FAA HORIZONS

Read:
'Balloonists
Becalmed'
Page 8

Vol. 3, No. 10 | Published biweekly for employees of the Department of Transportation/Federal Aviation Administration | May 12, 1969

## 'Connie's' Last Crew

**Tokyo Flight Inspection Group members relax after bringing FAA's N-121 Constellation back to Tachikawa for the last time. The plane was retired when this flight inspection mission was over. Crew members included (from left), Joseph D. Harrigan, James R. Koch, Malcolm L. McMillan, Ellsworth Ching, Melvin D. McClendon and Leslie C. Torguson.**

# Expansion Assigned 'Top Priority'

WASHINGTON—Expansion of the nation's airports and airways is among the national administration's top ten legislative priorities, Secretary of Transportation John A. Volpe told conferees at the recent First Annual Planning Review Meet. In his keynote address, the Secretary called attention to the need for keeping pace with the rapid growth of aviation and cited procrastination and the need for compromise as obstacles to the achievement of aviation expansion.

"General aviation is feeding about 150 planes into the system every week," he said. "Air carriers are adding about 50,000 new passengers each week. The danger is time.

### User Charges Sought

"It is no secret that the DOT will be sending up to the Congress within a very short time new legislative proposals urging adoption of a number of aviation user charges," he said. "The funds will be used to provide needed new facilities."

He emphasized that the interval between passage of new user charge legislation and actual operation of a newly-purchased ILS "must be measured not in weeks but many months."

Because he had been called to the White House during the time scheduled for his speech, it was read to the conference by Under-Secretary James M. Beggs.

Administrator John H. Shaffer also addressed himself to the problems and challenges of rapid aviation growth in his speech to the conference.

"The forecasts have caught up with us," he said. "Congestion predicted for so long has arrived. To me, the marvel is that the system has been elastic enough to absorb the growth that has occurred, consistent with safety."

Problems which can act as a "potential choke" to system expansion, he said, include terminal air space limitation, deficiencies in baggage handling, a shortage of gate positions and inadequate access to airports.

(Continued on page 7)

# Agency Fully Committed To Broad EEO Program

WASHINGTON—The agency is committed to an equal opportunity policy applying to all Americans regardless of race, color, religion, sex or national origin, Administrator John H. Shaffer told a Departmentwide Equal Employment Opportunity conference in Washington recently.

"Each of us in FAA's top management is acutely conscious that more needs to be done in this regard," the administrator stated. "More can be done and more will be done."

The EEO program, the Administrator emphasized, is one of providing employment opportunity for minority citizens, locating minority group individuals who can qualify immediately, as well as those who can be trained to qualify and channeling these potential employees "through the red tape that so often inhibits our achieving so natural a goal as equal employment opportunity."

He termed minorities "this country's most under-utilized resource."

### Progress Being Made

He said that significant progress is being made, though still subject to Congressional appropriations action, in developing a special prototype program for recruiting and training 150 GS-4-level air traffic and electronics maintenance personnel with specific emphasis on disadvantaged persons. Potentially, the plan will provide for training 300 persons annually, with the first class planned to begin in January 1970.

To broaden the agency's minority recruiting capability, seven specialists with proven professional capabilities sensitive to equal employment needs have already been hired and eight more have been selected for appointment throughout the agency. Three additional EEO officers remain to be recruited.

### Other Efforts Cited

Other agency efforts in the EEO field include creation of work-study

(Continued on page 7)

# Snyder Is Named Public Affairs Chief

WASHINGTON—Murray Snyder, a former Assistant Secretary of Defense, has been appointed the FAA's Assistant Administrator for Public Affairs, it was announced by Administrator John H. Shaffer.

He replaces Charles G. Warnick, who has been reassigned as Special Assistant to the Director of FAA's Eastern Region in New York.

Snyder, a resident of Scarsdale, N.Y., is a veteran newsman, government public affairs official and corporate public relations counsel.

He joined the Eisenhower-Nixon Administration on January 20, 1953 as Assistant Press Secretary to the President, having been previously the chief political writer in New York for the New York *Herald Tribune*. In four years on the White House staff, he served and traveled with the President both in this country and abroad, frequently as Acting Press Secretary.

Following his nomination by President Eisenhower as Assistant Secretary of Defense for Public Affairs and confirmation by the Senate, Snyder took that office on March 21, 1957. He served under Defense Secretaries Charles E. Wilson, Neil H. McElroy and Thomas S. Gates, Jr., until January 20, 1961.

At the Pentagon, Snyder was principal advisor on public affairs matters to the key civilian and military officials of the Defense establishment, and liaison on these matters with the White House, State Department, National Aeronautics and Space Administration and other agencies, and Administrator of the Office of Public Affairs, which has jurisdiction over military information, community relations and media relations generally.

Since leaving the government in 1961, he has been a corporate public relations consultant in New York.

Prior to his employment as a political and government affairs specialist by the *Herald Tribune* in 1946, he held similar assignments on the Brooklyn *Eagle*, serving in New York, Albany and Washington, and on the New York *Post*.

During World War II, Snyder served in the Army for four years including 2½ years in Africa and Italy. He was born in Brooklyn, N.Y., on June 20, 1911. He attended the public schools there and in San Antonio, Texas, and what is now San Antonio University, also studying at Columbia University. He is married to the former Betty Gathings, of Pageland, S. C. They have two daughters, Susan, 22, and Diana, 20, both students at Syracuse University.

Snyder is a member of the National Press Club, Sigma Delta Chi, the professional journalistic society, the Defense Orientation Conference Association and a director of the American Cancer Society, Westchester Division.

Murray Snyder

# Air Taxi Business Booming

By David Hess

WASHINGTON—Demand for scheduled air taxi service linking smaller airports with large air transportation hubs resulted in a 45 per cent increase in the number of air taxi operators in a 13-month period ending November 1, 1968.

An FAA report shows the number of U.S. scheduled air taxi operators—also known as "Commuter Air Service Operators" and "Third Level Airlines"— increased from 165 in October 1967 to 240 in November 1968.

During the same period, the number of aircraft used by these scheduled operators jumped 85 per cent, from 685 to 1,272. Included in this total are: 814 multi- and 318 single-piston engine aircraft, 118 turboprops, four jets and 18 helicopters.

By using the original factory list cost, the agency estimates the value of the 1,272 aircraft in the fleet as of last November at $125,744,000. This represents a 163 per cent increase over the previous year and 278 per cent increase over the estimated value of the fleet in 1966. By the end of this year, the value of the scheduled air taxi fleet is expected to be more than $200 million.

Passenger seats provided by this expanded scheduled air taxi fleet totaled 10,647 as of November 1968, up 108 per cent from the 5,112 seats available as of October 1967.

Along with passengers, 42 scheduled air taxi operators also carry mail for the Post Office Department on 161 routes, helping to move the increasing volume of mail and filling the transportation gap left by the curtailment of mail-carrying trains. The four pure jets in the air taxi fleet are used primarily for carrying mail.

Of the total 240 scheduled air taxi operators, 209 or 87.1 per cent are approved by the FAA to make flights in instrument weather.

The FAA report, "Scheduled Air Taxi Operators as of November 1968," lists the scheduled companies, types of aircraft they fly, date of FAA certification and those with air mail routes. It is available from TAD-484.3.

## Dumb, But Helpful

**Lifelike dummy is an excellent "prop" for use in demonstrating first aid techniques to employees at Omaha FSS. Walter Pierson (left of dummy), recently conducted three classes in Red Cross Basic First Aid for FAA employees at Omaha facilities. Omaha area personnel (from left), are: Ellen McCaughey, Thomas Steenson, Fay Webb, Pierson, Norman Busey, David Bent and Richard Bradford.**

# Teach-by-TV System Features FAA

WASHINGTON—A New Jersey school's "go-where-the-action-is" approach to modern education recently received a boost from the FAA.

Kennedy Way High School at Willingboro, N.J. utilizes a closed-circuit television hookup and TV sets in virtually every classroom to supplement person-to-person teaching. To obtain TV footage for classsroom use, teacher-student groups contact leaders in government, business, the arts and sciences in connection with topics being discussed in the various courses.

Recently, a social studies class studying transportation decided to delve into the question of how a new jetport is established. Since a new jetport to serve Metropolitan New York is currently being considered with a location still to be selected, students decided to go to FAA headquarters in Washington for details on the new project.

In preparation for the Washington trip, the social studies teacher and students gathered maps, charts, large aerial photographs and diagrams of air traffic loads in the New York area.

The TV production group consisted of the teacher, four students, a cameraman and a video-tape recording technician.

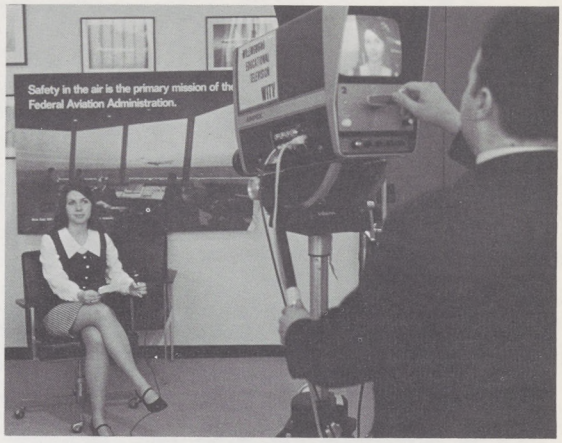
Oscar Bakke, Associate Administrator for Plans, was interviewed. The first half of the 30-minute program set the background for questions on various jetport sites being considered.

Using charts, Bakke explained the importance of air traffic volume, topography, population density and surface transportation capability in selection of a new jetport.

The agency's views on various sites—including Pine Barrens, the Bowling Green-Sparta area and the existing airport at Calverton, L.I.—were discussed by Bakke, who then answered questions directed to him by the student panel.

After editing, the film will be shown on the school's closed-circuit hookup, and will ultimately be seen by thousands of students.

Besides taking home a wealth of data for classroom discussion, students participating in this modern method of exploring contemporary problems are learning the efficient use of today's journalistic techniques.




### Show's Start

**Setting the video-tape camera for a closeup, cameraman Joseph Welsh focuses on moderator Karen Van Hoy, who is about to introduce Oscar Bakke, FAA Associate Administrator for Plans, for a half-hour program for use back at Kennedy Way High School and also in the community of Willingboro, N.J.**

### Pre-Planning

**Going over a dozen questions to be used on the video-tape interview with Associate Administrator Oscar Bakke (left), social studies teacher Mrs. Mary E. Stiles gets set for taping session in Bakke's office with four students and cameraman Joseph Welsh from Kennedy Way High School.**

# New Glider Pilot Rating Is Proposed

WASHINGTON—A special rating which would permit glider pilots to operate into and within clouds has been proposed by the agency.

In proposing the new "cloud-flying" rating, the agency noted that operating a glider in clouds is far less complex than instrument operations conducted in powered airplanes.

"The glider pilot is primarily concerned with attitude and speed control," the FAA said, "whereas the pilot of a powered aircraft is concerned also with such matters as navigation, position reporting, altitude control, power settings, holding procedures, instrument letdowns and instrument approaches. In view of these facts, qualification standards for a pilot who wishes to operate a glider into and within clouds need not be as stringent as those for a pilot who engages in instrument operations with a powered aircraft."

Glider flight in convective and wave clouds has become increasingly popular in recent years. This is due, in part, to availability of more high-performance gliders and to the interest in international glider competition.

At present, glider pilots must hold a regular instrument rating in order to operate into and within clouds.

Glider cloud-flying operations in controlled air-space are, and would continue to be, subject to any restrictions found necessary from an air traffic control standpoint. Ordinarily, these operations would be authorized only during periods of low IFR activity, and pilots would be responsible for conducting flights within specified geographical limits, as determined by visual reference to the surface, and within specified altitude blocks of airspace. While holders of the proposed cloud-flying rating would be prohibited from engaging in operations which require navigation by radio aids, they would be encouraged to use any such facilities available to them as an aid in maintaining their position within the geographical limits for which they were cleared.

The proposal would make the new cloud-flying rating available to a commercial pilot having a glider rating but not an instrument rating. A private pilot having a glider rating but not an instrument rating also would be eligible provided he met the general aeronautical experience requirements for a commercial certificate with a glider rating.

The rating would not be available to student pilots.

# ATC Flow Control Pioneers Win $750 Special Awards

WASHINGTON—For pioneering efforts in modernizing flow control procedures at key terminal complexes, William E. Broadwater and Stewart A. Dawson of the Air Traffic Service each received a Special Service cash award of $750 recently.

In presenting the award, ATS Director William M. Flener said: "It is particularly rewarding to give recognition to our people who have given their time—often their own time—their initiative, creativity and technical competence to a special, specific project.

"While modernizing flow control procedures—actually developing procedures that really work in the field—they evolved a new concept of flow control. They worked together as a team in the best sense of the word. As a matter of fact, they worked together so well it is impossible to determine which ideas were contributed by which man."

Although flow control procedures had been in effect for some time, they were not designed to cope efficiently with the increasing volume of traffic. Broadwater and Dawson worked out the myriad details involved in holding aircraft bound for congested terminals on the ground at the point of departure until they could enter a predetermined, manageable flow of traffic to the terminal.

The men were commended not only for devising and working the bugs out of the complex procedures but for "selling" the idea within the agency and to sometimes skeptical airline management.

Their Division Chief, Robert W. Martin, ATS Operations and Procedures, characterized the job they did as a "markedly superior accomplishment."

## Two Lives Saved By 'Anticipation'

ERIE, Pa.—Because three Erie Tower controllers were able to pinpoint the location of a crash before it took place, firemen were able to reach the wreckage of a single-engine plane—and the two survivors —within eight minutes of the time it went down.

Though seriously injured, the pilot and passenger are expected to recover, thanks to the fact that emergency equipment was able to reach the scene so quickly and rush the two men to a hospital.

Controllers Bert Messmer and Frank Selzer and Supervisor Ed Weiss were on duty when the pilot of the light plane called in to report he was approaching Erie.

The initial call was routine and the pilot was given wind and weather.

Since the pilot was low on fuel and bucking a strong headwind, he was given clearance for a straight-in approach.

While Messmer spoke to the pilot, Weiss and Selzer, realizing the pilot might not make it to the field, plotted the plane's position on a sectional map. When the pilot called to say his fuel was exhausted, his position had been accurately pinpointed.

By the time the plane crashed, a volunteer fire department in the immediate area, alerted by the controllers, was on its way to the crash scene.

# Fast Action Saves Vehicles

ATLANTIC CITY—Quick action by an alert aircraft mechanic at NAFEC recently prevented possible destruction by fire of two large fuel trucks and a tow tractor.

Checking ground equipment on the flight line in preparation for the day's flight operations, Albert V. Emenheiser started a tow tractor and let its engine idle to charge the battery. While inspecting a fuel tank truck parked nearby, he noticed smoke coming from the tow.

Grabbing a fire extinguisher, Emenheiser extinguished the flames and pulled the tow away from two vehicles. He then called the fire department.

Emenheiser was cited by his superiors for his prompt action. A retired Navy aviation chief machinist's mate with service aboard carriers in the Pacific during World War II, he has been employed at the aviation experimental center for 11 years.

### 410 Years of Service

**Both talent and experience is represented in this photo taken at the Boston Area Office, where length-of-service pins were presented to 15 field facility and area employees. In front row are 30-year pin recipients (left to right): William Van Craigh, Warren Whitehouse, Thomas Archibald, Marshall Cate, Michael Kozulak, Raymond Brzuchalski, and Edward Wilkins. In back row are those who received 25-year pins (left to right): William Morrill, William Burke, Paul Tully, Frank Marley, Thomas Eaton, Fred Salloom, Louis Reilly, and William Dunne. Unable to attend were Walter Bailey, 30 years; and three 25-year men: Stanley Wheeler, Russell Hall and John Jacobson.**

# 3 Pilots Grateful to Paso Robles

PASO ROBLES, Calif.—Three letters from three pilots, received recently by the Paso Robles FSS, had one thing in common: gratitude.

FSS Chief William K. Vanderpool said the letters from grateful users of FAA's services paid special tribute to Albert Moltzer, Waite Raybon and Barra Boyte, FSS specialists.

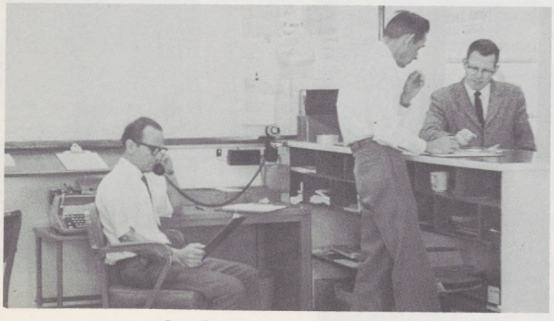
One of the letters thanked the specialists for "patience, tolerance and understanding" in aiding the pilot when he was caught above the clouds and was not qualified to fly IFR.

"My re-entry and safe return to earth was an experience never to be forgotten," the pilot wrote. "I am most grateful to the kind, friendly voice of the FSS man at the mike who is to be commended for never once losing his patience."

FSS personnel were termed "friends in need" by another pilot helped by the FSS during a landing gear malfunction. Emergency personnel and equipment were alerted as he came in for a landing; later, FSS specialists helped the pilot locate mechanical assistance.

The third recent letter came from the local flight school operator. He told FSS personnel in his letter that his flight school students profited greatly from extra briefings given them by the station.

"This type of cooperation," the operator wrote, "conditions my students to think of the FAA as being here to help rather than patrol."



**Thank You, Paso Robles**

**Among Paso Robles FSS personnel who rated special mention in letters of gratitude to the FSS from pilots recently are (from left), Albert Moltzer and Waite Raybon. Pilot being briefed is unidentified.**

# Participation Agreement Signed on CAS System

WASHINGTON—A two-year agreement has been signed between the FAA and the Air Transport Association of America (ATA) to participate in ATA's airborne collision avoidance system (CAS) program.

As part of the agreement, the agency will participate in testing and evaluation of airborne CAS systems supplied by industry in a program sponsored and funded by the ATA. Systems Research and Development Service will provide services and facilities at NAFEC in support of the CAS test and evaluation. This will include air traffic control services, use of range control and tracking facilities, ground station sites and equipment vans.

The CAS system to be tested and evaluated alerts pilots to potential collisions, analyzes the hazard and recommends evasive action.

The FAA-ATA test program will evaluate the compatibility and effectiveness of potential CAS equipment within the ATC environment and provide test results that can be used to determine the acceptability of the system.

The airlines, through the ATA, will bear the costs in the performance of the CAS test and evaluation. ATA already has awarded Martin-Marietta of Baltimore, Md., a $1.5 million contract to conduct the flight tests.

CAS equipment to be tested will be provided by three manufacturing groups: Bendix Avionics, of Fort Lauderdale, Fla.; McDonnell-Douglas, of St. Louis; and a team effort by Sierra Research of Buffalo, and Wilcox Electric Company of Kansas City, Mo.

The program involves extensive tests and measurements on the ground and in flight.

Ground stations for the tests will be operated at the Martin-Marietta plant in Baltimore and at NAFEC.

Three propeller and two turbojet (small leased business jet) aircraft will be used for the flight test program scheduled to run from June to December 1969.


**Points For Pilots**

**Briefings to pilot groups by personnel of the Omaha FSS are made graphically interesting through the drawings of FSS specialist Joseph Wenzl. His flip charts on weather, radio frequencies and proper radio use have a professional "zip" that gets the points across.**

# Computer's 'Bugs' Easy to Pinpoint

OKLAHOMA CITY—Introduction of automation in air traffic control has created a new concept in maintenance procedures for electronics technicians and engineers.

No longer do the agency's electronics technicians and engineers rely upon schematics to trace troubles and find faults. Today, they use logic circuit analysis techniques. Multimeters and oscilloscopes still are important tools. AND, OR, NOR, NAN, STOP, GO, AND NO GO gate analysis are also required to keep the complex computers operating.

Realizing the impact these new maintenance techniques would have on field maintenance personnel, the air navigation facilities training branch of the Academy set about to ease the maintenance transition. C. W. Mueller, ANF Branch Chief, has announced three items have now been developed and are available upon request to assist in maintaining various automated equipments.

For the IBM-9020 computer, a small handbook was developed to provide personnel with computer technical orientation to the system and quick means of isolating faults. This handbook has been very popular since original publication. The International Business Machines Corporation, which manufactures the 9020 computer, has requested copies of the handbook for their employees.

For the Flight Data Equipment Printout (FDEP), two quick reference cards have been developed to assist technical personnel in system analysis. These cards not only present the expected logical sequence of events, but provide answers as to what to do if the test program should fail. These cards are now in their second printing.

Requests for these aids should be mailed to AC-940 at the Aeronautical Center.

# Lights Go Out But Talks Go On

CHILLICOTHE, Mo.—Not even the loss of lights resulting from a power failure discouraged the audience listening to Accident Prevention Specialist L. 'J. Cox, Kansas City GADO, during a three-day Pilot Education Clinic held here recently.

The lights failed while Cox was discussing flight maneuvers during which most accidents occur. But the audience of more than 100 did not leave the hall. For the next two-and-a-half hours the meeting continued while the lights of an automobile parked outside shone on the blackboard through an open door.

Cox got along without a film he had intended to show. But even that was not cancelled. It was postponed until the next morning.

**'Typical of The Best'**

**The agency's "Outstanding Handicapped Employee" of 1968, Miami Area Office Airport Engineer Herbert Willis (left), received a plaque from John H. Shaffer, the Administrator. In presenting the award, which reads in part, "Excellence in Achievement," Shaffer said, "I am impressed by the caliber of people in this organization, and you are typical of the best." The recent ceremonies were held at Washington headquarters.**

# Peril of Bird Strikes Outlined in New Report

WASHINGTON—A new report on the bird strike problem at airports has been published. Entitled "Control of Birds on and Around Airports," AD 683 291, the report was prepared for the agency's Systems Research and Development Service by the Department of the Interior's Bureau of Sport Fisheries and Wildlife. Data was collected both on site and through bird strike reports received from pilots.

During the six-year study (April 1961 through June 1967), about 85 per cent of the 2,196 bird strikes reported by commercial carriers occurred when planes were departing or arriving at airports. Due to an improved strike reporting method, the information reported since 1966 is now more complete.

The study also indicates that twice as many bird strikes occurred during fall bird migration periods, September to November, than at any other period, with October the heaviest month. Of the strikes, half reportedly occurred at altitudes of 2,500 feet or below on a clear day.

The increased use of commercial jets since 1962 is reflected in the increased number of bird strikes involving jet aircraft.

The report recommended a number of possible solutions to alleviate the bird-aircraft hazard. These included: alter airport habitats to make airports less attractive to birds, operate mobile bird-scattering patrols with emphasis during the peak hazard period in the fall; issue warnings to pilots regarding the migration of birds; suggest that aircraft use components and windshields for light aircraft more resistant to bird strikes and call for the mandatory reporting of bird strikes for a period of two years, with reports at five-year intervals thereafter.

Using the new bird strike reporting form, the report for both commercial and private aviation for 1966 indicated that:

For commercial carriers, bird strikes occurred at all hours, with more reported at night; that two-thirds of the strikes occurred in the vicinity of an airport; that few pilots revised flight plans because of bird hazards and no personal injuries occurred.

For private aviation, strikes followed a similar pattern except that a greater percentage of aircraft were damaged (55 per cent compared to 37 per cent for commercial carriers), and two personal injuries resulted from bird strikes.

The majority of the aircraft bird strikes that were reported resulted in damage to engines, wings and windshields.

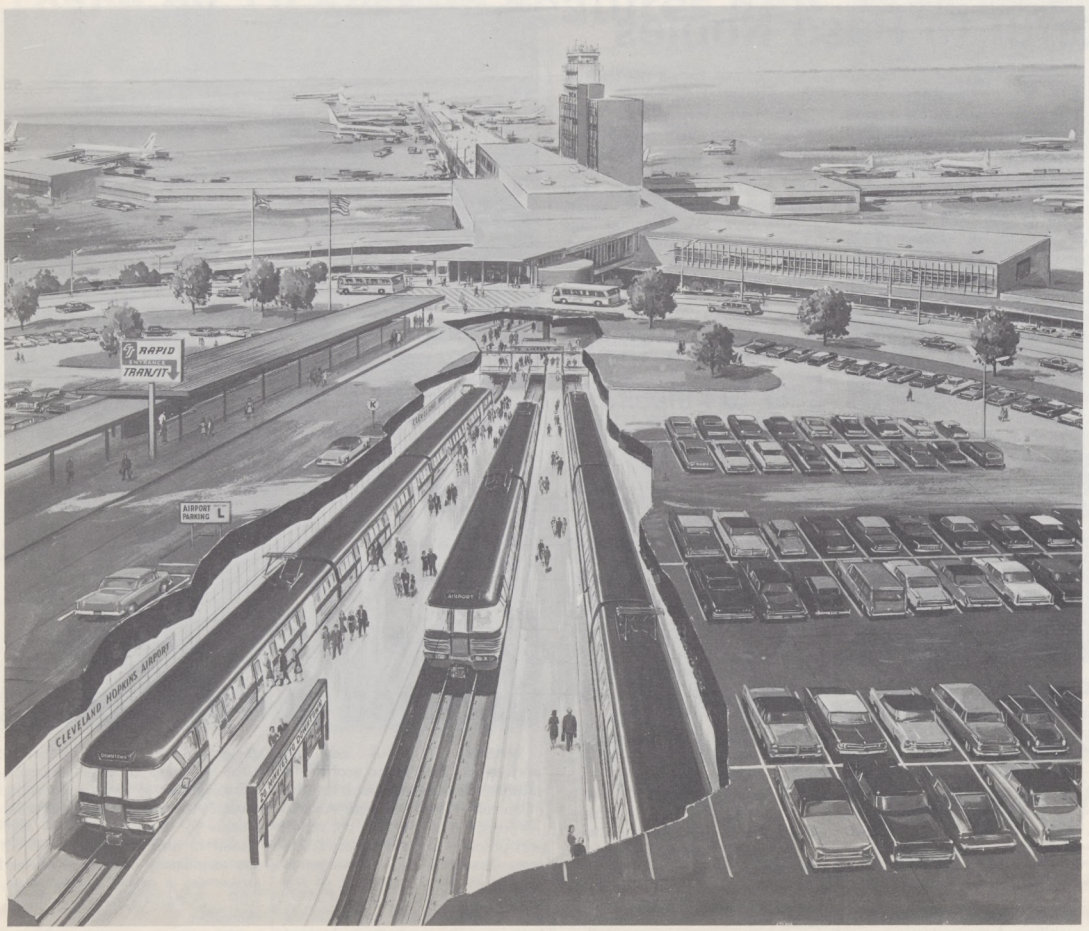
Gulls and waterfowl were the principal birds reported in strikes; however, 73 different species have been involved in the strikes that occurred in the vicinity of 185 U.S. airports and 61 foreign countries.

Copies of the report are available from CFSTI, Springfield, Va.

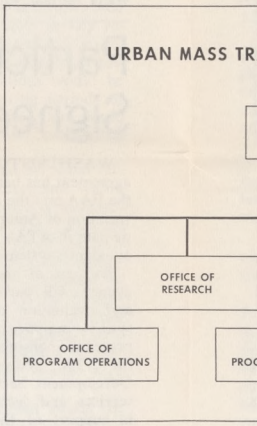
FAA HORIZONS

FAA HORIZONS, the official employee publication of the U.S. Department of Transportation, Federal Aviation Administration, is published biweekly by the Employee Information Division, Office of Information Services, FAA, 800 Independence Ave., Washington, D.C., 20590. Telephone: WO. 2-5575. Articles of general interest to employees should be submitted directly to Regional FAA Public Affairs Officers: George Fay, Alaskan Region; Robert Fulton, Eastern Region; Jack Barker, Southern Region; Joseph Frets, Central Region; K. K. Jones, Southwest Region; Eugene Kropf, Western Region; George Miyachi, Pacific Region; Edwin Shoop Jr., NAFEC, and Mark Weaver, Aeronautical Center.

| | |
|---|---|
| Administrator | JOHN H. SHAFFER |
| Assistant Administrator for Public Affairs | MURRAY SNYDER |
| Chief, Employee Information Division | CLIFFORD CERNICK |
| Layout/Production | GERNOT RASMUSSEN |




Federal urban transportation capital grant of $12,326,840 went into construction of Cleveland's Transit System extension to Hopkins Airport, making Cleveland the first city in the nation and the third in the world (others are Tokyo and Brussels) to have rapid rail transit access to a major airport facility.


# TARGET: BETTER TRANSPORTATION

## . . . for Today's Cities—and Tomorrow's

*EDITOR'S NOTE: The following is another in a series of articles intended to better acquaint FAA personnel with other administrations of the DOT.*

Carlos C. Villarreal of Los Angeles, recently sworn in as the new Administrator of the Urban Mass Transportation Administration (UMTA), heads the newest administration within the Department of Transportation. UMTA was established on July 1, 1968.

Villarreal's background in technology and management provide him with the tools needed to develop courses of action and policies for creation of a true urban mass transportation system. A 1948 graduate of the U.S. Naval Academy, Villarreal served in the Navy from 1948 to 1957. Later, he worked for General Electric, where he developed a marine version of the J79 turbojet engine, and for the Marquardt Corporation, where he was vice-president for marketing and administration.

The task confronting Villarreal is formidable. UMTA's long-range goal is to provide users with safe, fast and convenient mass transportation service as efficiently and economically as possible, while respecting and preserving other community objectives and values both within urban communities and between cities and their regions, the nation and the world at large.

Short-range goals include preserving existing public transportation by fostering improvements in service, comfort and speed and providing at least minimum public transportation for those who cannot afford private transportation. Specifically, these short-range goals are as follows:

- To improve coordination of total transportation planning with overall development planning of the city or community.
- To financially assist urban communities in improving and maintaining existing mass transportation systems.
- To improve the quality of public transportation not only for the user (service, speed and comfort) but for everyone (reduction in noise, odors and presence of unsightly vehicles and structures).
- To provide better service especially to those without access to automobiles—non-drivers, housewives, the young and the old, the handicapped and the poor.
- To relieve the ever-increasing congestion on urban streets.

To accomplish its goals, UMTA has four major programs designed to assist state and local governments in improving mass transportation systems.

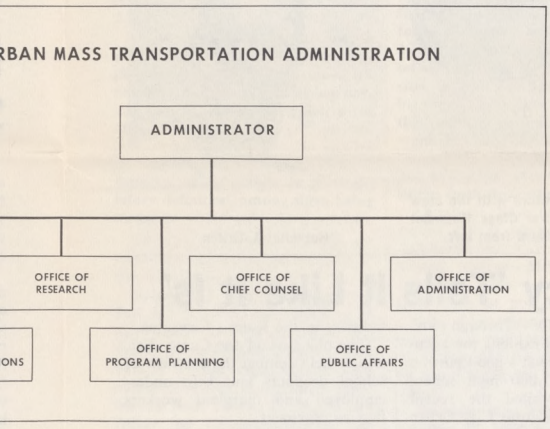
First among these are capital improvement grants and loans for acquisition, construction and rehabilitation of equipment and facilities needed for development or improvement of mass transportation systems.

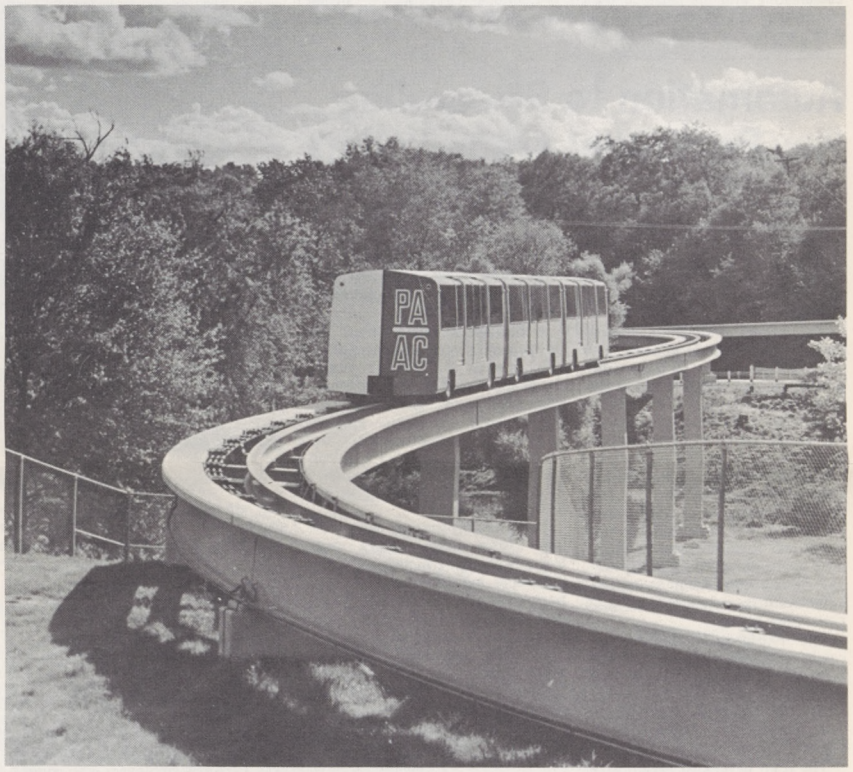
Another program encourages grants to assist public agencies in system planning, design and engineering, or technical studies needed to develop a coordinated transportation system as part of a comprehensive plan for the urban area.

A third program provides grants to government agencies, universities, private organizations or individuals for development, testing and demonstration of new facilities, equipment, techniques and methods for the purpose of improving mass transportation service at minimum cost.

Secretary of Transportation John A. Volpe (left), w
portation Administrator Carlos C. Villarreal shortly

UMTA assists in the development of streamlined transportation systems throughout the nation. This prototype of the Metro transit car will be used in Washington's 97-mile rapid transit system serving four counties and four cities and scheduled to begin operation in 1972.



Discovering the keys to better transportation is part of the role of the Urban Mass Transportation Administration. Among solutions to the transportation squeeze now being considered is this fully automatic, rubber-tired system now being tested in Pittsburgh. A central control room monitors speed, braking and loading.

n A. Volpe (left), with the new Urban Mass Trans-
C. Villarreal shortly after the latter was sworn in.

Also included are grants to public and private non-profit institutions of higher learning for research in problems of urban transportation and for training persons for further research in this field.

Grants also may be made to public bodies or agencies to provide fellowship awards for advanced training of personnel employed in managerial, technical and professional positions in the urban mass transportation field.

### A Look into the Future

Some examples best indicate the type of research currently being conducted in the field of mass transportation.

Several rapid transit systems now under construction or in the planning stage in the U.S. will have fully automated control. Speeds, braking and loading times at stations will be electronically governed by a central control room.

San Francisco's Bay Area Rapid Transit (BART) system will probably be the first such system. Others are in planning stages in Washington, D.C., Atlanta, Seattle, Baltimore and Pittsburgh.

To improve service—especially in areas with low population density—future bus systems may also include computer control that will supply customers with door-to-door service. A customer could request service by calling "Central Control" and give his desired starting time, origin and destination. Knowing the location of all controlled vehicles, the number of passengers on each and their destinations, the computer would select the right vehicle to meet the customer's requirements and promptly dispatch it to arrive at the intended departure time.

In the future, private vehicles and buses may travel on fixed guideways, with speed and turning movements automatically controlled. Upon reaching the vicinity of its destination the vehicle would leave the fixed guideway and travel as a conventional vehicle. Such a system would give speed and safety to long trips, as well as the flexibility needed for local or neighborhood travel.

Several systems are now in use or in the planning stage to assist people in moving about within the central city or within other major activity centers, such as airports, hospitals and schools.

A minibus system now serves the central part of our nation's capital. Similar systems are planned for other cities. At the University of Pennsylvania, research is under way to develop a three-passenger pollution-free minicar that would be available on a rental basis for short trips.

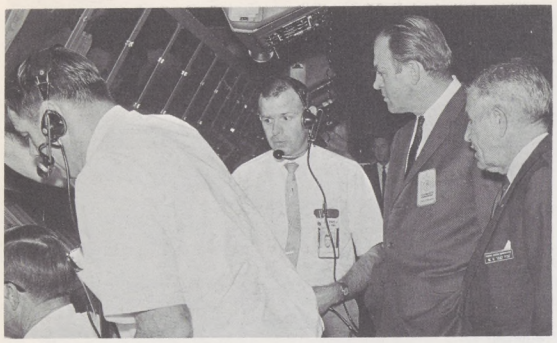
Another possibility is a variable-speed horizontal conveyor belt for moving people within highly congested areas.

Studies will determine the role mass transportation must play in the development of an urban community.

New forms of propulsion are being researched and tested to insure that future systems will be quieter and have lower pollution rates.

New suspension systems will insure a quiet and smooth ride for the commuter.

Through progress in all these areas, mass transportation will take its proper role in serving urban needs.



## First-Hand Look

**Visiting the ARTC Center in Fort Worth was Administrator John H. Shaffer (second from right), who talked with Controller J. D. Seaver while W. V. (Bud) Fox, who accompanied Shaffer on the tour, listened. In the foreground, coordinating with the radar controllers is Controller Edwin Knight. Shaffer visited the agency's facilities in Fort Worth shortly after being named FAA Administrator.**

# Automation to Streamline Key Personnel Transactions

By Cliff Cernick

WASHINGTON—A new FAA-wide automated data system that will streamline personnel procedures and give management swifter access to vital manpower information is scheduled to be in full operation by July 1, 1972.

The system, utilizing a central data base, will instantaneously provide management at all levels with a wide range of data on each of the agency's employees.

Making full use of computer technology, the data bank will be programmed to provide such personnel information as employment history, education, honors and awards, training, age, salary, service computation date, title, grade, series and organizational location. Also available will be training data and budget data, such as staffing authorizations, appropriations and cost center codes.

The Executive Committee recently gave the go-ahead to the new Automated Manpower and Personnel System on the basis of a study carried out over the past several months by a headquarters team.

The team developed preliminary design recomendations and set up requirements for equipment, programming and costs.

Target date for partial implementation of the system is July 1, 1971, with full-scale operation at all key locations a year later.

Computer-linked terminal devices using TV-type screens will be set up in each operating personnel office. Through telecommunications, these devices will feed data into the central computer, which will extract and print out information needed at the local offices.

### Operator Requests Information

An operator positioned at a standard typewriter keyboard attached to the screen will enter and request information from the central computer. A conventional type printer will provide printed copies in each operating personnel office.

The official personnel action document will be printed out in the personnel office and will simultaneously update records in the central data base.

Access to the data will be carefully controlled; information will be made available only to individuals having a "need to know."

Savings produced through elimination of costly, redundant clerical processes, accomplished manually at present, will permit recovery of system design and installation cost within four years, it is estimated.

Other agencywide benefits, in some cases more important than tangible savings, are expected to include:

- Employees' qualifications will be more fully presented to selecting officials under the Merit Promotion Program. The computer will produce profiles or "print-outs" containing each candidate's employment history, training, awards and accomplishments, providing selecting officials with more complete data, faster, thus speeding up selection processes.
- Better information about the work force characteristics, forecasts of changing manpower needs and other indicators of career opportunities will be available, giving employees and supervisors improved career guidance data.
- Current methods used by supervisors for assigning and controlling training quotas will be streamlined.
- Management and planning officials will receive more accurate and more timely manpower data. Time now being spent in gathering data can be redirected to data analysis and problem solving.
- The system will permit "reporting by exception" so users can quickly identify problem areas, eliminating the need for searching reams of computer print-outs for critical items of information.
- By "modeling" various alternatives before choosing the best manpower strategy, management will be able to determine the possible impact of proposed program and policy changes prior to making decisions.

## Solid Citizen

**For outstanding community work during eight years as a resident of Callahan, Fla., Don Jones (left), an FAA controller, recently received a plaque for "Outstanding Public Service" from the town's mayor.**

# Eisenhower Remembered by FAAer

OKLAHOMA CITY—When lunchtime talk gets around to boating at more than a dozen lakes within 140 miles of the Aeronautical Center, the thoughts of Herschel A. Griffin, a binderyman in the Center's Printing Branch, turn 1,153 miles eastward to Navy Yard Pier Number One on the Potomac.

Griffin vividly remembers that two of the most pleasant of his 21 Navy career years were spent aboard the Presidential yacht when President Dwight D. Eisenhower was in office.

This memorable phase of Griffin's Navy service began 14 years ago, shortly after he earned the Navy-Marine Corps Medal for saving an officer trapped on a breeches buoy in heavy seas. For his bravery and for his other qualifications, he was picked for the choice assignment with the Naval Administrative Unit in October 1955.

Griffin recalls that the entire crew had to be fastidious. A minimum of two haircuts a week were required. Uniforms were changed as often as three times a day.

Griffin remembers the President as "a man concerned about the people.

"He was like having a grandfather around—someone you felt comfortable with," Griffin said. "We knew what he wanted and used hand signals so orders could be obeyed silently."

The President used the yacht strictly for late afternoon family cruises.

On one occasion, Griffin recalls, the President's grandson, David, then about nine, streaked down the gangplank ahead of everyone in violation of the protocol requiring that the Chief Executive always be the first to leave.

President Eisenhower walked deliberately forward and caught up with his forgetful grandson at the foot of the gangplank.

"David," he said, "I'm your grandfather. But you know that I'm also the President of the United States, and no one should ever walk ahead of the President."

Griffin served on the Presidential yacht for two years. Then, after two additional years on a destroyer escort based at Pearl Harbor, he retired and returned to Oklahoma City to be with relatives and friends of boyhood days.

Having worked in a print shop before entering the Navy, Griffin joined the staff of the Center's Printing Branch in 1961.

He is 47 now and looks forward to a long second career.


## Famed Yacht's Crew

**The late President Dwight D. Eisenhower pauses for a picture with the crew of his yacht, the "Barbara Anne." Boatswain's Mate First Class Herschel Griffin (he became Chief a year later), now an FAAer, is third from left.**

Herschel A. Griffin

# 2 Savings Bonds Offered for New Awards Designs

WASHINGTON—Savings Bonds will be presented to the two Airway Facilities employees who come up with the best designs for a plaque and for a trophy which will be henceforth awarded to the outstanding "Sector of the Year."

For the winning design for a ten-year, rotating trophy, a $50 Savings Bond will be awarded. A $25 Bond is the prize for the outstanding design of a wall plaque, to be permanently retained by the winning sector.

The trophy design should allow space for the names and addresses of ten winning sectors, and the cost of the trophy, including a suitable carrying case, should not exceed $150.

The plaque should have sufficient space for the name of the winning sector and the date. This should be inscribed above the words "Presented by (name), Director, Systems Maintenance Service, Washington, D.C." The plaque should not cost more than $50.

The competition is open to all Airway Facilities personnel.

Designs, which may be either sketches or written descriptions, must be submitted to SM-1 no later than August 1.

The announcement of the winning design will be published in *Horizons*, along with a reproduction of the design and other details on contest results.

# Agency 'Tells It Like It Is'

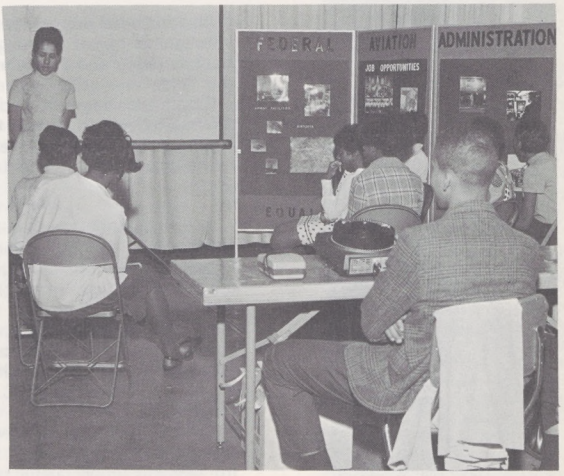
KANSAS CITY—Through movies, speakers and exhibits the agency was able to reach a good portion of the some 17,000 high school students who visited the recent Fourth Annual Kansas City Urban League Career Fair.

Job opportunities within the agency and the importance of education in qualifying for agency careers were stressed at the event, sponsored by various civic and governmental institutions and private industry in the Kansas City area.

The objective of the Career Fair was to help combat the problem of school dropouts and help underemployed and marginal workers find employment.

Theme of the Career Fair was "Telling It Like It Is."

Ruby Jo Rachal, personnel staffing specialist for the Central Region, was among the speakers at the Career Fair. Several other federal agencies took part.




## Education—Opportunity

**Encouraging a group of students to continue their education is Ruby Jo Rachal, Central Region personnel staffing specialist. Speaking at a recent Career Fair, she outlined FAA employment opportunities.**

# DIRECT LINE

This is your direct line to the top! Your questions will get answers! Employees are encouraged to discuss questions with supervisors or their local personnel office, but for those who do not have ready access to a personnel office, this column will provide an opportunity to get questions answered. Send your letter to Acting PT-1, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D. C., 20590. Ground Rules: • All questions must be signed. • This column should not be used to supplant formal grievance and appeals procedures. • Questions should concern personnel and training policies, programs and procedures, not operational or technical matters. What's your question?

I have four questions:

Question: (1) Item 31A of SF-171 (Personal Qualification Statement) reads as follows: "Does the U.S. Government employ in a civilian capacity or as a member of the Armed Forces any relative of yours by blood or marriage?" My question is: what is the definition of relative?

**Answer: (1) In the U.S. Code, a relative is defined as father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, sister-in-law, brother-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half-brother or half-sister.**

Question: (2) Why was the phrase "or as a member of the Armed Forces" included in Item 31A?

**Answer: (2) Under the law, a public official may not appoint, employ, promote or advance one of his relatives to a position in his agency, nor may he advocate a relative for appointment, employment, promotion, or advancement in the agency. In this context, "public official" includes many people in its regulatory definition, among them being members of the uniformed services.**

Question: (3) What are the restrictions on employing relatives in the U.S. Government?

**Answer: (3) There are two. The first one is called the "member of the family" restriction. Under this restriction, when two or more members of a family are serving in the competitive service, no other member of such family is eligible for career or career-conditional appointment, except eligibles entitled to veterans' preference. (Employees in the excepted service, Public Law 313 type positions, etc., are not counted). "Members of family" refers to those who live under the same roof with the head of the family and "form his fireside." Whether or not a person is covered by the phrase "form his fireside" must be decided on an individual case basis. Generally speaking, however, a person is no longer considered to be a member of his father's family when he becomes head of a new establishment; *or* when he becomes 21 years of age, is self-sufficient and pays for room and board.**

**The second restriction on employing relatives is the one on nepotism. The law says that a public official may not appoint, employ, promote, advance, or advocate for appointment, employment, promotion, or advancement, in or to a civilian position in the agency in which he is serving or over which he exercises jurisdiction or control, any individual who is a relative of the public official. Also, an individual may not be appointed, employed, promoted, or advanced in or to a civilian position in an agency if such appointment, employment, promotion, or advancement has been advocated by a public official serving in or exercising jurisdiction or control over the agency who is a relative of the individual.**

Question: (4) What are the compensating advantages of introducing the new Employment Application forms (SF-170 and SF-171), and have they been realized in practice? Is the short form (SF-170) being used and accepted as useful? Is any thought being given to returning to a single form?

**Answer: (4) The new forms were designed to save time for both management and job applicants in the screening-selection process. The SF-170, which briefly summarizes experience, is used by applicants for Federal employment or employees seeking work in other agencies. It is not intended to be used for routine internal considerations for agency job vacancies. The SF-171 is used to provide more detail on an applicant if management desires it. The new forms have been in effect since July 1, 1968, and they seem to be doing the job they were intended to do. The Civil Service Commission has not given any indication of returning to the single form type application.**

Question: Last fall a law was passed which permits the use of administrative leave by National Guard and/or Military Reserve personnel who are activated to quell riots or put down civil disorders. Last spring my unit was called up. I used four days of annual leave for civil riot duty. Will I be reimbursed for this leave, and if so, when?

**Answer: No. The law enacted October 17, 1968 is not retroactive and, generally, leave taken before its passage is not covered. There are exceptions in other laws which may apply in your case. For a specific answer to your question, you should present the facts to your personnel office. Include a statement indicating whether you were a state guardsman or a reservist and whether you were directed to duty by order of the President or the Governor of your state.**

## Meeting June 3 On Regulations

WASHINGTON—A government-industry conference to study the need to upgrade airworthiness regulations governing aircraft engine certification will be held at FAA Headquarters starting June 3.

Forty-eight agenda items are listed for discussion. The meeting will continue from three to four days, depending on the time needed.

Proposed amendments to Part 33 of the Federal Aviation Regulations were submitted by FAA, Aerospace Industries Association, Air Transport Association and foreign manufacturers and governments. Active conference participation by these and other interested groups is anticipated.

## Expansion

(Continued from page 1)

"My number one priority is to elicit support for the Administration's airways-airports legislative package—and to commend that package to all of civil aviation," he said.

He emphasized that the new, expanded program will require a very substantial investment for automation of the air traffic control system and for new terminal facilities and equipment.

"We don't need to wait on any 'round-the-corner' technology to do this job.

"We can be very busy throughout the next 10 or 20 years simply exploiting the science and technology presently available to us."

Following the plenary session, a number of separate seminars were held covering such areas as air traffic control, aviation forecasting, communications, airport systems and standards and the capacity of airports.

### Supporting EEO Program

**Representing the Chicago Area at the annual Chicago Urban League's Equal Employment Opportunity Program luncheon were (clockwise from far left): Al Fruechtl, Personnel Specialist; Thomas Davis, Flight Standards Branch Chief; Ted Burtness, Personnel Officer; Floyd Emanuel, Airway Facilities Branch Chief; Norman A. Amundsen, Assistant to Chicago Area Manager; Sandra Lodding, Clerk-Steno, Air Traffic Branch; Willie Baker, Electronics Technician; James O'Brien, Chief, Airway Facilities Sector, O'Hare; and Neal Callahan, Community Relations Officer.**

# Controllers Give Help In Three Emergencies

STOCKTON, Calif.—When the pilot of a pontoon-and-wheel-equipped Cessna 180 radioed Stockton Tower that one wheel wouldn't come down, Watch Supervisor Robert Noble and Controller Tom Perkins arranged a safe river landing for the plane.

After the sheriff's office assured the tower that a stretch of the San Joaquin River near downtown Stockton was clear of boats and debris—a check was made by a radio patrol car—the pilot was advised.

As the plane came down for an uneventful landing on the river, the stuck wheel came loose and a few moments later the pilot took off from the river and landed at a nearby airport.

* * * *

OMAHA—As the landing gear of a Beech Queen Air began to fold into the aircraft following a recent routine takeoff from Eppley Field, Controllers Donald Queen, Richard Huse and Kenneth Christensen saw the plane's right wheel drop off.

The pilot was alerted and decided to make a wheels-up landing on the sod adjacent to the runway. Instead of a sudden shower of sparks in the night, a violent ground loop and possible fire, the plane touched down gently on the grass, slid to a halt safely, without so much as jarring the occupants.

* * * *

WASHINGTON—National Airport controllers and a general aviation pilot teamed up recently to give assistance when an airliner with 84 passengers and a crew of seven aboard lost a wheel as it lifted off the runway en route to Miami.

A general aviation pilot reported to ATC specialist Dale Moung, on ground control, that he had seen the tri-jet drop a wheel into the river shortly after takeoff from Washington National Airport.

Watch Supervisor Don George passed the word to departure control and the airline pilot was alerted.

The pilot decided to continue to Miami, over-flying scheduled stops at Orlando and Tampa, landing there without incident since three of the four wheels in the right landing gear were still intact.

### Construction Progress

**Workmen make preparations to put second floor on the two-story Systems Training Building at the Aeronautical Center in Oklahoma City. Despite bad weather last month, construction moves toward its September completion date on schedule. In background at left is the Center's Headquarters Building; at right, the Air Navigation Training Building.**

## EEO

(Continued from page 1)

and aviation technology education programs in high schools and colleges, including some with predominately minority group students. The agency continues to conduct recruiting efforts in ghetto locations. Such efforts have taken place in Chicago, New York and Washington, D.C. using the assistance of various minority group organizations.

"An agency action plan has been amended to include a positive program for screening qualifications of all minority group employees to ascertain whether they are being fully utilized in positions commensurate with their qualifications," the Administrator said. "Where indicated, positive steps will be taken to provide reassignments to positions with greater promotional or developmental potential and to provide upgraded training."

### Minority Jobs Grow

As of June 30, 1968, when FAA full-time permanent employment with the agency reached 44,602 persons, minority employment rose to 6.3 per cent—a gain of .9 per cent since November of 1967 when the first minority census was taken, the Administrator stated.

"For the remainder of 1968 and early 1969, the pattern of minority group employment and utilization continued upward at a painfully modest rate," he said.

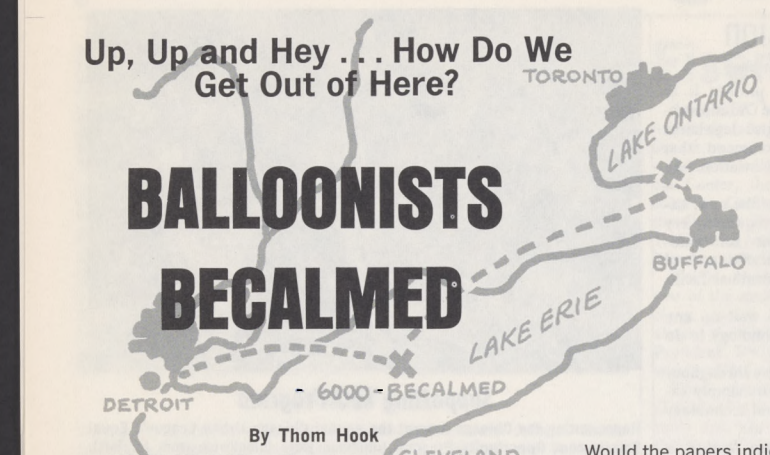
Among deliberate and positive actions taken recently and expected to be taken in the future, he stated, were the very recent placements of five minority group employees in staff and line positions from grades GS-12 to GS-17 and the selection and placement of a minority member—the first ever—in the position of Air Carrier District Office Inspector.

**THOMAS JEFFERSON**

"We hold these truths to be self-evident,—that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness." *The Declaration of Independence*

## Up, Up and Hey . . . How Do We Get Out of Here?

# BALLOONISTS BECALMED




By Thom Hook

*(EDITOR'S NOTE—Except for the yellowing files of the St. Catherines Ontario* Standard, *aviation history has taken no note of an eight-and-one-half hour flight over Lake Erie in a balloon by six young men on April 7, 1929. To remedy this oversight, "HORIZONS" presents the following article based on an interview with one of the balloonists, Harold D. Hoekstra. Following the events described here, Hoekstra went on to get his engineering degree at the University of Michigan, then launched a career as an aircraft designer, playing an important role with such early aircraft manufacturers as Crosley, Ford, Curtiss and Stinson. Now Chief of the Engineering and Safety Division of the Aircraft Development Service, Hoekstra is a veteran of 31 years service as an FAA aeronautical engineer.)*

The way Harold Hoekstra remembers it, the balloon trip was to have been a carefree Sunday outing aloft, starting on a vacant lot alongside a chemical plant on the outskirts of Detroit and ending, hopefully, somewhere on the East Coast.

Besides Hoekstra, the balloonists were four other aeronautical engineering students at the University of Michigan and an aeronautical engineer, each of whom chipped in $10 to buy hydrogen for the trip. Hoekstra and three of the lighter-than-air voyagers spent Saturday night and the early hours of Sunday morning laying out and inflating the balloon, on loan from the Detroit Balloon Club. The two others sallied off to the "blind pigs"—illegal saloons—of nearby Ecorse, but managed to show up shortly before takeoff.

Hoekstra recalls that by 6 a.m. Sunday, the 70-foot-high balloon, bulging with 35,000 cubic feet of highly inflammable hydrogen, slowly began to ascend. The crew was in a holiday mood, even though there were no instruments aboard and only one of the six had ever been up in a balloon. He was George Hineman, the aeronautical engineer, who came equipped with a map of the area and a Sunday newspaper.

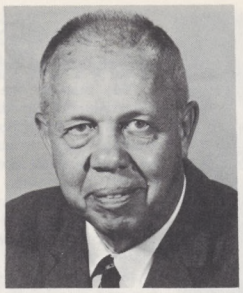
The six men were crowded elbow-to-elbow in the four-foot-wide by six-foot-long wicker basket suspended beneath the huge balloon. With a sense of adventure, they watched as Lake Erie's southern shoreline slowly receded.

Three and one half hours later, the balloon reached the approximate center of Lake Erie—then would go no further. Becalmed—without the slightest trace of a breeze—the mammoth bag hung motionless, suspended some 6,000 feet over the lake's shimmering blue surface. The nearest shoreline was 25 miles away on either side.

"We were nonplussed," recalled Hoekstra. "We joked, enjoyed the view, took snapshots of one another and of the tiny shadow our balloon cast on the water far below. We made sure that the two men who usually smoked didn't light up—we all knew how flammable the balloon was. But the weather was so good, none of us were concerned about static electricity, lightning strikes or thunderstorms."

Thirty minutes went by and they were still hanging motionless above the lake. It was 10 a.m., four hours after launch. Hoekstra and the others looked to Hineman for a solution.

Hineman proceeded to unfold surprise "instrumentation" consisting of a thick Sunday newspaper. Leaning out over the edge of the basket he began to drop the double pages over the side. He watched carefully as they floated toward the water.



**Harold D. Hoekstra**
*Chief,*
*Engineering and Safety Division*
*Aircraft Development Service*
*FAA Headquarters*

Would the papers indicate a westerly wind below? If so, the Sunday aeronauts could anticipate a long 150-mile over-water journey to Buffalo from that point. Hardly to be desired, especially if a thunderstorm came up.

Hoekstra and his comrades peered hopefully after the dwindling pages, which dropped vertically. Then the falling pages suddenly swung into a brisk northeasterly pattern. There was a good breeze at that level. Hineman valved gas and the balloon descended, capturing the long-sought onshore breeze.

Soon, Lake Erie's north shore cliffs went sweeping by, followed by small Ontario towns and serpentine rivers. Munching sandwiches, chatting, snapping photos, Hoekstra and his pals watched in fascination as the terrain unfolded. Only 400 feet above the earth, they could clearly hear the wind rustling the trees below, punctuated by the creaking of the balloon's ropes and basket.

By 1:30 p.m., the balloonists were slightly west of Buffalo, on a course that would take them directly over the thundering waters of Niagara Falls.

Fortunately, the wind shifted, easing them away from that awesome cataract and toward the city of St. Catherines on Lake Ontario's north shore.

Now, the once-carefree expedition was confronted with minor trouble and the need for a major decision. The balloon was losing its buoyancy. And night was approaching—somewhere, a landing had to be made. So some gas was valved out, the balloon began to lose altitude and the balloonists found themselves skimming the multi-colored rooftops of St. Catherines. Hineman spotted a freshly-plowed field, bordered on one side by a cherry orchard and on the other by Lake Ontario's white-capped waves.

"It's as good a spot to come down as any," Hineman proclaimed, yanking the valve cord and releasing gas for a semi-precision approach to the field.

"Unexpectedly, our hurtling basket slammed into a tree top," Hoekstra recounted. "We tipped horizontally, and one of the students—the guy who had been among those who had partied Saturday night—was catapulted out. I saw him sailing end-over-end, his feet disappearing through the cherry tree branches. The rest of us hung on for dear life."

Suddenly lightened by the ejection of one of its passengers, the balloon spurted upward about a hundred feet and began drifting swiftly toward the lake's chilly waters. Desperately, Hineman yanked the rip panel, quickly releasing a great volume of hydrogen.

With a resounding "crunch!" the deflated balloon plummeted to earth.

"In the ensuing crash-landing, my head was slammed against the basket's metal support ring," said Hoekstra

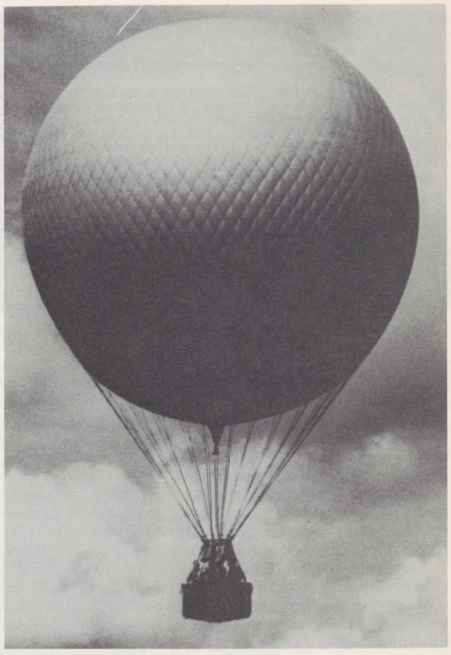
As the five balloonists extricated themselves from a melange of mud, broken cameras, sandbags and ropes, the missing crewman sauntered over, smiling disconcertingly.

He had survived the plunge without a single scratch or bruise.

The crowd that came to gawk stayed on to help the crew pack the balloon into its basket and truck it away for rail shipment back to Detroit.

"A nurse who lived on the farm where we landed bandaged the lump on my head, making it look worse that it actually was," said Hoekstra.

He remembers that none of the six had trouble sleeping that night on a vehicle moving swiftly along on terra firma—the night bus that brought them back to Detroit.



**The six young balloonists, crowded in the small wicker basket below the 70-foot high craft, lifted off successfully, hoping there would be no leaks from the bag carrying 35,000 cubic feet of highly inflammable hydrogen.**

**A large bump on the head singles out young aeronautical engineering student Harold Hoekstra from the rest of the crew after their forced landing near Lake Ontario. All went on to responsible jobs in aviation after graduation.**