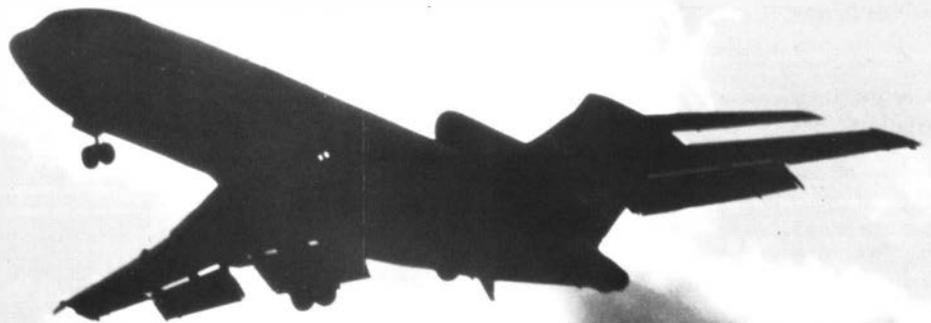


FAA WORLD

May 1980



The Third Year

FAA WORLD

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**An Interview With the Administrator
On the State of the Agency**

Q After three years on the job, have you been captured by the FAA “establishment?” In other words, do we now have you thinking like an FAA person?

MR. BOND: I think more and more like an FAA person. I don’t know that the conclusions I reach, given any particular problem, are any different from what I might have concluded in the past. But the longer you sit in a job and sort of marinate and get to know people, you begin to understand more and more about the institution and its mores. I understand them about 30% now.

Q One of the trade publications noted recently that you had been on Capitol Hill testifying more than any previous FAA Administrator. Is this a problem?

MR. BOND: Yes. It seems to me that all I do is testify. And it is a preoccupation, not only because it takes time to do it but also because of the time required to build up mentally. Some of these hearings are very emotional—people having died in a crash. It takes time to back off and to get back to normal emotionally after it.

I know it takes a heavy toll on the other senior people in the FAA who must come up with me to help handle the questions. In fact, I think that it must be even harder for them, since their background is technical rather than political.

Another factor is that, inevitably, the pressure and the negative publicity erode one’s own sense of self-esteem and is a depressing factor on morale. It depresses my morale because the person that in the end gets blamed is me.

But it also hurts the other people, as well, and the FAA, of course, gets such a disproportionate amount of publicity compared to other institutions in the

government. I guess the bottom line is that any statement on aviation safety is bound to get network time, especially on a slow news day.

Q By the same token, your speech schedule is probably lighter than any recent administrator. Is that by conscious design?

MR. BOND: Yes. I don’t like to go around and make speeches and structured public appearances; I like to go and look at the machinery, visit factories and talk to people. But accepting invitations to address some kind of a function is not my cup of tea. So I don’t do much of it, except when I have something to say. The enforcement speech was one, and there have been a number of others—announcement of new Part 135, for example.

Q Do you have any plans in the works for reorganization at the regional level?

MR. BOND: There have been none. I intend to address the organizational structure of the regions, but I have not got to it yet. I do not mean to suggest that there are any consolidation or closure plans for the regions, but perhaps we can make the regional headquarters’ structure simpler and leaner in the way we worked on headquarters here in Washington. But I have not even begun that work.

Q You’ve been asked so many questions about the DC-10, we almost hate to ask another. But with almost a year of retrospect, are you satisfied with the way we handled that crisis?

MR. BOND: I don’t know how we could

have done it any better. You just look at it every step of the way, and I’ve been over that a million times, and so have all the other people in the business. I don’t know what else could have been done—given the uncertainties and the factual unknowns that existed and the terrible threat of the recurrence of the same accident. I think that what I said on this subject originally still is true. I’m going to take the choice that is the most safe.

Q As a follow up to that, is the establishment of the Blue Ribbon Panel to look at the agency’s certification program in effect an indictment or criticism of that program?

MR. BOND: It’s an inquiry. I wouldn’t call it a criticism. I supported its es-





I think that our certification program is fundamentally correct.

tablishment myself. The panel had its origins in my conversations with Secretary Adams some time ago, and I think it's a good idea. The more public ventilation and professional examination of the process, the better. We will benefit from that. I don't regard it as a criticism at all.

Q Can you perceive the panel's report having a major impact on the way we do business here at FAA?

MR. BOND: That's predictive, and I would prefer to wait until the report comes out. However, I can express an opinion on what I think our program is like. And I think that our certification program is fundamentally correct. The responsibility rests on the manufacturer. I think that they should continue the way it is. But like everything else we do, I'm sure it can be improved.

Q Do you think we're "losing" the FAA professional groups—controllers, technicians and others—in the sense that they are looking more and more to their unions for leadership and direction and less to management?

MR. BOND: That's an inevitable consequence of expanding unionism, and there's no doubt in my mind that unionism is assuming a larger role in people's lives. In any case, whatever people feel about a union, it is incumbent on management to do its job so well that employees do not feel that the union is their only recourse. I find that most labor-management disputes are basically a question of how to deal with people and people's individual problems. We don't do that job well enough; if we did, our labor relations would be better. I think we're making progress along that line. But it's slow going, and I think in the past we may have been a little too—how would you say—quasi-military, or paramilitary, authoritarian, perhaps, in our approach. That won't wash today.

Q There have been rumors floating around about a controller strike or other job action in connection with the renegotiation of the PATCO contract. Would you care to comment on that, particularly, what the impact would be on FAA, the union and the public?

MR. BOND: Well, I'm very upset at the prospect of illegal action. I think it would be very, very damaging to the public and to the FAA; the union would lose, as well. Nobody wins in an illegal strike.

In last year's FAA WORLD interview, I said that the union had undermined its moral base through its actions in 1978. I think that the statement is worth

repeating because it's true. When the union was created, I think controllers had legitimate grievances against management. As a result, there was public sympathy and support for the actions the controllers took.

That public backing does not exist today because the abuses are not there. The staffing levels are better, the pay is not just good but excellent by any standard, and the equipment is much improved and is getting even better. Any illegal activity that comes along, especially now when there is a general feeling of intolerance toward illegal work actions by public employees, is going to damage PATCO. There undoubtedly will be pressures for FAA to take strong action. Congress itself may take strong action.

People forget that many of the benefits that have come to the union membership in recent years have required a sympathetic Congress as well as negotiations with management. The same holds true for what PATCO seems to want most in any future contract—a reduction in the workweek, collective bargaining for wages and so on. Those goals would have to be achieved through Congressional action if they are achieved at all. No amount of pressure brought to bear on FAA management can achieve them, because the law would have to be changed. Thus, Congress would have to be the target of any illegal job action, and the paradox here is that the more they pressure Congress, the less likely they are to achieve their aims. I'm not sure this fact is fully understood, despite the experience with the 1978 slowdown. There seems to have been a failure in discussions with the union membership to tie proposed actions to goals or to explain fully just how the mechanism really works.

There is an alternative, however, to illegal conduct for the realization of the

ultimate goals of any union. That is, first, staying within the law and, second, using the available political channels and public information and discussion channels that exist to gain the end. I think that the Congress and the Executive Branch will approve of that approach, if it's used.

Q FAA is often accused of “foot dragging” in correcting safety problems. Do you think these criticisms are fair, and what are you doing about them?

MR. BOND: I think the criticisms are justified as a historical statement; I do not think, however, that they are correct as a statement of present circumstances or present effort. When I took over here, it was pretty apparent to me—not only from my own observation but also because so many people told me so—that it just took forever to get rules out and that FAA was very slow in doing business. I already have tried to get people in positions of leadership and to simplify structures in a way that will speed regulatory and other processes. I believe we have made progress on that front and we're going to continue to do so.

However, one of the major factors—whether it's purchasing new hardware, implementing equipment, or

promulgating regulations—is the exceedingly long and detailed steps we must go through to get such a product on the street. Those requirements are imposed by law and apply for the most part to all federal agencies—and we cannot slip that. In the past, our people have not been very good at working within these constraints. I find that there are a lot of good electrical engineers and pilots who are not very good at dealing with the regulatory tangle. They've got to be good at both to do our job today.

Q Regarding your “get tough” enforcement program, you've taken the view that FAA should be a cop, not a coach. But can't an FAA inspector be both? And, in the long run, might not this approach achieve more lasting results?

MR. BOND: I didn't say we should be a cop and not a coach. I said we should be more cop, as well as coach. We should be both, and I tried to emphasize that balance. I think there was an imbalance before, and we're moving to correct it, getting more fines and more injunctive relief. People are sitting up and taking notice when an FAA inspector comes around now, because they know they are likely to be caught if their act is not together, and they're likely to be penalized for it. I think that is altogether to the good. The FAA people that I have talked to out in the field who are responsible for enforcing the rules seem to be uniformly happy with this resumption of tough enforcement action.



Q One final question—how would you compare the work environment today with when you took over three years ago? Do you think it's a better, a more productive environment?

MR. BOND: Well, I may be the wrong person to ask the question, because after all, a view of the world from the Administrator's office is much the same year to year. The people out working in the field are better qualified to answer you.

However, the indices that I can point to are clearly up in terms of productivity, and that is an achievement; nor is there any erosion of safety or increase in delays. So, if that is a measure of the work environment, it is clearly better.



People are sitting up and taking notice when an FAA inspector comes around now

Did You Know . . . ?

On Sept. 1, 1919, this pilot landed his plane on the roof of the Army Quartermaster's warehouse in Newark, N.J., turned it around and took off to the astonishment of those who witnessed it. No trace of this historic event or even of the pilot later on can be found in any aviation historical books. Like many others, he has flown off into oblivion.

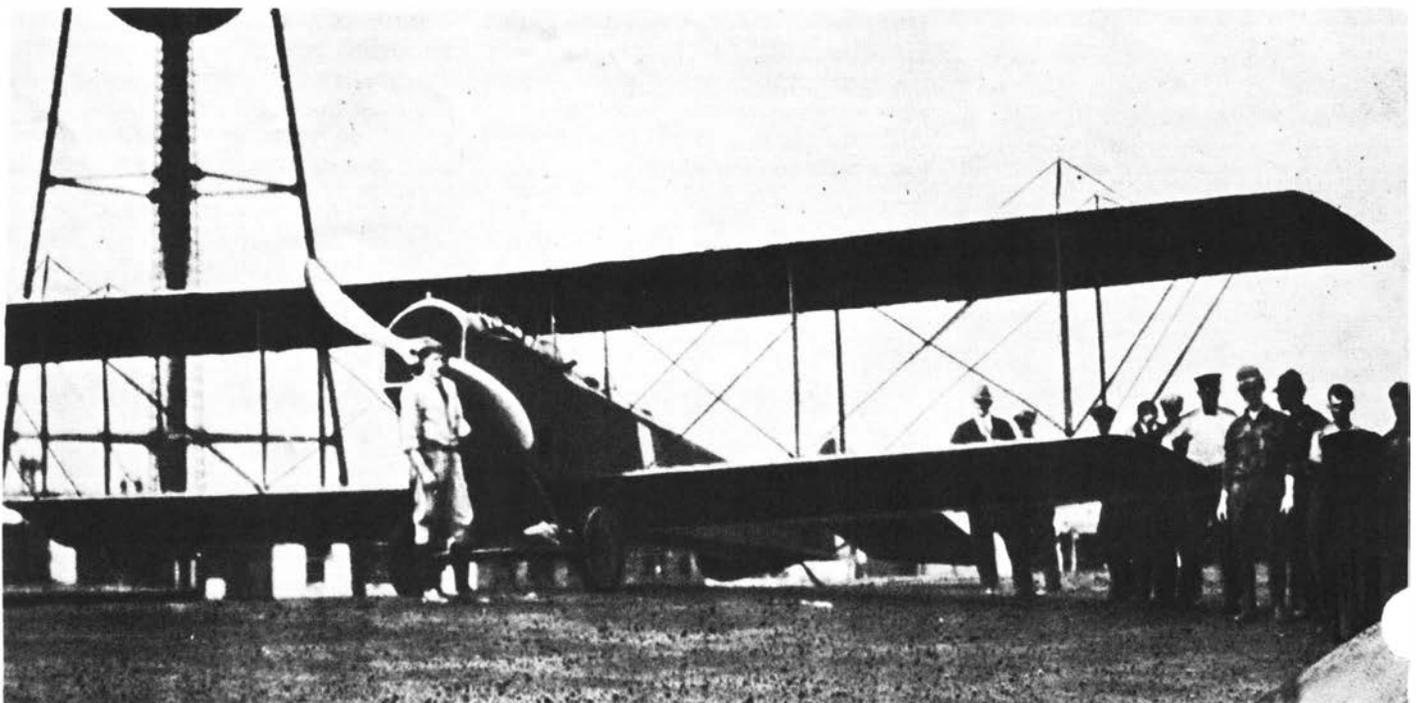
The 20 questions below are designed to recall the famous and not-so-famous aviation pioneers and their contributions to the development of the aviation industry.

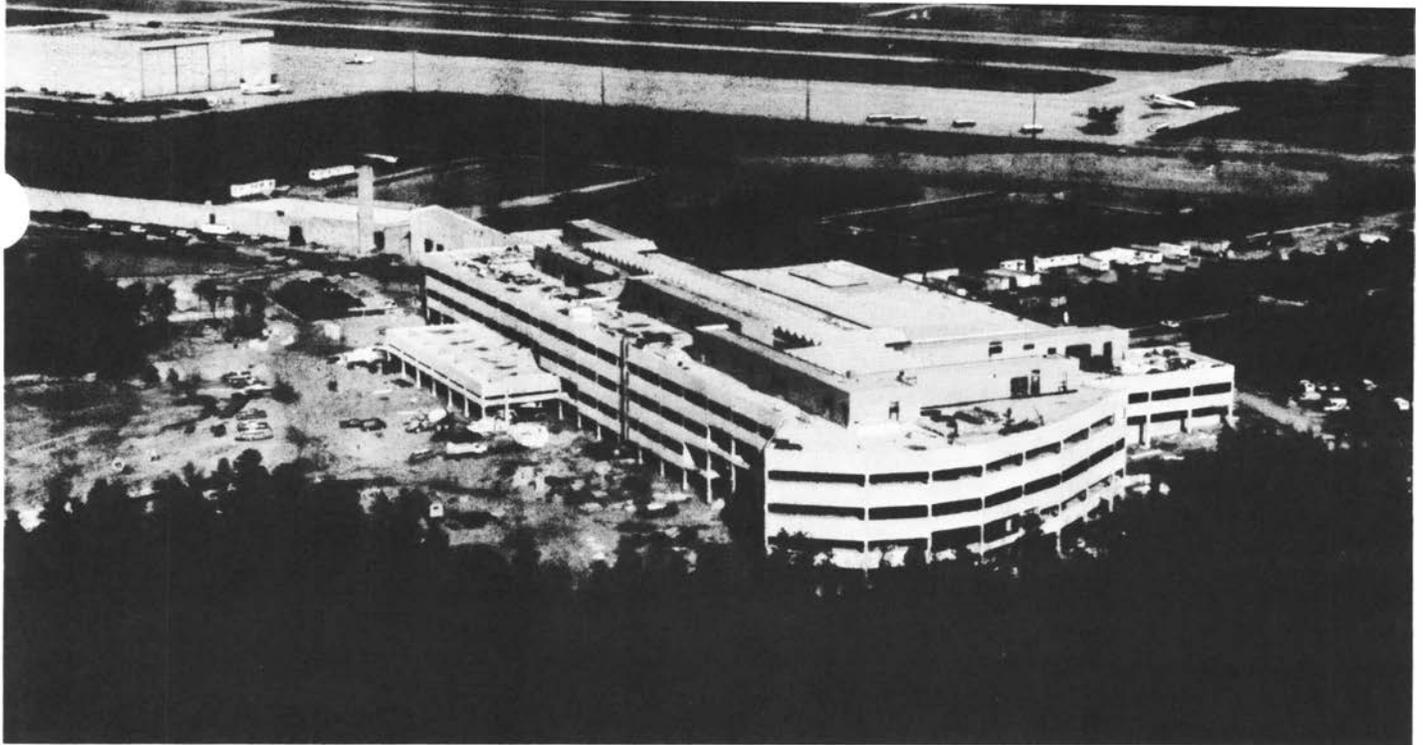
Match the names with the deeds. To check whether you deserve the title of "Quiet Birdman," check the answers on page 14.

- A. Was awarded the first pilot's license in the United States.
- B. Was the first pilot to loop-the-loop with a passenger.
- C. Was the first pilot to land on and then take-off from the roof of a building.
- D. Is considered the "father" of the Airmail Service.
- E. Was the first to attempt to fly across the Atlantic in a balloon.
- F. Was the first pilot to be hired by the Post Office Department to fly the mail.

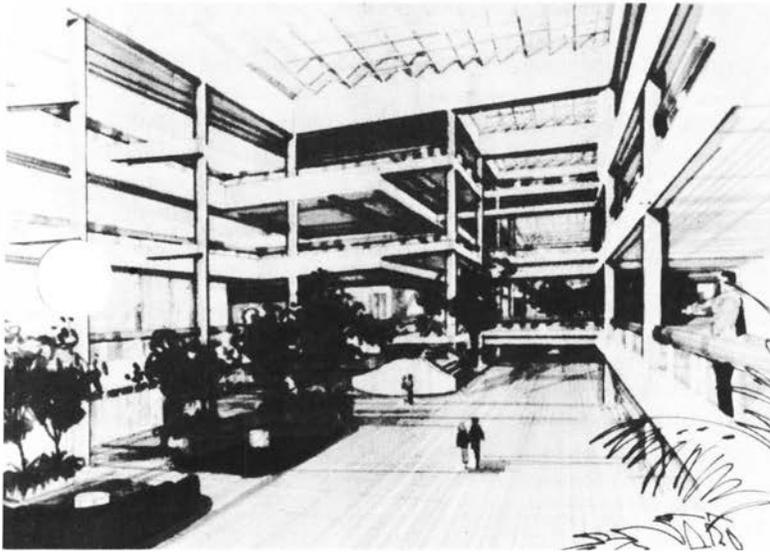
- 1. MAX MILLER ()
- 2. CHARLES DICKINSON ()
- 3. WILLIAM B. STOUT ()
- 4. BLANCHE SCOTT ()
- 5. R. W. SCHROEDER ()
- 6. JOHN WISE ()
- 7. JULIA CLARK ()
- 8. BENJAMIN LIPSNER ()
- 9. RUTH LAW ()
- 10. GLENN CURTISS ()
- 11. OCTAVE CHANUTE ()
- 12. ERVIN E. BALLOUGH ()
- 13. OLE FLORTOP ()
- 14. IRA O. BIFFLE ()
- 15. ANDREW DREW ()
- 16. EMIL M. LAIRD ()
- 17. KATHERINE STINSON ()
- 18. E. HAMILTON LEE ()
- 19. WASHINGTON DONALDSON ()
- 20. JAMES H. KNIGHT ()

- G. Was the first woman pilot to ever loop-the-loop.
- H. Piloted the first leg of the first transcontinental flight from Chicago for Boeing Air Transport.
- I. One of aviation's first propeller manufacturers, who built the one used by Lincoln Beachey.
- J. Was the first woman to graduate from the Glenn Curtiss School at San Diego, Calif.
- K. After being fired, caused the first pilot's strike in the country.
- L. Was one of the first aviation editors in the United States.
- M. Designed the wing used by the Wright Brothers at Kitty Hawk.
- N. Was the first airport manager in the U.S. to hold a pilot's license.
- O. Made one of the most famous flights in U.S. history on Feb. 22, 1921.
- P. Set a world altitude record of 38,180 feet on Feb. 27, 1920. Participated in the Hindenberg investigation.
- Q. If alive, would be the oldest licensed pilot in the world, 121 years old.
- R. Was the first to carry mail by air in the United States.
- S. Flew an airplane designed to fly 25 miles a record 666 miles on Nov. 19, 1916.
- T. First woman to be taught to fly by Glenn Curtiss himself.





The exterior of the new Technical and Administration Building was almost complete when this photo was taken last fall.



An artist's conception of the lobby court in the new building.

NAFEC Requests Your Company

You no longer can look for NAFEC—the National Aviation Facilities Experimental Center—in the pine barrens northwest of Atlantic City, N.J. You won't find it there later this month.

In its place will be the Federal Aviation Administration Technical Center—a spanking new name for a research complex with spanking new facilities. The name change will occur May 29 with the dedication of a \$50 million Technical and Administration Building, an all-weather heliport and the largest indoor fire test laboratory within the Federal Government.

The new name was chosen by Administrator Langhorne Bond for conciseness and to better reflect the center's mission and function.

NAFEC . . . er . . . the Technical Center is inviting all FAA employees to attend the week-long ceremonies, which include the inauguration of a 7,200-square-foot Visitors Cen-

ter in the new building, fly-ins, aircraft displays, aerial demonstrations, aviation-oriented seminars and tours of the building and the entire 5,000-acre center.

"Our goal for the dedication and open house," said Joseph Del Balzo, director of the center, "is to make this a memorable event befitting the uniqueness of our new, modern facility and the special joint effort that made it all possible."

The year-round Visitors Center, within the 10,000-square-foot main lobby, will tell the story of FAA and the role of the center through exhibits, displays and audio-visual presentations.

Inquiries about arrangements to visit the center should be directed to the Dedication Planning Committee, ANA-2D, Room 122, Bldg. 12, NAFEC, Atlantic City, N.J. 08405, or by calling (609) 641-8200, ext. 1101.

DIRECT LINE



Q In "Direct Line" of the December 1979 issue of **FAA WORLD**, you state that "The DOT Guide is applicable to the classification of positions at an air traffic approach control facility with 100,000 or more instrument operations annually." On Dec. 17, 1978, the Atlantic City Tower was upgraded from a Level II to a Level III approach control facility with 100,000 instrument operations. Prior to upgrading, the staffing in the Nav/Com Unit was four GS-11s and two GS-9s. The upgrading consisted of three GS-11s to GS-12s and two GS-9s to GS-11s. According to the classification guide, all technicians should have been upgraded. Why was one not?

A Under the DOT Classification Guide for electronics technician positions at certain locations, the radar and communications system certification for two or more complex systems at Atlantic City qualified for upgrading to GS-12 when the approach control met the criteria of 100,000 instrument operations annually. The nav aids system certification there did not meet the criteria for upgrading to GS-12 because the airport itself did not have 100,000 or more instrument operations annually. When the criteria for radar and communications system certification at GS-12 was met at Atlantic City, the official position descriptions for the GS-11s in the Nav/Com Unit only contained responsibility for systems certification on nav aid systems and did not indicate any responsibility for systems certification work on the tower communications system. Thus, none of the GS-11 positions in that unit met the criteria for upgrading. To permit an upgrading, new position assignments had to be made and classified. Since the Nav/Com Unit had a 16-hour, seven-day watch coverage, only three new positions could be established at the higher grade level, and they were filled under provisions of the Merit Promotion Plan. It should be noted that if the watch coverage increases in the Atlantic City Nav/Com Unit, more positions could be established at the GS-12 level.

Q I am a controller in a Level II VFR tower. I have requested transfer to seven Level II radar approach-control towers. My chief says that he and the region will not release me if I am selected for an opening. He says that a move from a Level II to another Level II, regardless of the radar, is not career progression. I have heard that it is. Are the chief and region correct in not releasing me?

A Your region does not confirm what your chief told you. Reassignment from a Level II nonapproach-control tower to a Level II radar approach-control tower is considered to be career progression. Employees requesting in-grade reassignment are covered by the provisions of the Internal Placement Handbook, PT P 3330.9. In accordance with paragraph 300e of this handbook, employees selected through internal placement are to be released promptly. In the case of a geographic move, employees are to

be released not later than 30 days after notification of selection. Under unusual circumstances, release dates may be extended by mutual agreement of the regions involved. In determining if unusual circumstances are present in a particular situation, regional resources must be considered. This process includes the analysis of the overall regional staffing level, facility staffing levels and permanent change-of-station funds. If, during this process, it is determined that an in-grade reassignment will not severely impact your region's operational effectiveness, your release should be effected.

Q According to paragraph 430d of Handbook, 7110.65A, an aircraft must not only have reported the preceding aircraft in sight and be instructed to follow it before being cleared for a visual approach but also must meet part C and have the airport in sight. However, according to the Airman's Information Manual, paragraph 383a, "the aircraft must have the airport in sight or the preceding aircraft in sight before the clearance is issued." I have seen both of these procedures used by controllers, even though the two manuals appear to contradict each other. Which is correct?

A Both manuals are correct. The Airman's Information Manual (AIM) describes the visual approach procedures associated with a radar environment, as prescribed for controllers in Handbook 7110.65B, paragraph 796. Paragraph 430 addresses nonradar facilities and nonapproach-control towers. Change 6 to 7110.65, effective Oct. 1, 1977, expanded the authority of nonapproach-control towers to include clearing more than one aircraft for a visual approach, provided the succeeding aircraft had both the destination airport and the preceding aircraft in sight. The AIM does not address the difference between radar and nonradar visual-approach procedures because the operational differences as perceived by the pilot are so insignificant that the additional discussion of controller requirements would add little to a pilot's understanding of the ATC system and would probably create more confusion than it would cure. In any event, the 7110.65 procedures are binding on the controller, while the AIM is directed toward pilots and is strictly advisory in nature.

Q Many of our co-workers in the past have brought our problem as far as Congress without any results. Just how much is a police officer worth? Park Police, Capital Police, Customs officers and Washington, D.C., Zoo Police, just to name a few Federal police agencies, seem to think their people are worth something and rightly pay them for their work. FAA Airport Police, however, don't seem to be worth that much since our top salary is equivalent to most other Federal police agencies' starting pay, even though we basically do the same work. If you'd like to see a zoo, go to Wash-

ington National Airport some Friday evening. Why does the janitor sweeping the floor at the airport, with almost no training of any kind and very few responsibilities, have a higher salary than I do? Most people tell us our job is so easy; at times it is, but not one of them is standing beside us when we're investigating a bomb threat. I seldom hear people tell me I'm overpaid when they need my assistance on a roadway. I'm not asking to become rich; I'd just like to be able to survive without having to work overtime. I feel it would be only fair for us to earn as much as our fellow Federal police officers. Can't anyone help us?

A A police position at Washington National and Dulles International Airports is officially classified as Airport Police Officer, GS-083-5. This means that officers' pay is set according to the General Schedule system, which is a standard pay system used for administrative, technical and professional positions government-wide. Janitors at the airports are paid under the Wage Grade system, which sets pay according to the wage rate of similar occupations in private industry in a particular metropolitan area. Since private-sector wages in the Washington, D.C., area are comparatively high, there may be some janitors who make more than Airport Police Officers. The Park and Zoo Police cannot be compared with Airport Police since the Park and Zoo Police positions are not classified using Office of Personnel Management (OPM) job-grading standards and their pay is exempted from the regular General Schedule (GS) pay plan as a result of a past act of Congress. The authority to establish grade-level criteria or to provide higher pay rates for Airport Police rests with OPM. Although FAA has been successful in gaining approval for higher pay rates for Airport Police in the past, OPM has recently decided that the existing rate is equitable.

Q I worked a 3:00 p.m. to 11:00 p.m. shift on a Sunday for which I was not compensated for five hours of night differential. Although my chief had made several attempts to get the payroll office to correct this error and I have not been able to get a response to a letter I wrote them, I would like to find out what some of my rights are. Can I place a claim with the government to recover the lost interest that the money would have earned in a savings account for the last few months, the lost purchasing power of the money based on the Federal inflation price index and the costs for correcting the payroll error—legal fees, certified letters, stationery, etc.?

A In general, claims against the Federal Government are payable only to the extent that the sovereign immunity of the United States has been waived by an express statutory or contractual provision. There is no express statutory or contractual authority that would permit the pay-

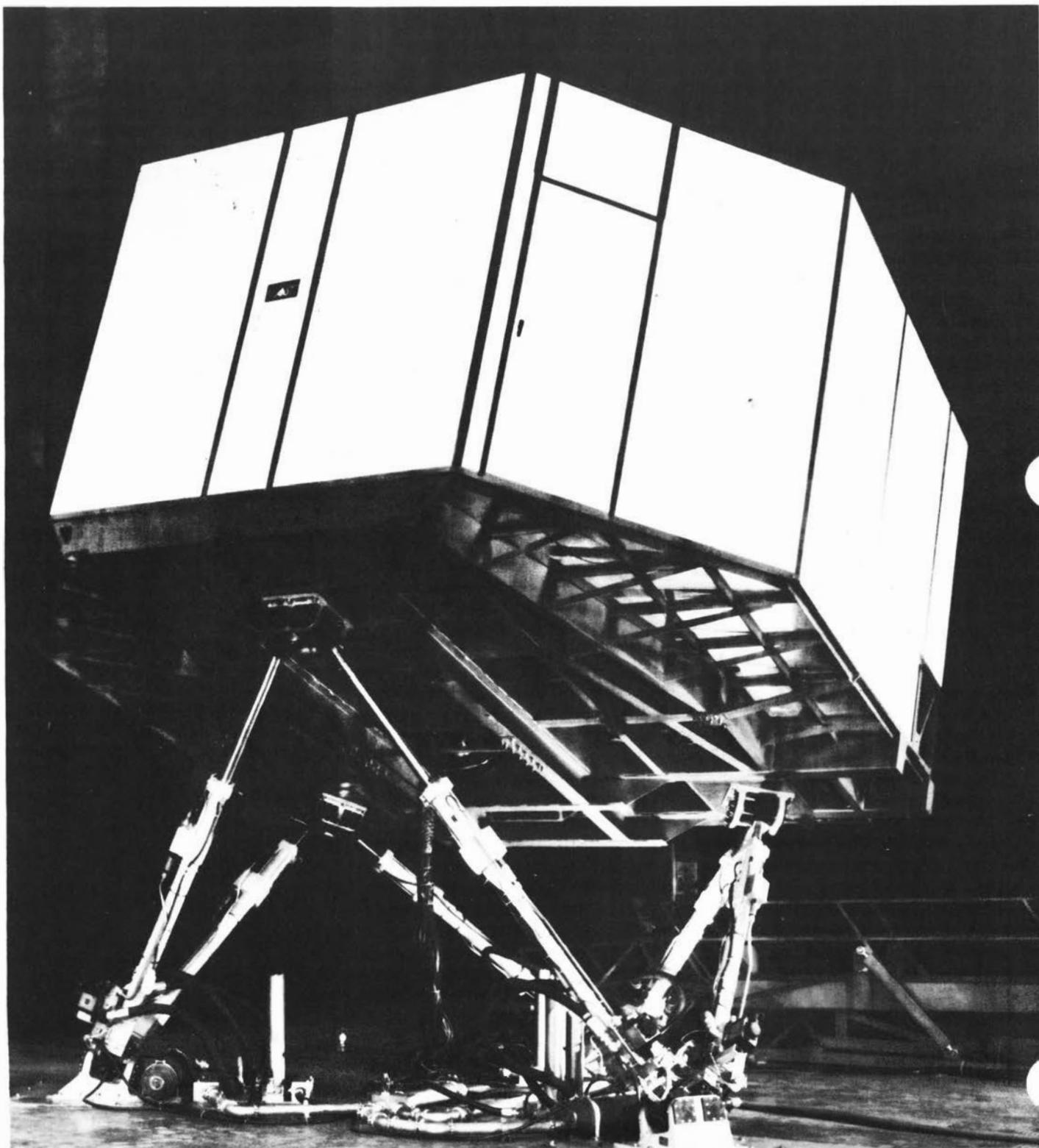
ment of either interest or lost-purchasing-power claims on a back-pay award. Under the Back Pay Act, 5 USC, Section 5596 (b) (1) (A) (ii), reasonable attorney's fees can be recovered by the employee for correcting an improper personnel action, but only if incurred with respect to a decision of an unfair labor practice or a grievance processed under a negotiated grievance procedure. In your case, however, the legal costs of correcting the payroll error are not recoverable.

Q I work at an airport in a region that has published IFR departure procedures. The Airman's Information Manual states that this type of procedure is made to assist the pilot departing IFR to avoid obstructions. If the weather is definitely IFR and approach control issues a clearance to an aircraft that includes a departure procedure that conflicts with the published procedure, is this clearance legal, or should the published procedure be given? If the pilot wishes to execute the published procedure, must he first receive approval from ATC, or can he simply execute the procedure and then continue with the ATC clearance he received? What is the intent of paragraph 350e of Handbook 7170.65?

A As you indicated, IFR departure procedures are developed and published specifically to assist pilots in avoiding obstacles or terrain. Compliance with the published procedures is the pilot's prerogative and responsibility, except when you, the controller, include the published departure procedure as part of the ATC clearance to ensure separation from other aircraft. However, if you want to issue a different departure procedure, it must provide the required obstacle clearance—that is, be compatible with the obstacle clearance purpose of the published departure procedure. See TERPS, Chapter 12, and Handbook 7110.65B, paragraph 350.c.(1). The pilot is expected to comply with the ATC clearance as issued. See FAR 91.75, Compliance With ATC Clearances and Instructions. If a standard instrument departure (SID) is established for the intended route, then the SID should be issued, unless the pilot has expressed a preference not to use a standard instrument departure. At airports with ATC services, a direction of takeoff, turn or initial heading may be issued, either in conjunction with a published departure procedure or in the absence of one. At airports without ATC, however, the procedures are different. If the airport has a control zone but no tower in operation, you may specify direction, but you also must obtain the pilot's concurrence that the directions are compatible with his obligations for terrain and obstruction avoidance and local traffic patterns at the airport. This is where Handbook 7110.65B, paragraph 350.e. comes in. This paragraph and the example it contains provide guidance for requirements such as that in paragraph 350.c.(2) on obtaining the pilot's concurrence. Without all the particulars of your situation, we can't say whether the local practice is legal.

Learning to Fly

By the Seat of the Computer



A Singer Advanced Simulation Technology simulator for a Boeing 727 is banked for a turn. Though happening inside a building, the simulated flight could fool a pilot.

By Dick Stafford

The passengers were comfortably seated, the flight attendants moving through the aisles of the Boeing 747 checking seatbelts and unstowed luggage. The voice of the co-pilot came over the intercom. "Welcome, ladies and gentlemen, especially those of you who are flying the 747 for the first time. I'd like to say that this is my first time, too."

Far fetched? It isn't. It may soon be possible for a pilot to actually fly a large jet aircraft for the first time, without any experience aloft in that aircraft.

That doesn't mean that the pilot hasn't flown before. He very probably has thousands of hours in many types of aircraft. To obtain his certificate to pilot a 747, however, he may soon receive all of his training in a simulator under a proposed regulation put forth by the FAA. That proposal, which would permit pilots to go from simulator to line, recognizes the great advancement made in simulator technology in recent years, and the agency firmly believes that simulator training is the key to turning out better pilots.

Simulators have been around in aviation for a long time. Edward Link developed his famous "Link Trainer" in 1929, and many World War II pilots trained in the small square box that moved up and down to duplicate aircraft motion. Airlines began using a simulator shortly after the war, and in 1954 the FAA recognized it for pilot proficiency testing.

In the late 1960s, visual attachments appeared on the simulator market. Since that time, a breakthrough in computerization has permitted the development of computer-generated-image visual systems. The visual systems, as well as other technological advancements brought the FAA to the realization that nearly total simulation was technically possible.

In 1975, according to FAA Simulator Projects Manager Charles Huettner, the idea of an advanced simulator plan began when the FAA, United Airlines and the Singer-Link Company met to determine where the state of the art was and was not. That meeting resulted in flight

test and engineering programs, which, in turn, resulted in the first simulator approved by the FAA for landings.

Beginning at United Airlines in 1977 and then at American and Pan American Airlines, that achievement marked a new beginning for simulators for training. "There was no question that simulators could make better, safer pilots," Heuttner says, "and the FAA was anxious to push improvements as far as possible."

Today's simulators, built at a cost of \$4-to-\$5 million dollars are very close to the "real" world of flight. They move up and down, just as the old models did, but the added dimensions of sight and sound are close to the real thing.

The new simulators look and sound like a cockpit interior. When the system is turned on, the pilot doesn't see a movie of an airport runway; through advanced computer visual technology, he may actually feel he is on the runway. As the "plane" rolls for takeoff, the bumps in the cement are felt, the lift off is sensed, the wheels are heard retracting and the airport is seen fading below. If the pilot banks to the right the airport is there, on the right, under him. The simulator responds to the pilot's every action, in real time.

Why the increased use of simulators in pilot training? Captain R. E. Norman, Jr., chairman of the Air Line Pilots Association's pilot training committee, cites two

Training for Work on the Trainers

In 1977, the Federal Aviation Administration began its own simulator program at the FAA Academy in Oklahoma City.

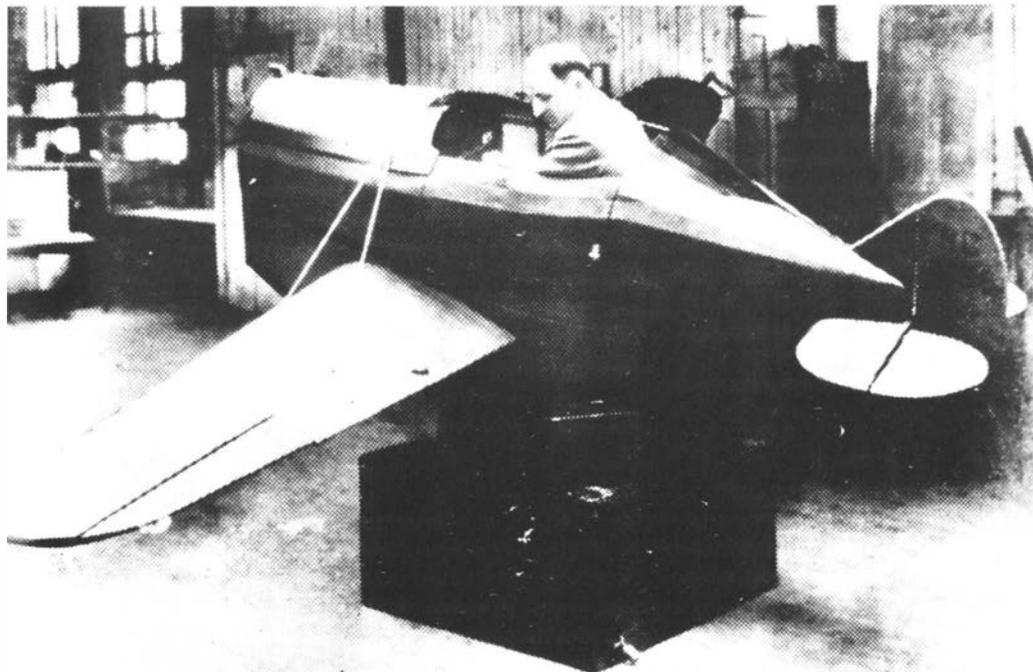
The FAA's Simulator Evaluation Course was designed to train Flight Standards inspectors who are responsible for approving flight simulators used in the training programs of commercial airlines and other operators of large aircraft.

The course consists of classroom and simulator laboratory instruction in the techniques, procedures, policy and criteria of evaluating and approving aircraft simulators and visual systems. The purpose of the training of FAA inspectors is to assure that the simulators used in crew-member training represent, as closely as possible, actual aircraft performance. In addition, the training should portray a satisfactory transfer of learning from the simulator to the airplane.

The FAA has developed the following approval criteria for the certification and evaluation of crew-member simulators:

- The simulator software should be programmed with data which accurately represents the aircraft, the flight environment and the ground environment.
- The simulator hardware should accurately represent the aircraft and produce minimal electronic interference (noise) to the computer software. It also should provide a fast rate of transfer from input to output.
- The motion system should be smooth and responsive and closely duplicate the motion of the real aircraft.
- The visual system should be responsive and the visual presentation realistic.

The FAA's evaluation course is one week, with only four students in each course, of which there are 20 per year. The agency has trained about 170 inspectors as simulator specialists on a 727 simulator leased from Braniff Airlines. The current plan is to continue the training through 1982, at which time approximately 450 specialists will have completed the course.



Edward Link flies his first "Link Trainer" in 1928, the beginning of ground-based flight training that saves lives, equipment and fuel.

what the real experience would be like."

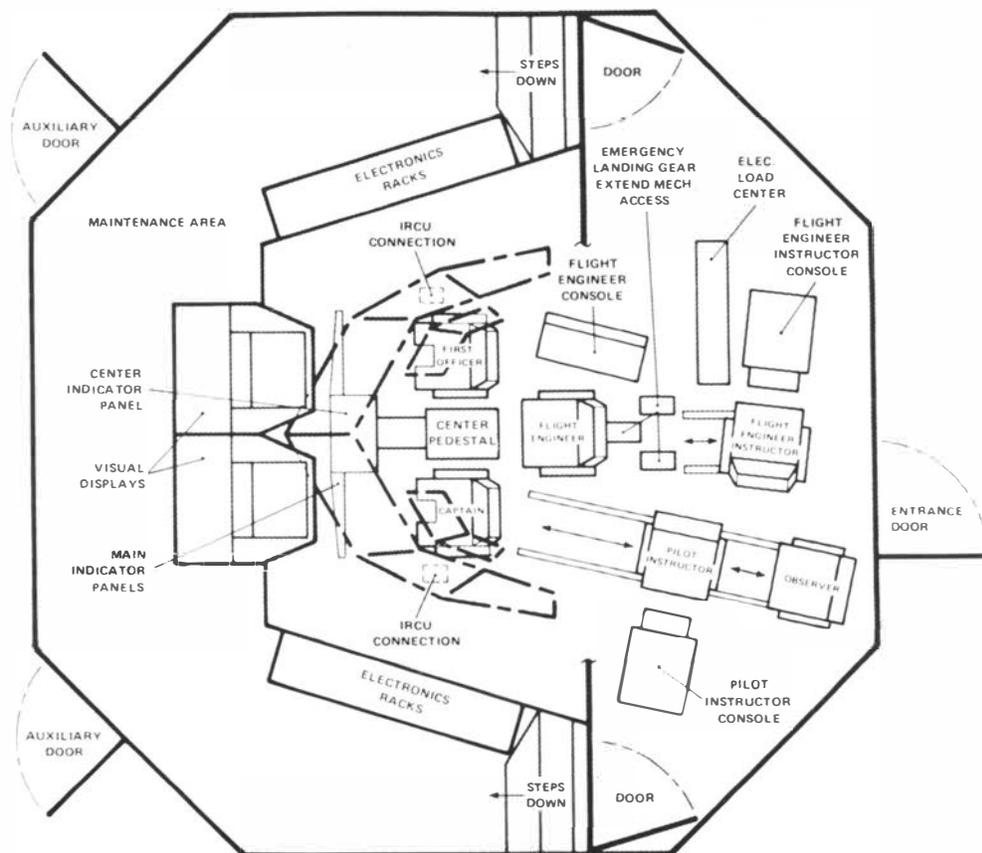
The economics of simulator training are very evident. Frink estimates that the cost of training a 747 pilot on-line today averages between \$4-\$5,000 per hour. As jet fuel costs increase, that figure is likely to soar. The FAA estimates that increased simulator training would save 32 million gallons of fuel per year. ALPA reports that more than 200 million gallons of fuel are saved annually through the use of flight simulators for all types of training.

Simulators are here to stay. What does the future hold? As Captain Norman put it, "We want the pilot to forget that he is in a simulator—that's the goal."

major reasons—safety and economics. He says that the use of flight simulators has made it possible to attain a near-zero training accident rate in the past several years, compared to the high loss of lives and aircraft during earlier years of the jet age, when most training was accomplished aloft.

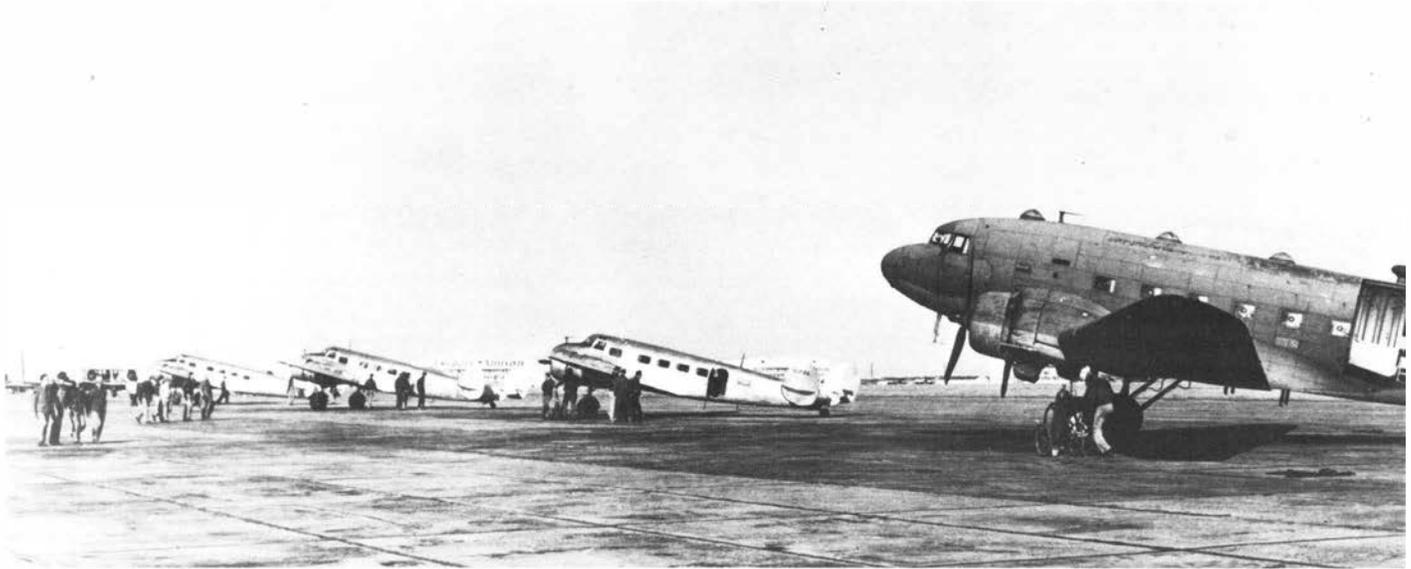
The consideration of safety is what it's all about. As the technology for duplicating the real world of flying advances, simulators provide valuable and realistic training for pilots, who learn to cope with or avoid the circumstances that cause accidents.

Al Frink, director of training for Pan American, says, "We love to play with the four-engine monsters, but we don't like to break up airplanes." Frink, an early advocate of simulators, goes on to add that "there is no way to teach a pilot how to make an aborted take off or a Category III landing. With a simulator, he can do these and learn something of



A top view of the interior of an AST simulator.

The flight line at the newly opened Aeronautical Center in 1946 boasted three Lockheed Electra 10As lined up, at the right, a C-47—the military version of the DC-3 workhorse.



A Pilot Retires

With FAA itself going on 22 years of age, there aren't very many oldtimers around the agency whose careers spanned the less-complex era of the Civil Aeronautics Administration.

One such who recently retired was J. Paul McDonnell, an FAA pilot with 37 years of CAA/FAA service. Going out as the chief of the Flight Inspection Field Office in Battle Creek, Mich., McDonnell reminisced about instrument flying and the changes in it, both from the standpoint of the agency and its navigational aids and of the pilot and his aircraft instruments.

"Instrument flying today, with our modern navigational aids, is light years ahead of what it was in the mid-40s," he recalled. "Navigational aids were mostly low-frequency ranges, with only a few instrument landing systems. In those days, if you filed an instrument flight plan at an INSACS (inter-state airway communication station—predecessor to the flight service station), everyone opened their mouths in awe. Now, of course, it's an everyday occurrence like going to breakfast."

Still focused on that era, he added, "The Chicago Center then was in one little room above a hangar on the west side of Municipal Airport, with no radar, lots of traffic and only one ILS at the airport."

McDonnell has seen this instrument flying from the inside of the Lockheed 10 Electra twin, the twin Beech, the ubiquitous DC-3 and, finally, the Sabreliner jet, working both the general-aviation and air-carrier sides of the street at airports throughout the region. He is credited with flight-checking the nation's first VOR (very high frequency omnirange) on the Chicago-to-New York airway in 1948.

He learned to fly in 1938 in Velva, N.D. "Three of us bought a Taylor Cub, with a 37-hp engine, on condition that the dealer teach us to fly," he said. "We used to fly down the highway, and the cars would pass us."

From 1941 to 1944, he was stationed at Tulsa, Okla., as an Army Air Corps civilian flight instructor on PT-19s.

Then he came to the CAA in Houston, Tex., at a predecessor to the Aeronautical Center as an instructor in instrument and multi-engine transition. McDonnell transferred to the center

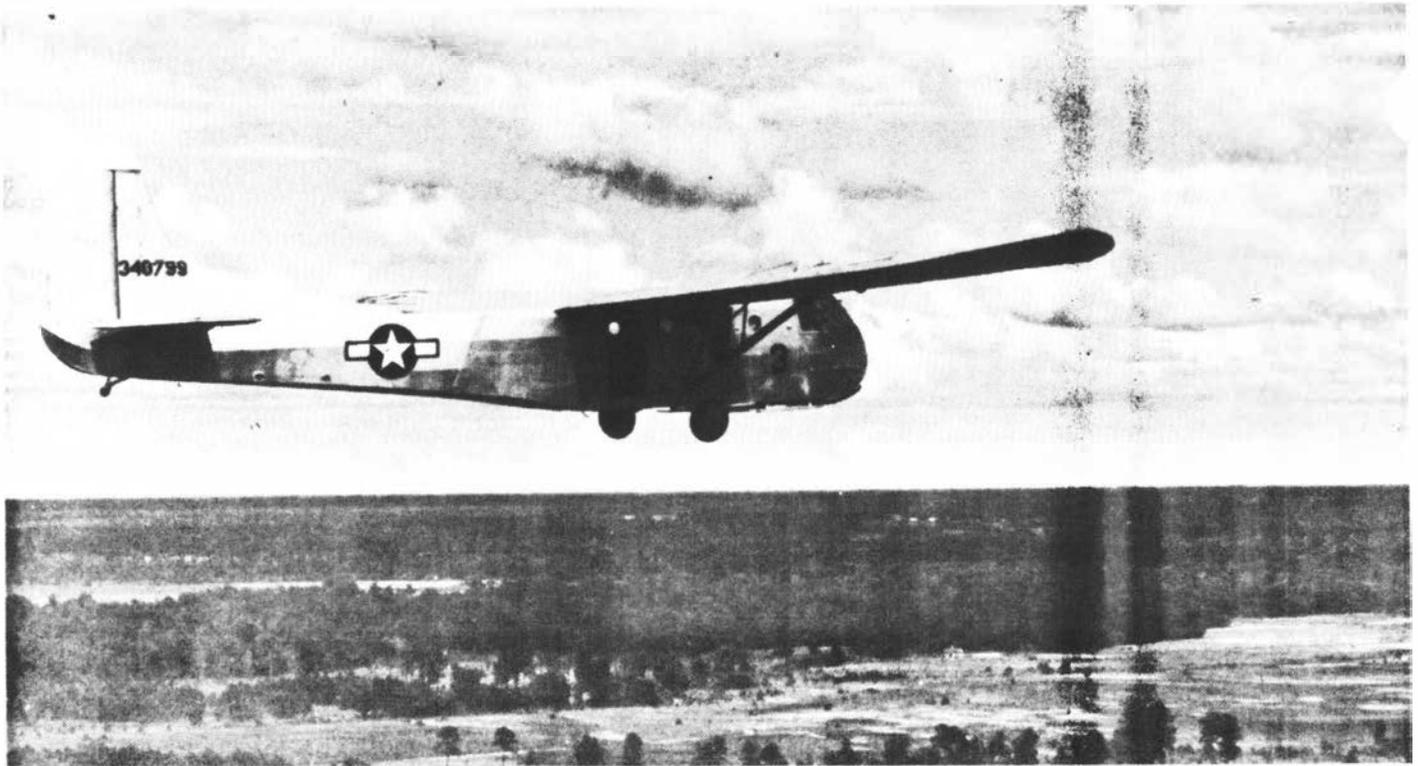


J. Paul McDonnell in multi in 1947 with his DC-3 flight inspection plane, NC 84.

when it opened in 1946 in Oklahoma City, then transferred again in 1947 to flight inspection in Chicago.

In 1957, he moved to the Chicago Air Carrier District Office, then back to flight inspection in Minneapolis. He was chief of the Battle Creek FIFO from 1973 to the end of 1979.

McDonnell intends to keep on flying in retirement, but "with gas at \$1.40 a gallon, I can't afford to buy my own airplane," he said glumly.



His Silent Phoenix

Parts are jumbled across the Harlingen, Tex., hangar floor like the skeleton of some prehistoric Pterodactyl. To make this long-dead bird—a Waco CG-4A military cargo glider of the World War II Epoch—fly again will be the job of John Huska.

Chief of the Space Management Staff of the Facility Support Division at the Aeronautical Center, Huska is also a member of the Confederate Air Force and the national wing commander of the World War Two Glider Pilots'

Association—the two sponsors of the restoration. He wants a piece of this action, but doesn't have the time to spend on trips to Harlingen, the home base of the Confederate Air Force. So, Huska is hoping for approval to move the parts to Max Westheimer Field at Norman, Okla.

The glider restoration will be a big job, and Huska recognizes that many volunteers will be needed to put together this aircraft, whose tail stands 12 feet, seven inches high and has an 84-foot wing and a 48-foot fuselage.

Meanwhile, the Confederate Air Force's first project is to complete the restoration of a C-46, which is being accomplished in record time, thanks to the joint efforts of volunteers from the Aeronautical Center, industry and Tinker Air Force Base.

Huska smiles at this, because the C-46 was used in China, Burma, India and Europe as a cargo carrier . . . and as a glider-tow aircraft. Some day, he hopes to see the C-46 in the skies over Oklahoma towing his CG-4A glider.

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Did You Know . . . ?

quiz on page 6

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|-------------|--------------|--------------|
| 1. F | 8. D | 15. N |
| 2. Q | 9. S | 16. B |
| 3. L | 10. A | 17. G |
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| 6. R | 13. I | 20. O |
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PERSPECTIVE ON POLITICKING

A Federal Employee's Guide

It's the quadrennial bout in big politics—the Presidential election year—and partisan passions are already heating up. But cool it, Federal employee; for the most part, you should be an interested spectator until election day.

The 1939 Hatch Act is still on the books, and it continues to regulate the partisan political activities of Federal employees. The law was designed primarily to protect us from abuses that once were rife. At one time, it was common practice for politicians to force career government employees to support a party or

candidate or even to contribute money.

You not only have a right to seek information, express opinions and participate in the political process, but you have an obligation to perform your civic duty. It's a sad commentary that only about half of the American electorate actually casts its votes.

There is no restriction on your voting in a primary or general election or expressing a political opinion, but you may not take an active part in partisan political management or campaigns, even if willing to do so. Local elections in which there are no parties of state or

national standing are not so proscribed.

The Hatch Act prevents us from assuming general political leadership or from becoming prominently identified with any movement, party or faction. For the most part, employees of the Federal Government and the District of Columbia are subject to political-activity restrictions, whether career or excepted service, part-time or temporary.

Below is a guide for your political conduct. If you have a specific question, contact the Labor Relations Branch of your servicing Personnel Management Division or ARTCC personnel specialist.

YOU MAY

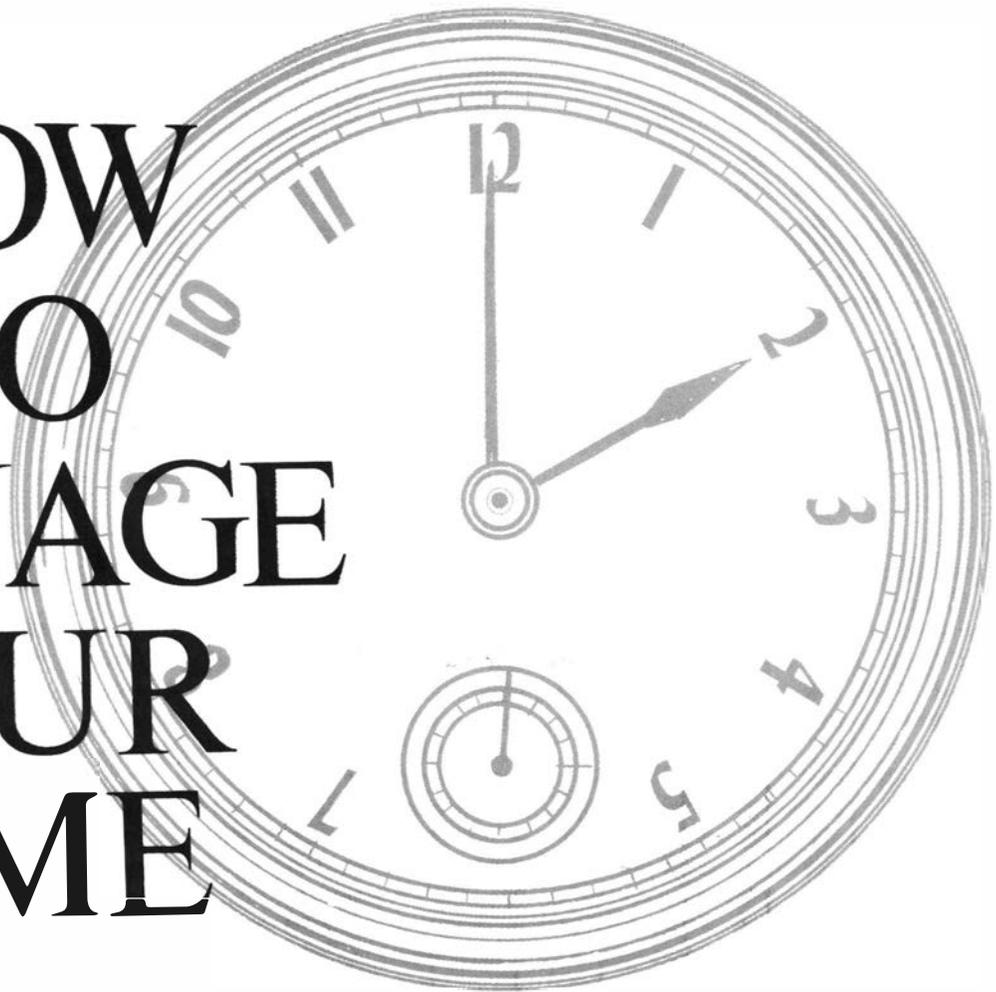
- YOU MAY register and vote as you choose.
- YOU MAY assist in voter-registration drives.
- YOU MAY express your opinion about candidates and issues.
- YOU MAY participate in campaigns where none of the candidates represents a political party.
- YOU MAY contribute money to a political organization or attend a political fund-raising function.
- YOU MAY wear or display political badges, buttons or stickers.
- YOU MAY attend political rallies and meetings.
- YOU MAY join a political club or party.
- YOU MAY sign nominating petitions.
- YOU MAY campaign for or against referendum questions, constitutional amendments, ordinances, etc.

YOU MAY NOT

- YOU MAY NOT campaign for partisan candidates or political parties.
- YOU MAY NOT work to register voters for one political party only.
- YOU MAY NOT make campaign speeches or engage in other activity to elect a partisan candidate.
- YOU MAY NOT be a candidate or work in a campaign if any candidate represents a national or state party.
- YOU MAY NOT collect contributions or sell tickets to a political fund-raising function.
- YOU MAY NOT distribute campaign material in a partisan election.
- YOU MAY NOT organize or manage political rallies or meetings.
- YOU MAY NOT hold office in a political club or party.
- YOU MAY NOT circulate nominating petitions.
- YOU MAY NOT campaign for or against a candidate slate in a partisan election.



HOW TO MANAGE YOUR TIME



*Interview With Patrick J. Montana,
Time-Management Specialist*

Mr. Montana, is it true that just about everyone wastes time doing nonessential things?

Studies show that almost everyone wastes two hours or more every day. That adds up when you think in terms of weeks, months and years. We spend 80 percent of our time on unimportant things that produce only 20 percent of the results.

Reprinted from U.S. News & World Report
March 5, 1979

Is this wheel-spinning a universal problem?

Yes, It affects everybody—businessmen, housewives, students. The problem isn't so much lack of time as it is making the best use of the time that's available. Each of us has the same number of hours in a day or a week. Some individuals work effectively and have leeway for leisure and relaxation. Others are workaholics who don't control their time and the content of their work.

You're talking about people on the job. But is time wasted in nonworking hours, too?

Certainly. People waste time everywhere—at the office, in the home, at social activities, while traveling. But my chief area of concern is helping people in business to get things done promptly and efficiently.

What's the best way to do that?

It comes down to a matter of time

management: planning the way one's time is to be spent. Effective managers don't start by deciding what they have to do and then finding time to do it. They first check up on where their time goes; then they set priorities. Those priorities apply both to the things they do to earn a living and to the leisure activities that give them pleasure.

Good managers should take an inventory of their time—

Exactly. And you can do the same thing yourself. Take out a pad and pencil and break down your day by 15-minute sections starting at 9 a.m. Then record what you're doing in each of those segments. You'll be surprised at the results. A great deal of your time, you'll find, will have been frittered away unproductively, going from task to task without really completing any single one

Do people tend to tackle the easiest things first and put off the harder jobs?

It's just human nature to do the things that are easy and familiar first instead of deciding in advance the most important things to be done. People should set deadlines for the tasks they want to accomplish. Then, if they don't meet those deadlines, they'll know that time is slipping away.

But it's also important to set aside some time every day for creative thinking: to plan for advancing in a career, for achieving financial success for yourself and your employer. For many of us, the morning is the best time for this sort of creative activity. For others, the afternoon or evening produces the best results.

What tips can you offer to the person who wants to avoid getting caught in a time trap?

One is to concentrate on doing one thing at a time. I suggest starting with the task that's preying on your mind and getting that out of the way. Then you can strike a balance between necessary things and important ones.

Another point: Every hour or so get up and move around for 5 or 10 minutes. Relax your muscles and your mind; take up some other activity for a brief period. You'll come back to your desk refreshed to finish the work at hand.

Still another idea is to have in front of you all day a list of what you need to accomplish. For example, before I leave my office at night I put down on a slip of paper or an index card the most important things I need to do the next day. First off in the morning, I look at the list and start working on No. 1 until it's finished. Then I tackle No. 2 in the same way, and then 3, 4 and so on. I try not to be concerned if I finish only one or two in the course of the day. I know I've been work-

ing on the most important ones. The others can wait.

Can you suggest some other effective approaches?

Yes. I'd list them this way: Learn to work anywhere. Abraham Lincoln used to say a country lawyer's office was in his hat. Keep a pencil and a pad of paper in several places at home—within reach when you watch TV, in your library, on a bedside table. Don't take a chance on forgetting an idea once it has hatched.

Put spare moments to work. The doctor does it by reading medical journals between appointments. The farmer does it by fixing fences on days when he can't do field work. Professional singers and musicians use spare minutes for practicing.

Decide trifles quickly. A great many decisions are so minor they can almost be made by tossing a coin instead of wasting time on them.

Separate the essential from the non-essential. That's a mark of maturity. Children start a great many projects and finish few; their attention is easily distracted. They become grown-ups when they follow through to completion the things that count. Put habit on your side. Develop good methods of working, and stick with them if they serve you well.

Do things right the first time. A lot of people who never seem to have enough time to do a job right always have enough time to do it over.

Get help from others. Know which tasks you can delegate safely. Theodore Roosevelt once observed that the best executive is one who has sense enough

to pick good men to do what he wants done—and self-restraint enough to keep from meddling with them while they do it.

What is the best way to deal with interruptions that get in the way of completing a job?

There are certain ones that just seem to go with the territory. You've got to put up with them and deal with them the best way you can. For example, there's a category of work that I call "boss imposed." Let me illustrate: You may be walking into your office with every intention of tackling the top task on your list, and as you pass the boss's office, he calls to you, "I was thinking about something last night that I want to share with you." And before you know it, you're walking out with several boss-imposed chores. You know those have to take priority because if they're not done, swift and direct penalties ensue.

Another situation of this type is the "system imposed" task. It can have penalties, too, though not as direct as those from boss-imposed demands. Suppose I'm a manager in a marketing job and someone in the treasurer's office asks me for a budget to support my marketing plan. If I delay drawing it up, I'll be subject to pressures and displeasure from fellow workers.

Another time robber at the office can involve subordinates. An article in the *Harvard Business Review* calls it the "monkey on the back" analogy. A worker and his boss meet in the hall and the worker says, "Hey, boss, we've got a problem," and he goes on to describe it. The boss doesn't want to seem unconcerned, but he's also leery of giving an off-the-cuff reply, so he says, "Let me think about that, and I'll get back to you."

Notice what's happened here. Before

Patrick J. Montana is president of the National Center for Career Life Planning. He also has been a professor of management and marketing. Among his books: You Can Change Your Future and Career Life Planning for Americans.

they met, the monkey was on the subordinate's back. When they left, it was on the boss's back. The boss who has to get back to the worker has violated two principles of good management: accepting a responsibility from a subordinate and promising him a progress report. That happens time and time again. It means that people lose control of their own discretionary time by having to deal with problems they should have delegated.

Does the telephone rate high as a time waster?

Certainly. The best way to avoid phone interruptions, of course, is to have a secretary screen your calls and deal with a lot of the nonessential things for you.

Suppose you don't have a secretary—

Then be brief. Cut your calls short. Don't be afraid to tell a caller that you're busy, that you'll call back once you're out from under a pressing assignment.

What about people who just drop into one's office? Do they cause wasted time?

That can be a pitfall, and it's why I think the open-door policy that many managers speak of with pride can be self-defeating. If anybody can walk into your office and interrupt you at any time, you're not managing yourself. A closed door doesn't necessarily mean that you're impertinent—only that you're achieving the results that you want to achieve. A secretary can let you know if you have an important visitor who ought to be admitted. You can also set up a

system of having your door shut at certain times of the day to give close attention to work and open at other times.

Do meetings waste much time in the typical office?

Yes, indeed. Before any meeting is held, the boss ought to raise the question of whether it's really necessary. Maybe a decision can be reached without getting a lot of people together. Perhaps things can be handled by a conference phone call. Maybe the meeting can be postponed or canceled. And if a meeting finally is scheduled, its purpose and agenda fixed and attendance firmly limited, the boss may be able to send a subordinate. That saves the executive's time and gives the subordinate some experience.

Once a meeting has been decided on, what rules should apply in order to conserve time?

The session ought to start right on the dot.

If possible, it should be a "stand up" meeting so people will be eager to get the business out of the way. Someone should be assigned to keep a watch on the time and see that the meeting ends on schedule. At the conclusion, the chairperson should be able to give a quick summary of the results and parcel out any necessary assignments.

Finally, after every meeting, there ought to be an evaluation to see if it accomplished its purpose.

Is a clean desk a sign that one is using time properly, keeping work from piling up?

I'm not sure that's an infallible way of determining how effectively one's time is being used. Some people just seem to work better behind a cluttered desk. Others stash paper away in different places but know where it is. Still others stow everything under the desk and keep the top clear. If an individual can accomplish what he's supposed to be accomplishing and feels that he's in control of both the content and the timing of his

work, I don't see that the presence or absence of papers means much.

I recall a cartoon that showed an executive behind a completely bare desk with a sign on it: "I practice effective delegation of authority—nothing ever reaches this desk." In a case like that, you wonder whether anyone ever gets in to see the boss to talk things over with him.

Do people need to be flexible in their work habits?

All the time. You can learn a lot of principles for managing your time, but you've got to know when to yield on some of them. If I'm talking with someone and my boss looks in with an expression that says, "If you don't come out in 5 minutes, you're fired." I'd certainly comply with his unspoken request. In such a case, the situation has to dictate your decision.

Have you found that people who organize their time properly tend to be more relaxed as well as more effective in their jobs?

If you're well organized—doing things on an efficient schedule—you certainly should be more effective and less subject to stress and tension.

On the other hand, I know people who are so well organized that they put themselves in a straitjacket. When things don't go exactly according to schedule, they get thrown off stride and don't know how to cope.

So it's important to keep some balance in this whole time-management enterprise. If you do the best you can, everything will fall into place.

Heads Up

EASTERN REGION

Barry S. Brayer, assistant manager of the Buffalo, N.Y., Airway Facilities Sector, from the Maintenance Operations Branch, AF Division . . . **William J. Marx**, team supervisor at the JFK Tower, New York . . . **Harry W. Nehrig, Jr.**, team supervisor at the Clarksburg, W. Va., Tower . . . **Joseph L. Nottage, Jr.**, unit supervisor at the Norfolk, Va., AF Sector, from the Philadelphia AF Sector . . . **John G. Palcovic**, team supervisor at the New York ARTCC . . . **Charles . . . Pickens**, chief of the Islip, N.Y., Tower, from the Farmingdale, N.Y., Tower . . . **Henri E. Porter**, team supervisor at the New York ARTCC . . . **R. Paul Riley**, chief of the Farmingdale Tower, from the Islip Tower . . . **David R. Sprague**, team supervisor at the LaGuardia Tower in New York . . . **Miller Stallings, Jr.**, assistant systems engineer at the New York ARTCC AF Sector.

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Edwin R. Berg, assistant chief at the Minneapolis, Minn., ARTCC . . . **John E. Biehler**, unit supervisor at the Springfield, Ill., Airway Facilities Sector, from the Moline, Ill., AF Sector . . . **Paul A. Stendahl**, crew chief at the Minneapolis ARTCC . . . **Arnold W. Torguson**, crew chief at the Minneapolis ARTCC . . . **Curtis Williams**, team supervisor at the West Chicago, Ill., Flight Service Station, from the regional Communications Control Center.

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Thomas D. Moody, team supervisor at the Quonset Point, R.I., TRACON.

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ARTCC . . . **James H. Walker**, team supervisor at the Greenville, Miss., Tower.

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Looking like battered, alienated commuters on a subway, these anthropomorphic dummies wait on a bench at the Aeronautical Center for use on acceleration sleds to test the effectiveness of Navy-designed in-

flatable seat restraints for protection in airplane crashes.

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