



Employees' Pay Greatly Boosted By Extra Benefits

WASHINGTON—Most of us consider our pay check as being the only really tangible payment for our work. We often overlook the fringe benefits. With employee benefits becoming more and more a substantial part of the employee's income, the word "fringe" becomes almost a misnomer.

The latest study on the subject, conducted by the Bureau of Labor Statistics and the Civil Service Commission, showed that Federal expenditures for fringe benefits were 23.5 per cent of the regular payroll (no overtime). However, that study was conducted even prior to the Pay and Benefits Act of 1966 which increased fringe benefits even more.

The average grade of the Federal employee today is about GS-7.9, reflecting an average salary of about \$7,000 a year. This means that the benefits package (at 23.5 per cent) is worth more than another \$1,600 per annum for the average employee.

Insurance and Retirement

Some of these benefit dollars can be counted in the government's share of insurance premiums and retirement payments. Such as:

YOU PAY	GOVERNMENT PAYS
Life Insurance \$.25 per \$1,000 per pay period	\$.72½ per \$1,000 per pay period
Health Benefits According to the plan chosen	\$4.70 per pay period on family plan (high option)
According to the plan chosen	\$1.68 per pay period on self-only plan (high option)
Retirement 6½ per cent	6½ per cent and an annuity for life after retirement

Mr. Average Retired Government Employee will get back *all* of his retirement contributions during the first 3½ years of retirement. Incidentally, he is about 60 years old at retirement and is expected to live about 17 years more.

He will, therefore, get about
(Continued on page 7)



Solve Payroll Dilemma

When bad news came on a Friday that 7,000 Western Region employees would get no paychecks because their regular shipment was sidetracked during a recent emergency readiness exercise, this speedy trio helped get duplicate cards from Los Angeles to San Francisco quickly. They are (left to right): Maxine Libby, chief of payroll; Julian Gryder, systems accountant, and Kathy King, secretary who "rode shotgun" via jetliner to get the payroll through.

Kathy 'Rides Shotgun' So Pay Goes Through

By Frank King

LOS ANGELES—Little did Kathy King think that riding shotgun on a \$3 million payroll at 30,000 feet, between two of California's biggest cities, would be one of her duties. But according to her boss, regional Executive Officer Slade Hardee, the aerial stagecoach job simply comes into her job description under, "and will perform other duties as assigned."

The routine original mailing of payroll cards to the disbursing office by regular means somehow had been side-tracked. So some 7,000 Western Region employees faced the unhappy prospect of getting no paycheck at the end of their bi-weekly work period. And since news of the loss hadn't come in until 8 a.m. Friday, it at first ap-

peared little could be done until the following Monday.

However, as a starter, the agency's data processing people initiated another run of the payroll cards. This required two-and-a-half hours, eating up most of the precious morning hours.

The accounting people then stepped in, making arrangements for Herman Stewart, chief of the San Francisco International FSS, to meet emergency messenger Kathy King and hand over the payroll to the man from the disbursing office.

Kathy then was rushed to the L.A. International Airport to depart on an airliner at 12:35 p.m. with the necessary paperwork. The *Electra* touched down at San Francisco at 1:45 p.m. and she was met by Herman Stewart, who took the payroll back to his office. Check processing was done quickly, and Kathy was able to board a Boeing 727 for the return trip to Los Angeles at 2 p.m. By 3:20 p.m., she was back at her desk at work.

Meanwhile the disbursing office in San Francisco had already started to process the checks. The Treasury Department specialists went on an overtime shift to process and mail the checks and get them out.

They arrived at employees' homes on Saturday. Whew!

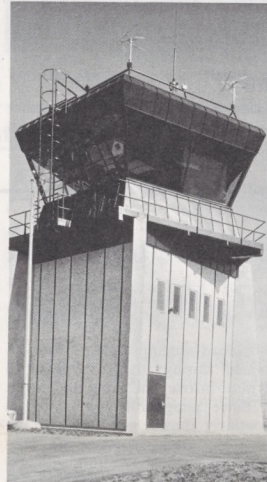
SEATTLE—The Seattle ARTC Center at Auburn has completed a full year without a reported system error. It was the second error-free year for the Center.

The achievement won praise from the Administrator during his recent trip here.

Using Solid-State Equipment

New Type Tower Begins Operation

SAN JOSE, Calif.—The nation's first solid-state (transistorized) airport traffic control tower began operating at Reid-Hillview Airport last month. It represents a giant step forward in applying the newest technology to the needs of today's air traffic needs.



Gilbert B. Harwell has been named chief of the new facility. His previous assignment was as tower chief at Brackett Field in La Verne, Calif. Controllers are: George W. Daniels, Vernon O. Fein, Robert J. Hall, Joseph B. L'Argent, Thomas M. Martin, William J. Newman and Charles R. Ybarondo.

Completion of the tower culminates more than two years of engineering and design effort by FAA engineers aimed at providing a low-cost, highly functional tower for use specifically at smaller airports.

Advantages of the new solid-state equipment in the tower include compactness, reliability, ease of installation and maintenance, and economy.

Like instant coffee or mashed potatoes, the "instant" tower has the same outward appearance as its conventional counterpart. The only difference is that it has solid state, transistorized electronic equipment.

Miniaturized Tower

Last month the nation's first completely transistorized tower began operation at San Jose, Calif. While it looks just like any other tower from the outside, the Reid-Hillview Tower is completely different inside. Providing the same tower services as towers of conventional design, the solid state set-up is less expensive, takes less space, and requires far less preventive maintenance.

Offers Same Tower Services

New solid-state towers will provide the same traffic control services as facilities with vacuum tube equipment, but they can be built in half the time, at one-quarter of the expense, and require far less maintenance. Installation of solid-state communications and recording equipment can be done in about one-tenth of the time required for a conventional installation.

Radical redesign of communications equipment for air traffic control towers, using the most modern technology, has resulted in a system that costs 40 per cent less than the old one and saves 98 per cent of the space requirements—and still does a better job.

It all began when the Western Region requested the Systems Research and Development Service to develop a small, low-cost communication system, 100 per cent solid-state, for a low-activity tower then in the planning stage.

Engineers of the SRDS communications division saw a challenge ripe with potential. Through ingenuity and technical skill, under the direction of program manager Ray Barkalow and his project engineers, Larry Keltner, Archie Millhollon, and Will McGibbon, they produced the new system.

Western Region Builds Tower

While the electronic developments were progressing, the Western Region was busy designing the tower itself. Just nine months after the contract was let for building construction, the nation's first solid-state tower was commissioned.

Construction cost amounted to

(Continued on page 7)



Glamorous Equipment

San Francisco Area Office secretaries Carol Ghilardi (left) and Pat Thomas look over modernistic solid-state equipment which was later installed at new Reid-Hillview Tower, San Jose.

EQUAL OPPORTUNITY POLICY

"... every employee and representative shall perform all official actions affirmatively and in full accord with the spirit and letter of the Constitution and applicable laws, regulations and policies to assure equality of opportunity for all persons and to avoid even the appearance of discrimination because of race, creed, color, sex or national origin..."



Alan S. Boyd
SECRETARY OF TRANSPORTATION
(Order DOT 1000.2)

... Fairness to All

Administrator William F. McKee, in endorsing Secretary Boyd's equal opportunity policy, stated, "I have given Secretary Boyd my personal commitment and that of the Federal Aviation Administration to the letter and spirit of his statement of policy as shown above. I have assured him of our continuing efforts to make equal opportunity a reality in fact as well as in the stated policy of the Department and the agency I am confident that each of us in FAA will do his utmost to ensure that equality of opportunity is practiced in all of our programs and activities."

Into the Wilderness for a Lost Aircraft



"We'll Find It"

FAA and Bureau of Aviation Safety inspectors wait at lakeside as horses and mules are loaded aboard a barge for 20-mile trip to the start of a trail leading into primitive area of Washington State.

SEATTLE—What's an FAA man doing trudging along a treacherous rocky trail in the heart of Washington State's rugged, bear-infested primitive area?

Ask Lloyd L. Weldon, operation inspector with the Seattle General Aviation District Office. His answer: "Official business."

Weldon's recent back-breaking trek into a section of the Northwest rarely seen by man illustrates the kind of work GADO inspectors sometimes are called on to do. In this case, Weldon was assisting in an aircraft accident investigation. Along with Bureau of Aviation Safety (BAS) Inspector George Rawski, Forest Service crews and sheriff's deputies, Weldon penetrated more than 20 miles into wilderness unchanged since the days of Lewis and Clark.

The plane had crashed July 1, 1957 on Freezeout Mountain, in the northern section of Mt. Baker National Forest, one mile south of the Canadian border. Its wreckage was not spotted until 10 years later by two deer hunters, last Sept. 13.

Barge Takes Horses and Mules

Weldon's trek began with a drive from the Seattle GADO office to Marble Mountain Ranger Station 80 miles to the north.

Here, he joined the eight other members of the party. To pack their supplies, seven horses and five mules were required. Looking much like a party of pioneers, the group boarded a tugboat for the 20-mile trip up Ross Lake to the starting point of the wilder-

ness trail. Horses and mules were transported on a barge towed by the tugboat.

"We camped at Willow Lake the first night," Weldon said. "Several deer wandered through our campground and we noticed bear in the area, some of them less than a hundred yards away."

After leaving Willow Lake the going really got rough. "It was all up hill, on sawtooth trails blasted out of the mountainside," Weldon said. "The animals could go only 50 to 100 yards without stopping to rest. In many places, a slip would have meant certain death on the floor of the canyon some 2,000 feet straight down a granite wall."

The last two miles to the accident scene there was no trail and the party had to crawl up the mountainside over fallen logs, sharp rocks and thick brush.

Close Book on Plane Crash

"After the investigation, we conducted a burial at the scene for the accident victims, as requested by the families," Weldon said. "Then we struggled back down to the campsite for a rest before the long journey back to civilization."

Terrain in the vicinity of the accident scene was so rugged that use of helicopters to transport personnel was ruled out as "too hazardous." The party had to get there and back the hard way.

"This is just one example of the kind of tough, unpleasant assignments GADO people are occasionally called on to carry out," said Robert L. Jones, chief of the Seattle Area Flight Standards branch.

Can Side-Vision Help Pilot Fly Safer In Bad Weather?

By Mark Weaver

OKLAHOMA CITY—Can peripheral vision—used routinely to control aircraft roll attitude during clear weather flying—also be used during instrument flying conditions?

A. Howard Hasbrook, flight and accident research specialist of the Aeromedical Research branch, Aeronautical Center, believes it can. He has conducted exhaustive research on the matter which may lead to a startling new aid in instrument flying.

Ideally, the pilot needs continuous rather than intermittent information on all functions of the aircraft and its systems. From a practical point of view, this probably is impossible. However, if only roll (bank angle) data could be absorbed continuously, the flight task might be easier and less fatiguing.

The difficulty experienced by non-professional pilots attempting to fly in foul weather, day or night, is well documented by accident statistics. Almost one-third of all fatal accidents in general aviation involve weather flying as an accident factor.

Unlike contact flying, in which peripheral vision cues related to the outside world are used for control of aircraft attitude, instrument flying requires total dependence on central vision for interpretation of instrument readings.

In an attempt to more closely associate the visual aspects of instrument flying with that of contact flight, Hasbrook made a study of human response to peripheral vision cues relating to an aircraft's bank attitude.

Study Tyros and Veteran Pilots

Thirty pilots, whose flying experience ranged from 52 to 12,000 hours, were tested in a multi-engine aircraft simulator. Data on aircraft bank angle, heading, altitude, peripheral vision cue signals, pilot eye movement, and additional

workload accomplishment were obtained during flights involving a typical instrument flying maneuver.

Since peripheral vision is used routinely during good-weather flying, Hasbrook, a long-time pilot himself, decided to study pilot response to this type of visual cue as it might relate to controlling aircraft bank attitude during instrument flight.

He used two sets of small lights as cueing devices. Each set consisted of a red bulb and a green bulb. One set was installed near the lower left corner of the pilot's control wheel, the other set near the right hand corner. Activated by a camming device connected to the roll servo of the aircraft simulator, the left-hand lights shone during left turns, and the right-hand lights operated during right turns.

In contemplating the use of lights for peripheral cues, several factors were used as guides:

1. The lights should not add to the pilot's perception problems.
2. Their operation should not produce an irritating effect except when such an effect is desired as a warning.
3. They should produce the desired response as a relatively natural function.

Based on this, Hasbrook used a "negative" cue, or lack of any cue-light illumination, to inform the pilot when he was in relatively level flight. To prevent continuous operation of the cue lights during level flight in rough air, the non-illumination range was set to encompass a total of six degrees from zero to three degrees of bank, left to right. Between three degrees and 10 degrees of bank, the green light was set to flash once per second. From 10 degrees to 18 degrees the green light rate was doubled to two flashes per second. To provide for turns in the holding patterns, the green light illuminated steadily in a four degree range from 18 to 22 degrees of bank. From 22 to 90 degrees of



Straight and Level Flight

Arrows point to a red and a green light on each side of the pilot's control wheel which make up a new peripheral lighting system being studied by the agency's A. Howard Hasbrook, of the Civil Aeromedical Institute, Oklahoma City. The pilot can continuously absorb roll or bank angle data with this system, it is believed, while still keeping his central vision busy interpreting panel instruments.

bank, the green light was extinguished and the red light flashed four times per second.

Peripheral Cues Aid IFR Pilots

Results of the study suggest, says Hasbrook, that substantial gains can be achieved in instrument flying capability by use of peripheral vision cues as they relate to provision of continuing bank attitude information.

The data also indicates such cues may be useful in preventing steep bank "upsets" in aircraft when turbulence and vibration prevent visual interpretation of the conventional artificial horizon instrument.

Hasbrook believes that with experience in the use of peripheral cues for bank angle control, pilots might reduce their fixation time on the instrument panel by at least one-half. The study gives weight to his assumption.

Two interesting aspects of the study were the quick manner in which the subjects adapted to the use of peripheral vision cues, and the wide angles within which the light cues were recognizable.

However, says Hasbrook, despite these and other apparent advantages of using this "secondary" visual sense, research should be conducted in actual flight to determine whether any in-flight factors, such as acceleration, might significantly change the results found in the present study. If such factors do not prove to be a problem, adding a peripheral vision cue system to the pilot's informational display might be considered.

The study and experiments bring out four important facts.

1. During fair weather flying, many of the visual cues used by a pilot to control his aircraft are received continuously through his peripheral vision.

2. During instrument flight, on the other hand, only central vision can be used, necessitating numerous eye movements and fixations.

3. The acquisition of data on an intermittent basis via central vision, as compared to receiving continuous data through peripheral vision, tends to produce a loss in flight performance when additional tasks are introduced.

4. When peripheral vision cues are added to the instrument flying display environment, flight performance is improved.

Hasbrook recommends additional research to explore more effective means of utilizing human sensory capabilities for receiving and using aircraft orientation information.

As a veteran pilot with more than 10,000 hours, he has high hopes for the day when all aircraft may be equipped with peripheral cues for instrument flying.



Will It Fly?

Frank Castellon (right), aerospace engineer, Atlanta EMDO, and Vern Gardner, Lockheed-Georgia structural engineer, inspect the first Boron-composite airplane part slated for installation and testing on the giant L-200 (commercial version of the C-141 StarLifter) jet airfreighter. The part, to be fitted to the leading edge of the wing of the huge plane, carries FAA approval and marks the first commercial application and testing of the new space-age material on any aircraft.

Flying Football Visitors Are Expertly Handled

OKLAHOMA CITY—Arch R. Moody, supervisory electronic technician at the local airway facilities sector, has much in common with the hundreds of fans who arrive by air for each Oklahoma University home football game.

Moody is a team booster, too, but his team is composed of controllers who work the temporary tower at Westheimer Field in Norman, Okla., for each home game.

Because his controllers frequently had to work from an exposed platform or truck bed in bad weather, Moody thought he should do something. His solution was a mobile tower, built in his garage from surplus material during off-duty hours.

Moody's tower was completed in time for Oklahoma's first game. Fitted neatly on the back of a pickup truck, the tower cab provided comfort for the two controllers

while they handled 333 aircraft from 10 a.m. to 6 p.m.

The portable cab, framed by 2 by 2 lumber, is eight feet long, seven feet high and seven feet wide. All joints and the plywood exterior walls are joined by glue, and the cab's Fiberglas roof is fastened with silicone adhesive. Windows are 36 inches high, and the unit is topped with a mobile trailer ventilator.

Moody finished the exterior in international orange paint and covered the underside with automotive undercoat. Interior walls are of pre-finished walnut. The floor is covered with remnants of acoustical floor covering salvaged from a recent installation in the Oklahoma City's new tower cab.

The cab normally accommodates two gonset transceivers and a light gun. There is ample room for the two controllers to work in comfort.



Pick-Up Tower

Arch R. Moody, of airway facilities at Oklahoma City, stands by the portable tower cab he designed and built for use in the area to handle air traffic attending fly-ins, air shows, and Oklahoma University's home football games.



Aviatrix in a Sari

Chanda Sawant of Bombay, India, just before takeoff, stands with her flight instructor, Cecil Ingram (left) and FAA's Oren Norwood. Norwood, Dalhart FSS chief, administered the written exam for Miss Sawant's higher rating just before her return home.

East Indian Aviatrix Wins Panhandle Hearts

DALHART, Tex.—Not many flight service stations can boast of serving customers who live 8,000 miles away.

The FSS here recently administered the written examination for a commercial pilot's license to lovely Miss Chanda Sawant, an advertising executive, who came for their service all the way from Bombay.

Miss Sawant entered the United States as an unofficial entrant in this year's Powder Puff Derby. During her stop-off in Amarillo, the petite sari-wearing aviatrix—who then was rated a private pilot—became greatly impressed with the wide Texas skies and the friendly, outgoing ways of the Lone Star Staters.

She decided then and there to train for her commercial ticket before she went home, and proceeded to devote the next two months to flying a modern single-engine

Beechcraft under the tutelage of Cecil Ingram, local fixed base operator.

This Panhandle town of 5,000 warmly welcomed the photogenic lady from India, and when she was primed to give the answers, Miss Sawant reported to Oren Norwood, chief of the FSS for her written exam. His FSS, in an area of small towns, only administers some 200 tests a year, and at first he did a "double-take" when the lovely young Indian walked through the FSS door.

"She passed the written," said Norwood, "and did fine in her check rides as well."

Norwood says neither he nor the small Texas town will soon forget Chanda Sawant. On her part, she is seeing to it that the town's memory will keep refreshed also. Upon returning home, she sent the Dalhart public library several books on India and its customs.

One of World's Best Instrumented

Atlantic City Airport Boasts Role As FAA's Little-Known Key Airport

By Frank McHugh

ATLANTIC CITY—Ask anybody in the aviation business, including FAA employees, how many airports the agency owns and operates in the Continental U.S. and they'll probably say two: Washington National and Dulles International.

There is a third: Atlantic City Airport, home of the National Aviation Facilities Experimental Center.

Located nine air miles northwest of downtown Atlantic City, the Atlantic City Airport has belonged to the agency since 1959. Previously, it had been owned by the City of Atlantic City, which still holds on to an 84-acre section that includes the municipal passenger terminal and its ramp.

Construction on Atlantic City Airport began in 1939 in a joint City-WPA effort. In 1943, during World War II, the airport was leased by the Navy and operated as a Naval Air Station. It later became well-known as one of the Navy's top all-weather bases on the East Coast.

In 1958, the Navy moved out, turning the facility over to the Airways Modernization Board. It became the National Aviation Facilities Experimental Center a short time later and was absorbed at the end of that year by the FAA. In 1959, the agency purchased the airport from the city.

Since that time, Atlantic City Airport has operated as a typical municipal airport and also, at the same time, as a test facility for NAFEC. One carrier, Allegheny Airlines, is certificated for scheduled service and operates from the municipal passenger terminal. In addition, private and corporate aircraft, including charter planes that visit the area—a big convention and summer resort center—use the municipal ramp, which is serviced by a fixed-base operator.

The airport has four runways, the all-weather runway being 10,000 feet long and 200 feet wide. Two other runways are 5,000 feet in length, while the third is 6,100

feet. These three are all 150 feet wide. The airport has all the conventional navigational and landing aids including VORTAC, ILS, high-intensity approach lighting with flashers, and approach control with PAR and DF.

Runway Is Best Instrumented

At times, the main runway, 13-31, is one of the most impressively instrumented runways in the world. Many new types of all-weather guidance systems, experimental lighting systems, and runway paint markings are frequently under test here by NAFEC. Also scattered around the field are experimental navigation aids being evaluated. The equipment here must demonstrate successful operation before it may be installed at other airports throughout the country.

Manager of the airport for the past six years is Patrick J. O'Shea, former superintendent of airports in his native Hawaii, and with FAA since 1959. An ex-Air Force pilot still in the reserves, he heads up a staff of five operation officers who are all authorized customs, immigration, agriculture and health officials so that they may clear international flights.

Ike O. Jones, supervisor of this group, an ex-Navy pilot, reports that they all have wide and varied experience.

William D. Sellers is a former Marine and Air Force pilot who flew with the Coast & Geodetic Survey before he joined FAA. Richard S. Meyer is an Air Force veteran of World War II and did some flying as a civilian pilot. Benny J. Nigro was an operations specialist with both the Army and the USAF, while Clifford C. Clark is an expert in flight maintenance. The newest man, Joseph Pannullo, is a veteran flight dispatcher, former USAF bomber crew chief, and an executive pilot.

"The basic effort of our operations group is to coordinate experimental projects going on at the field with normal air traffic to insure safe and expedient operations 24 hours a day," Jones explained.

"We are responsible for inspecting and checking maintenance with respect to safety of the airport. We also play a major part in arranging details when the President of the United States, the Vice President, or other VIPs fly in here on a visit of the area," he added.

O'Shea reported that in 1966, Atlantic City Airport ranked 170th in the country in total operations, out of 304 airports having control towers. The number of take-offs and landings was 114,839. In instrument operations, the airport ranked 81st in the country, with 33,833 operations.



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They're Learning New Techniques

WASHINGTON—Future technical managers will have to be as capable in techniques of calculus, numerical methods and statistics as today's managers are capable at reading and writing. To help bring this about, FAA in 1965 launched a year-long, graduate level training program to meet a need for increasing its ability to plan and conduct complex economic and technical studies.

The program, now in full swing, is known as the Air Transportation Systems Specialist (ATSS) development program. Through ATSS, the agency will develop selected specialists who know FAA programs and are prepared in the mathematical techniques of management.

A secondary program objective is to encourage graduate level study in air transportation at one or more universities.

What does an air transportation systems specialist do?

For an answer, let's look at what has been accomplished by the first six graduates of the program. They came from a variety of engineering background and experience levels. Their specific activities in the nine months since returning to the agency also have been varied.

These activities range from working on immediate problems—such as evaluation of supersonic transportation proposals—to long-range planning of possible ways for the agency to best allocate its resources through mathematically sophisticated implementation of the Program Planning Budgeting System concept.

All six have progressed to more responsible assignments since completing the program. Here are the six specialists and some of the ways each has used the analytical skills gained in the training program:

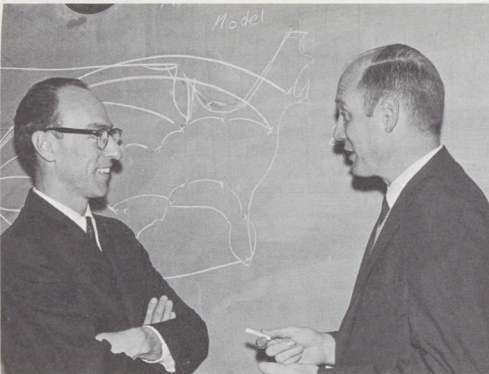
DONALD R. GEOFFRION was an aerospace space engineer in Aircraft Development Service. He studied at the University of California Transportation Institute, and received a master's degree with a transportation option. While at the university, he developed a mathematical formula for predicting the effects of runway gradients on take-off performance of aircraft using the runway. The potential is sufficiently interesting that FAA has considered using the formula to study many airports in the United States and in other countries. Geoffrion recently became chief of operations research with the Flight Standards Service where he will continue to apply the systems analysis and statistical training that he received in the ATSS program.

ROBERT L. PAULLIN came into the program from his position as a branch chief in engineering and manufacturing of Flight Standards Service. He studied at the University of California Transportation Institute, receiving the same degree as Geoffrion. On returning to the agency, he was assigned a mechanical engineering position with Supersonic Transport Development to manage technical development of the SST's flight control system. This activity required extensive field work at Langley Air Force Base, Wright-Patterson Air Force Base, and in California.

Paullin recently became chief of the systems analysis staff in FAA's new Office of Noise Abatement. His responsibilities concern cost effectiveness and technical and planning analysis of the noise abatement program.



Don Geoffrion (left) and Bob Paullin find a supersonic transport model handy when discussing flight control problems. Both are air transportation systems specialists schooled in mathematical management techniques.



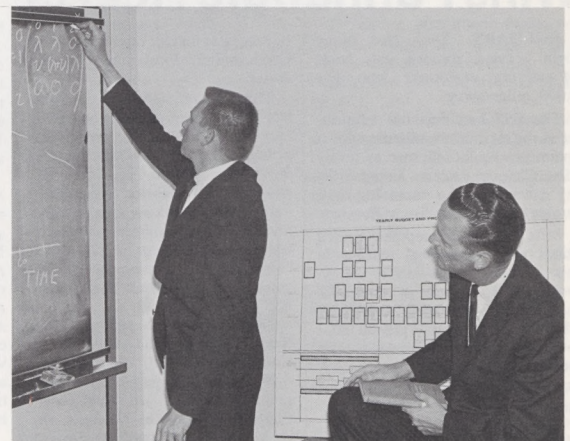
Tom Messier (left) and Pat Webster make use of their graduate level study to develop an aid to airport planning.

JESSE H. TANNER entered the program as an electronic engineer in systems maintenance. He studied at the University of California Transportation Institute. Returning to Systems Maintenance Service as a principal planning engineer, he has applied many advanced analytical methods to maximize maintenance effectiveness at minimum cost. He also developed an agency handbook to implement a Planning, Programming, Budgeting System. Tanner also has made in-depth studies leading to recommendations for increased utilization of mathematical and statistical analysis procedures in the Systems Maintenance Service. He recently has been detailed to the chief of programs in Systems Maintenance Service.

JAMES A. MORELAND entered the program as an airport engineer in the Eastern Region. He studied aerodynamics, mathematics, and management at MIT's new Center for Advance Engineering Study. On return, he was assigned as an industrial engineer in management analysis in the Office of Management Services. Moreland's major project has been a high density terminal study. It consisted of an on-site survey of the nation's ten busiest airports, both air carrier and general aviation; identifying and evaluating major problem areas; reviewing agency efforts directed toward terminal operations; and presenting appropriate recommendations for improving terminals to accommodate their increasing traffic.

THOMAS P. MESSIER entered the program as an electronic maintenance technician from Fairbanks, Alaska. He studied at the Stanford University Institute in engineering-economic systems. His post-program assignment was as an electronic engineer in the programs division, Systems Maintenance Service. Since arriving in Washington, Messier has worked on a variety of projects: a system study of radar bright display equipment (RBDE); an analysis of emergency power systems at major airports; a study of SMS supply support; and development of reliability formulas for systems analysis. He is now on detail to the Department of Transportation's office of systems analysis.

ARTHUR L. WEBSTER, now on detail to DOT, Office of Systems Analysis, came into the program from the Systems Research and Development Service. He studied at the Stanford University Institute in engineering-economic systems. His first post-program assignment was to the chief of plans, Office of Policy Development. One of his first efforts was to review the agency's implementation of PPBS to make it more meaningful and useful. A comparison between business and governmental resource allocation mechanisms was drawn. Elements of business economic theory, welfare economics, linear programming, and statistics were combined with personal knowledge of FAA operations.



Air Transportation Systems Specialists Jim Moreland (left) and Jesse Tanner try out a formula for measuring equipment reliability effectiveness. Half-a-dozen specialists take graduate training yearly for later application in management work.



Punch 'n Cake

Serving guests at the recent 25th anniversary celebration of the "Civairettes" in Kansas City are (left to right) Corrinne Lair, Pauline Anthan, Shirley Smith, Carol Stubblefield, Linda Gibson, and Frances Chaffin. All are employees in the Central Region office.



'Phone Book Covers

Modern aviation will be at everyone's fingertips daily in at least two large metropolitan cities this year. Left, Edward C. Marsh, Central Region director, accepts an artist's concept of an SST over Kansas City's Mid-Continent International Airport from telephone company representative. The illustration will be the cover of the Greater Kansas City telephone directory. At right, Kathleen Ann Blommer, who works in the back-to-school program for the Western Region office, holds the new Pacific Telephone Co. directory featuring Los Angeles International Airport.

Letter To Youngster Wins McKee's Praise

By Cliff Cernick

NEEDLES, Calif. — Nine-year-old David Beitzel, of Elmira, N.Y., is fascinated by weather phenomena. He wanted to know what the temperatures were around Needles, Calif., so he wrote a letter of inquiry to this sunny town's FSS, situated near the edge of the Mojave desert—billed as one of the nation's "hot spots."

When FSS Chief A. W. Osovski answered David's letter, he gave not only the weather details, but also descriptive data on the Needles area.

"Our city is on the beautiful Colorado River, separating Arizona and California. Even in summer, the river is always cool and fresh. There is fishing, swimming, boating and camping. In every direction are majestic, if at times savage, mountains. Within a couple of hour's drive, there are beautiful forests and many lakes."

Osovski concluded: "If you happen to pass this way one day, stop by and see us."

David's father, G. B. Beitzel,

wrote Osovski that David was "absolutely thrilled with your reply." Beitzel added that he was an instrument-rated pilot. "I might tell you that the high regard I have for the FAA is intensely increased by the thoughtful and creative fashion in which you responded to my son."

Beitzel sent a copy of his letter to General McKee, who wrote Osovski commending him for the manner in which he handled David's request.

"You might be interested to know I sent David a book about aviation weather and invited him to visit FAA facilities near New York," the Administrator commented in his letter. "In taking those few extra minutes of time to aid young David Beitzel, you reflected public service of the highest order."

In his regular telephone conference with Western Region area managers, Director Arvin O. Basnight called attention to the manner in which Osovski handled the boy's inquiry as an illustration of how one employee had contributed to one of Basnight's objectives: humanizing FAA's public image.

Kansas City's All-Girl 'Civairettes' Celebrate Twenty-Fifth Anniversary

By David H. Myers

KANSAS CITY — Twenty-five years ago, Kay Bradshaw and Ann Kaiser, two forthright women employees of the CAA, decided to hold a picnic for women employees of the agency in the area. The 39 who turned out for the event gave rise to a group now known as the Civairettes.

Formed originally as a social club, the Civairettes evolved into a group that now puts the well-being of others first and foremost.

When first organized, monthly meetings were held after work at the office and later in homes of members. This soon developed into a combined business and luncheon meeting.

Programs alternate between FAA speakers and those selected by the program committee from outside sources. Civairettes have seen practically the entire world through the eyes of FAA personnel assigned to overseas jobs and those taking overseas vacations. Knowledge of various technical fields has been broadened by agency officials who have appeared before the group. Other programs include a look at city government, book reviews, fashions, art, music, and gift wrapping—just to mention a few.

Special events include the Civairettes birthday celebration in October of each year and the Christmas party in December. These events bring together not only active members but also former members and special friends.

But most rewarding of all to the Civairettes is the ability to be of service to others. This effort dates back to World War II, when planned social gatherings, special seasonal donations of gifts and money, an honor roll for service men and many other projects were carried out, to give local members of the Armed Forces a feeling that others cared.

In 1946 the club undertook its first big project—"adoption" of 60 children from a local orphanage. What at first seemed to be an overwhelming undertaking was successfully accomplished through assistance of other FAA personnel who generously donated gifts, clothing, food and money for the purchase of shoes for the children.

Helping the Needy

Through the years, Civairettes has responded to many requests for assistance, especially at Christmas time. Needy families have been provided with tons of coal, gallons of milk, boxes of bread, as well as

a few frivolous gifts. Hospitals, orphanages, senior citizens of Kansas City and others have felt the touch of these angels of mercy.

In being of service to others, the club has not overlooked fellow employees in the region, and throughout the FAA as well. They have supplied funds for education, in times of illness and deaths, and have contributed to those who have suffered costly personal losses. Indicative are their contributions to FAA families in Fairbanks, Alaska, and Wake Island.

This year is the 25th anniversary of the Civairettes. The group has grown from an initial membership of 39 to 102. The club celebrated its anniversary with several events, including a silver anniversary tea at the Central Region office here and also at the Kansas City Area office.

Officers elected for 1967-8 are: Frances Barclay, president; Edith Meyers, vice-president; Barbara Burford, recording secretary; Bertha Gasser, corresponding secretary; Ruby Krantz, treasurer; Diane Britt, social chairman; Ruth Anthony, program chairman; Alice Brown, service chairman; Irene Smalley, publicity chairman; and Lola Wade, counselor.



VORTAC Display

Air safety was the theme of a recent safety seminar sponsored by the Green Bay, Wis. Flight Service Station. Phil Krinsky (right), tower chief at Austin Straubel Field, explains a model of the VORTAC system during the program, which was attended by some 300 pilots, student pilots, and interested observers. Looking on are (left to right) Leonard W. Berg, Green Bay FSS chief; Gordon J. Fedders, a local pilot; Mrs. Fedders; Robert Goleuke and Robert Myers, air traffic specialists. The event received such an enthusiastic response that it is planned to make it an annual affair. Green Bay Press-Gazette Photo



By the Numbers

Mrs. Delores Metzger, after years of part-time study, recently passed the Accountant-Auditor examination and has been appointed a junior accountant in the Alaskan Region's accounting division. Her supervisor, Gilbert G. Whitehead, checks addition with her.

First To Pass Tough Test

Burning 'The Midnight Oil' Pays Off for Accountant

ANCHORAGE—Hard toil and midnight oil have paid off handsomely for Mrs. Delores Metzger, accounting division, who recently passed the Civil Service Commission's Accountant-Auditor examination.

Gilbert G. Whitehead, chief of accounting coordination, reports that Mrs. Metzger is the first accounting technician in the division to pass this examination.

An ambitious lady, she realized that there weren't any more rungs for her to climb on the accounting technician career ladder, so her

studies became her taller ladder. It wasn't easy. A wife, and mother of one son, Mrs. Metzger attended University of Alaska extension classes in accounting.

Things are definitely looking up for Mrs. Metzger these days, now that she has passed the Civil Service exam. She has been appointed a junior accountant, and will receive further training on the job.

"Mrs. Metzger's home study efforts and attending night school classes have paid off handsomely for her," says Whitehead.

Meet 'MAC' ... the Maintenance Sleuth

By Floyd Gibson



Robert T. Burke (left) and Lynne D. Covalt (right) research a maintenance reliability report, while Charles E. Griffin examines a graph depicting aircraft utilization,



Christine Persa responds to a field inquiry concerning an Air Carrier Operations specification for maintenance.



The Maintenance Analysis Center is located in the Aviation Records Building at the Aeronautical Center. In this modern meeting room, experts have use of latest information and modern communication to spot trouble before it happens.

OKLAHOMA CITY—If an aviation maintenance man had one wish, it probably would be to get to the source of trouble before it occurs.

Something closely akin to fulfilling that desire is now in operation at the FAA Aeronautical Center. It is called MAC, for Maintenance Analysis Center. While it cannot prevent trouble, MAC can—through a compilation of reports and a computer analysis of maintenance reliability studies—predict trends that affect aviation safety.

MAC was put in operation at the center because of its easy access to representatives of both industry and government, and the fact that reliability and maintenance reports from all segments of civil aviation funnel into the Flight Standards technical division.

MAC works in three phases: input, analysis, and output.

A number of reports make up the input to the MAC system. Among them are mechanical reliability reports (MRR), sent in by air carrier operators through air carrier district offices. There are also mechanical interruption summary reports (MIS), write-ups of suspected mechanical difficulties or malfunctions. Aircraft and engine reports deal with engine removal because of malfunction.

A recent addition, taking in all general aviation aircraft, is the maintenance irregularity report (MIR). Information on malfunctions is gathered from owners, mechanics, repair stations, air taxi operators, and fixed base operators. This is reported directly to MAC, which uses automatic data processing to search out the potential hazard, eliminating any need to review or analyze those events not affecting aviation safety. All reports are coded for data processing.

Seek Trends or Patterns

MAC technicians and specialists analyze maintenance information for trends or patterns. When trends are detected and problems are isolated, a run is made on the computer with other data bank information. MAC machinery makes extensive use of data bought or developed through other programs. For instance, a tabulated listing of aircraft accidents can lead to a contributing factor that may have been responsible for the accident. Significant trends or "like" factors also can point to air carrier or general aviation operations that might need a closer look.

Adverse trends that are noted are coordinated with people in the region. If, as a result of this interchange among regional engineers, maintenance people and MAC specialists, more detailed information is needed, a directed safety investigation is conducted.

This means that field inspectors will obtain specific and detailed information on the particular problem and forward the reports to the Maintenance Analysis Center. An analysis of these reports is made, and from it is learned the reliability of the product, effectiveness of maintenance, methods or procedures, or the need for changes in FAA regulations.

The output of MAC consists of a daily summary of mechanical reliability that is mailed to FAA offices, foreign embassies, air carriers, manufacturers, and all associations having a direct interest in air carrier aircraft reliability. MAC also responds to inquiries from the National Transportation Safety Board.

Rate charts also are developed for Flight Standards and for the air carrier branch of the maintenance division. These charts show rates of events per 1,000 hours of flight time on a number of late-model transports. Analysis reports are developed by MAC specialists from directed safety investigations and are sent to the controlling region for whatever action is needed. It could be solved by coordination with the manufacturers, published as an inspection aid, or issued as an airworthiness directive.

In simple language, the Maintenance Analysis Center is designed to pinpoint quickly and early those problems which could lead to hazards in today's civil aircraft and to bring this knowledge to the attention of owner, operator or aircraft manufacturer for quick and efficient remedy.

Here's a MAC Troubleshooter

Charles Hall, the only member selected from outside the FAA to join the new Maintenance Analysis Center team, is no stranger to aircraft troubles.

From hostile World War II skies over Italy and North Africa to his present assignment as maintenance specialist, Hall has been trouble-shooting aircraft of one type or another for more than 20 years.

Hall, a native of Brazil, Ind., recently joined the Aeronautical Center's newest activity. He came from Tinker Field, Oklahoma City, where he was a production control specialist and scheduler.

Enthusiastic about his new position, he is reluctant to discuss his World War II feats. It seems, he says, far off and long ago.

It was 1943 when Hall joined the famous all-Negro 99th fighter squadron during the North African invasion. Flying the famous P-40 Warhawk, he was the first Negro pilot to shoot down an enemy plane in World War II. Hall also was the first of his race to receive the Distinguished Flying Cross—for shooting down two German planes on one mission over the Anzio beachhead.

His first "kill" was a Focke-Wulf 190, which he shot out of the sky over Sicily, after a flight across the Mediterranean from his North Africa base at Cape Bon.

His biggest thrill came when General Dwight D. Eisenhower, European theater commander, together with Generals Jimmy Doolittle and Carl Spaatz, arrived for a ceremony to congratulate him.

Flying P-40s, P-47s and P-51s, Hall completed combat missions over Africa, Sicily and Italy before being rotated to the States in 1944.

A captain at 22, Hall joined other service men on a 105-day bond-selling tour, where he found that speaking to large groups of people was "more terrifying" than anything he had faced in combat.

Hall's immediate family consists of his wife Delois, and their daughters, Sherri and Kelli.

Bob Burke, acting chief of the Maintenance Analysis Center, and other members of the MAC team agree that Charles Hall is a first class "wing man" in his latest trouble-shooting assignment.



Secretary Betty Crosswhite takes an incoming maintenance call as Charles Hall, a fighter pilot in World War II, and now an equipment specialist in MAC, identifies reliability factors in air carrier equipment from an analysis of maintenance specifications. Right, in the cockpit of his U.S. Air Force fighter, Hall points to the Nazi swastika on his aircraft, a symbol of his first kill.



Direct Line!

This is your direct line to the top! Your questions will get answers! Of course, employees are encouraged to discuss questions or problems with their supervisors or their local personnel office, but for those FAAers who do not have ready access to a personnel office, this column will give them an opportunity to have their questions answered. Write today to Joseph H. Triplets, PT-1, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D.C. 20590, General Ground Rules. All questions must be signed by the employees. This column should not be used in place of the formal grievance and appeals procedures. The questions should concern personnel or training policies, programs, and procedures and not be operational or technical in nature.

Q. I am a Structural Maintenance Mechanic. Why do I have to install ductwork and work on electric signs when these things are not in my job description?

A. Most of us are called upon from time to time to do things that are not specifically spelled out in our job descriptions. This may happen occasionally, and it's perfectly proper. When it happens often, it means that the position has changed and that it should be rewritten and reviewed for proper classification.

The best course of action in a matter like this is to talk over your problem with your supervisor. Bring up the fact that these duties do not seem to fall under the job headings of carpentry, masonry, and the operation of mobile equipment, etc. Then, the two of you can work up a job sheet which accurately reflects your present duties. After this is done, a classifier from your personnel office will be glad to meet with you and find out if your job is properly classified. If this doesn't work out to your satisfaction, feel free to contact your personnel office directly.

Q. What is the agency's policy concerning a straight eight-hour day or an eight and one-half hour day with a scheduled lunch period?

A. It is agency policy to establish lunch periods unless prevented by shift requirements or operational considerations. A very short break for lunch or its equivalent in lieu of a normal 30-minute lunch period may be counted as time worked when all of these exist:

- Three or more eight-hour shifts in a workday are in operation in the facility.
- An overlapping of shifts to permit time off for lunch is not possible.
- The work situation is such that the employee cannot leave the immediate work area where his regular duties are performed.

If you have a lunch period built into your schedule, this is entirely proper. If you wish to review agency policy on this subject, it can be found in paragraph 26 of PT P 3600.3.

Q. 1. Is the Middle Management Institute a prerequisite to the FAA Executive School, and, if so, why is this not shown in the Executive School course announcement?

2. Does the Civil Service Commission Fifth Senior Management Intern Program satisfy the Executive School prerequisite?

A. The FAA Middle Management Institute is a "preferred" prerequisite, but it is not an absolute re-

New Type Tower Begins Operation

(Continued from page 1)

\$145,000 and the electronics equipment added another \$15,000, for a total of \$160,000.

This compares with the previous cost of similar type "O" towers of \$331,000 (\$305,000 construction and \$26,000 electronics). Savings amounted to an impressive \$171,000, more than half of the previous total cost.

The complete system, consisting of radio channel control equipment, five-channel recorder, and RF equipment, five-channel recorder, and RF equipment, is entirely installed in the tower cab instead of requiring a separate equipment and maintenance room, which has been standard in all previous tower facilities.

By adapting new solid-state technology, equipment was reduced to a relatively small compact package. As an example, where two 83-inch high racks were needed previously for transmitter control and receiver selection equipment, engineers reduced this to a mere five inches high by eight inches wide and deep, installed in the control console and

performing all the same functions. Additional functional capability can be added if more frequencies are required at a position, with another four-channel unit four inches high, four inches wide, and eight inches deep.

Here Are the Advantages

The advantages of redesigning the building and electronics equipment have a chain-reaction effect. Because the equipment components are small and fit in the tower cab, installation cost is less. Previous cost of installing electronic equipment in towers of the Reid-Hillview type was \$26,450, and required 496 man-days to put in place. The new system is estimated to result in at least a 90 per cent reduction in these figures—\$2,250 installation cost and only 40 man-days of effort.

"In addition," according to Program Manager Barkalow, "because solid-state components have an inherent reliability, tighter and more stable performance can be realized when used with good design techniques. Such integrity of performance could allow a substantial reduction of costly preventive maintenance."

This is possible because: (1) there are fewer equipments to contend with; (2) the system uses all solid-state components; and (3) the sys-

tem has been designed using the principles of reliability engineering.

Communications for the "instant tower" are powered by a 12-volt DC system. The battery power supply is maintained by a constant 12-volt DC system. The battery power supply is maintained by a constant trickle charger. In case of a power failure (to the commercial source), the batteries have from four to six hours of operational reserve. If an extended commercial power failure occurs, a car or truck with a 12-volt ignition system can be driven up to the base of the tower and jumper cables can be run to the alternator of the vehicle.

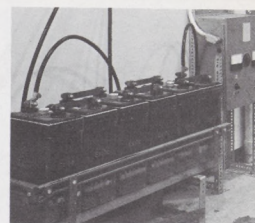
So, there is a completely fail-safe system protecting terminal traffic.

More Solid-State Planned

Four additional towers using solid-state equipment are now being planned or constructed—at Salinas, Palo Alto and San Carlos, in California; and at Felts Field, near Spokane, Wash.

An expanding use of transistorized communications equipment is foreseen, particularly at low-density airports.

On the basis of the successful operation at Reid-Hillview Airport, FAA is now looking into the feasibility of also using solid-state electronics at flight service stations.



Who Needs Power?

The new solid-state tower at San Jose can operate for hours on these six batteries when regular power fails.

Benefits Boost Employees' Pay

(Continued from page 1)

13½ more years of annuity which is the government's "share" of his retirement.

The average monthly annuity for those who retired during 1966 was about \$300, which means that he probably will get about \$48,700 more than he contributed.

This average life expectancy chart will show you how much the government contributes to the retirement benefits of the average Federal retiree.

NON-DISABILITY LIFE EXPECTANCY AFTER RETIREMENT		
Retirement Age	Male	Government Contribution
55	21 years	\$63,000
60	17 years	\$48,700
65	14 years	\$41,400
70	11 years	\$27,000
Female		
55	26 years	\$81,000
60	22 years	\$66,600
65	18 years	\$52,300
70	14 years	\$41,400

Government disability retirement provisions are even more liberal. Most disabled employees with at least five years civilian service may receive 40 per cent of their average (high five years) annual salary if disability retirement is approved. Other provisions vary, depending upon the employee's age and years of service.

Leave With Pay

Leave with pay is another benefit. Annual leave allows most of us to be absent with full pay for four weeks during the year. For the average employee, this amounts to about \$600 a year, not to mention the physical and mental benefits of a vacation or being able to handle personal affairs without having to lose pay.

Sick leave is sort of an insurance policy which, if treated with proper respect, can mean the difference between income or no income during prolonged sickness or injury. The average employee takes about six or seven days of sick leave per year which totals more than \$200.

Other Benefits

Not to be forgotten are the benefits of medicare, social security, injury compensation, extended life insurance without cost during retirement, death benefits, unemployment compensation, severance pay, disability retirement and job security.

Incentive awards, available to all of us, provide another source of income. Last fiscal year the FAA paid \$59,750 for 6,679 suggestions.

Also, more than \$437,000 in the form of performance awards was paid to 2,161 employees.

Information obtained from the Bureau of Labor Statistics indicates that the government now actually pays more for its benefits package than the average paid for employee benefits by private industry.

"Fringe" benefits? Perhaps we should recognize them as "fundamental" benefits.



To Head ATCA

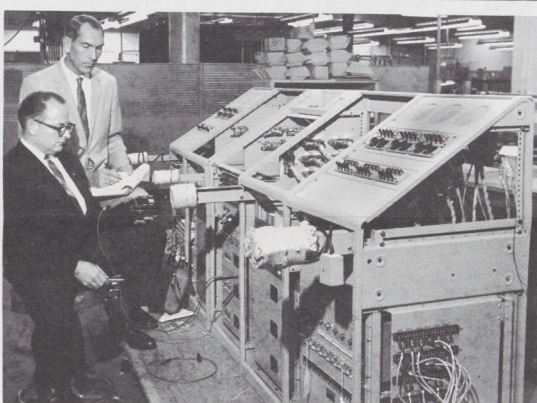
After 38 years of federal service, including three decades with CAA and FAA, Washington Air Traffic representative George W. Kriske retires the end of December. He starts the new year out as Executive Director of the Air Traffic Control Association in Washington, taking over from Clifford P. Burton who is retiring.

requirement. This statement has been omitted from course announcements, etc., to avoid a misinterpretation of the prerequisites. However, because of your suggestion, this type of information will be included in future course announcements. Thanks for catching it.

Your local Personnel and Training Office will be happy to review your personnel records and see if the courses you took will meet the Executive School prerequisite.

Q. I bid upon and was selected for an ATCS position in a different option in another region. Upon my arrival, I was informed that, due to circumstances beyond the control of the region, the position for which I was selected was no longer available. A month and a half ago, I was assigned to a position in my previous option. My question: Is the region obligated to give me a position in the option for which I was originally selected?

A. No. The region is not legally bound to offer you such a position, but it's a good bet that the region will make every effort to put you in a spot similar to the one for which you were originally selected. Sometimes this just takes a little time.



Console for Vietnam

Project engineer Paul G. Welch (standing), and installation technician Stephen E. Smith record voltage readings on an Air Force console prior to shipping it to Vietnam.

Army Towers in Vietnam To Be Installed By FAA

HONOLULU—Phillip Swatek, Pacific Region director, announced that the first contingent of electronics installation personnel arrived in Vietnam in late October where they will install air/ground and point-to-point communications systems in 22 U.S. Army control towers, and 10 consoles in U.S. Air Force control towers.

Both projects were requested by the Armed Forces under a reimbursable agreement with the FAA.

FAA is now in its third year of direct support to the Armed Forces in Southeast Asia, with an expanded control tower installation program for the Army and Air Force.

The FAA Depot in Oklahoma City began the engineering design and fabrication of the Army electronics system in March. The first was ready for the final checkout in less than eight months despite numerous change orders from the

Army Electronics Command. As the first tower electronics system was being completed, an additional 12 were in various stages of assembly, with the last of the 22 scheduled for final checkout within six months.

Volunteer for Hazardous Duty

FAA Project Engineer Paul Welch will supervise the installation program in Southeast Asia. He heads a crew of 17 experienced FAA engineers and technicians, all of whom volunteered for hazardous duty in Vietnam for the Army project. In addition to the Army control towers, Welch will supervise the Air Force project of 10 control tower consoles in Vietnam and Thailand.

The first Air Force console in Vietnam was flight checked and commissioned last October. Bruce Hitchcock, of the Pacific Region, coordinated installation and trained the U.S. Air Force maintenance and operations personnel.



Improving Flight Assistance

The FSS Procedures Committee has completed its first workshop in Washington to improve flight assistance and communication procedures. A total of 85 recommendations were made by the committee, whose members were invited from far afield. Members are (standing left to right): Earl Hardee, Tallahassee; Neal Rogers, San Antonio; Reginald Hoskins, Montpelier, Vt.; David Ryan, Honolulu. (Seated, left to right): Russell Wooten, Pine Bluff, Ark.; Albert Rohlfing, Kansas City; Donald Torbert, Cleveland; Richard Bishop, Denver; Orville Hinds, Memphis; James Gruhn, Tonopah, Nev.; David Malueg, Green Bay, Wis.; and Kenneth Jordan, Kenai, Alaska.

FAAer's Wife Is Outstanding City Leader

KENT, Wash.—“A truly great gal, a good wife, and a wonderful mother,” says Charles L. Welcho, chief of the Boeing Field Tower, of his wife. And he's not alone—the entire community here says, “Roger, Welcho.”

Since 1961, when the family moved to the area, Mrs. Welcho has directed seven annual community pageants.

For two years, 1965 and 1967, she was president of the Kent Orthopedic Guild.

In 1965, the community honored her as “Woman of the Year.”

In several of the pageants Mrs. Welcho has directed, scholarships have been awarded to girls with poise, talent, and intellect who have subsequently become eligible for other pageants—such as the “Miss Washington” pageant, from which winners are selected for the “Miss America” title.

Welcho himself takes an active part in the community event as a frequent member of the staging committee.

He was a judge for the 1966 “Miss Auburn” pageant, the 1967 “Miss Ellensburg” pageant, and the 1967 “Miss Grays Harbor” pageant. “And it isn't bad duty,” says Welcho.



Key to Giving

PC's Soloman Espinda, a Combined Federal Campaign unit keyman, shows off his “key to the heart and pocketbook” that helped him get 100 per cent participation from his people in the Administrative Services division.



You're Tops

Robert T. Williams, Alaskan Region Executive Officer, receives a Presidential Medallion from “Mrs. U.S. Savings Bonds” at an awards banquet in Anchorage. FAA led all other federal organizations in bond participation in the region.

NAFEC Issues Two Technical Reports

ATLANTIC CITY—If several radio altimeters are installed on an airplane will they interfere with each other and give false readings?

Richard W. Cleary, a project engineer at NAFEC, recently investigated this problem and recommended that multiple antenna installations be designed so that beam axes of the altimeters nearly coincide. Complete information is in his report number RD 67-71.

Also, the problem of excessive weather clutter on search radar was tackled recently by two NAFEC experts who have come up with a recommended fix. Findings are detailed in report number RD 67-41, prepared by William F. Herget and Dominick L. Offi.

NAFEC Computer Experts Complete Ohio Program

ATLANTIC CITY—Members of central programming at the National Aviation Facilities Experimental Center have returned home to stay after nine months at the Cleveland ARTC Center.

Since February, the NAFEC team has worked on programming the new IBM 9020 computer at Cleveland—designing, coding, testing and integrating. Commissioned in September, the new computer system became the first of its type in operation at any center.

It expedites handling en route traffic by processing flight plans, up-dating stored flight data, and printing flight progress strips. In addition, it exchanges flight data with five adjacent centers and airports at Cleveland, Detroit, Pittsburgh and Buffalo.

Following commissioning, the NAFEC group conducted a one-month course for Cleveland controllers to cover the operations and program logic of the center's new computer complex. They still remain on call for in-service troubleshooting.

The 13-man team of programmers and system analysts from

NAFEC were headed by project manager Earl L. McAfee, and include: Joseph L. Adair, Francis K. Casey, Norman D. Champion, John L. Fickler, Benjamin T. Golden, Norman W. Ingham, Michael J. McCrory, William Reed, Michael Senkow, Lewis H. Slaw Jr., Robert B. Stein and Donald A. Trucano.

Schwerzel Earns Air Force Honor

DULUTH, Minn.—Robert A. Schwerzel, air traffic representative at the 29th Air Div. Hq., was recently awarded the U.S. Air Force Air Defense Command Certificate of Recognition, for exceptional support in providing coordination between the Air Force and the FAA.

The award cited Schwerzel's efforts, in matching airspace reservations with the often demanding exercise schedule, as contributing significantly to the successful accomplishment of the Air Division's mission.

Double 'Disorientation' Day

Same Aircraft Saved Twice in Three Hours

MONTPELIER, Vt.—The flight service station here recently provided two successful flight assists to the same aircraft within a three-hour period.

The four air traffic control specialists who participated in the double feature and received Eastern Region's “We Point With Pride” plaques were: Salvatore Lucenti, Reginald Hoskins, Arthur Schehr and Ronald Parker.

Lucenti and Hoskins were on duty for the first incident. The aircraft, en route from Zahn's Airport, Amityville, L.I., to Post Mills, Vt., became lost after its last known position over North Adams, Mass. “Anybody . . . from 72D . . . am lost, running low on fuel, VOR out, unfamiliar with terrain, visibility low, request assistance,” was the pilot's radioed plea.

Only one person heard the weak signal—a local doctor flying his own plane over Barre-Montpelier Airport. The doctor promptly advised Montpelier FSS, where Lucenti and Hoskins immediately activated the station's D/F. Because of weak signals, poor D/F returns were received from the lost aircraft. The pilot could not provide VOR cross checks or any useful

landmark identification. All communications were relayed through the flying medico.

Finally, some 20 minutes later, two reliable bearings were obtained, and a steer was furnished to the Montpelier D/F. The pilot then reported having the airport in sight. He landed safely almost an hour after his initial call for help. Later, 35.1 gallons of fuel were required to top the plane's 36 gallon tank!

But the story was not over yet. At shift-changing time, Lucenti and “Hoskins were relieved by Arthur Schehr and Ronald Parker. Meanwhile, back at the hangar, N72D was preparing to take wing again.

This time the aircraft took off for a short local flight. Once again, N72D couldn't find the airport, and became a lost aircraft. A pilot in the hangar office, who heard N72D calling for assistance, immediately alerted specialists Schehr and Parker.

Using the same third-party relay system as employed by their predecessors on the job, Schehr and Parker obtained the desired D/F steers. Minutes later the wayward aircraft was led back to the airport and made a safe landing.

New York Traffic Delay Study Is Now Underway

NEW YORK—A joint FAA-aviation industry study was launched last month to identify causes of delay in aircraft movement in this congested metropolitan area.

The study will continue until mid-December.

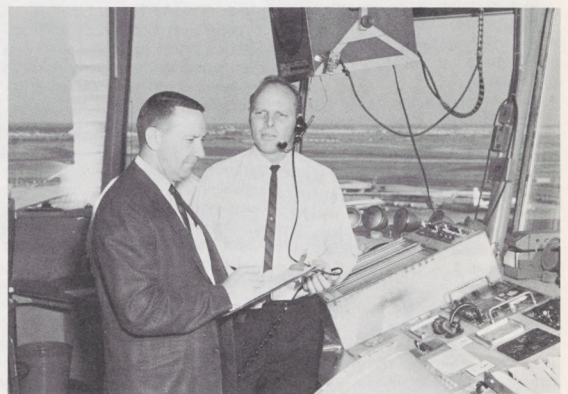
FAA people as well as other observers have been assigned to Kennedy, LaGuardia and Newark towers and the New York ARTC Center. Observations are being made three days each week, and the hours and days are varied to obtain data on all conditions of operations.

The survey team consists of retired airline captains, currently employed airline first officers, airline

and Air Transport Association executive personnel, and retired and currently employed FAA air traffic control people.

The Air Traffic division here emphasizes that industry observers have not been assigned to the study to lay blame for delays on facilities or individuals. Rather, the goal is to make as comprehensive a study as possible to pinpoint the causes of delays, from the readily obvious causes to the most obscure.

The Air Transport Association, which represents all of the domestic air carriers, put the total cost of flight delays last year at \$41 million. ATA noted that the final figure this year will be much higher.



Why the Delay?

FAA observer Charles Branick (left) checks Kennedy Tower operations as part of a recent study to pinpoint causes of aircraft delays. Meanwhile, Air Traffic Controller Robert McGuckin keeps the takeoff lineup at the end of the runway moving as expeditiously as possible.