the machine followed commands properly—that it typed out the appropriate letter after receiving an electronic signal. The machine he was working on checked out perfectly; he explained that he was really doing confidence checks—testing the printer to insure that everything was okay. Leter, we watched environmental support specialist Jess Dailey doing a confidence check on a refrigeration control unit in preparation for the summer.

Display-channel crew chief Dave Lattanzio was found in the basement hovering over the scan-converter equipment. He could see the same picture as the controller upstairs, so he could check the equipment without even visiting the floor. He had a problem—a squawk from a controller. The range linearity on the controller's display was not up to snuff, and this is critical: It's what enables the controller to determine the distance between targets. Because of the nature of the problem, Lattanzio knew that the trouble was in the scan converter and not in the radar signal coming in from the antenna.

He pointed out that the circle described by the "sweep" was slightly egg-shaped. Checking with the range marks displayed on the screen, he adjusted the equipment until the sweep drew a perfect circle.

These are quiet men at home in a world of sophisticated tools for testing sophisticated equipment, with a mission to prevent trouble or find it and fix it. And they do the job well.

-Text and photos by Theodore Maher

## FACES AND PLACES



HEAVIES—Anchorage North Airway Facilities Sector GFETs Dave Wiles (center) and Bob Todd receive course-completion certificates in heavy-equipment operation and maintenance from an Elmendorf AFB sergeant under a training agreement between AL and the airbase.



WELCOME ABOARD—C. E. Abshire (left) is greeted as the new Seattle FSS chief by Dave Jones, Northwest ATD chief. Abshire was formerly chief of the Boise, Ida., FSS.



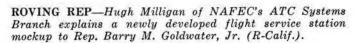
NEITHER SLEET NOR—Denver Sector personnel worked through unseasonable snow and heavy rain to convert the Runway 35 glide slope to the "capture effect." Engineer George Beasley (right) checks new solid-state ILS clearance transmitter with Navaids chief Harry Mogensen (left) and electronic technician Fred Weaver.



CHEESE FOR ARTS SAKE—Hostesses for the dedication of the Cleveland ARTS III system were (left to right) secretaries Linda Vanca and Olga Drabiak of the Cleveland-Hopkins tower and Norma Flowers of the Cleveland AFS.



WE POINT WITH PRIDE—Meeting ATCS Gerard Dumoulin for the first time at an open house at the Manchester, N.H., tower are Keith Whitten (left), son of Boston FSS specialist Donald Whitten, and Allen Ryea. The boys were cited for aiding the pilot of a crashed plane and responding to controller Dumoulin's call from the tower on the downed plane's radio.



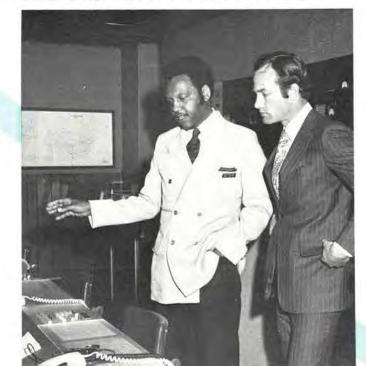


Forrest Smith demonstrates. Smith and the blimp were at Indianapolis Weir-Cook Airport just prior to the Indy 500 race, Smith to tour the newly dedicated tower there.

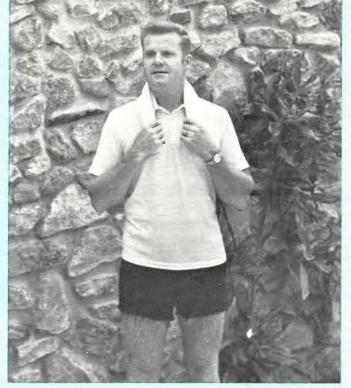
FIRST SALE—With all these bond girls hovering, how could Administrator John Shaffer resist signing up. Head-quarters passed last year's Savings Bonds sales during the



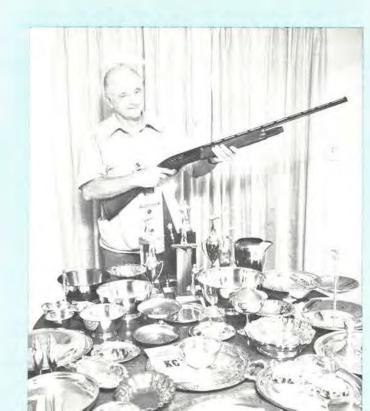
GOT WIND UP—Joseph F. Sowar (center), assistant chief, Weather and FSS Branch, Airport Div. of SRDS, receives Special Achievement Award from Charles L. Blake, chief of the Airport Div., as Sowar's chief, Edmund Bromley, Jr., watches. Sowar was rapporteur of an ad hoc ICAO study group whose recommendations to provide surface wind measurement and reporting was approved by ICAO members.











### **FAAers AT LEISURE**

FAAers are no different than anyone else. With a crew of some 54,000, we're bound to cross all boundaries of sizes, shapes, characters and interests. In fact, we're likely to be a not so small microcosm of American life.

Last December in FAA WORLD, we took a look at the joiners, the workers, the people interested in using their leisure time to help other people or their own communities. Now, during the vacation season, we contemplate our travel, our camping trips, our excursions to the mountains or beaches, water-skiing (and saving some leave for skiing next winter), or . . . just taking the time to enjoy doing whatever it is that moves us—sports, hobbies, collecting, art or music—any activity that makes our lives a little more interesting.

ports activities take many forms, and why a person chooses one over another comes from his own vision of life. Striding out of the Portland, Me., CS/T is its 62-year-old road-running chief, Jim Carroll. He started jogging for health reasons, but found competition more his style. He practices 20 miles a week and enters monthly races. Rodney Hunt, Atlanta Center ATCS (left), started jogging to drop 25 pounds. Now, he, too, has the racing bug and has well over 1,000 miles under his belt. Another jogger for physical fitness is Jerome Moonier, deputy chief of the St. Louis tower, who is well

Ted Maher of the Employee Communications Staff at
Headquarters gets his kicks
through ballooning in suburban
Virginia. He and Dr. Barton Pakull of Aviation Medicine fly a Raven
hot-air job that stands seven stories
high. Maher says that they usually fly
"low and slow" but he has ridden the fourby-four-foot fiberglass basket up to 7,000 feet.

past the 500-mile mark.

Pert Vicki Langholz, a secretary in the Alaskan Region's ATD, is no lady to trifle with, despite her scant 100 pounds. She sports a "black belt" as a professional judo instructor and was state judo supervisor for last year's Arctic Winter Games between Alaska and Canada's Northwest Territories.

Then there's the racing breed. St. Louis tower ATCS Dave Hess has been racing his motorcycles in rough-terrain track riding for 10 years. In the four-wheel category, Charles (Rick) Hinson of the Houston Center likes to tool down race tracks a 1966 Chevy belonging to Red Adair. On a not-so-

sedentary sideline is Max Ehinger, Jr., Ephrata, Wash., FSS, who is assistant course chairman at the Atomic Cup Race in Tri Cities, Wash. He helps set up the course and assigns all rescue and patrol craft for the race. Burdette Solomon works two sides of his street. The NAFEC design technician has been racing pigeons for 20 years and is trying to breed a strain of bird with an extra feather on each wing for more lift and speed.

Another kind of racing is Bill Chamber's forte. Chambers, an ET at Paine Field, Everett, Wash., and his son, George,

race dogsled teams, with which they have taken top money in competitions at Priest Lake, Ida. The team pictured on the cover appeared in a Disney movie, "Dingaling Lynx."

Coo-Coo, Jim Lindsey's pet dove, has nothing to worry about. The trophies that CE's Audit Division chief has won are for skeet-shooting. Lindsey's honors include a national runner-up title and the 1971 Missouri State High-Over-All Sub-Senior Championship.

The deer do have to worry about SATCS Don Brown of the Bangor, Me., tower. He's an expert bow-and-arrow hunter who once held the largest-deer-with-bow record in Maryland.

The ski-school director at Blanchard Hill in Dunstable, Mass., and seven of the instructors are controllers at the nearby Boston Center. Art Rockwell heads up the group that includes Norm Cormier, Bob Benjaminson, Chester Johnson, Steve Huntley, Ron Dionne, Earl Kimball, Claude Bennett and three wives of controllers—Dot Tormey, Mary Bednarz and Virginia Mammone.

A hobby is usually something quite different from one's job, so many FAAers get away from their technical or administrative work through the arts, and some are top notch. A team supervisor at the Houston Center, A. J. (Buddy) Schexnayder is also an accomplished watercolorist. He has exhibited in numerous exhibitions and lectured for the Houston Art League and the Southwest Watercolor Society. An auto accident ended Mrs. Charlotte Chester's singing career and led her to be the secretary to NAFEC's manager of the Atlantic City Airport and a part-time artist. (Her husband, David, is an FAA flight inspector.) She exhibits her works and teaches art at college and at home; one of her works was at the Smithsonian National Air and Space Museum and toured NASA bases throughout the country. Seattle's FSS boasts three artists-Don Brenden, Dave Ipsen and Sid Rock. Brenden specializes in seascapes, and Ipsen in Indian portraiture.

A rarer creative field is the bailiwick of Vic Redeker of the Lubbock, Tex., AFS. In addition to paintings and wood sculpture relating to the West and Southwest, Redeker casts figures in bronze by the lost-wax process, such as his "No Quarter" piece shown. His work is displayed and sold by Norwood Galleries in Denver and Kachina Gallery in Santa Fe, N.M.

A former professional photographer, Herman Carter of the Tulsa FSS moonlights as a free-lance writer and photographer, working in black and white and color, and doing all of his own processing. He owns several magazine covers.







There have to be modelmakers in every group, for its appeal is widespread among young and old. Not satisfied to work with his hands only at his job as an aircraft mechanic at NAFEC, Frank Havens shows his dexterity and patience in building yard-long authentic models of ships from the War of 1812. How authentic? Well, it takes him about two years to finish a single model and he fabricates every part himself, except for the sails and dacron thread. He's working on his third—the USS Wasp—and has only 27 more models to go.

Wayne Roderick, maintenance technician at Pocatello, Ida., and his son Randy are model-railroad buffs of note. Their layout requires four "engineers" to move their 25 locomotives and 300 cars over more than 300 feet of track through hills and farms and over bridges they built themselves.

Not content with building in miniature, John Cooley, chief of the Alaskan Region's Field Program Section, AFD, built a full-size bird in his basement and garage over a period of six years. He now has his official experimental aircraft certificate for his "Red Baron."





Then, there's the ubiquitous collector. There's Joe McKnight of the Austin Tex., RAPCON/tower who collects old license plates and restores them. Osceola Madden, art director of this magazine, collects not just any old Roman coins, but primarily the coins of the reign of the emperor Hadrian. And Winston Sims, Baton Rouge CS/T, hangs on to glass insulators. He has collected 115 different types of glass communications and power insulators, including one from 1865 appraised at \$100. How's this for a collection: a boa constrictor, a king snake, assorted lizards, fish, mice, a cat, a praying mantis, a mud puppy and an ant farm. This odd menagerie is Dave Williams', Amarillo, Tex., tower. Don Botts of the Dallas AFS has a 100-clock collection, the prize of which is a Piller and Scroll shelf clock made by Seth Thomas around 1820. Tommy Avis collects guns, rifles and old bottles and rides Brahma bulls when he isn't working at the Austin, Tex., RAPCON/tower. Locks, stocks, barrels, tangs, set triggers and lead and black powder is the stuff of which Bill Haynes' hobby is made. He's a black-powder, muzzle-loading, primitive-firearms enthusiast when off duty from the Tulsa FSS. He has built eight weapons from scratch in addition to collecting muzzle-loading percussion guns. His competition in matches has netted him eight medals.

There's every type of leisure-time activity.

While husband John likes to jump out of airplanes, Shirley Brendel, secretary in the St. Louis tower, packs his chutes. She hasn't goofed yet.

Opa Locka, Fla., tower ATCS Dave Smith holds a diploma in and an honorary title of "colonel" for auctioneering. Right now, he doesn't do it for the green, but for PTA fund-raising drives. Many FAAers hold pilot tickets, but not like Don Kerr of the St. Louis tower. He has 2,900 hours and holds commercial, instrument, multi-engine, flight-instructor, instrument-flight-instructor, ATR and all ground instructor licenses. He formed the first flying club at the tower and was the first from the St. Louis tower to make a parachute jump. The rest of the time, he mans a sailboat and a motorcycle.

Porcupine Stew and Dumplings won first place over 2,600 entries in a cooking contest sponsored by the Potato Chip Institute International. The chef and creator was Emil Hynek, general facilities equipment technician at the Lincoln, Neb., tower. But this hobby is a family affair. Wife Laura, son Bob and daughter Diane have all brought home prizes in recipe contests. Each year, the family's participation in the National Chicken Cooking Contest has been the Hynek's vacation. And they all continue to work up new recipes.

For 20 years, Bob McLaughlin's sideline has been in micropaleontology—the identification and study of microscopic fossils. A supervisory electronic technician in Alaska's AFD, he has built his expertise to where several of his report and studies have been published. Now the *British Journal of Microscopy* is publishing the first part of his four-year study of fossil freshwater diatomaceae deposits on the Kenai Peninsula.

An 18-year veteran of the Ephrata, Wash., FSS, Bob Grove spends most of his off-duty time farming. In addition to growing about 500 tons of alfalfa each year, he's an auxiliary sheriff, FSSCOM member and a NAATS representative.

When a newcomer to the Hobart, Okla., FSS, electronic technician Jim Lanterman became interested in Kiowa County history while scouting for sites to explore with his metal detector. Directed to abandoned towns and goldmines by older residents, he realized that the colorful history of the area was slipping away. Metal detecting gave way to historical detecting. He sought out people who helped open the Oklahoma Territory and settle the county, taping their experiences on a recorder. Now, his collection of interviews is earmarked for a county museum.



While on duty at the Omaha, Neb., FSS, Clarence Bennett heard of a crash of a pilot caught in weather who hadn't contacted the FSS. The incident moved the 37-year-old specialist to pen the following poem. Bennett likes to write short stories in his free time and illustrate the station publication, Fireside Chat.

Today, a small plane crashed in the rain, in a hayfield near our town. He was lost on top till an engine stop finally forced him down.

I heard no call—no word at all.
I didn't know of his plight.
If it hadn't been for its tragic end,
I wouldn't have known of the flight.

I wonder why he fought the sky terrified and alone. If he didn't know which way to go, why didn't he ask to be shown?

Our ceiling was low, visibility zero on this rainy summer's day.
But the sun did shine, visibility was fine not very far away.

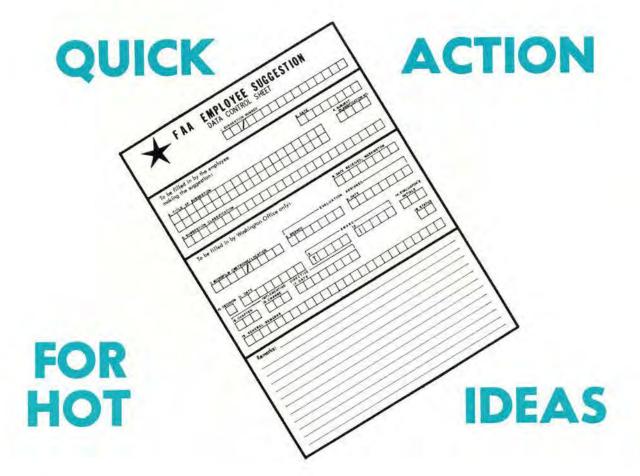
No attempt was made to give him aid, tho I surely would love to have tried. If only he had contacted me, this young pilot might not have died.

I can not surmise where the fault lies, what possibly caused him to decide to go it alone till his fuel was all gone. Could it have been foolish pride?

Was he too proud to holler out loud, "HEY, FLIGHT SERVICE GIVE ME A HAND"! What made him so sure his fuel would endure till he found a safe place to land.

Whenever I see such tragedy
I wonder if in some way
I could do more to help pilots before
they end up as he did today.

The answer I feel is to work with such zeal that all our services are outstanding. So the pilot depends on his Flight Service friends, when he needs help for a safe, happy landing.



So, the agency has another automation program . . . but this one means something to you personally.

It means that the first guy to come up with a usable suggestion has a better chance of getting paid for the idea while he's still young enough to enjoy the fruits of his initiative. For, FAA is automating the suggestion program, the first to do so anywhere in the Federal government.

To find out how it works, we asked Paul C. Ratliff, Radar Branch of the Airway Facilities Service, who developed the new system.

He told us that the new system was better for the people making suggestions and better for the people evaluating the suggestions. It speeds up the handling and recording of suggestions, and it makes the information stored in the computer immediately available to regional offices. By using a teletype-like "terminal" typewriter, regions can dial the computer on an ordinary telephone. There's no need to query Washington, and there's no need for Washington to issue quarterly reports.

Say, a region has a suggestion that looks good, Ratliff said. It makes sense and they want to know if any similar suggestions have been received. They dial the computer and ask. The answer is typed out for them or can be displayed on a video screen readout.

What will happen, he continued, is that the suggestion will be written on a special form, a copy of which will be forwarded immediately by the region to Washington. The Records and Awards coordinator will enter the coded information—like date, type of suggestion, equipment modified—into the computer, which will check it against its memory bank. In this way, the date or precedence of the suggestion is established.

Right off, we know if the suggestion is a "first" or not and can analyze it to see if it's worth adopting. If it's not a new idea, the system has flagged us to review the original idea again. We may find that because of a changed situation, the original idea is now valid, and the originator gets credit for it. His suggestion is thus not lost in reams of files, while he bitterly watches a Johnny-come-lately get the award. We may also get a suggestion that is complementary to an earlier one coughed up by the computer, and parts of each may be adopted.

Ratliff said that AFS was trying out the system initially. If it worked for them, the system would then be adopted agencywide and perhaps someday for the entire civil service.

Paul Ratliff's suggestion is the kind the system may help speed on its way—one that saves time as it cuts through red tape and helps FAAers achieve more.

—By Theodore Maher

# HAPPENS EVERY SPRING



NAFEC women are intense as they eye an evening gown with a shoulder drape at this year's fashion show.

A long a 60-foot runway decorated with apricot blossoms and greens whirl lovely models in haute couture. It's not Fifth Avenue or Paris, but the NAFEC Woman's Club annual spring fashion show.

Now in its fourth year, this highly successful event benefits the Atlantic County Student Loan Fund. As part of its varied program, the NAFEC women looked into the fund in 1967, finding it of benefit not only to high school graduates of this southern New Jersey county but to children of NAFEC employees. While students may draw from the fund to help cover the costs of their academic careers, they are under no obligation to repay; however, most do. The club donated money from its treasury, but later decided to raise money via a fashion show.

Under the banner of "Suddenly It's Spring," the first fashion show was held in 1969 at the Flanders Hotel in Ocean City, N.J. To set off the fashions presented by the Doloway Shops of Ocean City, Mrs. John Danzenbaker and Mrs. Victor Crawford decorated the ballroom with 40 handmade birdcages filled with flowers. ATCS Victor Crawford built the birdcages in his shop. This proved to be a maiden effort, for he was to be called on again for the decor in the third and fourth shows. Each of the cages was a table centerpiece, later awarded as a doorprize.

Having been so successful in support of the loan fund, the show was repeated the following year under the theme of "Boutique Bouquet," with spring bouquets as centerpieces created by Mrs. Anthony Spingola and Mrs. E. F. Fitzpatrick.

In 1971, "Potpourri of Spring" produced proceeds that surpassed everyone's expectations. The centerpieces were Victor Crawford's hand-turned candle bases, topped by hand-poured scented candles by Mrs. Crawford and surrounded with bright yellow flowers.

This year, shades of apricot, spring yellow and green carried out the theme "Way of Spring." Once again, the wood-working talents of Victor Crawford were sought to create 18-inch wooden scales that were filled with flowers. Hanging baskets of spring flowers around the ballroom completed the decor.

This year's parade of styles could suit varied tastes. Seersucker, taffeta and denim predominated in short and long dresses, the latter embellished with large bows, and blazers combined with skirts, pants and dresses. The prevalence of hats worn by the models was a surprise, since hats have been passé for several years.

Formed in 1958 at the same time as the center itself, the club is designed to bring NAFEC women together socially at monthly luncheons and welcome newcomers to the center. It gives social, recreational and charitable opportunities to NAFEC women employees and wives of government employ-

An ATCS at the center, Victor Crawford has a talent with a lathe. Here he turns out a spindle for the scales centerpieces that graced the tables of the 1972 show.



ees and those of military personnel at NAFEC, contractors permanently stationed at the center and of transferred, retired or deceased NAFEC personnel. Among the ladies' activities are bus trips to New York for the theater, a Thanksgiving food drive for needy families and a Christmas party for the Child Federation of Atlantic City. The club believes itself to be the largest woman's club connected with government employees.

Any organization is only as good as its members, and the NAFEC Woman's Club has 135 workers. The extra time, work and experience they bring to all club functions prove their worth.



NAFEC Woman's Club Fashion Show Committee (left to right): Mrs. D. N. McFarland, Mrs. V. Rogers, Mrs. C. Moore, Mrs. J. A. Muller, Mrs. D. Pommer, Mrs. D. Schlots, Mrs. R. M. Allensworth, Mrs. L. G. Alverson, Mrs. V. A. Crawford, Mrs. J. D. Danzenbaker, Mrs. J. R. Bennett; kneeling—Mrs. D. Bottomley, Mrs. J Stein.

#### Home-Grown Is Best

Some people who relocate experience what is known as cultural shock, but many who head for domicile in the 49th state experience what might be called climatic shock. Retaining competent employees who can adapt to the Alaskan Region has long been a managerial staffing problem.

As a result, FAA has been cooperating with the Bureau of Indian Affairs in investigating the feasibility of employing Alaskan Indians in FAA facilities. From this unusual joint effort, a group of 12 Alaskan Indians has completed a one-year training course under a contract with the Philco-Ford Corp. to qualify them as general facilities equipment technicians.

Their instructor, Harold Pixley—a former FAA electro-mechanical specialist, taught them electronics, mathematics and electro-mechanical concepts. As part of the training, the class toured the Los Angeles ARTCC for an orientation in the type of equipment and facilities they might be servicing in the future.

The members of this first group who have now taken up jobs in the Alaskan Region are Jim Scudero, Steve Kochutin, Ernest Mack, Elmer Knox, Harding Sam, Henry Sam, Benno Cleveland, Larry Davis, Chris Pleasant, Alfred Burgo, Chris Malavansky and Charlie Williams.

In fulfilling the requirements for equal employment opportunity, the use of home-grown talents has given the Alaskan Region a bonus in well-trained and climatic-adaptable personnel.



Models line up on the runway at the woman's club's first fashion show.

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As one of NAFEC's many projects in progress, Paul Rich, project manager for Visual Collision Avoidance, operates a low-power laser to achieve perfect alignment of optical systems used to measure pilot eye movements in flight simulation. For the story, see page 3.

