FAA HORIZONS

JUNE 1965

OFFICIAL EMPLOYEE PUBLICATION OF THE FEDERAL AVIATION AGENCY

EDITORIAL:

The Common End

As a boy, I participated in a jujitsu course at a neighborhood YMCA and recall vividly the fascination it aroused in me. The principle objective of jujitsu is not to meet force with force but to exploit an opponent's strength, weight and movements for one's own advantage. The feats wrought through the "cooperative competition" principle of judo are truly remarkable, simply because it wastes no asset even when the asset is contributed by an opponent.

The lessons of judo might well be applied in the field of transportation, where competition to date has been anything but cooperative. The classic example of hogs transiting the country in the same railroad car while passengers traveling coast to coast had to change rail terminals as well as trains in Chicago may be somewhat exaggerated, but it does illustrate the hardships historically endured by rail travelers in this country. And aviation has been equally shortsighted. We have a major effort underway to develop a supersonic transport, but we have almost completely ignored the increasingly acute problem of surface access to airports. By 1975, when John F. Kennedy International Airport is one hour and 40 SST minutes from London, it will in all likelihood also be one hour and 40 minutes from downtown Manhattan via surface transportation. Yet the various modes of transportation have remained indifferent—indeed, almost hostile—to one another's needs. Rail services have shown little interest in improving airport access, and aviation has been equally apathetic concerning mass transit.

But what if each mode of transportation set out deliberately both to exploit and to complement the capabilities of other modes of transportation? Airports yearn for compatible land use in their environs and what greater compatibility could we seek than that between parking lots, rail terminals, storage facilities and airport operating areas? Such mass transit concepts as "park and ride" or "peripheral parking" need considerable expanses of parking space, and land is almost embarrassingly plentiful at many of our major airports. If our great centers of trade were surrounded by satellite transportation hubs at which all required modes of transportation were integrated, one might visualize *an airport whose terminal area was within walking distance of an elevated railroad station under which was located a bus terminal and around which was ample parking area.* Here would lie a real solution to some of the principal problems of mass transit and airport access. It would provide for genuine integration of transportation facilities, would complement transport capabilities in a most compatible form, would furnish the focal point for surrounding industrial development, would provide a meaningful pattern upon which essential comprehensive transportation planning could be accomplished and would permit implementation to begin immediately to solve some of the pressing economic, social and political problems that have followed the demise of passenger rail service and the helter-skelter growth of highways and airports.

Our ends are common. Our efforts to date have been "common" only in the sense that they have been crude—and ineffective. What irony will history record when having helped destroy intercity passenger rail service, aviation also destroys the basis for its own position in metropolitan America?

Oscar Bakke

Oscar Bakke
Director, Eastern Region

The Eastern Regional Headquarters is in Jamaica, N. Y., adjacent to the J. F. Kennedy International Airport, where the Regional Director heads a complement of more than 7,700 employees. The region directs FAA activities in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Delaware, New Jersey, Kentucky and the District of Columbia. It also handles certification of Canadian-made aircraft and components; and the flight inspection of navaids in Iceland, Greenland, Bermuda, Azores and assigned facilities in Canada.

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F E D E R A L A V I A T I O N A G E N C Y

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At Vietnam's Tan Son Nhut Airport, Paul W. Wilson, air traffic control specialist, instructs future Vietnamese controllers and electronics technicians at FAA's Civil Aviation Assistance Group's ground school. (See pages 6 and 7).

Mrs. Yule Chaffin finds no lack of interesting things to do at a remote station. Right: Senior air traffic control specialist James I. Jensen lends helping hand to Mrs. Gary Aune debarking **Fedair IV** with baby son.

ON WOODY ISLAND LIFE IS GOOD

(Editor's Note: FAA's business in Alaska is a family affair. HORIZONS asked Mrs. Yule Chaffin, wife of Area Manager Darrell F. Chaffin at Kodiak, to write this first-hand account of life at a remote Alaskan station.)

By Mrs. Yule Chaffin

Anyone who thinks the friendly frontier spirit of helpfulness and cooperation is disappearing should come to Alaska. He would find it still very much alive in FAA's remote field stations.

The FAA station at Woody Island near Kodiak, Alaska, is a good example. Here year-long planned activities have proven so interesting and satisfying that many employees are loath to move on to jobs elsewhere.

What is it that creates this special sort of FAA family feeling in Alaska's field stations—a feeling that is fast disappearing in the world "outside?" Is it thoughtful supervisory personnel who really care about the happiness of their FAA "families?" Is it the wives who keep so busy with worthwhile activities that there is no time for grumbling? Is it a pride on the part of all personnel in being part of a neat and well-run community? It is all these things—and more.

The FAA community at Woody Island, like many other field stations in Alaska, is cut off from the rest of the world. The two-by-four mile island is several miles off shore from Kodiak and must be reached by boat. Children of the FAA families living there attend junior high and high school in Kodiak and are ferried across by boat five days a week.

The FAA boat, *Fedair IV*, is the life-line to Woody, hauling in all the island's food and supplies. It is not uncommon to see teen-agers, their mothers, and even some of the small fry helping to load and unload mail and freight from the boat when it docks. Woody Islanders know that work done together for the good of all helps create a bond of family unity.

FAA wives play a big part in helping to create a clean, well-ordered, and friendly station. When newcomers arrive, a warm welcome awaits them. Each wife cooks her speciality and takes it to the new family's apartment. The same friendly cooperation is extended to those leaving the station. Wives vie with one another for the privilege of cooking farewell meals for departing personnel.

Woody Island personnel maintain an active organized recreation association in which station wives play a major part. Sometimes a schedule is laid out for a year in advance with two families taking turns planning the activities for each month. Such activities might include pot-luck dinners, bingo parties, square dances and dinners or parties for teen-agers.

Recreation does not stop with organized activities. Building and repairing boats keeps most of the men occupied during the winter and then in spring each proud owner finds anchorage for his gleaming labor-of-love where it bobs in readiness for summer's fun. There will be hunting and fishing trips, family outings, island hopping and camping expeditions. Woody Island apartments and homes are decorated with driftwood, shells, glass balls, dried starfish, and other objects obtained on such forays.

By fall, deep-freezers are filled with foil-wrapped halibut fillets, crab meat, venison, ducks and other game. But this year there will be no clams. The earthquake of March 1964 put an end to clam-digging. Woody Island and surrounding lands sank some five and one half feet at that time with resultant loss of clam beaches.

The sinking of the land and the new high tides created a new and exciting recreation for FAA families on Woody Island—artifact hunting. Tons of soil were washed away, exposing many old buried village sites where such artifacts as Aleut stone lamps, fishhooks, spearheads, and other articles of historic value are found.

Interest in the history of the region is not new to Woody's FAA families. They are aware that Kodiak is the oldest Russian settlement in Alaska and that their own tiny island is especially rich in early history. It is here that some of the descendents of one of the oldest families in Alaska, Pavlof, still live. Here hundreds of Aleut sea otter hunters once had their homes.

FAA families on Woody Island are especially favored by nature. They are surrounded by some of the most beautiful scenery in the world—black, jagged rocky cliffs; emerald islands floating in blue-green seas; lakes covered with fat, golden balls of yellow water lilies and filled with trout and beaver; meadows filled with a myriad of wild flowers from purple lupine in the springtime to the cerise flame of fireweed in the fall. Soft, mossy woodland trails lead through pungent spruce forests. There are millions of land and sea birds; the surrounding waters are alive with whales, porpoises, salmon, halibut, flounders, crabs and other forms of sea life. And close by the famed giant Kodiak bears prowl the snow-capped mountains.

No wonder, then, that FAA personnel at Woody Island are like one big happy family. No wonder that their spirit of helpfulness and friendliness is infectious. They are situated in one of nature's choicest places where busy schedules keep them from the boredom of having nothing to do tomorrow, next week or next month. #

Left: **Fedair IV** ferries Woody Island teenagers to and from high school at Kodiak. Above: Miss Helen Case, grade school teacher, goes over lesson with Charlette, daughter of W. H. Johnson, senior electronic technician.

Above: Jerry Chaffin (far right) joins the Alaskan Fathomeers of Kodiak diving for king crab at the annual King Crab Festival. Below: During the winter boating is an indoor sport in Alaska. Air traffic control specialist Leslie H. Dhabolt spends his leisure moments getting his boat ready for summer recreation and fishing.

saigon's tan son nhut... *a controller's fraternity*

Nowhere is International Cooperation Year better exemplified than in Saigon's Tan Son Nhut control tower at Vietnam's largest airport. There you hear and see Vietnamese, Filipino and American—both FAA and Air Force—technicians occupied with jobs requiring a high degree of alertness and cooperation.

It takes close international teamwork to handle the 20,000 aircraft operations a month, especially when most of them take-off and land during the day. But teamwork and a common purpose are the bywords of air traffic controllers at Vietnam's busiest air terminal.

Kenneth S. Cooper, chief of FAA's Civil Aviation Assistance Group (CAAG) in Saigon said, "We estimate that the airport conducts nearly the same volume of traffic from 7:00 a.m. to 7:00 p.m. that San Francisco International Airport manages in 24 hours—and does it on a single runway which, incidentally, was engineered by the CAAG and constructed under the foreign aid program."

Few airports in the world today can match the growth rate of Vietnam's two major landing facilities—Tan Son Nhut and Danang to the north. And few civil aviation technicians have had to face the challenges and meet the problems as have the staff of the Vietnamese Directorate of Civil Aviation (DCA), assisted by the FAA Office of International Aviation's CAAG.

Starting in 1956 and accelerated in 1962, the United States Government began a massive improvement program to modernize and expand the air capabilities of the nation. "In the last few years air traffic has increased three to five times at Saigon," said William (Bill) H. Hallenbeck, air traffic control specialist. "In Danang, it has grown an amazing 2,200 per cent and has been further complicated by tactical and air defense requirements."

Working with the DCA at present are 791 Vietnamese, the CAAG and many U. S. Air Force advisors. The CAAG currently is operating with a small but efficient five-man staff on loan from the FAA to the U. S. Agency for International Development (AID). Other FAA personnel are Paul W. Wilson, air traffic control specialist; Frank Femiano, electronic technician, and James Given, electronic engineer.

Today, unusual and heavy traffic loads confront the Vietnamese controllers. Although trained for a much lower rate of activity they take it in their stride. A few minutes of radio activity might sound like this:

"Saigon Tower, this is Clipper 2 calling. Request landing instructions. This is Air Force 1678—we have casualties aboard and our right engine has been hit by ground fire. Request emergency landing. This is Air Vietnam, Flight 28—taxi and take-off instructions." A land-line phone rings: *"We've got a mission taking off in 10 minutes—20 choppers."* And so it goes throughout the day.

The FAA/CAAG/USAF advisors, all skilled aviation technicians, work closely with their Vietnamese counterparts and tackle problems head-on. Without interrupting service, a new east-west runway was constructed within two years. Included were taxiways, high-speed turn-offs, parking apron, high intensity runway lights and an approach lighting system. The already existing north-south runway is used to park the ever-increasing number of United States and Vietnamese military aircraft.

A new control tower was erected and equipped with a modern communications system and a rotating airport beacon. A mobile radar approach control (RAPCON) unit now scans all departures and arrivals on a surveillance scope plus monitoring the radio communications. Normally, the RAPCON controls air traffic within a radius of 35 nautical miles and up to 5,000 feet altitude.

"If the watch supervisor decides that traffic is too heavy," said Paul Wilson, "he has the option of extending control up to 60 miles and 30,000 feet altitude."

Five DCA civilian Vietnamese are permanently assigned to the RAPCON. Each is a graduate of the FAA Academy and has spent several months controlling traffic at a United States commercial airport before returning to Vietnam.

Is there a language barrier? English is used almost exclusively in giving air traffic instructions. Occasionally a commercial pilot will ask for landing or take-off instructions in French, but this is no problem for the trilingual Vietnamese controllers.

Vietnamese supervisors and instructors, trained by the Agency in the United States, have taught 38 skilled air traffic controllers in an FAA/DCA operated school at Tan Son Nhut. The most recent, a group of 20, was graduated early this year. In addition, 155 others have been sent by the CAAG to the United States or neighboring Asian nations for advanced training under AID-sponsored programs.

Improvements continue. Last year the United States military forces set up a flight following service for aircraft not under civil control. A highly sophisticated microwave communications network now connects all important airfields in Vietnam.

This system was integrated into the activities of Saigon's area control center. Every non-tactical plane in the air is known—its speed, altitude, destination and mission.

Today, radar control permits plotting of international air carriers to assist their entry into the Saigon area. As Ken Cooper put it, "By the end of 1965, Vietnam will have one of the most modern international airport facilities in Southeast Asia."

Plans this year call for commissioning an instrument landing system and installing the associated meteorological equipment which will complete the all-weather capability of the Saigon complex. At present high-powered independent sideband transmitting and receiving equipment is being set up which will connect Saigon with Bangkok, Manila, Hong Kong and Singapore.

All of this adds up to safer flying for everyone—air carriers, military and general aviation. Considering differences in aircraft types, weather conditions and traffic volume, Tan Son Nhut's safety record is outstanding. Figures last year show that over 63,000 helicopter missions and 149,000 fixed wing operations were handled. "During peak hours," Bill Hallenbeck said, "there's an aircraft landing or taking off every 22 seconds."

That there has been no serious accident over the past few years is a tribute to the training and skill of these professional men. And with the eyes of the world focused on Vietnam, the Federal Aviation Agency can be justly proud of its contribution to the rapid advancement of Vietnamese civil aviation. #

Left: Vietnamese teletype technician and girl in native dress work in teletype room. Above Tan Son Nhut's control tower is a beehive of cosmopolitan activity. FAA's controller Bill Hallenbeck observes Filipino, USAF and Vietnamese at work.

Filipino electrical engineer and William Hallenbeck stand at entrance to sand-bagged new RAPCON center. A team of 25 Vietnamese and Americans operate the center.

Above: Chief of FAA's Saigon CAAG five man staff is Kenneth S. Cooper. Right: Frank Femiano, electronic technician, checks out Vietnamese on use of equipment.

Above: Inside the RAPCON Vietnamese FAA Academy graduates work with USAF advisors. Below from left: Wesley G. Holland, electronic technician, and James Given, electronic engineer, inspect one of the ILS localizer antennas at Tan Son Nhut Airport.

Laboratory at the FAA Academy in Oklahoma City where Flight Standards inspectors are given periodic proficiency training in instrument flying and procedures.

'CANNED' FLYING

. . . At the FAA Academy

Executing a missed approach from the Burbank, Calif., Airport, a pilot heeds the bad weather and contacts the Los Angeles Center requesting clearance to his alternate, Los Angeles International.

Through the headset a voice cracks back, "Cleared to the Los Angeles ILS outer marker Victor 186, Victor 459, Victor 264 to the Stadium intersection, thence by the 305 radial of the Long Beach VOR until intersecting the 270 radial of the Downey radio beacon direct Downey, thence via the localizer course to the outer marker. Maintain nine thousand, cross Berry intersection at eight thousand."

Mopping his brow, the now anxious airman has another problem. And it *is* a problem, even though the pilot is not shrouded in the smog of Southern California, but sitting in a simulator at the FAA Academy in Oklahoma City. He still must "fly" a complex course through an area of exceptionally high density traffic.

He is in one of eight Flight Standards training simulators in a laboratory at the Academy. Unlike many such installations, these labs are not there to teach people how to fly an airplane. They are used to train Flight Standards inspectors —men who are already professional pilots—to become more proficient in instrument flying and procedures.

But something new has been incorporated into the system to make these ground trainers even more realistic by simulating flying in high density terminal areas such as the anxious pilot just experienced. It is a flight programmer called a High Density Multiple Area Terminal Console, a product of the ingenuity of the Simulated Instrument Training Branch Chief, William D. Jones, and his staff technicians, Lester K. Groves, Robert G. Judeman and Donald L. Schneider.

The console has an automatic field elevation capability which enables the trainer's glide slope to adjust for change in field elevation when shifting from one airport to another. In addition, up to 20 VHF stations and 20 low frequency beacons can be individually tuned in when switching facilities. Half of the VHF stations can be programmed to ILS frequencies and half to VHF omni range stations. The marker beacons are automatic, lighting up and sounding off on their own. All of this provides distinct training advantages in developing and maintaining the instrument flight proficiency of FAA's Flight Standards inspectors.

The opening sequence of this story is typical of what can be programmed into the simulator. Had the instructor chosen to close Los Angeles Airport, the pilot would have received instructions to another airport along with another problem in radio navigation to handle. In this way inspectors become familiar with radio facilities and flight procedures in more than one terminal area without the costly expense of operating an aircraft. In fact, the entire radio portion of a typical flight check, as conducted by a Flight Standards inspector, can be simulated. This is helpful in training new inspectors.

A Radar Traffic Control Console designed to accommodate two instructors has also been devised. By pressing a button either instructor can observe the activities of any or all of the eight trainers, determining instantly position, heading, true altitude and airspeed. Also available are radar identification and tracking information, as well as the communication frequencies for ground, tower, approach and en route traffic control. All communications are tape recorded for ready read-back. This, too, is a valuable training aid for post-flight clarification of air traffic clearances.

This training is given to Air Carrier Operations inspectors and General Aviation Operations inspectors. With the modern trend toward more and more all weather flying, familiarity with instrument flight procedures is essential, particularly in congested terminal areas.

FAA Air Carrier Operations inspectors are required to conduct flight tests to determine the instrument proficiency of airline pilots for Airline Transport ratings. General Aviation inspectors must monitor flight tests for instrument ratings of the flight personnel who operate thousands of corporate, business and personal aircraft. It is, of course, of utmost importance to public safety that these men who pass judgment on others be themselves thoroughly trained and highly proficient.

The flight programmer and the radar traffic control console are truly unique. There is no other way of expressing it because the equipment exists nowhere else in the world. Conceived by instructors who saw the need, it was designed and constructed by the staff of the Simulated Instrument Training Branch. Costs were held to a minimum by such practices as using discarded potentiometers.

No cost figures can measure the dreaming, the ingenuity, the free exchange of ideas, and the final touches applied by Branch Chief Bill Jones, his instructors and technicians, who have produced the most realistic "canned flying" available anywhere. #

Instructor Harold O. Burroughs adjusts trim tab to level off in the high density terminal flight simulator. Trainer duplicates any terminal in the United States.

Interior view of the radar traffic control console with technicians making final tests and adjustments. From here instructors can observe any or all of the eight trainers.

THEY MAKE THE CHIPS FLY AT NAFEC

Craftsmen of NAFEC's Mechanical Laboratory Facility designed and built this adjustable tower being mounted on an instrumental van. The unit has a special receiver to check the accuracy of an experimental approach and landing system.

Above: Martin A. Mozo, unit supervisor (left), and experimental machinist Robert Shinn team up on an intricate wiring project. Below: Experimental machinist Herbert Dorn lines up plastic for cutting on a universal milling machine.

Make it big, make it light.
Make it small but make it tight.
Make it match the existing frame,
And at the bottom, engrave its name.

This could well be the credo of the 14 craftsmen manning the Mechanical Laboratory Facility (MLF) at FAA's National Aviation Facilities Experimental Center (NAFEC) at Atlantic City.

These skilled artisans are craftsmen in every sense of the word. They are so versatile, in fact, that they could turn from watch repair to bridge building without so much as raising an eyebrow at the request.

"Few people realize," said Herbert Dorn, experimental machinist, "that prototype models have got to be made before the real thing is manufactured."

What Dorn was referring to is the fact that basic crafts are still a part of our daily lives. No matter how ingenious the advances in this modern age of specialization, the early model has to be hammered, sawed, poured, beaten out or forged by hand—and the hands that do it are those of skilled craftsmen. These are the men who run the machine shop, the carpenter shop, the welding shop and the sheet metal shop. They operate the lathes, the saws, the presses and punches. They are the masters of these basic tools of trade.

In the hands of a tyro, these machines would produce little. When guided by craftsmen, they satisfy the most challenging and varied of NAFEC's engineering requirements.

NAFEC has the reputation of being civil aviation's most extensive proving ground. There, hundreds of the Agency's highest priority research and development projects are continuously in progress. And supporting these programs is the Technical Services Division and its skilled personnel.

"We can build just about anything," said Harry J. Hogg, machinist leader, "as long as it can be made of metal, wood, plastic, wire and the like. You name it, give us the materials, and we'll build it."

They do just that and without much in the way of instructions, either. These journeymen average 20 years Government experience each, so verbal instructions or rough sketches usually suffice. Many have served at various Federal organizations such as the Frankford Arsenal and the Philadelphia Navy Yard long before the birth of NAFEC. Other master craftsmen making up the MLF team are: metal model makers Irving E. Taylor, Michael L. Vizaco, William J. Mayer, Herman E. Regal and Edward G. LaDrew; experimental machinists Robert W. Shinn, John E. Staniszewski and Roy E. Martin; James M. Mullen, precision equipment fabricator; Joseph P. Bruckler, diesel mechanic and Lawrence Ramsey, general machine operator.

Their versatility has been proved time and time again. These men designed and built the slush beds that were used in finding the effects of slush and standing water on jet transport take-off performance. And, just as efficiently, they repair and modify cameras, turning from heavy equipment to minute repair tools with the ease that comes from long experience and professionalism.

"We've designed and built special containers to protect instrumentation cameras in aircraft fire-rescue experiments," said Martin A. Mozo, chief, Mechanical Services Unit. "Our boys have produced jet engine mounts that permit full-power ground operation for bird ingestion studies."

These are but a few of the jobs that come their way. Others are prototype air traffic control consoles, experimental radar antennas, new altimeters and a variety of scale-model research and development facilities.

The craftsmen put together the first Airport Information Desks which are now in use in the Southern Region. Exhibits are not new to them either. Some of their products even showed up at the FAA's recent Shareholders Meeting.

The talented men of the MLF play a leading role in FAA's research and development activities at NAFEC. As one engineer aptly put it, "You tell those guys what you need and before you're back at your desk, it's designed and halfway finished. They sure know their business." #

Clockwise from above: Machine operator Lawrence Ramsey adjusts control of milling machine. • Metal model maker Edward LaDrew welds a heavy-duty antenna mount. • Machinist leader Harry Hogg (left) and experimental machinist Roy Martin work on a stabilizer. • Model makers Herman Regal (left) and William Mayer use power shear.

Senior air traffic control specialist Myron Davidson (left) shows flight data aid trainees Mrs. Maureen Ellison and Gary Foy the proper way to transfer information onto a flight strip.

THE LOW-DOWN ON A HIGH-UP SUBJECT

The Southwest Region's first class of Flight Data Aids (FDA), seven men and two women, reported for training in mid-March and are undergoing four months of indoctrination at the Fort Worth Air Route Traffic Control Center.

Flight Data Aid is a new job classification encompassing the clerical duties formerly handled by air traffic control specialists in air route traffic control centers. Training for the position will be about equally divided between the classroom and on-the-job itself until the group is ready to accept full responsibility for their flight data positions.

Among other things, the FDAs will study the airways system of low altitude and jet routes; characteristics and speeds of aircraft; how to operate the IBM Cardatype machine and the Center's 300-interphone system; interphone phraseology; how to handle instrument flight plans; encode flight plan information on flight progress strips; prepare the number of strips required to control the flight through the Center area; compute estimated arrival times over various checkpoints and deliver the strips to the proper sectors for posting on control boards.

Fort Worth's FDA trainees represent varied backgrounds. Youthful Gary Foy and Louis Hunt are on their first permanent jobs. Mrs. Shirley Ingram moved over from regional headquarters. Donald Stahl was on the Civil Service Commission's air traffic control specialist register as were Theo Brooks, Charles L. Lee, Raymond LaPlant and Varnal A. Christopher. Of these, all but Stahl are retired from the Air Force and already familiar with flying and air traffic control work. Mrs. Maureen Ellison came in from private industry.

Although full automation is expected eventually to take over this work, in the interim period the new Flight Data Aids will contribute greatly to the overall air traffic control assignment. #

Above: Mrs. Shirley Ingram listens to a recorded flight plan and plots the aircraft's course. Working the regular position behind her is air traffic control specialist Laverne K. Gerth. Below: The three military retirees, Theo Brooks, Charles L. Lee and Varnal A. Christopher travel familar ground over the airways maps. Training is divided between on-the-job and classroom work.

Learning the operation of the IBM equipment with which they will be working in the Center are, from left: Raymond L. LaPlant, Louis Hunt and Donald A. Stahl. In the background, wearing headset, is flight data position supervisor, James A. Conger.

Left: Cecil H. Taylor, chief of the Montgomery, Ala., Systems Maintenance District Office, checks his radio equipment prior to takeoff on one of his trips in his district. Above: An accomplished pilot, Taylor makes a thorough preflight inspection before each flight.

Alabam' Travelin' Man

Stretching his work-day about twice as far is a neat trick that Cecil H. Taylor, supervisor of the Southern Region's Systems Maintenance District Office (SMDO) in Montgomery, Ala., has been able to do by flying a small airplane on FAA business.

By using a single-engine aircraft almost every day, Taylor has found that he can approach the economies of automobile travel, use much less time, and frequently is able to eliminate overnight stays and other travel expenses that add up while making his supervisory rounds by car.

Taylor's systems maintenance district spans more than 64,000 square miles, but 22 of his 23 field offices are located on airports, and the 23rd is near an airport. From Montgomery, the most distant spot is only 2½ hours flying time, so a round trip to the farthest point and return can be made during a normal work-day, with plenty of time left to handle necessary on-site work.

Several side benefits also are realized from Taylor's airborne travel arrangements. As he flies from field office to field office, he has a fine opportunity to check the end product of the systems maintenance employees' work. He sees the Federal Airways System as the flying public sees it. If something doesn't sound or look just right, he checks it out. Although flight-checking is not an official part of his job, he can use his flying time en route to good advantage and further increase flight safety.

Taylor, the gadabout, gets to know his people better, and this helps him select the most suitable persons for promotion or other key assignments.

And field personnel look forward to his frequent visits too. They have a better opportunity to get quick and direct answers from the boss. They feel that he knows their problems better because he is able to stay in more frequent contact. He gives more meaning to their daily efforts by showing how their facilities fit into FAA's overall plan of safety on the airways.

The practical application of this flying skill apparently has been a good influence on employees, too. In the Montgomery SMDO alone, intense interest in flying has been generated—there are now three pilots and three non-pilots planning to form a flying club. One man already has received five hours of instruction and soon is expected to solo.

Technicians who fly receive a much broader picture of the Agency by becoming users of the services and thus more familiar with the work of controllers, general aviation district offices and other Agency functions. Taylor encourages FAAers in this type of flying since it develops a keener sense of cooperation and fraternalism among employees. #

President Johnson congratulates Associate Administrator Alan L. Dean for being selected a recipient of the National Civil Service League's Career Service Award.

Alan L. Dean:

THERE'S ALWAYS ROOM AT THE TOP FOR KEY TALENT

From a GS-5 trainee in Ordnance Department administration pulling down a cool $38.50 each week to Associate Administrator of a large Federal agency responsible for a $700,000,000 annual budget. . . .

This Horatio Alger-type success story belongs to 46-year-old Alan L. Dean, FAA's Associate Administrator for Administration. Alger, himself, probably never wrote a better one—and certainly not a truer one.

But unlike Alger's fictional heroes who progressed from rags to riches simply by leading virtuous lives and performing daring deeds, Alan Dean has found that other, more basic ingredients, also are necessary for success. High on this list is dedication. And Alan Dean is a dedicated man.

But don't take our word for it. Here is what Administrator N. E. Halaby had to say about Alan Dean in nominating him for the National Civil Service League's 1965 Career Service Award:

"Alan Dean's achievements span a Government career of 23 years. The excellence of that service is demonstrated by his record of promotion through the ranks up to the top levels of the career service. His accomplishments in the Federal Aviation Agency are manifold, but they center around service to his organization and to his superiors. Specifically, he has been the chief architect of an advanced system of management and control which enables the Administrator of FAA to administer effectively a large and complex independent agency in the accomplishment of its programs."

Dean subsequently became one of ten outstanding Federal Government employees selected by the League to receive the 1965 awards.

But what kind of a man is Alan Dean? Is he one of those dehumanized, programmed, computerized management types—all brains and no heart—we hear so much about today?

Well, his family doesn't think so. In 1955, his daughters Claudia (then 10) and Diana (then 6) nominated him as the Washington area's "Ideal Father." And they gave him such a strong, objective, unbiased recommendation that he won the title hands down.

Dean later commented that his daughters should have been named "Letter-Writers of the Year."

A man of sly wit spiced with understatement, Dean speaks with precision, selecting and polishing each word before fitting it into a sentence. His conversation is not slow; however, it carries the implication that the speaker simply knows what he is talking about.

If the occasion demands he can get his point across in German, can make his way in French and Swedish, has followed the conquests of Julius Caesar in Latin and has studied Russian and Sanskrit.

And—you can take Claudia and Diana Dean's word for it—he also "can speak cat talk"—a habit he acquired while convalescing from a lengthy illness when his faithful bedside companion was Clinky, the family cat.

(It was little items of information like this in the girls' letter of nomination that won Dean the "Ideal Father" title.)

Alan Dean started his Federal career as a GS-5 administrative trainee with the War Department at Rock Island Arsenal, Ill., in 1941. He progressed rapidly through a series of positions in personnel management and in 1947 he moved to the Bureau of the Budget (BOB). Dean represented BOB in a series of studies of aviation programs and organizations which contributed significantly to the passage of the Federal Aviation Act and the creation of the FAA, while simultaneously heading the Bureau of the Budget's staff work leading to the establishment of the National Aeronautics and Space Administration. While in the Bureau of the Budget he took on such other chores as writing the National Capital Planning Act of 1952 and serving as assistant to the Vice Chairman of the first Hoover Commission on Organization of the Executive Branch.

He became the first FAA Assistant Administrator for Management Services in 1959 and was later promoted to Associate Administrator for Administration with responsibility for directing FAA's personnel, training, budget, management improvement, accounting, auditing, security, automatic data processing and administrative services activities.

Dean's modern management concepts and practices have contributed significantly to a $65 million saving achieved by the FAA during the past four years. An FAA five-year budgeting program, initiated by him, was cited by the Director of the Bureau of the Budget as an outstanding example of modern financial planning.

A good insight into Dean's management concepts and philosophy can be found in his article, "Development of a Financial Management Improvement Program in the Federal Aviation Agency," appearing in the report of the Joint Financial Management Improvement Program, Fiscal Year 1964. It provides an inside peek at top management in action and is a concise history of the FAA. In addition, Dean has been the author of numerous professional papers, including the papers "Field Office Configuration Study" (Project Focus) and "Action on Hoover Commission Proposal, Part 12."

His work has not gone unnoticed. In 1945 he earned the War Department's Meritorious Civilian Service Award; in 1962 he was nominated for the Rockefeller Public Service Award and the National Civil Service League Career Service Award; in 1963 he was again nominated for the Rockefeller award and also for the President's Award; in May he was presented with the National Civil Service League's Career Service Award.

A chef of more than passing ability, his speciality is *lutefisk*, a Scandinavian cod fish delicacy usually served during Christmas season. Traditionally 16 days in preparation, Dean has trimmed the time a bit.

His acquaintance with pots, pans and the kitchen stove came early; his mother died when he was eight and in later years he assumed the role of chief cook and general housekeeper for his father and younger brother. He didn't get tangled in his apron strings, however. He got in his share of canoeing, hiking and swimming, pursuits he still enjoys. And he acquired enough merit badges to become an Eagle Scout.

Outside the Agency Dean is an active member of his community, Arlington, Va., where he has served as a member of both the County Board of Supervisors and the County Planning Commission. He has recently been asked to serve as a member of the Board of Directors of the United Givers Fund in the Washington area.

Alan Dean is an active member of the Conference on the Public Service and of the American Political Science Association. He has long been one of the leaders of the American Society for Public Administration, and served as president of its largest chapter, the National Capital Area Chapter. He is currently an officer in ASPA's Executive Council. He is a frequent guest lecturer at several Washington area universities and a member of the Board of General Administration of the U. S. Department of Agriculture Graduate School.

Born in Portland, Ore., Dean received a B. A. in political science at Reed College, Ore., and an M. S. in public administration from American University, Washington, D. C. #

Dean finds relaxation from the pressures of a 12-hour work day with his stamp collection, begun as a boy, which now has 20,000 varieties.

Above: The Dean clan takes it easy in the back yard of their Arlington, Va. home. Catching this energetic family at rest is quite a trick. From left: Diana, Claudia, Laura, "Daddy" and wife, Vera. Below: Dean and Laura harvest asparagus crop in the garden. The family canoe, a major source of pleasure, is in the background.

Competition for
Miss or Mrs.
Federal Civil Service

17 BEAUTIES - COUNT'EM - 17

Veteran beauty contest judges, aged beyond their years in the pursuit of their arduous duties, will tell you it's tougher work than digging ditches. Only their dedication to public service drives them on. And so does the beauty of the job.

Just how tough their work is is illustrated by this bevy of FAA beauties from the Eastern Region who competed for the diadem of Miss (Mrs.) Federal Civil Service to be awarded at the World's Fair observance of Civil Service Day, May 31. All the girls are from the New York City area.

The hard-working judges, toiling under a broiling sun and working against a relentless clock, also sought queens to reign over city, county and state civil service systems.

In addition to this plentitude of pulchritude, the FAA was represented at the Fair by its Audio Visual Theatre, a display featuring two general aviation panels and a continuous-run movie. Eastern Region controllers manned the exhibit and explained it to thousands of Fair-goers. (At press time, Regina Malinowski was named winner.) #

Barbara Atherton, Noise Abatement

Barbara Prinz, Aircraft Management

Regina Malinowski, Management Analysis

Carol A. Villecco, Program Planning

Shirley Rivera, I & M

Marga-Rose Fischer, Navaids System

Barbara Schmidt, Planning Branch

Susan Russo, Administrative Services

Phyllis Montella, Training

Eileen T. Vernon, Public Affairs

Sandy Dasch, Space Management

Brenda Schliemann, I & M

Jill Duva, Airspace

Gloria Wiener, Aircraft Management

Angela Errico, Aircraft Management

Arlene A. Caproni, Propulsion Section

Margaret Braton, Defense Readiness

CENTRAL REGION, I&M DEPUTY DIRECTORS NAMED

Glenn E. Goudie

Donald S. King

Two new Deputy Directors, one in the Central Region and the other in Washington Headquarters, were announced recently.

Donald S. King was named Deputy Director, Central Region and Glenn E. Goudie was selected Deputy Director, Installation and Materiel Service.

King, currently Deputy Director of the Installation and Materiel Service, succeeds Henry L. Newman who recently was named Director, Southwest Region.

Goudie, Deputy Director of the FAA Systems Maintenance Service, will replace King in the Installation and Materiel post.

King is a 25-year employee of the FAA and predecessor agencies, with a total of 32 years in Government service. His Government service began with the Public Roads Administration in 1933 after graduation from George Washington University with a B.S. degree in civil engineering. He transferred to the former CAA in 1940 working in Washington, D. C., Atlanta and Seattle until 1947, when he transferred to the Department of the Army for overseas duty. He returned in 1950.

In January 1964, King received FAA's Meritorious Service Award for his outstanding work in planning and effecting the establishment of the Installation and Materiel Service while continuing the operations of an existing organization, the Aviation Facilities Service. He is a graduate of the Industrial College of the Armed Forces and is a registered professional engineer and a member of the American Society of Civil Engineers.

Goudie's FAA service dates back to 1940 when the Alaska Aeronautics and Communications Commission was taken over by the Federal Government. At that time, Goudie was supervisor of that Alaskan commission. He remained in Alaska for the next four years with the former CAA and, in 1945, transferred to Washington, D. C. as chief of the Radio Engineering Section. He resigned from the CAA in 1946 to work in industry, and rejoined the Agency in 1948 as chief of Communications Engineering.

Goudie held progressively responsible positions in the CAA until 1951 when he was detailed by the Administrator to the International Civil Aviation Organization (ICAO) to make a detailed survey of Iceland's air navigation facilities and services. He was appointed chief of the ICAO Technical Assistance Mission to Iceland in 1952 and in Lebanon in 1953. He returned to the CAA in 1955 and later was named chief of the Systems Maintenance Division in the former Bureau of Facilities. He was named Deputy Director, of Systems Maintenance Service in January 1964.

Goudie is an active pilot and holds a commercial license with multi-engine and instrument ratings. For his effective work overseas, Goudie was decorated by the Governments of Iceland and Lebanon. He also holds two FAA awards.

Seattle ACDO Responds with Blood for Sick Child

Seven FAA employees in Seattle served as blood donors when an urgent call was issued to aid a two-and-one-half year old boy suffering from hemophilia.

The plea for help was answered promptly by four employees of the ACDO, Roy L. Mayfield, Edward Thompson, Edward B. Saul and Donna R. Stearns. Two employees of the SMDO, Francis H. (Frank) Horn, and Con J. Lund, also donated blood as did Dalton D. Allen of the Seattle GADO.

Number of U. S. Airports Rises Continuing Annual Upward Trend

The number of United States airports reached 9,490 at the end of 1964, an increase of 676 over the previous year. The increase represents a five year trend which has averaged 623 annually.

This increase reflects new airport construction and a more extensive airport reporting service on the part of the FAA. FAA regulations now require airport operators to notify the Agency before establishing or closing an airport. This practice has enabled the FAA to account for many airports in use for a number of years but not previously recorded.

All airports which are open to the general public are now inspected annually. FAA's current analysis of civil and joint civil-military airports in the United States shows that Texas, with 812 airports, leads all other states in the number and growth rate of airports. California, with 627 landing facilities, is second, followed by Alaska with 549.

Nearly two-thirds of the national total of 9,490 airports, 5,846 are privately owned. Lighted runways are provided at 2,773, and paved runways at 2,630.

PETER CAPORALE

Peter Caporale, a veteran FAA employee in Washington, died of a heart attack in his home in Chevy Chase, Md., on June 5.

Caporale, who was 58, was internationally known in aviation electronics for his pioneering contributions to the development of today's air navigation, communications and radar facilities.

A veteran of 28 years service with the FAA and its predecessor agencies, Caporale had recently been appointed Deputy Director of the Systems Maintenance Service. Prior to the appointment, he was chief of the Program Management Division, Installation and Materiel Service.

During his Government service, he held a variety of engineering and supervisory positions including chief and Deputy Director of the Systems Equipment Division of the former Office of Air Navigation Facilities.

Born in Philadelphia, Caporale graduated from the University of Pennsylvania. He was a registered professional engineer and a senior member, Institute of Radio Engineers.

He is survived by his wife, Alma, and four sisters.

DALLAS CARRIER INSPECTORS CHECK JET PILOTS

When the Dallas-based air carrier, Braniff International Airways, introduced a new short haul jet recently, it climaxed two years of work by FAA's Air Carrier District Office (ACDO) in Dallas to train pilots and inspectors for the British Aircraft Corp. *One-Eleven* jet airliner.

Ted J. Alkire, FAA airman certification specialist, was the only U. S. certificated pilot on the British-made jet when the project started.

During the past two years, he has spent nearly half of his time in England. Together with Albert F. Yost Jr., Alkire has given Braniff pilots their BAC *One-Eleven* training, FAA type ratings and proficiency checks. Braniff now maintains a $1.5 million simulator in Dallas for much of the flight indoctrination training.

Also in England for training as BAC *One-Eleven* FAA inspectors were Charles R. Davies Jr., a principal operations inspector; J. Lee Herron and Roger A. Turney, maintenance inspectors and M. Larry Bottie, a principal electronics inspector. They have participated in the Maintenance Review Board and will be responsible for the maintenance procedures.

The FAA office in Paris played a role in the international venture by issuing the final certification for the aircraft and permitting British crews to deliver them to this country.

The BAC *One-Eleven* deliveries brought to seven the different types of aircraft inspected by the Dallas ACDO for Braniff alone.

The 100 hours of proving flights required of all new aircraft by FAR 121 was started in April. FAA inspectors will ride the last 50 hours over Braniff air routes.

RECEIVES SAFETY AWARD

Administrator Halaby was awarded the 1964 Monsanto Aviation Safety Award by Roy Brandenburger, (center) of Monsanto, and Jerome Lederer, Flight Safety Foundation, at the Aviation/Space Writers Association Convention held in Albuquerque, N. M.

Agency's Top Recruiter Tours Countryside with Brief Case Full of Jobs

"When I told my girls you were coming to give the tests this year they cheered, and I joined them," wrote a Pennsylvania high school teacher to Audrey Mills, FAA's five-star recruiter. To these youngsters, as to hundreds of others, Mrs. Mills is a legendary figure who used to come each year from Washington carrying a brief case full of jobs.

Mrs. Mills, now retired and living in Florida, was recalled to FAA this spring by the Office of Personnel and Training to make another expedition into the Keystone State in quest of typists and stenographers. Why Pennsylvania? Two good reasons. Its excellent school system turns out well-trained pupils, and it is within easy visiting distance from Washington.

In her six and a half years with the Agency, Mrs. Mills tested and offered jobs to over 1,300 high school students; 850 reported for work and 475 are still with us. Actually, Mrs. Mills has provided FAA headquarters with two-thirds of its secretarial staff. And more are on the way.

Mrs. Mills has established an enviable reputation among Pennsylvania school and employment authorities. She works with both in planning her itineraries and she keeps both fully informed of her activities.

Because of Mrs. Mills' sincere interest in the new employees and her excellent follow-up once they are on the job, the secretarial turnover in FAA is significantly lower than most Government agencies. An unofficial survey showed that in the first six months of Federal service—always a crucial period for youngsters away from home—FAA loses 12 per cent of its probationers as against up to 50 per cent in other agencies.

Personnel recruiter Mrs. Audrey Mills tours Pennsylvania testing high school students for secretarial work in the Washington Headquarters. More than 1,300 students have been recruited. (Photo by Johnstown Tribune-Democrat).

Mrs. Mills always watched out for the newcomers. She helped them find living quarters they could afford; she had lunch with them; she invited them to her apartment to make cookies and candy; she did everything she could to help them adjust to the loneliness of a big city. Always, at the end of their first 90 days, she conducted a formal follow-up placement interview which straightened out many problems.

FAA lost Mrs. Mills when her husband retired from Government service in 1962, and they moved from Washington to Bradendon, Fla. Before she left, 500 of her "kids" gave her a big party, an engraved silver tray, a scroll inscribed with their signatures and their love. And in addition the Governors of West Virginia and Pennsylvania sent letters of appreciation for all the unselfish and unsparing help Audrey Mills gave so many fledgling workers.

RELIC ALASKAN AIRWAYS CHART STIRS MEMORIES

Airways named for Alaskan pioneer pilots Raymond Petersen, left, and James Dodson, right are shown on mid-thirties airway chart in the office of L. P. Rogers.

An old air navigation chart used in Alaska during the mid-thirties brought moments of nostalgia recently when it was shown to Alaskan airmen, Raymond Petersen and James Dodson, president and vice-president, respectively, of Northern Consolidated Airlines Co.

The chart, which was shown to the airmen by Lawrence P. Rogers, operations officers, FIDO, chronicles the history of air transportation in the 49th state. Some of these earlier routes are still served by the same men who have moved from the cockpit to the front office in companies which have merged and become larger. For example, the Petersen route between Bethel and Anchorage was served by the Ray Petersen Flying Service; the Dodson route connecting Fairbanks, McGrath and Ruby was flown by the Jim Dodson Flying Service. When Petersen, Dodson and others incorporated in 1947 to form Northern Consolidated, these routes were brought into the NCA route structure, and expanded.

Airways, as such, were named after the air operators who served the routes connecting Alaskan towns and villages in their Stinsons, Bellancas and Wacos.

Plans are currently being made by Flight Standards Division to restore this chart of aviation in Alaska and give it to the regional library for historical use.

Airport Advisory Service Use Left Up to Pilots

The rule requiring pilots of radio-equipped aircraft to maintain communications with a flight service station (FSS) when they are within a five-mile radius of an uncontrolled airport on which a station is located was rescinded May 17.

In taking the action, FAA said the rule is inconsistent in its application. It affects only pilots of radio-equipped aircraft who must comply with the rule or be liable for violation. There is no similar obligation imposed on pilots flying aircraft not equipped with radios.

In addition, the rule is extremely difficult to enforce since it also excludes pilots of aircraft with inoperative radios.

FAA believes that the purpose of the rule, which was to make FSSs a centralized source for airport advisory service at fields without a control tower, can be achieved by making communications with the station voluntary.

The airport advisory program, therefore, will be continued on a voluntary participation basis. Pilots are encouraged to avail themselves of this service.

The rule change is based on a Notice of Proposed Rule Making issued October 7, 1964. It affects Part 91 of the Federal Aviation Regulations.

'GIRL GUIDES' GUIDED

A walk on the bright side is in store for visitors to the Aeronautical Center when one of these beauteous "Girl Guides" conducts the tour. Wayne Sprague (right), Chief, Line Operations Division, Aircraft Services Base, briefs them. From left: Carol Prewitt, Marie Davis, Odessa Amos, Judy Cunningham, Marvella Holmes, Jane Dodd, LaVaughn Harris, Glendeen Hollis, Carolyn Wallace, Nora Walkup. On the loading stand, from left: Betty Dale, Gail Starnes, Jane Noakes and Barbara Neuenswander.

President Names David D. Thomas As New Deputy FAA Administrator

David D. Thomas

David D. Thomas, a career Civil Service employee with 27 years in the Agency and 33 years in aviation, has been named by President Johnson for appointment as Deputy Administrator of the FAA to succeed Lt. Gen. Harold W. Grant.

Thomas, born in New Castle, Tex., Feb. 19, 1913, holds a commercial pilot certificate with multi-engine and instrument ratings.

Prior to his being named Deputy Administrator, Thomas served as Associate Administrator for Programs, a job he assumed on June 12, 1963.

He began his aviation career as an operations agent and assistant station manager for American Airlines in Nashville, Tenn., in 1932 and entered Federal service in 1938 as an air traffic controller for the CAA in Cleveland.

Thomas was appointed chief of Air Traffic Control for the Fort Worth Regional Office of CAA in 1941 and in 1942 moved to Washington, D. C. as airport traffic control inspector and assistant chief of the Airport Traffic Control Section. Next he became chief of the CAA's Air Traffic Control Branch in Santa Monica, Calif., a post he held from 1944 to 1946.

He was then named deputy chief of the International Services Office, and in 1949 he became planning officer in the Office of the Administrator. He was elevated to chief of the Planning Staff in 1953 and was named Deputy Director of the Office of Federal Airways in 1954.

He was Director of the Office of Air Traffic Control from 1956 to 1959 and then served as Director of the Air Traffic Service from 1959 to 1963.

Thomas holds the Meritorious Service Award from the Department of Commerce, the Laura Barbour Air Safety Award, and in 1963 he received the President's Award for Distinguished Federal Service.

STANDARD DESIGN TOWERS DEDICATED AT LAWTON AND TULSA, OKLAHOMA

Above left: I. M. Pei points out an architectural feature of the standard design tower to Administrator Halaby. Above right: Three men vitally concerned with the Lawton Tower in background are, from left, electronics maintenance technician Evan Roberts; Tower Chief James E. Welsh and the Construction Superintendent Frank Stuever.

Southwest Director Archie W. League (center) and Jay Perry (left) and Richard L. Jones Jr. snip the ribbon simultaneously marking the opening of the Tulsa Tower.

Two of FAA's new airport traffic control towers were dedicated in early April within hours of each other to become among the first of this design to start operating in the United States. Both were in Oklahoma—at Lawton and Tulsa. A third tower went into operation in Anchorage in March.

Administrator N. E. Halaby, who attended the Lawton dedication on April 9, spoke to an overflow crowd of more than 400 persons at a meeting of the Lawton Chamber of Commerce. Later he shared the speaker's platform at the Lawton Tower with I. M. Pei, whose architectural firm designed the tower, and civil and military leaders from the Lawton-Fort Sill community.

Several military representatives from NATO countries, including Army officers from the West German Republic, France, Great Britain and the Netherlands, were also at the dedication ceremonies.

The Tulsa Riverside Tower dedication was held a few hours later beginning with a reception-dinner at the Tulsa International Airport. Archie W. League, Southwest Region Director, was the keynote speaker at the dedication program held on the following morning.

Lawton Tower was commissioned March 1 and the Tulsa Riverside Tower March 15.

Balboa IFSS Scores a Big Hit With Little Leaguers in Panama

Baseball is probably the most popular sport in Panama where even the Little Leagues command a healthy turnout from the local population.

FAAers in the zone are counted among the avid fans of the sport, too. Recently, under the guidance of Fred B. Self, air traffic control specialist at the Balboa International Flight Service Station, FAA employees raised sufficient funds to outfit six amateur teams with new uniforms.

To show their gratitude, the Pacific Minor League decorated the outfield to spotlight the support of FAA employees.

This Spring, a special ceremony celebrating the completion of the Pacific Minor League Field was held, followed by a series in which all six teams competed in a round-robin. Many FAA children participated in the competition.

PARIS CONFERENCE SPEAKER

Perry S. Bolyard, assistant chief of the FAA Academy's Air Traffic Training Division in Oklahoma City, was one of the United States representatives who addressed the Paris International Training Conference which included air traffic personnel from most of the countries of the free world.

HAM OPERATOR AIDS SKIPPER ON CRIPPLED KETCH

An alert ham radio operator in Oklahoma was responsible for the rescue in early April of a man and wife who were left adrift off the coast of Baja, Calif. on their 38-foot ketch, *Seaway*, when the engine failed.

The amateur radio operator was FAA's William O. (Bill) Todd, Central Aircraft Dispatch, Aeronautical Center who picked up a request for assistance while monitoring his radio.

The couple aboard the ketch had no idea of their position when their marine engine failed on April 3. By utilizing an amateur radio aboard the boat they established contact with operators in California and Mexico, but because of heavy signal interference on the densely populated amateur band no accurate directional finding (DF) fix could be obtained. Then because of the peculiarities of radio waves to "skip" at certain times, communications could no longer be made directly to the boat.

Bill Todd then heard the urgent request while at his home in Norman, Okla. He took active part in the operation both at his home station W5UZX and at the FAA radio shack W5PAA until the rescue was accomplished two days later. Involved directly in the total operation were Todd and hams from Mexico and California. The actual rescue was made by a Mexican Navy gunboat led to the scene by a U. S. Coast Guard aircraft directed by messages relayed by Todd.

Using amateur radio equipment from stations in his home and at the FAA, Bill Todd aided the rescue of two persons adrift in a ketch off of Baja California.

A letter from an official of the Armed Forces Communications and Electronics Association praised Todd's work saying, "Comments from the hundreds of participating amateurs, our U. S. Coast Guard, our Embassy staff in Mexico City, as well as from amateurs in some dozen or so foreign countries lauded the work of the FAA's station W5PAA and Todd's station W5UZX."

MIDNIGHT OIL BURNED BRIGHTLY FOR 3 ALASKANS

The old lamp burned late into the night as these three Alaskan Region FAAers, from left, Frank Berry, Emil Knowles and Al Bruck, labored to add to their education.

"Cease not to learn until thou
cease not to live;
Think that day lost wherein
thou draw'st no letter,
To make thyself learneder, wiser, better."

Three FAAers at the Alaskan Region Headquarters, Alfred B. Bruck, Frank E. Berry and Emil E. Knowles, probably have never heard of 16th century French poet, Guy De Faur Pibrac, but they have certainly heeded his advice.

Bruck, Berry and Knowles were awarded degrees from the University of Alaska at ceremonies held on the Fairbanks campus in May.

Bruck, chief of the Budget Division, and Berry, staff engineer in the Installation and Materiel Division, received Master of Science degrees in management engineering. Both had attended evening classes at the University of Alaska Community College in Anchorage. Knowles, a personnel staffing specialist in the Personnel and Training Division, was awarded a Bachelor of Business Administration with majors in accounting and management.

A retired Air Force Master Sergeant, Knowles had attended evening classes at the Elmendorf Air Force Base branch of the University of Alaska.

Two Programs Reduce JFK Airport Communications

Two programs to reduce the communications workload between pilots and controllers are proving very popular with pilots using J. F. Kennedy International Airport where the systems have been adopted recently.

One is the use of pre-recorded noncontrol information such as navaid status, weather data, altimeter setting, runway in use, etc., which pilots can receive instantaneously. The other is a system which transmits IFR clearances to aircraft departing IFR before they taxi to takeoff position.

The first system, Automatic Terminal Information Service (ATIS), is now in use at at least a dozen United States airports and it is being installed at seven Air Force bases. Prior to the development of ATIS by the Agency's Systems Research and Development Service, controllers were required to give pilots all pertinent terminal information along with control data. ATIS permits the pilot to get the information when his duties are the least pressing. He simply switches to the channel transmitting the recorded terminal data. The controller, freed of the routine duties, can devote more time to actual control responsibilities.

The Pre-Taxi Clearance Program at Kennedy Airport further reduces congestion of the radio frequencies. Pilots departing IFR request their air traffic control (ATC) clearance prior to taxiing out for take off by contacting a newly established clearance delivery position in the tower. Abbreviated clearances are relayed to this position from the New York ARTCC as much as one hour in advance of takeoff. On departure the aircraft calls Kennedy Tower and the previously received clearance is issued without further coordination with the center.

MODEL CHAMPS: *Best of Show winner Donnel Hunter (left) and Terry Hill (second from right) with most original entry receive trophies from Administrator N. E. Halaby and William H. Waters Jr., of the Washington, D.C. Recreation Board, at the 13th Annual Model Aircraft Contest.*

FAA's Basic Long Range Policies Outlined by the Administrator

The Agency recently outlined its basic long range policies which will guide it in carrying out its missions and in its relations with those it serves.

Announcing the policy statement in April, Administrator Halaby said, "This is perhaps the first time an agency of the Federal Government has published a comprehensive, long-range statement of the policies which will guide its actions."

He explained, "the statement cannot commit the President or the Executive Branch in every respect, and many individual issues will arise in such a manner as to require individual decisions." He expressed the expectation, however, that it would establish a broad base for government-industry-labor understanding.

Basic Principles Guide FAA

The policy statement sets forth basic principles to guide the FAA in carrying out its regulatory responsibilities and its role as builder and operator of the National Airspace System.

The policy affirms the FAA's obligation to regulate private conduct but only to the extent required in the public interest; to recognize the right of the general public to be informed and to be heard; to apply the regulatory hand evenly in similar situations, while also recognizing the different rights, duties and operational requirements of the various segments of the aviation community.

Also, the FAA is obligated to manage the airspace as a national resource in a manner best serving the requirements of all users while also recognizing needs of people on the ground.

A favorable balance of benefit versus cost is recognized as the basic test to be applied to FAA actions affecting the National Airspace System.

The Federal Government's policy of recovering through user charges its expenditures for activities which confer benefits on specific individuals over and above benefits to the public at large is reaffirmed in the statement.

Agency's Role in Civil Aviation

Clarification of the FAA's role in promoting the growth of civil aviation and providing essential defense services is also contained in the document.

Halaby indicated that the statement of policy will be subject to periodic review by the Agency and, for this reason, "the comments of the aviation community and the general public will be welcomed and carefully considered."

BEST BACKYARD BEEF BARBECUE BUFF BRINGS BOUNTIFUL BUCK BONANZA

His wife's whimsical wish last summer for a trip to Hawaii started NAFEC electronics engineer Glen D. Adams down the long barbecue trail that led to his being crowned America's Cookout Champion for 1965.

He won the title and $10,000—plus a week-long all-expense trip for his wife and himself to Hawaii—for his original recipe, "Plum Good Polynesian Beef Roast," in a Kaiser Foil contest.

As one of the 25 finalists in the national competition, Adams recreated his gastronomic masterpiece in a palm-shaded garden where he and the other contestants were secluded from the judges.

Adams' bent toward food preparation began out of necessity when he was a bachelor undergraduate at California State Polytechnic College, San Luis Obispo, Calif. He early learned to cope with the problem of keeping well fed at rock-bottom prices. The knack has now grown to professional size, and a good thing, too—he and his wife Frances have six sons with appetites to match.

Left: NAFEC's electronics engineer Glen D. Adams and wife receive $10,000 cooking prize from actress Joan Crawford who announced the lucky contest winners. Right: Adam's winning dish, "Plum Good Polynesian Beef Roast" is admired by local beauty. Besides the cash, Adams and his wife were given a week-long all-expense trip to Hawaii.

Here's his $10,000 formula:

Plum Good Polynesian Beef Roast

(Makes about 10 servings)

1 (7 to 8-lb.) beef rib roast, boned, rolled and tied
1 bottle Italian salad dressing
2 cans (No. 2½) purple plums
1 can (6 oz.) frozen lemonade concentrate
1 tablespoon soy sauce
1 teaspoon ground ginger
1 pkg. (6 oz.) slivered almonds
Quilted heavy-duty foil

Marinate beef roast in Italian dressing for 3 hours, turning occasionally.

Line grill with quilted foil; let coals burn down until covered with gray ashes.

Drain plums, reserving 1 cup syrup. Seed plums; puree in a blender or through a sieve. Add reserved plum syrup, lemonade, soy sauce and ginger; mix well.

Remove roast from marinade and place on spit. Reserve marinade. Cook roast for 3½ to 4 hours. If using a meat thermometer, meat is medium rare at 150°. During the last 45 minutes, baste frequently with plum sauce. Remove roast from grill to hot serving platter. Heat remaining sauce with marinade and pour over roast. Sprinkle with slivered almonds. Garnish with spiced crab apples and parsley, if desired.

SHARP CONTROLLER GIVES EARLY TORNADO ALARM

Strict attention in class paid off in lives saved and property losses reduced recently when Billy J. Evans remembered his school lessons. Evans is a controller at Southwest Region's Little Rock, Ark., terminal radar control room (TRACON).

Evans noticed a peculiar radar echo on the scope coming from a squall line 25 miles west of Little Rock. The unusual echo, southwest of Conway, Ark., resembled photographs of confirmed tornadoes that he had seen at an Agency sponsored training course at Denver.

Not one to hesitate, Evans checked with William W. Patrick, electronic maintenance technician, who also was on duty. Patrick then briefed the nearby Weather Bureau to get its opinion.

Weather bureau personnel closely observed the radar return, verified that it was a tornado echo and lost no time in alerting State Civil Defense headquarters at Conway and warning broadcasts were made. The rapid actions of Evans and Patrick, coupled with the immediate response of the weather bureau gave Conway citizens from 10 to 19 minutes advance warning that the tornado was headed their way.

The low loss of lives and property at Conway is directly attributed to the quick thinking and cooperation of FAAers and Weather Bureau employees on the job.

Billy J. Evans points out where tornado echo was seen to EMT. William W. Patrick at Little Rock TRACON.

NAFEC Aircraft Services Unit Now Is Approved Repair Station

NAFEC's Aircraft Services Facility (ASF) has been designated an approved repair station. Presentation of the certificate was made recently to ASF Chief Vincent G. Sanborn at Atlantic City by B. S. Van Artsdalen, general aviation district office, North Philadelphia Airport.

The new designation increases the facility's scope of work to include major repairs and modifications. Maintenance is now approved on six types of aircraft, DC-3, DC-4, DC-7, Aero Commander, Convair T-29, and the Grumman Gulfstream. The Facility has an instrument certificate for work on auto-pilots and an electronics certificate for certain airborne radar, radios and other types of communications equipment.

ASF not only maintains NAFEC's own fleet of eight aircraft, and five others belonging to the Flight Inspection District Office located there, but also performs maintenance on 12 other Agency planes periodically flown in from other bases.

VACATION ENDS WITH HELICOPTER RESCUE RIDE

What started as a vacation—that long awaited, eagerly planned camping trip in West Virginia—for a Baltimore man and his three teen-age sons—ended as an ordeal. And but for the cooperative efforts of FAA, the Army, the Air Force and the U. S. Forest Service, it might have ended in disaster.

The saga of the Gaines family of Baltimore began on Monday, April 12, when they departed Smoke Hole Camp Grounds in the Monongahela National Forest in two canoes for an 18-mile trip downstream to the intersection of the south branch and north fork of the Potomac River. Clement Gaines and his 14-year-old son, Gary, were in one canoe. Eighteen-year-old Chris and 15-year-old Clement Jr., shared the other.

Both canoes were swamped with water about 11 a.m. of the following day near Shooch Gap where the south fork of the Potomac rushes through a series of steep rocky gorges. Chris and Clement, Jr., were injured in the accident, so Mr. Gaines and Gary went for help.

They arrived at a farm house outside Pansy, W. Va., about 2 p.m. on Wednesday and telephoned Ranger Joe Tekel of the U. S. Forest Service in Petersburg, W. Va.

Since the accident location was not accessible to land vehicles, it was decided to attempt helicopter rescue. FAA flight service stations in Elkins and Martinsburg, W. Va., were contacted for assistance.

As a result of FAA efforts, the Air Force control tower at the Martinsburg Airport was alerted to the search. The tower advised that a "banana" type Army helicopter (an HC-21) from Ft. Belvoir, Va., was inbound for fuel.

The pilot who was contacted by the Martinsburg FSS agreed to undertake the mission. John Tabler, an FAA electronics technician at Martinsburg volunteered to go along as a guide.

The evacuation was conducted without incident, and the two boys were transferred to the Petersburg hospital when the helicopter landed there at 6 p.m.

Thom Drums It Up for American Indians at Denver

From left: Western Region's Melvin D. Thom, civil engineer, confers at a Denver meeting of the National Indian Youth Council with Allen Jacob, a Chippewa from Edmonton, Canada, and Herbert Blatchford, a Navajo from Gallup, N. M. Thom, of Paiute extraction, assists the Indians' economic situation and helps to preserve their lands.

Many an American Indian has reason to be grateful to Western Region's Melvin D. Thom, a civil engineer with the Installation and Materiel District Office, San Francisco. Not only is Thom an outstanding FAAer, he also is a dedicated worker for causes associated with America's Indian minorities.

Thom, 25, of Paiute extraction, is president of the National Indian Youth Council (NIYC), which is deeply concerned with fair treatment and equal opportunity for the minority it represents. The council is active in improving the Indians' economic situation and helping preserve their lands.

Thom presided at a recent two-day executive conference at Denver, aimed at bettering cooperation between United States and Canadian Indians. The meeting drew 35 delegates from all areas of the United States, including Navajos, Chippewas, Senecas, Paiutes and others.

Recently, Thom was given a quality within-grade pay increase for consistently exceeding performance requirements.

Air Traffic Controller Stress Will Be Scrutinized by Medics

The Office of Aviation Medicine and the Systems Research and Development Service have begun a cooperative study to determine the physiological and psychological reactions of en route controllers during sustained periods of intense activity. The study which is conducted at National Aviation Facilities Experimental Center is related to the possibility of early retirement of air traffic controllers.

Actual working conditions in an air route traffic control center will be duplicated by simulation. As a first step, NAFEC controllers will be observed under varied conditions of work load.

Following the completion of this initial phase, a group of controllers from the regions, varying in age and experience, will report to NAFEC for participation in the simulation study. It is expected that the project will be completed by early fall.

FAAer IS SUCCESSFUL AUTHOR

Specialist Joseph F. Higgins of the Las Vegas Flight Service Station is also a successful author and dramatist. His play, "Aladdin and His Magic Lamp," about the misadventures of a high school dropout, made its debut at the Gallery Theater (Nevada's first theater-in-the-round) in Las Vegas recently and was an immediate hit. Billed as a play for children, it also appeals to adults.

"Aladdin" was warmly praised by the Las Vegas *Review-Journal* whose critic found it "an enjoyable 90 minutes of horseplay, slapstick and ironic commentary on some of our universal evils," adding that it was "hilarious, imaginative, sardonic and frequently touching."

Higgins says he started collecting rejection slips about 1936 when he was still in high school and made his first sale in 1947 with an article entitled "Salt Water Radio Operating." His first fiction sale was also about the sea, a short story called "Tug of Heart," published in 1950. Since then his writings have appeared in both fiction and non-fiction, sometimes under the pseudonym "Joe Sparks."

Higgins plans some day to write on a full-time basis.

ALASKAN OLD-TIMER RETIRES

Robert Matsen, chief, Airport Engineering Branch, Airports Division, at Regional Headquarters in Anchorage, on April 9, after 31 years Federal service.

ALASKANS COMMENDED FOR WORK AT SCIENCE FAIR

Blue ribbons were presented to the two top Science Fair winners by Ted R. Young, director of the Greater Anchorage Science Fair. The finalists, Jerry Rankin, center and Dale Walther, both of East High, represented Alaska in the national high school science competition in St. Louis, Mo., where it was held in May.

FAAers in Alaska were commended for their contribution to the 1965 edition of the Greater Anchorage Science Fair.

Headed by Ted R. Young, chief of the Operations Branch of the Systems Maintenance Division in the Regional Headquarters, 27 employees served as Science Fair administrators and judges in the preliminary and final competitions.

Winning top honors in the physical and biological fields of science were East High School seniors Jerry Rankin and Dale Walther. Both represented Anchorage in the National Science Fair finals.

Expressing his appreciation for FAA support of the Science Fair, August G. Hiebert, owner of Northern Television, Inc., commented in a letter to Alaskan Region Director James G. Rogers: ". . . Those of us who contributed our time to help the best interests of the Science Fair are well aware of the fact that the FAA people who provided the outstanding leadership this year had considerable understanding and support from their FAA colleagues. I'm sure I can speak for the others who also feel that we collectively owe you and the FAA a note of gratitude and this expression of appreciation. FAA received a great amount of good will because of this."

Allemand Left Your Corner, Grand Right and Left!

"Swing your partner and 'do-si-do'" are typical fun-filled words often called out by Carnot N. Blocker, when he takes the mike in Fellowship Hall at Cary, N. C., and warms up for an evening of fun, folk music and fellowship.

Blocker, chief of Southern Region's Systems Maintenance Field Administration Section at Raleigh, N. C.—born in the Deep South and a veteran FAAer with 19 years service in the southern states—is at home during his leisure hours serving as leader of the Crosstrailers Square Dance Club.

The Crosstrailers Club was originally organized by members of the Cary Methodist Church to further the church fellowship program. However, after a few years, the club members decided to share their fun with others, and are now holding regular square dancing classes for everyone.

Blocker's enthusiastic participation in his church and community affairs, exemplifies the talent, versatility and spirit of good citizenship of each member of our FAA team.

In bright string tie, plaid shirt and jeans, Carnot N. Blocker mans the mike at lively square dance session.

Medical Aspects of Air Traffic Presented to Medics on Live TV

Highlight of the Aerospace Medical Association's 36th Annual Meeting, held in New York City in April, was a live, closed circuit television program presented from the J. F. Kennedy Tower by the Federal Aviation Agency's Office of Aviation Medicine.

The hour long telecast, "Medical Aspects of Air Traffic Control," was moderated by the Federal Air Surgeon, Dr. M. S. White. Participating in the program at the JFK Tower were Wayne Hendershot, Deputy Director of the Eastern Region; Dr. Lawrence Marinelli, Eastern Region Flight Surgeon; William Parenteau, Tower chief; and the JFK controllers on duty.

Following the telecast a panel of FAA medical experts conducted a question and answer session attended by several hundred physicians. Appearing on the panel, in addition to Dr. White, were Dr. Romney H. Lowry, chief of Medical Research and Education; Dr. Peter V. Siegel, chief of FAA's Aeromedical Certification Division; Dr. Frank R. Raymond, chief of FAA's Aeromedical Standards Division and Dr. Arthur E. Wentz, director of FAA's Georgetown Clinical Research Institute (GCRI).

Papers on aeromedical research were presented by the following FAA research scientists: Dr. Kenneth M. Moser, Dr. P. Gregg Rhodes and Dr. Richard Feinberg, all of GCRI and Dr. Richard G. Snyder, Michael T. Lategola, G. T. Hauty, J. Robert Dille, J. D. Dougherty, William E. Collins, George E. Pendergrass, David K. Trites, William F. O'Connor, and Stanley R. Mohler, all of the Civil Aeromedical Research Institute (CARI).

The Federal Aviation Agency also presented an exhibit on the role of medicine in aviation and films on air traffic control.

NAFEC's FOR THE BIRDS

NAFEC is ready for the annual onslaught of New Jersey's demon mosquitoes. Three bird houses have appeared on the premises, each a six-room apartment aimed at luring a colony of purple martins to take up residence there.

Purple martins are winged creatures slightly larger than the Jersey pests, more effective in aerial combat, and with an insatiable appetite for mosquitoes.

According to Center Manager William F. Harrison, the martins, by decimating the mosquitoes, will enable him to cut down on spraying bills this summer.

ON THE SCOPE

IN THE LIMELIGHT: Nelson F. Barritt, chief of Central Region's System Maintenance Division presents Presidential Citations to personnel of the West Branch, Iowa SMS Sub-Sector. From left: R. S. Marco, C. C. Kurth, H. E. Wholford, D. W. Lowrey, D. S. Blackmon, R. Lanning, R. F. Seger and Nelson Barritt.

PROOF THIS: Margaret M. Nevins, HQ-410 (left) receives Federal Editors Award from Mary E. Healy for editing the FAA's "Private Pilot Handbook."

ABOVE AND BEYOND: Clara Teitel, EA secretary receives commendation from Director Oscar Bakke for her selfless work after an air carrier accident.

PROMOTION: Lt. Gen. Harold W. Grant, Deputy Administrator and Mrs. Verus Yon pin the General's old Lt. Col. leaves on new USAF Lt. Col. Yon recently. Yon is Assistant Executive Secretary to the Administrator.

YAKATAGA HERO: Director James G. Rogers presents Meritorious Service Award to general mechanic James Oksotaruk for saving Robert Garner from drowning when his boat capsized at Cape Yakataga, Alaska.

CAREER AWARD: SW's management analyst George E. Andreason was granted a Career Education Award for graduate public affairs study at Indiana University.

AFTER HOURS

TAKEOFF: Boy Scout official Carl E. Timmons (center), hands Explorer charter to Clarence W. Schilling, Air Traffic Control Association, in ceremonies at Denver Center. Tracy E. Perry, ATCA, is on right.

CHAMP: Electronic maintenance technician Earl L. Redman rolled 211-226-227 in his doubles to win this trophy and Class "B" All Events crown in the Men's Annual City Bowling Tournament, Waco, Tex.

GIRL FRIDAY: Mrs. Elizabeth Hendricks, clerk-stenographer, Air Carrier District Office, Dallas, was named "Outstanding Member of the Year" of the Farmers Branch Business, Professional Women's Club.

SKY BUGGY: Alfred J. Dewey, Western Region Flight Standards Branch chief, puts the finishing touches on **Cosmic Storm**, a two-place version of the **Cosmic Winds**. It's been five years (2,500 hours) in building.

SURE-FOOTED: George E. South, Phoenix General Aviation District Office, with safety trophies given him by the Arizona Aerial Applicators Association.

CAGERS: Dayton RAPCON basketball aces. Back row, left to right: Loren Ridgeway, Edsel Sammons, Bill Doyle, John Burton, Mike Senkowski. Front row, left to right: Bill Pucket, Coach Egon Kurtz and James Norton. They had eight successive wins.

EXECUTIVE SUITE: Aeronautical Center Gun Club officers for 1965, elected last January are, left to right: Eugene S. Yates, president; Charles E. (Ed) Shipley, secretary; Sammy L. Pennington, ways and means chairman; L. Carl Perry, chairman for memberships and Charles L. Korstjens, vice president.

TECH TALK

$TRETCHING THE PROCUREMENT $$$. Value engineering is the drumbeat that is setting the cadence in negotiating contracts over $100,000 originating in the Agency's Program Management Division. Value Engineering (VE) is the term given to a procurement practice that provides cash incentives for cost-conscious manufacturers while at the same time saving money for the Government.

In a recently concluded transaction with Canadair, Ltd., Montreal, Canada, for the manufacture of air traffic control tower cabs, representatives of Installation and Materiel Service came away with savings to the FAA of $750,000 which was realized through the VE approach and negotiations.

The request for proposals contained a unique provision which solicited alternate proposals from the bidders prepared on the basis of a specification entitled: "Design Criteria for Alternate Proposals."

Bidders were instructed to submit changes that they thought would result in a cab of minimum overall cost and still meet design criteria. Using this pre-bid VE approach, Installation and Materiel procurement and engineering personnel, together with a team of Canadair value engineers, were able to obtain a contract price 32 per cent lower than the lowest bid price for the standard design.

Although the size of the savings obtained through the pre-award VE effort might indicate further cost reductions were unlikely, a provision for additional cost reduction was written into the contract through a value engineering incentive clause. Since the award of the contract, this clause has been responsible for 10 VE proposals submitted by Canadair and approved by I&M. The proposals represent a $25,000 reduction in cab manufacturing costs. And under the 50-50 concept of VE, the Agency saved $12,500, which was deducted from the contract price, and Canadair earned its $12,500 share of the savings.

The value engineering changes instituted in this contract and pre-award cost reductions will be reflected in all future tower control cab procurement and recurring savings can be accumulated as the program continues. The FAA's cost reduction and VE efforts have demonstrated that the contractors' know-how can provide procurements at minimum cost without sacrificing necessary operational, technical and aesthetic requirements.

CHECK YOUR OIL, MISTER? Now they're diagnosing incipient aircraft engine ills—and heading off unexpected breakdowns—by remote control.

Spectrometric oil analysis is what does it. By taking a few ounces of engine oil from the reservoir 5 to 15 minutes after the engine has been run and putting it through a spectrograph, microscopic and sub-microscopic metal particles can be detected instantly.

Long in use by operators of heavy Diesel engines, notably the railroads, the process is now being used extensively by the U. S. Navy which maintains an oil analysis laboratory at Pensacola, Fla. Also on the Navy "customer" list is the FAA, all of the Presidential aircraft operated by the Air Force, Army, Marines, Coast Guard and the Air Force's Tactical Air Command.

The Agency, which entered a six-month test series in January 1965, has 14 aircraft participating, which involves checking 20 reciprocating and 10 turbine engines. Twelve of the planes—five DC-3s, two DC-6s, one CV-340 and four TV-2s—are operated out of the Aircraft Services Base, Oklahoma City; the other two, a JetStar and a Gulfstream are based at Washington National Airport.

Since the Agency entered the program, oil analysis detected sufficient metal to justify removal of two engines and several others are under suspicion and increased sampling is being made.

The spectrometric oil analysis concentrates on the nine predominant alloying elements used in aircraft mechanical systems—aluminum, iron, chromium, silver, copper, tin, magnesium, lead and nickel. Sub-microscopic particles suspended in the oil can be separately measured in extremely low concentrations by spectrometric analysis.

Silver, for example, is accurately measured in concentrations down to one-half part by weight of silver in one million parts of oil. Most other metals are measured accurately in concentration down to two and three parts per million. These particles are not visible to the naked eye nor can they be felt with the fingers; they pass easily through fine filters but even metal particles one-tenth the size of a grain of talcum powder are easily measured by spectrometer.

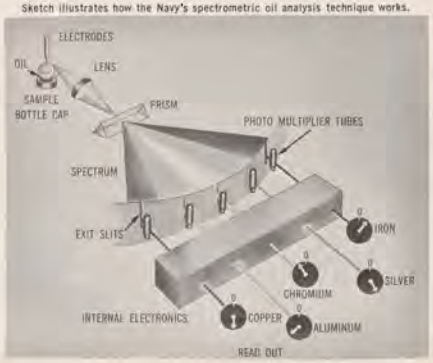
How does the process work? A film of used oil is picked up on the rim of a rotating, high-purity, graphite disk which is also an electrode. A precisely controlled, high voltage AC spark discharge is initiated between a vertically mounted electrode and the horizontally mounted rotating disk, burning the oil film.

Light from the burning oil passes through a slit which is positioned precisely to the wave length for the metal being monitored. As the light passes through the slits, photomultiplier tubes transform the light waves electronically into energy which automatically prints the results, in parts per million, on punch cards on the laboratory record sheets.

The results are interpreted and when a sharp trend or abnormal concentration of metal is present, the participating activity is notified by priority telephone or message, depending on the urgency.

Spectrometric oil analysis is not a substitute for routine engine maintenance but it does provide a dependable tool to give advance warning of a possible engine failure.

Sketch illustrates how the Navy's spectrometric oil analysis technique works.



YOUR HEALTH

. . . THROUGH YOUR SUNGLASSES

Q. Does everyone need sunglasses when out-of-doors?

A. It depends upon the individual and the circumstances. If you squint, furrow your brow, constantly blink and constrict the eyelid muscles, and at the end of the day wind up with tired, teary or inflamed eyes—sunglasses may help. But nature provides some people with unusually effective optical filters, in their eyes' lens fluid, which are 10 or 20 times the density that others are born with.

Sunglasses may be needed for special occasions only. A New Englander is likely to need them for a vacation in Bermuda. Indoor workers who go to the beach only on Sundays will benefit from good sunglasses.

For some people, a week-end of skiing in the sunshine may unduly expose the membrane under the eyelid to harmful ultraviolet rays. Desert highways may be intolerable to the driver because of heat radiation. Once the eyes have been conditioned to the protection of sunglasses they must be worn regularly when exposed to glare, or else discontinued gradually.

Q. Most sunglasses don't seem dark enough—are these of any value?

A. Yes. They help keep dust out of the eyes and protect the sensitive inner eyelid from windburn. Glasses with 30 to 50 per cent light transmission (the most common) provide a slight relief from glare.

Q. Some advertisers claim that their sunglasses will sharpen vision in mist and fog, eliminate headlight glare, increase the amount of visible light, give complete eye protection, and so on. Is this true?

A. Nonsense. The most that general purpose sunglasses can do is give some eye comfort to some people, sometimes.

Q. Will cheap sunglasses ruin my eyes?

A. No, but they may produce annoying or dangerous symptoms. If they distort images they may reduce your vision to dangerous levels for driving and for occupations. Poor lenses also may cause eye fatigue, irritation or headache.

Q. How large should sunglasses be?

A. Large enough to prevent bright light from entering the eyes around the edges of the lenses. This is one reason why clip-on lenses are, in general, unsatisfactory.

Q. I need correction for distant vision and wear sunglasses a good deal. Should I have specially ground lenses?

A. Definitely. This is where the eye specialist comes in. Slight corrections can be ground into the usual absorbing lenses. Larger corrections will require fused, metallic or densely absorbent coated or dyed lenses.

...AND SAFETY

BOATERS BEWARE

FAA's boating enthusiasts should note that the U. S. Coast Guard does not now accept lifesaving devices in which kapok or fibrous glass buoyant material has not been encased in sealed plastic bags. This new ruling has been in effect since the first of the year.

Extensive tests by the Coast Guard have shown that kapok or fibrous glass life preservers, without the protection of plastic bags, lose their buoyancy after several years and can't be depended on in an emergency.

Sailing FAAers would be wise to check their lifesaving equipment carefully while their crafts are out of the water before the start of this year's boating season.

In addition to the regular chores of painting and polishing, boatmen should make certain that fire extinguishers, buoyant cushions and vests are in ready-for-use condition. Because buoyant cushions are used both as seats and lifesavers, and tend to wear out more rapidly than other equipment, they should be inspected frequently. This care can avoid needless loss of life and property.

DEATH TRAPS

Parents are cautioned to be especially alert to the hazard created by abandoned refrigerators, ice boxes, trunks, foot lockers and any other airtight container in which a child could become entrapped playing "hide 'n seek" or other games.

There were 43 children killed during 1964 by suffocation in such temporarily idle or abandoned refrigerators. Attention was focused on the problem by triple tragedies which occurred in Maryland, Illinois and California. Three children were found dead in an idle refrigerator in Baltimore, three were killed in an unused back porch ice box in Chicago and three other tots died in a food freezer temporarily out of service in Los Angeles.

Parents must be made aware that unused ice boxes and the like are a menace to children unless special action is taken either to prevent entry or to guarantee ventilation. If a refrigerator is to be junked, the doors should be removed or it should be carted away and destroyed. This goes for old ice boxes and trunks, too.

Another death trap is the refrigerator that is temporarily out of use. Upright units should be placed so that the door stands against the wall or laid down so that the door is facing the floor.

An added precaution to make the box child-proof would be to tape it closed with strong filament tape or wrap it with a padlocked chain. The same thing should be done to out-of-use food freezers and unlocked trunks.

Like the mud puddle, empty boxes and containers big enough to get in hold a magnetic attraction for youngsters, especially those under six years of age. Remember, if you see or hear of such a menace, do something about it. The child you save may be your own.

PERSONNEL PIPELINE

WITH THE FRINGE ON TOP

More than $100 million in tax-free fringe benefits were received by Agency employees during 1964. The amount paid in actual cash to match employee contributions for insurance, retirement and health benefits was $57¼ million dollars. But this did not include such things as annual leave and sick leave. One million man days of annual leave, worth $38 million, is accrued by FAA employees each year. Even with one of the lowest rates in Government for the use of sick leave, some 286,000 days were used in FAA last year. At current average salary rates, this was worth $11 million. The slice of this $100 million pie collected by each employee would be impossible to compute because the amount varies with the personal situation and the employment situation of each individual. Benefits for everyone range from holiday pay to life insurance, from injury compensation to first aid and certain medical services. Still others may get home leave and uniform allowances. Many of these benefits are fairly new, and many have been modified recently to reflect the changing social and occupational environment in the United States. The total effect has been a gradually increasing earnings pattern for Government employees which does not show up in salary figures. Does your family know all about the fringe benefits which directly affect them? Additional information about employee fringe benefits will be included in future articles.

EMC NEARS THIRD BIRTHDAY

Employee-Management Cooperation (EMC) in the Federal Aviation Agency will be three years old on July 1. EMC, which was initiated in 1962 under the provisions of Executive Order 10988, gave Government employees the right to organize. Since then, the FAA has granted 28 exclusive, 13 informal and 46 formal recognitions to employee groups. Three are on the national level. Agreements under the recognitions cover a variety of occupations, from printing to aircraft maintenance. They touch upon such subjects as leave arrangements, safety, basic work schedules, overtime distribution and grievance procedures. When employees take part in formulating policies affecting their jobs, the public's business is better served. Also, a realistic exchange of views between the Agency and recognized employee organizations is the most effective way of insuring that each reaches a better understanding of the other's problems. Because the Agency must exercise sole responsibility in certain areas, these are not subject to negotiation. These areas include the Agency's mission, its budget, organization, the assignment of personnel and the technology of performing its work.

EMPLOYEES PROTECTED IN GOVERNMENT VEHICLES

Since Public Law 87-258 protects a Government employee from liability arising out of an accident while acting within the scope of his employment, should a Government employee cancel his own automobile collision or liability insurance? The canceling of automobile insurance, of course, is a matter of personal discretion. But a Government employee should be aware of the provisions of Public Law 87-258 (28 U.S.C. 2679). This law provides that a Government employee who is involved in an accident, either while driving a privately-owned vehicle or a Government-owned vehicle, is immune from judgment if driving within the scope of his employment. However, the Government cannot pay the employee for damages to his own vehicle, even though he is driving within the scope of his employment nor is he protected from liability when driving off the job. Employees should realize that the question can always arise as to whether the employee is indeed "acting within the scope of his employment." If it is found that he was not so acting, the benefits of this law will be denied to him. It should be emphasized that the statute does not provide any substitute for insurance when the vehicle is being used for private or personal driving.

SHIP ME SOMEWHERE EAST OF SUEZ

With more than 350 foreign assignments available to FAAers, there is a natural desire by the Agency to select FAA families which are able to adjust easily to new surroundings that involve language, culture, climate, social activities and customs.

To choose families most adaptable to an overseas assignment and also to give FAA wives helpful information available, the Agency has turned to electronics.

A computer unerringly plucks out cards of employees who have asked for foreign service and who are technically qualified for a certain job abroad. Five best qualified applicants are picked and requests go out asking for an interview with the whole family.

Each group is contacted by one of FAA's interviewers to get important facts about the applicant not covered in the original application. Since the Agency is already aware of the candidate's technical proficiency, he is encouraged to talk about himself.

The candidate is interviewed alone and again with his family in their home. By friendly chats the interviewer learns of past experiences and education which may have a bearing on an assignment.

After a careful study of the five reports the candidate is selected who would most likely make the best adjustment to the foreign assignment. An alternate also is chosen in case the first has to withdraw for some unforeseen reason.

For the next several months, both candidates and their families are prepared for the assignment. Reports from the overseas post provide wives with helpful data on family housing, educational facilities for children, suggested clothing, household items to take along and other significant things. Thorough medical examinations and security checks also are included, and the candidates get whatever language training is necessary.

Careful selection of a candidate and thorough briefing help assure a rewarding experience abroad for FAA families as well as the satisfactory performance of the Agency mission.

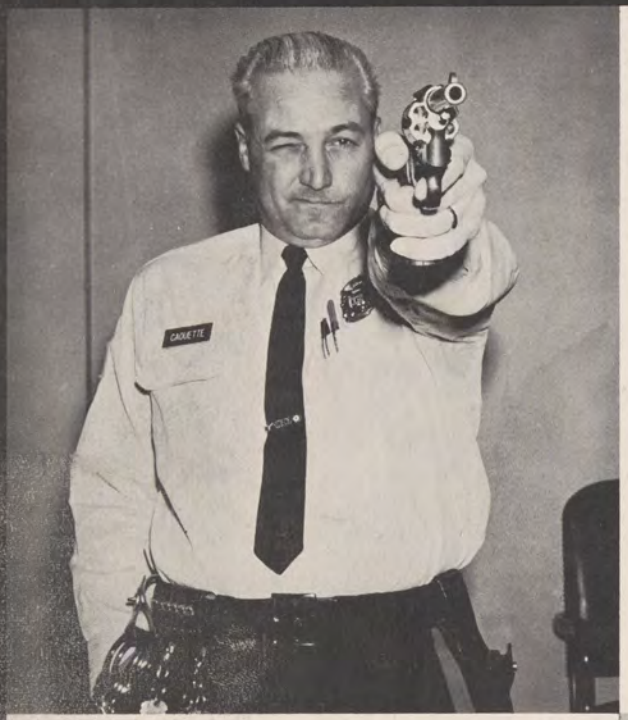
INVESTMENT ADVICE

For growth, buy U.S. Series E Bonds; for current income, put your money in Series H bonds.

EVACUATION A SUCCESS

Theatrical smoke and sound effects piped into the fuselage of a deliberately crashed aircraft were used by the FAA recently to create realism during a series of day and night emergency evacuation tests. Held at Deer Valley Airport near Phoenix, Ariz., the scientific tests in the previously disabled **Constellation** investigated reactions of passengers under simulated crash conditions. Results will be used to study emergency evacuation procedures from aircraft. Clockwise from top left: ● Men, women, children and dolls were used as volunteer passengers during the tests to study their reactions. ● J. D. Garner, of the Civil Aeromedical Research Institute, headed the project. ● Sound equipment manned by Frank S. Cardone, of the Western Region and John G. Blethrow, of CARI, was used to add realism to the tests and to record the reactions of the evacuees. ● Airline stewardesses who participated in the tests were interviewed by Robert C. McGuire, ADS airframes project manager, following one of the tests. ● Harold D. Hoekstra, of FAA's Aircraft Development Service and Leonard H. (Bill) Williamson, Western Region's Aircraft Engineering Division, were observers. ● Cameras installed by Gregg Winters of the Aeronautical Center filmed the reactions of the evacuees.

FAAers ON THE JOB



George L. Caouette

When they talk about straight shooters at Washington National Airport everyone assumes the conversation is about Police Officer George L. Caouette, a recent graduate of the Metropolitan Police Academy where he won the school's high individual marksmanship trophy with a score of 150 out of a possible 150 with 19 Xs. Caouette, who also completed the Fairfax County, Va., police firearms instructors course, joined the WNA Police and Security Branch in July 1962. Previously, he had been with the Internal Revenue Service, Bureau of Customs and General Services Administration. He is a member of the Metropolitan Police Reserve Corps (10th Precinct) and on its pistol team. His other hobby is the training of horses.

Benjamin F. Darden IV

The communications duty officer (CDO) position is comparatively new in the Eastern Region but Eastern's chief CDO, Benjamin Franklin Darden IV, is hardly a newcomer. He's been with the FAA for almost seven years, starting his career as an air traffic controller at the New York Center. A native of New Jersey, Ben received his Bachelor of Business Administration degree from Adelphi University and now attends New York University Law School at night and expects to receive his LLB next year. A writer and ski enthusiast in his spare time, Ben contributes articles to the Air Traffic Control Association Journal. Other than law, his current interests include mass transportation and urban renewal.