



### Save Recognized

For his part in an outstanding flight assist Alfred Warren (center), Oakland ARTC Center controller, received a Special Achievement Award from Hervey Aldridge, San Francisco Area Manager. Looking on is Donald Brink, Chief of the center.

## FSS Men Alert to Hypoxia; Groggy Pilot Given Assist

RED BLUFF, Calif.—For their cooperative effort in giving an outstanding flight assist to a pilot overtaken by the insidious effects of hypoxia (acute insufficient oxygen), FAA employees John Nylund and Alfred Warren recently received the agency's Special Achievement Award.

It all began when the Arcata FSS passed on to the Oakland ARTC Center word that a pilot flying IFR at 28,000 feet was requesting a lower altitude. The pilot's transmission indicated he was bordering on being irrational.

Oakland Center activated its Direction Finding network, then assigned John Nylund of the Red Bluff FSS to make primary communications with the shaken pilot. Nylund learned the pilot's plane had an automatic pilot, so he suggested using it to make an immediate descent to 13,000 feet. Meanwhile, the center vectored all other aircraft clear of the descent area.

Nylund kept the pilot busy reporting leaving each 1,000 foot increment. Since the pilot became more coherent as he descended, Nylund suspected that it was hypoxia that had incapacitated him. (Incapacitation caused by hypoxia stems from lack of sufficient oxygen to keep the brain and other tissues functioning properly. A malfunctioning oxygen mask or unit would bring the effect on unannounced and unexpected. The major early symptom is an increased sense of well-being, but the pilot was experienced enough to recognize his slow reactions, impaired thinking, unusual fatigue and dull headache feeling in time to seek help.)

Nylund then turned over communications to Oakland Center, where Alfred Warren established radio and radar contact. Ceiling

was 900 feet at Red Bluff, visibility ten miles, in light rain. The pilot indicated the hypoxia had made him incapable of trying to make an instrument approach, and he didn't have sufficient fuel to go on to Sacramento, where the weather was better.

(Continued on Page 7)



### Mission Completed

Inspecting recently completed tower modification at Jamestown Municipal Airport are (left to right): Vince Buck, Jamestown Airport Manager and Frank Stefonek, Chief, Jamestown AFSS. (See story on Page 7.)

## '71 Budget Totals \$1,473 Million

WASHINGTON—Additional personnel, continued automation of the air traffic control system and increased funds for research and development are included in the FAA portion of the President's budget for Fiscal 1971. The new budget estimate requests appropriations of \$1,473 million for the agency, an increase of \$205.6 million over Fiscal Year 1970. In addition, the 1971 estimate includes \$292.5 million for airways and airport development. This amount is proposed for separate transmittal under the Airport/Airways bill which passed the House last November and is currently awaiting Senate action and includes \$220 million for grants-in-aid for airport development and \$72.5 million for facilities and equipment and research and development.

The budget increase will enable the agency to keep pace with the steady growth in virtually all sectors of aeronautical activity, including an estimated 7 per cent increase in the number of IFR aircraft handled by FAA centers and towers and a 5 per cent increase in total operations at airports with FAA towers. It is estimated that revenue passenger miles and general aviation hours flown will increase by 9 per cent and 6 per cent respectively during the next fiscal year.

(For details on the FAA budget process, see "From Need to Deed" on Page 2.)

The estimate for the Operations appropriations which finances agency operating expenses amounts to \$923.9 million in the new budget, an increase of \$98.5 million over the 1970 funding level. This increase will be applied primarily to increased workload demands on existing air traffic control facilities. It will also be applied to safety certification and inspection staffs and to operation and maintenance of new air navigation and traffic control facilities.

Under the Operations total, the largest amount—\$448,046,000—is earmarked for operation of the air traffic control system. Other significant operations totals in the new budget include \$104,711,000 for installation and materiel, \$218,347,000 for maintenance, \$119,485,000 for flight standards and \$15,162,000 for administration of the airports program. Research direction would receive \$11,649,000 and administration of medical programs would be allocated \$6,485,000.

The estimate includes \$47.5 million for a continuing research and development program emphasizing improvements to and automation of the air traffic control system. The estimate provides for expansion of efforts in the noise abatement and sonic boom programs. A program to study, develop and evaluate devices to enhance the safety of civil aircraft is also part of the estimate.

The new budget calls for \$190 million for facilities and equipment, all of which will be applied to continued automation of the en route portion of the air traffic control system.

For Washington National and (Continued on Page 7)



### For Exceptional Service

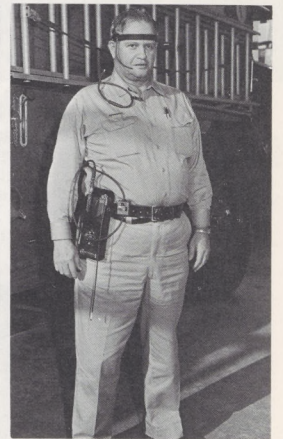
FAA Decoration for Exceptional Service is bestowed on Joseph D. Blatt, retiring Associate Administrator for Development, by Administrator John H. Shaffer. The pin and citation honor Blatt for his many years of contribution to the operation, improvement and modernization of the National Air Transportation System, particularly with regard to application of advanced technology toward producing tomorrow's automated air traffic control system.

## Fire Communication Tested

ATLANTIC CITY—To help firefighters respond to instructions from their chiefs immediately and converse noise-free in emergencies, a portable communications system for firemen wearing asbestos protective suits and helmets is being tested by the NAFEC Fire-Crash Rescue Section. Besides testing the equipment under various conditions, agency firefighters are devising procedures for its more efficient use.

The transistorized FM transceiver is strapped to the fireman's hip with a belt. An adjustable headset is worn under the helmet. The voice actuated transmitter need not be keyed manually, enabling the fireman to talk hands-free.

The new radio equipment enables firemen to communicate when out of sight, for example, when in the smoke or inside a burning fuselage. The sets might save a life in case a fireman is injured or trapped. The device is also useful when the noise of truck engines, pumps, turbines and firefighting activity make voice commands difficult to hear for those not wearing enclosed helmets.



### Firefighter

Modeling a new transistorized firefighter's communication system undergoing evaluation at NAFEC is Fireman Louis DeBeer. In actual use the equipment would be worn under an asbestos suit.

To prepare a top priority list of items needed by the agency, representatives from various services get together with John Driscoll (end of table, left), Chief Research and Facilities Program Division, Office of Budget, and Charles W. Carmody (end of table, right), Chief Program Requirements Staff of the Office of the Associate Administrator for Operations. Others are (from left), Glen Tigner, ATS; Jim Loebach, ATS; Paul Bohl, BU; Joseph Kuba, LG; Driscoll; Carmody; E. P. Hyman, OP; L. O. Ola, FS; F. J. Cervanka, SM; and Bill Allen, SRDS.



## How FAA Gets Its Funds

# FROM NEED TO DEED

By Theodore Maher

Early this month, the President's fiscal 1971 budget message was sent to Congress. More than a year ago, agency officials were asked to provide estimates for this proposed budget. Funds specified in the new budget will become available to FAA some time this summer, hopefully by July 1, the beginning of the fiscal year for which they are appropriated.

Because of the scope and magnitude of projects and programs involved, the budget process is lengthy and complex, involving massive detail and the work of thousands of individuals.

Agency participation in the budget process begins with screening of agency needs at field offices and facility levels, through area and regional offices, Washington headquarters, the Office of the Secretary of Transportation, the Bureau of the Budget and finally both houses of Congress.

To illustrate in detail the steps required between "need and deed," a theoretical item—the need for an air traffic control tower—is traced from its origin to the time when funds are made available for the structure.

Here are the steps:

- A new tower is needed at Boomtown Airport, which qualifies for the facility by virtue of meeting agency criteria, primarily volume of air traffic.
- Along with other items, the request for the new tower, with substantiating information, is forwarded to the agency's Office of Budget from the region, in response to the annual call for estimates. Under current procedure, this call is issued by November and requests must be submitted by Feb. 1. Even though the airport qualifies for a tower, the tower request may not be included in the regional estimate since the region must determine requirements on a priority basis. For the purpose of this delineation, however, we will assume that the tower is included in the regional estimate.
- From the Office of Budget, the request goes to the program service, in this case Air Traffic Service, for validation. If ATS agrees that the tower should be built, the item is added to the list of validated projects and is a candidate for the budget estimate.
- Next, funding the new tower is considered by representatives of various program services requesting funds for facilities and equipment (F&E) and representatives of the technical services, who get together with Research and Facilities Programs Division Chief John Driscoll and Charles W. Carmody, Chief, Program Requirements Staff of the Office of the

Associate Administrator for Operations. At these meetings, lists of validated items and priorities are prepared for the service directors. These lists are then pruned by the service directors until the total estimated costs come within identifiable F&E budget ceilings.

- Final estimates include an itemized list of all projects, including the tower at Boomtown, and go to the Office of Budget where they are analyzed and sometimes challenged from a budgetary standpoint before being sent to the Agency Review Board.

- The Review Board, comprising the Deputy Administrator and the five associate administrators with the Director of Budget acting as executive secretary, reviews budget estimates and approves the estimated budget for submission to the Office of the Secretary of Transportation.

- In OST, the levels and resources that may be included in the FAA budget are determined. Any cuts made by OST may be appealed. If items are not reinstated, the "final" estimated budget is revised accordingly. It is then sent to the Bureau of the Budget (BOB) by Sept. 30.

- DOT and FAA officials now appear at the first of many budget hearings. Some time in December the Bureau gives the agency a "mark." This figure is the amount that BOB will recommend to the President for inclusion in his budget to Congress.

- If the BOB cuts the FAA budget estimate, which often happens, the program services will review submission and recommend which items should be deleted and the "impact consequences" of these cuts.

- The revised estimate is returned to the Office of Budget and again reviewed. Once again, the Agency Review Board acts on the recommendations and gives general guidelines for the appeal. If there is to be an appeal, items to be appealed are specified.

- The appeal is reviewed by DOT where the final decision to appeal is made. If DOT agrees that the BOB "mark" should be appealed, a letter is written to the Bureau.

- BOB may then allow the agency additional funds, and some or all of the items slated to be cut may be reinstated. The agency then revises the estimated budget in accordance with the action taken by BOB.

- The result of this is a sanctioned budget. Following this, the FAA Office of Budget prepares the President's Budget for BOB. This is a high-level summary of the budget as approved by BOB. At the same time the Office will prepare the Fiscal Year Budget es-

(Editor's Note: The following description of the budgetary process is intended to give agency employees insight into the complex procedures that precede authorization of Federal funds for needed projects.)

timite for submission to Congress by January.

- In the spring, the FY budget estimate is acted upon by the House subcommittee on DOT and Related Agencies' Appropriations. At this time, the Administrator, supported by his associate administrators, service directors and other key persons, will have an opportunity to testify in support of the budget at subcommittee hearings.

- Based on the hearings and an in-depth study, the subcommittee makes its report to the House Committee on Appropriations. In the report, allowances are made for each of the FAA programs: operations, facilities and equipment, research and development, operations and maintenance, capital airports, construction, grants-in-aid for Airports and Civil Supersonic Aircraft Development.

- The full Appropriations Committee then reports out a bill to the House. This is the DOT appropriations bill and it includes appropriations for FAA.

- This is the bill the House votes on. If cuts are made by the House, the agency may make an appeal to the Senate for restoration.

- The appeal is sent to the Senate Subcommittee of the Committee on Appropriations. Again hearings are held and again FAA and DOT officials testify.

- As in the House, the bill is then reported out and voted upon. When it passes the Senate, it is still not quite ready to go to the President for his signature. First, differences in the bills passed by the House and that passed by the Senate must be resolved. A joint conference of representatives of both houses is held to work out the differences.

- No later than July 1, the bill should be sent to the President for his signature.

- After the bill becomes law the Agency Review Board will meet once again to decide how any cuts, made by the Congress or by Presidential/BOB limitations can best be resolved with agency programs.

- At this time, fiscal programs are issued to agency organizations and they are provided with the resources to carry out their programs within the levels authorized by the Congress and the Executive Branch. This means that the region is authorized to establish the facility at Boomtown. Site selection is checked and bids go out to build the tower.

As the appropriations bill becomes law, the agency is already preparing the next year's budget for presentation to the Bureau of the Budget, and calls for estimates have gone out for the budget for the year after that.



Validating budget requests are Joseph J. Moraski, Acting Chief Raymond G. Belanger and Richard A. Fitzek, all of the ATC System Requirements Division Air Traffic Service.



At a top level session, the Agency Review Board meets to review the estimated budget. Standing (from left) are Director of Budget James E. Dow, Deputy Administrator D. D. Thomas and Associate Administrator for Administration Clarke Harper. Seated are (from left), Deputy Associate Administrator for Operations Cliff W. Walker, Associate Administrator for Plans Oscar Bakke and Acting Associate Administrator for Personnel and Training E. J. Anderson.



**They Can Take Over**

Recently graduated "Pinch Hitters" of the Aero Center Flying Club are (left to right): Naomi Pritchett, Jean Archer, Rita Young, Megan Young, Mickey Seavey, Dianne Sargent, Mary Case, Faye Shackelford, Shelia Glover, Joan Perciful, vice president Walt Shedlowe (standing in for his wife, Nadine, and daughter Nancy) and David Reed.

**Club's Training Boosts Air Safety**

OKLAHOMA CITY—The FAA Flying Club at the Aeronautical Center, founded in 1958 to provide private, commercial and instrument training for FAA employees at the most economical rates possible enabled numerous employees to obtain ratings, increase their aviation knowledge and skills and enjoy flying. In recent years, club benefits have been extended to include members' immediate families. Not only has this reached wives and husbands of FAA employees, but it has also provided wings for young people wanting to become pilots and has encouraged many to choose aviation careers.

This year the Flying Club further

expanded its training by offering a complete Pinch Hitter course, including a ground school taught by club secretary R. W. Sargent and flight instruction organized by operations officer Doyle Herrington.

The Pinch Hitter Course was developed by the Aircraft Owners and Pilots Association (AOPA) for its non-pilot family members. Four hours of ground school is given to build confidence and assist the students—generally women with no prior knowledge of piloting—in taking over should the pilot become stricken or need assistance. General principles of flying and navigation are covered in the classroom. Another four hours of flight training

teaches the aspiring Pinch Hitter basic pilotage; how to make the aircraft climb, descend or fly straight and level; how to center the VOR needle and change the compass heading to reach an omni station; and how to communicate over the emergency frequency of 121.5. In an emergency, the confidence built by having taken the course is intended to enable the stricken pilot's Pinch Hitter companion to land the airplane, following instructions from the ground over the aircraft radio, flying the plane from the right seat.

Students in the Pinch Hitter Course are required to demonstrate their capability to take command of the airplane and land it safely if the pilot should become disabled.

AOPA cooperated fully with the club by providing instructional and text materials and all instruction met AOPA standards. Club President John Pritchett and Bill Grant of the Southwest Region Safety Education Program presented certificates of achievement to the 13 graduates of the course. Also, all 12 students who elected to take flight training were certified by their instructors and will be awarded Pinch Hitter certificates by AOPA.

The Flying Club is currently conducting a private-commercial ground school and flight training in the fleet of two C-150s, three C-172s and a Mooney MK-21.



**Teach 'Pinch Hitters'**

"Pinch Hitter" instructors for the FAA Flying Club at Oklahoma City include (left to right): Gene Henson, R. W. Sargent, Louis Mitchell, Art Lewis, Tom Young, Bob Phipps, and (not shown) Carl Melton. The course teaches passengers how to fly an aircraft if the pilot is stricken in flight.

**Traffic Up at Agency Field**

ATLANTIC CITY — Atlantic City Airport handled 139,077 take-offs and landings during 1969, a 3.3 per cent increase over that of the previous year.

The figures were released by NAFEC which owns and operates the airport except for its municipal passenger terminal.

Traffic increased in all categories except military operations, which remained about the same at 50,585. A tactical fighter group of the Air National Guard and a detachment of an Air Force fighter-interceptor squadron are both based at the field.

Private and business aircraft movements totalled 83,500, about 3,000 more than in 1968. Some of

these flights were agency airplanes based at the center, testing experimental navigation and guidance equipment.

The number of airline operations, mostly flights by Allegheny Airlines, the airport's only scheduled carrier, was 4,992, an increase of about 700.

During the past year, the airport control tower and its radar room handled a total of 61,352 instrument operations. These are flights monitored by airport radar, mostly during weather conditions requiring flight by instruments.

The tower also handled 3,486 instrument landing approaches during the year.



**Simulator**

Ready to "fly" the Vertigon recently displayed in the Headquarters building lobby is Mrs. Carol Lencki, a secretary in the Office of Public Affairs. Hundreds of volunteers experienced vertigo by taking five minute flights "under the hood." Agency display travels around the country to aviation shows.

**Three-Facility 'Team' Helps Confused Pilot**

By Bob Huber

OGDEN, Utah—"I'm at fourteen thousand three hundred feet, heading south and I've got my hands full," radioed the pilot of a light aircraft who needed a lot of help during the 90 minutes preceding his landing at Ogden.

Three Utah FAA facilities played an important cooperative role in executing a "save" reminiscent of baseball's famous "Tinker to Evers to Chance."

The pilot originally reported ten miles east of Ogden, above treacherous mountainous terrain at 15,500 and caught on top of an overcast. Ralph Spencer, Salt Lake City Tower, identified the aircraft as actually being 34 miles west of Salt Lake City. A quick check of landing facilities within the aircraft's fuel range revealed none suitable for VFR let-down. During subsequent radar vectors, Spencer had difficulty maintaining radar contact and "handed the aircraft off" to the Salt Lake City Center.

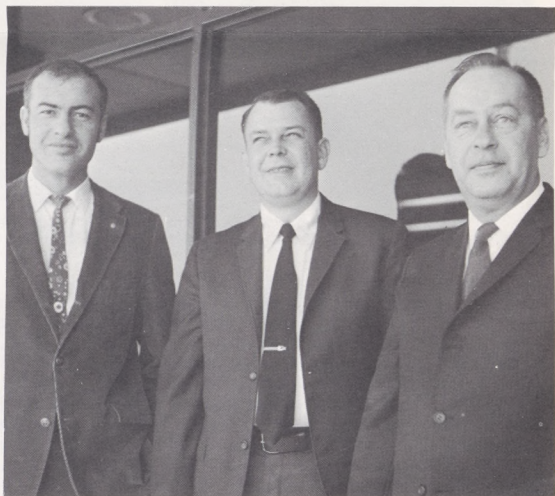
There controller Paul Lochhead completed vectors to a reported "break" in the overcast and the pilot began descent with the ground in sight. During his descent, the pilot alarmingly reported he was in instrument weather again. Lochhead broadcast the minimum safe altitude, and the pilot immediately climbed to 9,000 in accordance. Improved radar response at the

lower altitude permitted the tower to resume control.

Trying to maintain visual flight rule conditions, the pilot descended to 7,400 and lost radio and radar contact. Voice communication then was established between the troubled pilot and Capt. Tommy Edwards of Western Airlines Flight 492. The lost pilot reported he was flying over water, heading toward a mountain and unable to continue VFR. Correlating the lost pilot's reported observations with his own personal knowledge, Captain Edwards guided the aircraft over the Great Salt Lake in hopes that railroad tracks would be sighted through the restricted visibility.

Hill Radar Approach Control Center now entered the scene and radar identified the plane over the Great Salt Lake. Radar controller Don Patterson guided the lost pilot in restricted visibility and between cloud layers. Using his pilot background, as well as good controller technique, Patterson provided empathetic assistance that resulted in a successful landing at Ogden, three minutes before sunset.

The pilot's appreciation was extended to other members of the three-facilities team: Wendell Covert and Ken Stirk, Salt Lake City Tower; Bill Higgs and Gary Rutherford of Salt Lake City Center and Harold Eckstrom, Bill Seward and Charles May of Hill RAPCON.



**Triple Players**

This alert air traffic control trio recently received a Special Achievement Award from Western Region Director Arvin O. Basnight for a successful flight assist. They are (from left): Ralph Spencer, Salt Lake City Tower; Paul Lochhead, Salt Lake City Center, and Don Patterson, FAA Radar Approach Control at Hill AFB.

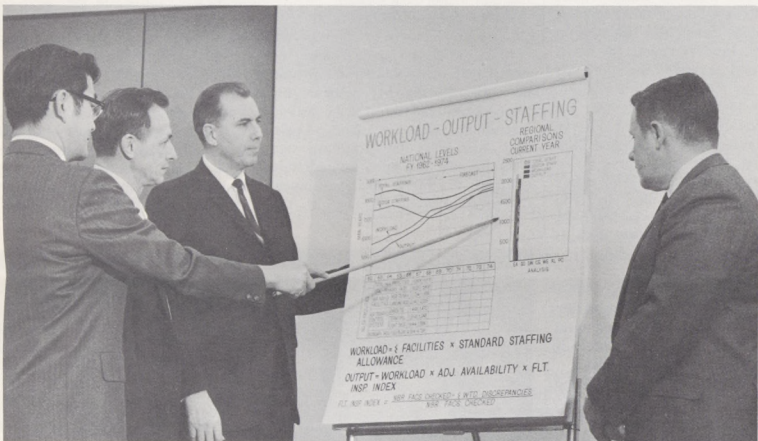




Systems Maintenance and Management Systems personnel confer during a management information planning session, in connection with a joint SM/MS project.



Updating a portion of the Executive School curriculum to assure that it emphasizes use of information which compares actual achievement with planned objectives are (left to right): G. Management Development Staff, MS; Victor Onachilla, Executive School Manager, TR; Jay M. Director, OMS; Walter Felton, Chief, Systems Analysis Div., RD; and John Slover, Executive School Manager, TR.



A proposed MIS presentation is reviewed by Mervyn Martin, Director, Systems Maintenance Service, with technical specialists Edwin Kaneko, SM; Wilbur Mathias, MS; Martin; and Ernest Fernsten, MS.



Weekly "telecon"—national telephonic conference—brings together top management in Washington to discuss the Management Information System. Washington participants are shown in above photo.

In the control tower, an alarm sounds and a light flashes, signifying ILS trouble on runway 9R. Within seconds, a controller is notifying maintenance personnel by telephone. Within minutes, a maintenance technician is on the way to the ILS. The malfunction is corrected and soon the ILS is back "on the air."

Outages of this kind, handled quickly, efficiently and routinely at FAA facilities throughout the country, illustrate effective management information in action in its simplest form: trouble is reported, trouble is eliminated.

Higher echelons in the maintenance organization do not have "bells, buzzers and flashing lights," but they, too, need some alerting mechanism. Their alarm system is the Facility Maintenance Reporting System. The maintenance technician's report is entered into a computer, where it is combined and compared with similar reports, to produce summary reports for all levels of management from the sector chief to the Administrator. With these reports, each manager has a picture of the maintenance activity he is responsible for and management action needed.

A single outage report can thus become an indispensable element in an area manager's recommendation for staffing adjustments, a regional director's request for additional backup facilities, a Systems Maintenance Service project for revising a procedures manual or a memo from the Administrator to Research and Development calling for the design of more reliable equipment. In each case, the information from the maintenance technician and his counterparts around the globe forms the basis for a decision which can provide better facility performance and a safer environment for thousands of pilots and millions of passengers—priceless by-products of an effective management information system.

The Facility Maintenance Reporting System, which continuously supplies raw material for decision-making, constitutes a major segment of FAA's Management Information System (MIS). Through this system and others, MIS is constantly striving to improve the quality and effectiveness of agency "information for action." As a result, new techniques are emerging for collecting, arranging, and presenting information in such a manner as to pinpoint, at any given date, program accomplishments in relation to program goals. Thus managers are able to see more clearly their own contributions in terms of total program objectives and are better equipped with data required in today's demanding decision-making process.

In line with this, the Systems Maintenance Service and the Office of Management Systems recently completed a joint effort to identify key elements for judging performance in the maintenance area and to determine the most effective way of presenting this information to top management. The directors, as well as technical specialists from both services, actively participated in the project. The result was new methods for assessing and presenting SM achievements in terms of program objectives, activities and resources. Discrepancy data from Flight Standards Service flight inspection reports and Systems Maintenance facility performance reports were combined into a new series of management information charts. The complete series has been approved by the Associate Administrator for Administration and the Associate Administrator for Operations and will soon be made available to managers throughout the agency.

Similar studies led by the Office of Management Systems and aimed at improving the quality of management information throughout the agency, are currently in progress in other program areas and will

## Management Information Systems

# Information for

By Wilbur J. Mathias  
Chief, Management Information Systems  
Office of Management Systems

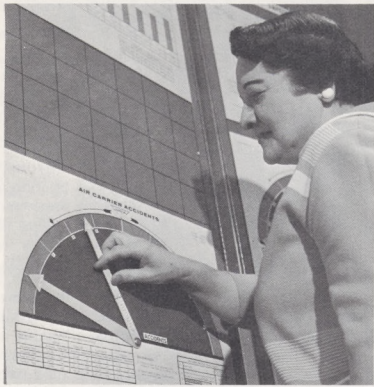
gradually be extended until all major programs are covered. These studies are designed to delete from management information displays large volumes of "nice to know" factual information which, because of its volume, tends to obscure the need for management action. The new displays will increasingly relate current program achievement to predetermined goals or objectives. They will be designed to highlight, for the manager at each level, in terms meaningful to him, situations which fall short or significantly exceed planned achievements and costs. Management information displays thus can trigger management action.

The vital day-to-day MIS job of processing and publishing information for top management and modifying and improving basic information systems is the responsibility of the Office of Management Systems' Information and Statistics Division, headed by Fred Osgood. In that Division's Management Information Systems Branch, analysts John Minemier and Rose Johnson are busy developing charts and other data for the "Red Book"—the *Management Information Manual* (MIM). Each week about a dozen charts are

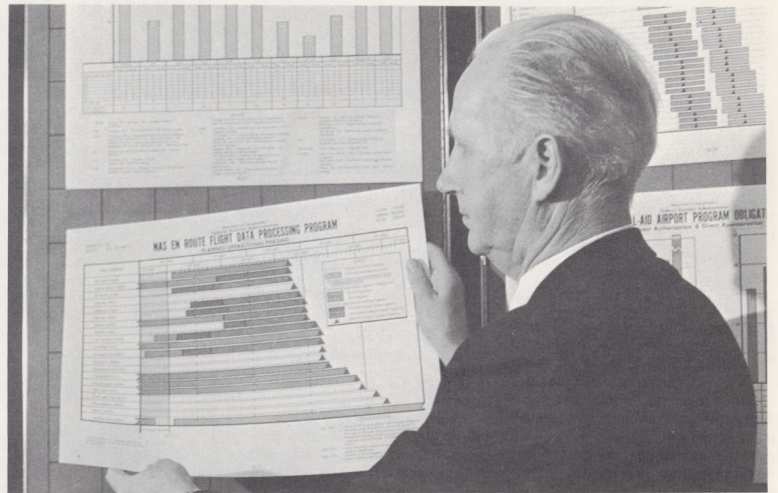
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emphasizes use of management (left to right): George Hendon, Manager, TR; Jay Meisel, Deputy Manager, Executive School Staff, TR.



Comparison of air carrier accident forecasts with actual accident statistics is graphically illustrated with movable arrows being adjusted here by Rose Johnson, an analyst in the Office of Management Systems. The chart is posted in the Administrator's Management Information Center.



John Minemier, OMS, checks new MIC chart illustrating how a chart showing only a schedule can be converted into a management information presentation on current program status, pinpointing the need for management attention or action. The new chart has an expanded schedule showing when various stages of Flight Data Processing should be in operation at each center. A shaded overlay has been added to show current status of the program in relation to the schedule. "Current status" overlay will be updated every month to give status on a continuing, regular basis.



Management in Washington with field directors and is an important element in the agency's Management Information System.



Time and Attendance cards, which are considered basic MIS input data, are recorded by Carol Anderson, a secretary in Management Systems.



Management information chart being prepared by Molly Kaufman of the Publishing and Graphics Division. The chart will be posted in the Administrator's Management Information Center (MIC) and will also be used as a master for the chart published in the FAA Management Information Manual (MIM).

## Information System (MIS) Provides...

# Action for Action

Wilbur J. Mathias  
Management Information Systems Branch  
Management Systems

updated and distributed to approximately 300 "Red Book" holders. MIM is a standard size looseleaf binder containing about 150 tables and charts showing organizational structures, key officials, resources, environmental and workload data, plus the plans, progress and status of major programs and projects.

Closely related to this activity is the Administrator's Management Information Center (MIC) on the 10th floor of FAA Headquarters. Charts in the MIC provide the Administrator and his staff with a capsule picture of FAA operations throughout the world. Highlighted are significant achievements as well as potential problem areas requiring top-level decision-making and action. National aviation statistics—aircraft production figures, pilot totals and accident summaries—are included. Growth forecasts, personnel totals, and geographic manpower distribution are included.

Other important MIS elements are the Administrator's Fact Book, the Administrator's Alert Bulletin, and the Field Directors' Conferences. The Fact Book is a handy, pocket-sized looseleaf publication distributed to a select number of top agency officials. It contains tables on current, historical and forecast

data on environment, resources and aeronautical activity. It also contains the names, addresses, and telephone numbers of key FAA officials. The Fact Book, prepared by the staff of the Management Information Systems Branch, is intended to provide top officials with a readily available source of information when they are away from normal information sources.

The Administrator's Alert Bulletin is a daily summary of developments or events of the past 24 hours having management, political or public relations significance that merit the attention of the Administrator and his top staff. James M. Davis, Chief of the Washington Communications Control Center, and his duty officers assemble the Bulletin early each morning from information gathered from various sources.

Field Directors' Conferences—periodic meetings of field directors with the Administrator and other top members of the Washington headquarters staff to discuss broad policy and operational matters—are considered part of the overall system.

Other system elements include program conferences, briefings, telecons, program plans, program feedback and status reports, budgets, financial reports, personnel reports and a variety of statistical publications. Many of the regions, centers, offices and services have counterparts or supplements to the central agency elements of the Management Information System.

At the present time the agency is also beginning to develop the first agency application of a real-time management data system with on-line access to the computer, and visual cathode ray tube (CRT) displays for the Manpower and Personnel Information System. (See Horizons, Feb 2.)

Seymour E. Blum, Director of the Office of Management Systems, considers the Management Informa-

tion System the keystone of FAA's total management process. "To fill this role," he said, "agency information systems must present essential facts in a clear and meaningful way, as simply and completely as possible, so that managers can see them, study them, and act on them rapidly. Normally, management information systems provide regular reports based on management's stated or anticipated needs. Higher management levels, however, frequently have changing and unique needs for information to support the decision of the moment. To meet these needs, we must be prepared to take full advantage of modern techniques, involving the use of computers and comprehensive data banks."

Getting the right information to the right manager at the right time—the primary MIS objective—is part of "everybody's job description" according to Jay Meisel, Deputy Director of OMS. Every employee, he points out, is involved to some extent in the task of recording, processing and interpreting management information in one or another of its multitudinous aspects.

"Each time an employee records an aircraft departure, fills out a facility outage report or submits a time and attendance card, he is furnishing significant management information," Meisel said. "Small errors inserted at the base of the information system can add up to big errors—and wrong decisions—at the top. So the next time you record an aircraft departure or fill out a Facility Outage report, or submit a Time and Attendance card, do not belittle the importance of what you are doing. Remember, you are furnishing significant management information—information which may be used to help shape the future—your future, the agency's future, and the future of aviation."



### Lead Flight Clinic

The annual Bellingham, Wash., winter flight clinic was recently held at the Bellingham Yacht Club. Clinic principals included (from left): Thomas Glenn, general manager of the Port of Bellingham; Lynn Mahlberg, pilot and officer in the Northwest 99s; Don Frost, Supervising Inspector of the Seattle General Aviation District Office; and Paul Fleming, Chief of the Bellingham FSS.

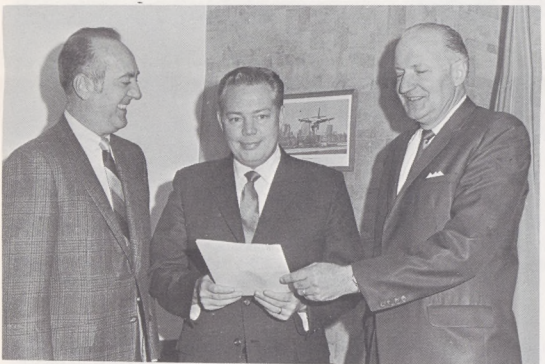
## GADO Is Sponsor of Clinic

BELLINGHAM, Wash. — With winter in full blast, the Northwest Washington Pilots Clinic was recently held at the yacht club here. This annual clinic is jointly sponsored by the Port of Bellingham, operators of the Bellingham Airport and the FAA General Aviation District Office in Seattle.

The program covered winter flight operations, flight planning, air search, flight maneuvers, operating procedures in Canada as well

as other general air traffic control procedures. Luncheon was served and clinic members enjoyed yacht club privileges throughout the day.

As usual, a large turnout of pilots and student pilots from both the Bellingham and Vancouver, B.C. district attended the clinic, along with Ron Pretti, Director of the Washington State Aeronautics Commission and Bill Lavery of the Canadian Department of Transport.



### Well Done

Chicago Area Manager Paul E. Cannom (right), presented a Special Achievement Award to Charles S. Irwin, Chief of the Chicago ARTC Center, in Chicago recently. Jack L. Koehler (left), Chief of the Chicago Air Traffic Branch, looks on. Irwin was cited for time, thought and special effort in initiating the critical staffing study at the Chicago Center. Irwin accepted a similar award for his assistant at the center, Harold Lufkin.

## 1969 FAAP Totals \$107.5 Million

WASHINGTON—A total of 513 grant agreements have been executed by the FAA committing \$107.5 million for airport development during Fiscal Year 1969 and pushing the 23-year total in grants provided under the Federal-aid Airport Program (FAAP) to almost \$1.2 billion.

The agency's "Twenty-fourth Annual Report of Operations Under the Federal Airport Act," submitted to Congress by Administrator John H. Shaffer, summarizes the status of the program. It shows 1,488 active FAAP projects involving

over \$425.9 million in expenditures as the agency reached FY 1969.

From the start of the program in 1947 through FY 1969, the FAA and its predecessor agencies have committed \$1,162,443,013 in Federal matching funds for 7,774 projects at 2,310 public airports.

The report provides the following breakdown of Federal funds for active projects: \$261.2 million in grants for 820 projects under construction; \$117.2 million for 463 projects essentially completed but awaiting final payment; \$34.8 million for 144 projects not yet started;

and \$12.7 million in allocations for 61 projects to be put under grant agreement in the remaining part of FY 1970.

FAA's announced FAAP program for FY 1969, which included a \$70 million Congressional appropriation and carry-over funds from previous years, amounted to \$74.7 million for development projects at 397 civil airports. Allocations subsequently were increased to \$83,386,739 at 404 locations. During the same period, FY 1969, 464 projects involving almost \$81 million in Federal funds were completed and financially closed.

FAAP funds are used for airport development on a priority basis to meet requirements described in the agency's National Airport Plan, which is updated annually. These projects include construction of runways, taxiways and aprons, airport lighting and acquisition of land for construction of new and expansion of existing airports and to clear aircraft approaches. FAAP funds cannot be used for construction of terminal buildings, hangars or public automobile parking.

Copies of the "Twenty-fourth Annual Report of Operations Under the Federal Airport Act" are available from TAD-484.3.



### Illuminating Words

Bruce Dysthe (left), Ventura Tower Controller, explains approach lights system switching panel to Richard Balsler, a blind youth with only one arm who visited the FAA facility recently.

## Tower Finds Youth a Home

OXNARD, Calif.—Young Richard Balsler is only 18. He has been blind since birth and recently lost his right arm in an operation to cure a malignancy.

Making circumstances even more difficult for the alert teenager is the fact that his parents' home is many miles away from Oxnard, site of the only School for the Blind in the area.

To secure a local home for Richard so he can attend the special school, Bruce Dysthe, controller at FAA's Ventura County Tower, and

his associates hosted a party for Richard.

The party featured cake and ice-cream donated by local merchants, and the FAA employees gave Richard a special plaque made up in Braille by the Oxnard School for the Blind. Richard toured the tower and was made an Honorary ATC Specialist upon completing it.

Through publicity engendered by Richard's tour and party, a local residence was found for him during the week, and he now attends Oxnard School for the Blind.

## Airline Adopts Anti-Hijack Plan

WASHINGTON—Pan American World Airways, Inc., has become the third U.S. air carrier to employ an anti-hijacking system developed and tested by the FAA.

In keeping with established policy, specific locations where the system is being used were not disclosed.

Last October, Eastern Air Lines became the first airline to put the system into use. Trans World Airlines (TWA) followed in early December. A fourth airline is expected to be using the system shortly.

The system combines knowledge of behavioral traits common to hijackers with a weapons screening device. Posters are prominently displayed throughout airports warning passengers they and their baggage are subject to search.

Implementation of the system is a cooperative effort of the FAA, the Air Transport Association of America and the participating airlines. Law enforcement assistance is provided by the U.S. Marshals Service of the Department of Justice.

## Emergency Backup Set for 21 Centers

By David Hess

WASHINGTON—A \$3,363,301 contract has been awarded by the FAA to a division of the International Telephone & Telegraph Corp., for the production of 285 transceivers and accessory equipment for automatic emergency backup communication systems at the 21 FAA air route traffic control centers serving the continental United States.

Under the contract, IIT's Aerospace-Optical Division in Ft. Wayne, Ind., will produce 150 very high frequency (VHF) and 135 ultra high frequency (UHF) transceivers (transmitter-receivers) and the necessary control stations, audio transfer panels, processors and other control equipment. Installation of the equipment is scheduled to begin by the end of this year.

Administrator John H. Shaffer said the backup communication equipment planned for the centers "will provide virtually failsafe communication capability between controllers and pilots when fully implemented." He noted that the project is part of FAA's overall plan to provide air traffic control facilities with the best equipment available to handle the present traffic volume and at the same time prepare them for the increased aircraft traffic forecast for the 1970s.

The transceivers will be installed at long-range radar sites throughout the nation to serve as part of a backup system for the primary remote communication air/ground (RCAG) system. In the first phase, two VHF and one UHF transceivers will be installed at each long-range radar site with acces-

sory equipment going in the centers. Once installed, an air traffic controller who loses communications with an aircraft because of an RCAG failure need only push a button, and within two or three seconds, communication will be regained on the correct channel through the backup system.

The first phase of the project will provide at least 50 per cent coverage of a center's area, and most of the controllers in a center will be able to use the emergency system. A second phase, already planned, will provide 100 per cent coverage.

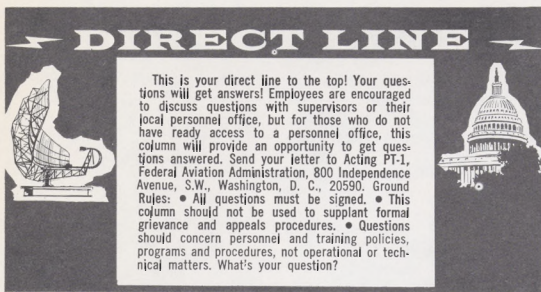
The new system also is capable of narrow band operation, which will provide the additional communication channels needed to control the increased air traffic forecast for the next ten years.



### Tower Tour

Getting a briefing on air traffic control at the Fort Wayne, Ind., Tower is Congressman E. Ross Adair (second from right), of Indiana. From left to right are: I. Pimanis and T. C. Menuinck, controllers; Joe Sullivan, Watch Supervisor; Congressman Adair, and R. E. Robinson, Tower Chief.

**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?

**Question:** When an employee has been rated ineligible for a promotion plan vacancy announcement and his questions have not been answered to his satisfaction, what recourse does he have, other than formal grievance procedures?

**Answer:** Employees are encouraged to try to resolve their complaints through informal discussions with supervisors and personnel representatives. If this cannot be accomplished to the employee's satisfaction, the formal grievance procedure is the only remaining recourse. Under certain conditions, the Civil Service Commission will investigate complaints based on violations of procedures or regulations. Your personnel office can advise you on such matters.

**Question:** Agency handbook 2730.2A paragraph 5c(6) states: "Schedules shall not be established or revised either to cause or prevent the inclusion of holidays within the employee's basic workweek." In regard to this regulation, can staffing be reduced on one particular day to reduce payment of holiday pay?

**Answer:** Staffing on the holiday can be reduced. However, the purpose is not to reduce payment of holiday pay. The staffing reduction is made to excuse as many employees as possible on the holiday consistent with anticipated workload requirements and agency responsibilities for air safety. (See PT P 3550.11, Chapter 4.)

**Question:** When standard time changes to daylight savings time in the spring, employees at my facility are charged one hour of annual leave. I consider this action as "enforced annual leave" and therefore contrary to the regulations contained in agency handbook PT P 3600.2, Absence and Leave. What's the ruling on this?

**Answer:** The charge to annual leave when going from standard time to daylight savings time is not contrary to enforced leave provisions. If no charge is made to leave, you may be paid only for the actual number of hours worked. Bear in mind also that when the clocks are changed back to standard time in the fall employees working shifts at the time of changeover are paid for the extra hour. Agency rules on this subject (paragraph 25 a and b of Handbook 3600.3, Workweek and Hours of Duty) are based on rulings of the Comptroller General. (See 26 Comp. Gen. 921.)

**Question:** Here's my situation: I report for a Flight Familiarization Program (SF-160) assignment at 8:00 a.m.; spend about three hours in-flight; and then put in about 1½ hours in a debriefing session—all in all about five hours go by. Should I be assigned some sort of duty for the remainder of the day or would I be considered in travel and, as such, would have completed my duty day?

**Answer:** An employee traveling on his regularly assigned duty day under the SF-160 program is considered to be on duty (training status) for pay purposes. If you complete your trip prior to the expiration of your normal tour-of-duty, you are properly required to perform assigned duties for the remainder of your tour. The basic workweek is 40 hours. Unless you complete your basic eight hours of work for the day, the agency has no authority to give you your full pay for the day.

**Question:** How can students at the FAA Academy obtain a list of lodging facilities which offer reduced rates after 30 days? No one in my sector has been able to obtain reduced rates in Oklahoma City even during extended periods of training.

**Answer:** Homer Parks (AC-910), Room 1, Air Traffic Building, FAA Academy, Extension 2361, maintains a current listing of 100 to 125 apartments, houses, hotels, etc., which will accept short term leases. Most of these facilities will reduce their rates after the first 30 days of occupancy. The listing goes out to many FAA organizations. If copies are not available locally, students may write or phone Parks at the Academy and copies will be furnished. Students who need assistance in obtaining housing should also contact Parks and inform him of any special requirements such as schools, landlords who will accept pets, etc.

**Question:** A few Federal agencies conduct classes for employees contemplating retirement. When will FAA institute a formal program of this nature?

**Answer:** FAA personnel offices offer pre-retirement counseling to employees upon request. In addition, a formal retirement planning program is currently being developed and should be available to potential retirees at some time in the future. If you are contemplating retirement in the near future, contact your local personnel office to arrange for a personal retirement discussion.

**Budget**

(Continued from Page 1)

Dulles International Airports, the new estimates provide \$10.6 million for current operating expenses and \$11 million for construction. Included in the latter figure is \$7 million for the first phase of a project to expand the Dulles passenger terminal.

For the civil supersonic aircraft development program, the budget request includes \$290 million to continue work on construction of two prototype aircraft.

An FAA position level of 57,349 is called for in the new budget, an increase of 4,701 over the figure for 1970.



**Air Marking History**

When "FAA Horizons" ran the above picture in its story, "The Aeronautical Center: Then and Now," Dec. 8, it evoked a letter of query from Controller Leland B. Kent, Jr., Reading, Pa., asking what the symbols meant. Aviation pioneer Blanche Noyes, FAA's Chief of the Air Marking Staff, answered Kent personally (see story below).

**Cryptic Symbols on Hangar Explained**

WASHINGTON—Some cryptic symbols atop the old maintenance hangar shown in a Dec. 8 story about the Aeronautical Center prompted Air Traffic Control Specialist Leland B. Kent, Jr., Reading, Pa., to write *FAA Horizons* for a further explanation of the picture.

Due to lack of space, the hangar top message had not been deciphered, because staff members felt almost everyone was familiar with the old marking system to aid disoriented pilots, and the "17 30 51 77" were obviously geographical coordinates. But, on receiving Kent's letter, the staff had to admit to being stumped about the term, "Skyway 1 N."

Kent's letter was forwarded to Mrs. Blanche Noyes, Chief of the Air Marking Staff of the FAA, who explained in a letter to Kent that

the word "Skyway 1 N" indicated the airport was a checkpoint on an aerial route known as "Skyway One North." Latitude and longitude then followed.

In the event the curiosity of other readers was whetted, here are some comments Mrs. Noyes made in explaining the air marking system no longer in use:

"Just after World War II, there were a number of people in aviation who insisted there should be an air marking system of coordinates. Numerous ideas were presented to the CAA . . . which would have called for different markings in each state . . . and a decision was made to use latitude and longitude, which is an international language and is shown on the Coast and Geodetic charts.

"We next laid out skyways over the best terrain from coast to coast as well as north and south—Skyway number one being from Los Angeles to Washington, D.C. The program was to be carried out by the Chambers of Commerce and civic groups, with the towns along the skyways to be air marked first.

"However, air marking by volunteer help and civic groups did not work out well; so after ten years, the latitude, longitude and skyway systems were abandoned. We went back to the tried and true method of air marking towns with their names and an airport symbol point-

ing to the nearest good airport."

Over a three-decade span, Mrs. Noyes has directed placement of some 75,000 air markers on the nation's rooftops to guide pilots. She was the first FAA woman to win the Federal Woman's Award among 25,000 top women executives, which was presented her by the late President Kennedy.

**Communications Facilities Added At Jamestown**

JAMESTOWN, N.D.—With the recent installation of four new 50-foot radio towers, increased safety is the keyword at the Jamestown Municipal Airport.

Late in 1967, the Jamestown FSS's air-to-ground communications system and direction finding capability was restricted by FAA flight inspection due to limited coverage. As a result, a request was made to improve coverage by elevating the antenna system.

The Minneapolis Area's field maintenance crew was assigned the task of raising the air-to-ground system 50 feet and placing the ground installed UVDF system on

(See photo on Page 1.)

a 30-foot tower. The two assignments were completed with a minimum of down-time. Flight checks indicate that the coverage has been improved 300 per cent over the previous limited coverage, making it possible to remove all restrictions on its use.

The new \$13,000 installation has greatly improved the safety factor in communicating with low-flying aircraft and assisting planes using the direction finding system.

Credit for completing the project goes to the field maintenance crew of Ken Kennedy, construction specialist; Cyril Beynon; Ken McMullen; George Wojnar; and Stan Christians.

The crew received a valuable assist from local electronics technicians W. Edwardson, Tom Fuher and Floyd Schauer, under direction of Jamestown AFSS Chief Frank Stefonek.

For the outstanding manner in which they accomplished the job, the Minneapolis crew was recently given a Special Achievement Award. When compared with recent similar contract jobs, cost savings were estimated at \$8,100.



**For Assist**

John Nylund (left), air traffic control specialist at Red Bluff, Calif., was presented a Special Achievement Award for his part in an outstanding flight assist by Dave Burns, Chief, Red Bluff FSS.

## Agency Assigns Revised Roster Of Beacon Codes

By Don Byers

WASHINGTON—A new beacon code assignment schedule has been implemented by the FAA to provide greater flexibility in transponder use during the period when the air traffic control system is being automated and both 64-code and 4096-code transponders are in use.

Major changes in code assignments include substitution of three altitude-stratified codes for VFR (visual flight rule) flights in place of the current two codes and formal employment of a code for loss of radio communications.

The old VFR codes were changed Feb. 1 from 0600 and 0700 to the following:

- 3300 for up to 10,000 feet.
- 3400 for altitudes at or above 10,000 feet to the floor of positive control airspace, which is 18,000 feet over the northeastern and north central U.S. and 24,000 feet over most of the rest of the 48 states.
- 3500 for flights at or above 24,000 feet in areas where positive control is not in effect, such as off the U.S. coast and in Alaska.

The radio failure code is 7600 and the emergency code remains 7700 as before.

Code 7600 previously was reserved for radio failure use, but there was no prescribed procedure for controllers to follow in its use. These procedures have now been established and published in the controllers' handbook.

The major benefit of the new VFR code is the opportunity it affords controllers to filter out, at their discretion, all VFR targets over 10,000 feet.

## Comulada Heads Logistics

WASHINGTON—Paul Comulada, a career civil service employee, has been appointed Director of Logistics Service.

He will fill the post vacated by Donald S. King, who retired in October. Comulada reports Feb. 22.

In his new post, Comulada will direct the agency's procurement and materiel management policy. He formerly was executive director for materiel management with the Naval Air Systems Command. In this capacity, he was involved with planning, directing and coordinating



### Car for Winner

Bert LaCroix, Office of Management Systems, came up with a special prize for the person submitting the best idea for promotional material to publicize the agency's Cost Reduction Program: a current car model. The car—a miniature version built by LaCroix in his workshop—was presented by Central Region Director Edward C. Marsh (right), to the "contest" winner, Morris Earle, the region's Cost Reduction Representative.

## New York, Kansas City To Get UPS Equipment

By Alex Garvis

WASHINGTON—A \$784,367 contract has been awarded by the FAA to AiResearch Manufacturing Company, a division of the Garrett Corporation of Torrance, Calif., for two uninterruptible power systems

(UPS) to be installed in key FAA facilities serving New York and Kansas City.

The installations are part of a continuing agency program to provide key air traffic control facilities with uninterruptible power systems.

One UPS system will be installed in the New York Common IFR Room, located at J. F. Kennedy International Airport, to provide terminal air traffic control approach and departure radar service for the entire New York metropolitan area. The other will go in the new Kansas City, Mo., Weather Message Switching Center/Aeronautical Fixed Telecommunications Network (WMSC/AFTN) facility, which handles aeronautical weather messages and the exchange of flight information for both U.S. and international air traffic.

The UPS will provide these facilities with stable power regardless of the quality of the commercial power to the two facilities. Although commercial power generally is reliable, disruptions of up to 15 seconds (the time it takes to obtain auxiliary electric power from standby diesel driven engine-generators now installed at these facilities) may occur at any time. Such disruptions adversely affect the computers and ATC displays.

The UPS consists of batteries and a series of solid state inverters and rectifiers. It accepts commercial or standby AC power from the engine-generator or DC power from its batteries and delivers it as stable AC power to the facility's critical systems. Batteries provide power during the 15-second transition period from commercial power to engine generators.

The UPS ordered are designed as "building-block" modular systems permitting future expansion or contraction of the UPS to meet the facility's power needs without operational disruption.

Deliveries of the two new UPSs are expected to be completed within 11 months.

## Tower Rated 'Terrific'

ST. LOUIS—Air Traffic controllers at Lambert-St. Louis Municipal Airport are "highly elated" with their new working quarters which opened recently.

The new 120-foot tower is a far cry from old quarters in the Air National Guard hangar.

The transfer "went without a hitch and everything is going beautifully," according to Jerry Moonier, Assistant Tower Chief. "We all think it's terrific."

A number of significant improvements over the old tower are provided in the new structure.

"For one thing, it's 80 feet higher and provides controllers with a much better view of the runways," said Tower Chief Edmond A. Raymond. "The latest in radar equipment has been installed. This includes three 22-inch horizontally-mounted radar scopes and one 22-inch vertically-mounted scope."

Horizontal scopes allow four or five controllers to observe the screen at once.

The terminal radar approach control operation in the new tower is almost four times as large as the terminal radar room in the old facility.

The prefabricated control tower cab topping the five-side concrete shaft is roomier and more efficiently designed than the old tower.

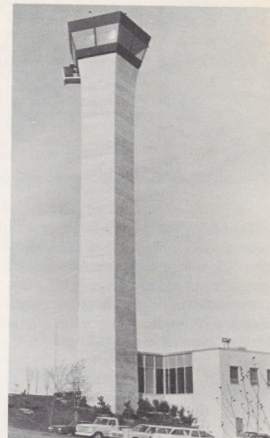
Raymond reported that employees are pleased with carpeting in the new facility which has cut down on the noise. A push-button telephone system permits instant telephone communication and better coordination.

The agency plans to install an ARTS III (Advanced Radar Terminal System) in the tower. Initially, the system will provide the controller with continuous aircraft identity and ground speed on transponder equipped aircraft as well as Mode C altitude data from equipped aircraft. The system removes some of the bookkeeping chores performed by controllers, particularly on altitude requests and reporting, and reduces both controller and pilot workload.

The system is expected to be in operation in 1971.

The transfer from the old tower to the new one, which is northwest of the airport terminal, was made

almost three weeks ahead of schedule, according to Raymond.



### Skyscraper

New tower at St. Louis Municipal Airport is 80 feet taller than the old one and includes a number of improvements that make the controllers' jobs easier and more pleasant.

## Test Equipment Contract Is Let

WASHINGTON—A \$216,321 contract has been awarded by the FAA to the Raytheon Company of Waltham, Mass., for test equipment required to automate the air traffic control system.

The contract calls for the purchase of 62 test stations or consoles designed to house specialized test equipment for the Computer Display Channel (CDC) and Computer Updating Equipment (CUE), two key elements in the air traffic control automation system now being installed in the nation's 20 air route traffic control centers. The test consoles when used with the appropriate specialized test equipment will facilitate preventive and corrective maintenance of the CDC and CUE systems.

Delivery of test consoles will be made in nine months to NAFEC near Atlantic City and the Aeronautical Center at Oklahoma City.



### Successful Program

Former Deputy Administrator D. D. Thomas, who retired Feb. 15, presents Red Cross certificates to Kathy Miller (left), of Air Traffic Service and Janet Patrick of the Office of Budget. The certificates were for the 1969 FAA Blood Donor Program, during which Air Traffic Service had the highest number of donors—68, and the Office of Budget had the highest percentage of participation. The girls are office chairmen for the blood donor program.



### Aerospace Leader

For services to the Civil Air Patrol as an "outstanding educator, aerospace leader and patriotic American," Gene Kropf (right), Western Region Public Affairs Officer, recently received a plaque from John V. Sorenson (center) of the CAP at a National Aerospace Education Advisory Committee (NAEAC) meeting. Looking on is Dr. J. Wesley Crum, former chairman of NAEAC.