World

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U.S. Department
of Transportation
**Federal Aviation
Administration**

The helipad atop New York's PanAm Building is surrounded by skyscrapers—one of the world's tallest, the Chrysler Building, is only one block away. Such sites will not serve for all-weather helicopters, whose development requires obstruction-free heliports. *See story on page four.*

"FAA's mission is to promote the safe and efficient use of the nation's airspace, facilities and the vehicles that travel the airways. To achieve this objective, we should control but not constrain aviation; we should regulate but not interfere with free enterprise of competitive purpose; and we should recognize that most air travelers do so by means of scheduled air carriers. We have a responsibility to consider their priority but not to the extent that it excludes the single individual from enjoying man's greatest achievement—solo flight. Above all, we must remember that the airspace belongs to the users and not the FAA."

—J. Lynn Helms

Front cover: *Illustration courtesy of Bell Helicopter.*

Back cover: *Manning the Watch Desk at the New York TRACON are Tom Llewellyn (left), Airway Facilities systems engineer, and flow controller Jim Turner.*

Photo by Harvey Schoenfeld
New York FSS/IFSS

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Choppers Finally Coming of Age?

All-Weather Avionics May Fulfill Rotorcraft's Promise

Avionics now being developed and certified could well make the difference between the helicopter industry growing into a full, productive adulthood or languishing forever in a state of promising development.

For avionics are the key to routine all-weather flight for the helicopter, and routine all-weather flight combined with an IFR urban heliport system are the keys to turning the helicopter into a full-fledged part of the country's transportation system.

So, both are being watched very carefully by the Federal Aviation Administration's new Rotorcraft Program Office, which was established late in 1982 to coordinate all FAA activities concerning the helicopter industry and make sure that the agency does all it can to help the helicopter reach its full potential.

What that full potential might be is hard for anyone to say at this point. But it is clear that it is more than the helicopter has achieved so far.

In the years immediately following World War II, when the helicopter was new on the scene, all sorts of rosy predictions were made for this then-strange craft that flew straight up and down as well as forward. There would be one in every garage, and it would be used instead of the car to get people to and from work. Or it would whisk people from the center of the city to the airport in a comparative twinkling compared to the long ride on surface transport.

But, except for a lot of oil-rig workers, nobody takes a helicopter to work today. And but for one or two exceptions, that long ride on the

Not the helicopter's best element until all-weather avionics are developed.

Illustration courtesy of Bell Helicopters

By Fred Farrar
A Public information specialist in the Office of Public Affairs, he is a former Washington correspondent for the *Chicago Tribune*.

surface is still the prevailing means of getting to the airport.

The helicopter is a well-established, indispensable means of transportation in the offshore drilling industry, where they make more than 300,000 flights a month and carry more than 8,000 people to and from work every day. In fact, one of the companies involved in the business of shuttling people and supplies to offshore oil rigs owns more than 400 helicopters. This is more than many countries have in their entire air force.

And there are other areas, such as search and rescue work, in which the helicopter not only excels but is not even challenged.

But beyond that, the helicopter hasn't nearly reached its potential. So where can it be expected to go now?

The area that most experts in the

A Sikorsky Spirit helicopter approaches an offshore oil rig in the Gulf of Mexico. IFR routes and basic avionics are in use for this limited purpose.

field see as holding the most promise is regularly scheduled passenger service between some cities—cities that are close enough together so that the helicopter can get people from the center of one to the center of the other faster than can be done by the combination of surface transportation and fixed-wing aircraft.

But, the experts say, potential passengers will never take seriously a form of transportation that can't be depended on to take them where they want to go *when* they want to go. They will continue to prefer the long ride to the airport and the all-weather fixed-wing aircraft.

What the helicopter needs is an all-weather capability and heliports at which they can land and take off from in any weather. Helicopters now exist that are equipped and certified for IFR flight, but there are not many of them, and even their capabilities would have to be improved before IFR helicopter flights become routine.

This is where new avionics comes in. One of the biggest problems is the inherent instability of the helicopter compared to a fixed-wing aircraft, for IFR flight requires a stable platform—one that can follow an electronic beam in the sky without wandering all over the airspace. And this means a reliable automatic pilot with the ability to control at very low speeds.

But more is demanded of the automatic pilot for a helicopter than for a fixed-wing aircraft, because flying a helicopter is remarkably similar to patting your head and rubbing your stomach at the same time. The autopilot that does this has to be more sophisticated than that for a fixed-wing craft.

A helicopter autopilot, for example, has to contend with a trickier mechanism for maintaining direction control. A fixed-wing aircraft tends to continue to go in the same direction unless rudder control is applied. But a helicopter would spin in the opposite direction from which its main rotor is turning if it were not for the rotor in the tail. So the autopilot has to continually make corrections in the tail rotor control to keep the helicopter flying in a straight line.

As for heliports that can be used for all-weather flying, they don't exist for the most part. Most heliports today are small—many of them on rooftops—and do not have the obstruction-free space around them that all-weather flying will demand. This is why one of the first projects undertaken by the agency's Rotorcraft Program Office is the development of a demonstration all-weather heliport. And if all goes well, it will prove that the concept is feasible.

Headed by Jerry Chavkin, an aeronautical engineer and pilot who formerly was head of the Aircraft Engineering Division in the Office of Airworthiness, the Rotorcraft Program Office is currently in the process of picking the site of the demonstration heliport. The choice is expected to be made shortly.

Among the criteria that will figure in the choice are:

- Adequate real estate: from four to six acres minimum;
- Lack of obstructions to IFR or VFR flight;
- Environmental compatibility with surrounding areas;
- The political "climate" of the community: Are the political and neighborhood leaders anti-helicopter or will they give the project the support that is needed if it is going to succeed?
- Projected level of activity and demand and the heliport's position relative to the center of town;
- Existing air traffic control facilities in the area and local weather patterns;
- The overall flight safety aspects.

Chavkin says that a full IFR

This riverine heliport in New York City is one type of suitable obstruction-free site within a city, superior to the pad atop the PanAm Building a short distance away among the skyscrapers.

Jerry Chavkin, director of the Rotorcraft Program Office, reviews the master plan briefing for helicopter IFR development and all-weather heliports with program analyst Judy Leach.

Among the unchallengeable superior uses of the helicopter is as a materials mover, particularly in remote sites.

Oil rig workers can be rotated through their shifts quickly and safety by air, which means by helicopter only.

capability is not expected until 1986 or 1987. "Instead," he says, "we'll build slowly while the avionics people at the FAA Technical Center develop the ground-based avionics and procedures we will need. We think we can have an IFR non-precision-approach capability by 1984 or 1985 and a full IFR precision-approach capability by 1986 or 1987."

The actual building of the demonstration heliport will be done by a local government body with the help of funding from the FAA through the Airport Improvement Program.

Meanwhile, the Rotorcraft Program Office is continuing to look ahead. Its Rotorcraft Master Plan, which addresses all areas of rotorcraft development—operations, policy and research and development—through the year 2,000, notes that despite its limitations, the helicopter remains the fastest growing segment of civil aviation. It employs more than 75,000 people in manufacturing and operations and has annual gross revenues exceeding $1 billion. That figure is expected to go to $3 billion by 1990.

And by the year 2000, the number of helicopters in the U.S. civil fleet is expected to increase to 15,000 to 20,000 craft, half of these equipped for IFR flight.

The goal of the plan is to permit the helicopter to employ its unique capabilities to the maximum extent, to provide for an adequate system of both VFR and IFR heliports and to improve safety by upgrading criteria and by the application of advanced technology.

While the plan contains programs that are specifically aimed at the helicopter, others are aimed at identifying advances in other areas that could benefit the helicopter industry, such as new techniques in the fabrication of composite materials that could be applied to the building of lighter and stronger helicopters. Conversely, it will be looking for benefits from helicopter technology that could be used in other areas of aviation.

Now, as the helicopter industry looks forward to what may be its final coming of age, there are those who say the helicopter will never be seriously competitive with fixed-wing aircraft. They point to the fact that a modern helicopter built for carrying passengers costs as much as a 737 but can carry only about half as many passengers, is not fuel efficient and has a much more limited range.

But a helicopter supporter can say: "How do you measure what is competitive and what isn't? Can a 737 land on an oil rig? Can it pluck people from the roof of a burning hotel? Can a 737—given the ground transportation time required—move people between centers of two cities 200 miles apart as fast as a helicopter can?"

That the helicopter has a unique role in aviation transportation says it all. ■

By Barry W. Leach, Jr.
Now an air traffic controller at the New York ARTCC, he was formerly a U.S. Marine Corps sergeant.

'I Like My Job'

A New Controller Tells How He Came Aboard and Wants to Stay

Two and a half years ago, I said to myself, "Is what I'm doing really what I want to do for a living?" After endless discussions with my wife, the decision was made to cut the umbilical cord between myself and the Marine Corps and move on to bigger and better things.

But finding meaningful employment in the civilian world was another matter. The months went by without much luck until PATCO started to grab headlines.

After the President's nationally broadcast ultimatum, the handwriting was on the wall. Anyone with foresight could see there soon would be thousands of prime, well-paying government jobs available.

The next day, I went to the Office of Personnel Management in New York City. I arrived at 6:30 a.m. and was first in line. By the time the doors opened at 8:30, it seemed there were hundreds hoping to be hired. The line extended around corners and down the stairs to the next floor, zig-zagging around offices that probably thought that air traffic control was some sort of logistics function.

A week later (which some consider a speed record), a large envelope arrived filled with all sorts of papers that had to be completed prior to taking a test. Most importantly, it contained a pass to get into the test site. My foot was in the door.

The test was similar to most aptitude tests I had taken in the past—but perhaps a little harder. The last section of the test concerned strictly air traffic knowledge—things you would know only if, I could later say, you had studied the 7110.65 or were a military controller. For me, it was a matter of painful guessing. I really thought I blew it. But it wasn't long before the scores arrived. A 92.7! Maybe I had a chance after all.

After what seemed too long a time, I called the personnel office in the Eastern Region. The response was, "Didn't you get a Mailgram? You were supposed to be at the New York Center this morning!" Thump, as my heart fell to my toes. The personnel specialist assured me that he would square it away. The next day, I went to the center, and the following Monday I was on my way to Oklahoma City.

I was never much for studying in high school or college, but for the three months I was in the Academy, I studied more than I ever thought possible. Classroom time was 40 hours per week. However, if that same number was not matched with home study, the chances of passing the course were virtually nil. After losing 20 percent of my classmates, I was on my way home, following an unimpressive graduation ceremony.

Things did not get any easier at the facility. More classroom and home study followed. The indoctrination speech went, "You've been taught the right way to do things; now you'll learn the New York way." We learned the area, military operations, preferential routing, the area again and separation criteria over and over. Sometimes, my forehead would become numb because of all the information being thrown at it.

A year later, I'm ready for my first check ride as an associate radar controller. My enthusiasm is still high. My knowledge of air traffic control continues to grow daily, and my ability to deal with the pressure associated with the job has grown to the point where it is rarely felt anymore.

While working on the control room floor, you can't help but hear the old stories of guys that are long gone. It's regrettable that things worked out the way it did for them: careers destroyed, lifestyles shattered—all on account of a miscalculation and the adamant attitude of the PATCO leadership.

Of the controllers that are gone, most were not bad controllers. The majority were very fine, safety-minded individuals who I believe were misled by PATCO.

I like my job and so do my classmates. This new breed of controller will be better than those of the past. We are the best America has to offer—the top of the barrel—and we had to work the hardest just to get our foot in the door. There will be no more sickouts, slowdowns or strikes because we like being controllers, and we will do everything to stay controllers. Aviation safety is not and will not be jeopardized.

The new breed is good; we know it and soon the records will show it. ■

More Than an Instructor

Paul E. Clark is a quiet-spoken, unassuming man whose actions in the field of aviation shout with eloquence. He's the kind of person whose extended helping hand is gladly taken.

Clark is now an aviation safety inspector in the Examination Standards Branch of the Aviation Standards National Field Office at the Aeronautical Center. While he's no longer in the right seat with budding pilots as in yesteryear, he's still influencing the lives of airmen by helping to develop written tests, the light training handbook, instrument flying handbook, the flight test guide and the book on flying for FAA personnel.

Clark started in aviation as a Navy pilot during World War II and helped pay his way through college afterward by teaching flying. After a stint in the field of geology, he returned to aviation as chief flight instructor in the Aviation Department of the University of Oklahoma in 1959, where he spent a decade prior to joining FAA.

That he has touched others with his love of flying is attested to by Budd Davisson, writing in the December 1982 issue of *Air Progress* magazine. He said:

"I suppose every aviator can turn around and look at his life, at one individual outside his immediate family who stands tallest as one whose effect has been farthest-reaching and longest-lasting. In my case, it was Paul Clark—one of the proudest and most gentle men I've come to know in this business. Paul

ran the Flight Training School at the University of Oklahoma and became my instructor, my boss and my friend during my years there.

"Paul did a lot more than simply teach me the fine art of putting a 7EC Champ down on the runway in the 20-knot crosswind we considered normal in Oklahoma. He did his very best to teach me the art of relating to people, and the fact that they were flying students was incidental. Paul Clark was one of those rare gifted individuals to whom teaching flying was a higher calling to which you dedicated your all in producing a pilot who loved flight and everything it represented. To him, an airplane was more than a machine, and the student much more than someone to be harped at for an hour.

"What Paul Clark taught me about aviation and the part it plays in life, both physically and emotionally, is something to which every aviator should be exposed. I am certain there are a thousand pilots out there who have similar reasons to thank Paul, and I hope just a few of them take the time to say thank you, with a note to the FAA Center in Oklahoma City where he now spends his time trying to help make sense out of FAA written exams."

But Clark isn't just flying a desk these days. He's going for his glider rating and really enjoying it. "It's a fine sport," he says. And when he retires in just a few years, he's planning to build "one of those little fiberglass airplanes from a kit."

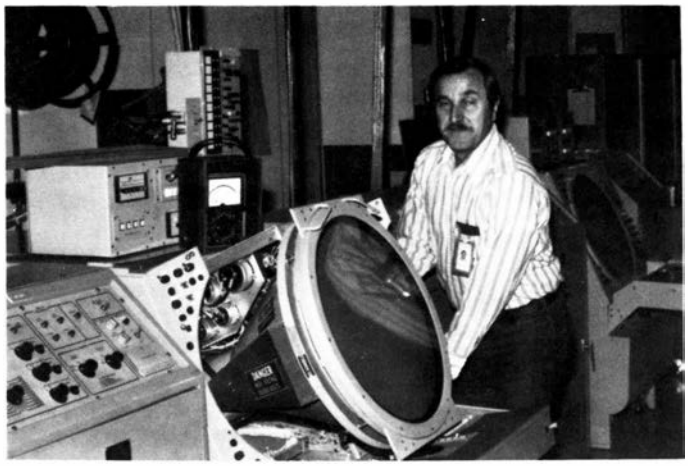
After all, for a man like Clark, flying is a life-long love affair. ■

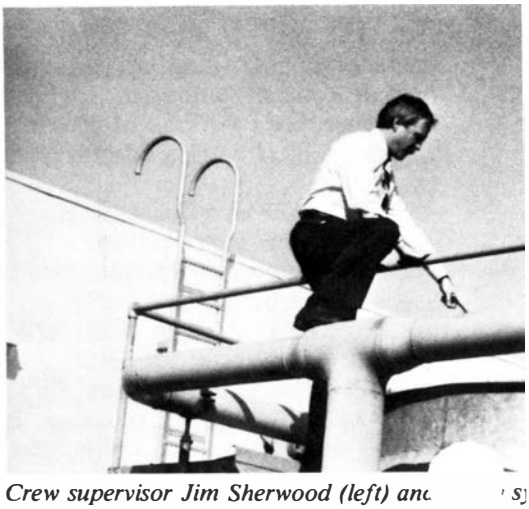
on the job

Technical Sta

En Route Airway Facilities Secto

ARTS technician Joseph Hock works on the innards of one of the New York TRACON's radar scopes.





Crew supervisor Jim Sherwood (left) and ... inspect an air conditioner cooling tower atop the ...

It was only the second year of operation for the New York TRACON, and the manager of the Airway Facilities Sector, Vincent Laurentino, thought it would take a few more years of seasoning before his crew would be a contender for Facility of the Year.

After all, they had the typical growing pains of a new facility—all had to gain technical proficiency on the new systems and equipment in order to obtain certification credentials after the changeover and move from the old New York IFR Room. Supervisors and staff had to modify existing operating procedures and develop new ones. Goals were set to improve two-way communications, to improve skill levels through formal and on-the-job training and to start automating administrative functions.

According to Laurentino, a facility cannot win the Facility of the Year Award—as his did for 1982 in the en route category—without a majority of its personnel taking a personal interest in the facility. He points to the many hours his personnel expended in developing energy-saving ideas, installing and checking out an ARTS IIIA training facility that is as large as most operational facilities, initiating a large cost-avoidance program and finding ways to use automation in both technical and administrative areas.

The sector plaque and individual certificates were presented in May. Laurentino is sure his people won't stand on their laurels.

Making an adjustment on a system monitor is communications technician James Brown.

douts—Part II

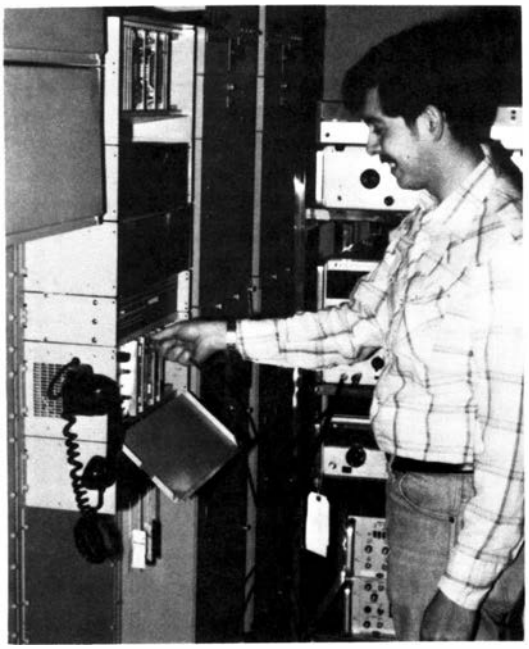
of the Year—*New York TRACON*

m st t Pat McMahon
lity.

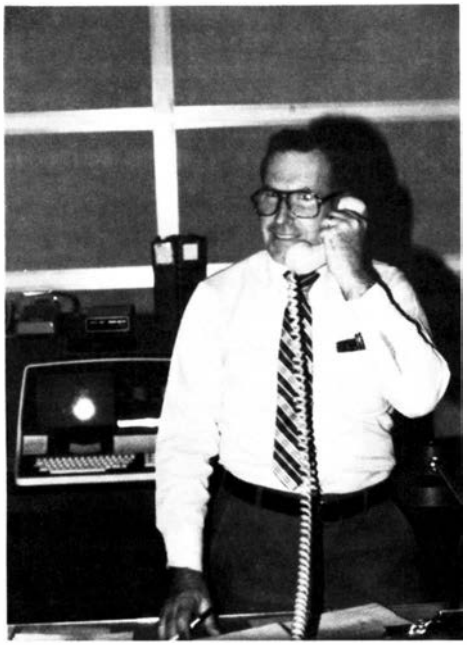
The hub of sector operations is secretary Frances McConnell's desk in the office of manager Vincent Laurentino.

Environmental technician Steve Nicolaides checks the operation of the power conditioning system (backup power supply).

Getting what's needed is the job of general supply specialist Terry Fennelly.



Radar technician Edwin Camacho plugs in a test instrument from his equipment cart.



System engineer Leon Gonthier talks to one of the technicians in the equipment room about a maintenance problem.

The central control monitoring system computer is used by utility systems technician Anthony Vangeli to check out the TRACON's environmental systems.

People

Aeronautical Center

■ **Jesse M. Dillon,** unit chief in the Special Services Section, Air Traffic Branch, FAA Academy, from the Los Angeles ARTCC.

■ **Betty R. Holmes,** group chief in the Radar Training Facility Section, Air Traffic Branch, FAA Academy, from the Airway Facilities Branch.

■ **Devere A. Olson,** unit chief in the Technical Support/Production Control Section, Line Maintenance Branch, Aircraft Maintenance & Engineering Div., Aviation Standards National Field Office.

■ **Van E. Sims,** chief of the Methodology and Standards Section, Training Methods and Operations Branch, FAA Academy.

■ **William P. Spollen,** supervisor of the Flight Inspection Section, Atlantic City, N.J., Flight Inspection Field Office, promotion made permanent.

Alaskan Region

■ **Merry F. Creamer,** manager of the Accounts Control Branch, Financial Management Division.

■ **David B. Epstein,** assistant manager for program support at the Juneau Airway Facilities Sector, from the Planning/Establishment Branch, AF Division.

■ **Ronald W. Forsyth,** assistant manager for technical support at the Juneau AF Sector, from the Maintenance Operations Branch, AF Division.

■ **Leoroy J. Stratman,** area officer at the Anchorage ARTCC.

Eastern Region

■ **Harry Breimann,** programs officer at the New York TRACON.

■ **John Buono,** manager of the Control, Reports & Analysis Branch, Accounting Division, from the Accounts, Cost and Property Branch.

■ **John C. Henline,** manager of the Philipsburg, Pa., Flight Service Station, from the FAA Technical Center.

Great Lakes Region

■ **Jay A. Baumann,** manager of the Zanesville, Ohio, Flight Service Station, from the West Chicago, Ill. FSS.

■ **Fred W. Bell,** manager of the Maintenance Operations Branch, Airway Facilities Division.

■ **Clayton D. Boring,** area supervisor at the Cleveland Hopkins (Ohio) Tower.

■ **Peter R. Edison,** manager of the Columbus Ohio State University Tower, from the Air Traffic Division.

■ **Larry D. Everitt,** manager of the Establishment Engineering Branch, Airway Facilities Division, from the Maintenance Operations Branch.

■ **Gordon C. Fries,** area supervisor at the Hibbing, Minn., FSS, from the Wausau, Wis., FSS.

■ **Jackie A. Hackett,** manager of the Springfield, Ill., AF Sector Field Office.

■ **Bruce M. Jeckel,** manager of the Cleveland Lakefront (Ohio) Tower, from the Columbus Ohio State University Tower.

■ **Carl W. Sheldon,** unit chief in the Minneapolis/St. Paul, Minn., Air Carrier District Office, from the Office of the FAA Representative, Rome, Italy.

Central Region

■ **John R. Adams,** area supervisor at the Kansas City ARTCC.

■ **Robert H. Hale, Jr.,** area supervisor at the Kansas City ARTCC.

■ **Harry E. Heflin, Jr.,** manager of the Accounting and Disbursing Branch, Accounting Division, promotion made permanent.

■ **Warren H. Livingston,** manager of the Accounting Control and Payroll Branch, promotion made permanent.

■ **Gerald L. McDonald,** area supervisor at the Des Moines, Iowa, Tower, from the Dallas-Fort Worth, Tex., Tower.

■ **Charles R. Worthington,** unit supervisor in the Springfield, Ill., AF Sector.

New England Region

■ **William F. Healey,** area supervisor at the Manchester, N.H., Tower, from the Boston ARTCC.

■ **Herschel C. Jones,** manager of the Technical & Administrative Support Staff, Aircraft Certification Division, from the

Norwood, Mass., General Aviation District Office.

Northwest Mountain Region

■ **Alfred F. DeRosa,** area supervisor at the Seattle-Tacoma, Wash., Tower, from the McChord AFB, Wash.

■ **James A. Harrison,** maintenance mechanic general foreman for the Denver, Colo., Field Maintenance Party, from the Ashton, Idaho, ARSR Sector Field Office.

■ **John Homa, Jr.,** area supervisor at the Denver Flight Service Station, from the Akron, Colo., FSS.

■ **Jon T. Middleton,** area supervisor at the Boise, Idaho, Tower, from the McClellan AFB, Calif., RAPCON.

Eastern Region Director Joseph Del Balzo (left) presents the National Logistics Service Award to Terry Mirro, contract specialist, for her reduction of contractual service costs, including a saving of $75,000 for janitorial services. In the middle is Manny Weiss, manager of the Eastern Region Logistics Division.

■ **George C. Paul,** manager of the Safety and Standards Branch, Airports Division.

■ **John W. Schmidt,** evaluation specialist at the Denver ARTCC.

■ **Ronald D. Schwartz,** area supervisor at the Moses Lake, Wash., Tower, from the Isla Verde Tower in San Juan, Puerto Rico.

Southern Region

■ **Harry S. Berd,** airman certification specialist in the Miami, Fla., Flight Standards District Office, from the Miami Air Carrier District Office.

■ **Billy W. Bolton,** unit supervisor in the Atlanta, Ga., ARTCC Airway Facilities Sector.

■ **Allen C. Burroughs,** area supervisor at the Memphis, Tenn., ARTCC.

■ **John T. Givens,** unit supervisor in the Jacksonville, Fla., ARTCC Airway Facilities Sector.

■ **David E. Graham,** assistant manager for technical support in the Jackson, Miss., AF Sector.

■ **William R. Guillebeau,** manager of the Macon, Ga., Flight Service Station, from the FSS Procedures Branch, headquarters Air Traffic Service.

■ **James R. McNamara,** area manager at the Memphis ARTCC.

■ **Samuel J. Smith,** area manager at the Memphis Tower, from the Houston, Tex., Intercontinental Tower.

■ **Daniel E. Strawbridge,** area supervisor at the West Palm Beach, Fla., Tower, from Miami International Airport Tower.

■ **Elbert R. Turner,** area manager at the Memphis ARTCC.

Southwest Region

■ **Penelope E. Benz,** area supervisor at the Tulsa, Okla., Flight Service Station, from the Albuquerque, N.M., FSS.

■ **Arthur E. Gumtau,** programs officer at the Oklahoma City, Okla., Tower, from the Wichita, Kan., Tower.

■ **John G. Johnson III,** unit chief in the Installation Management Section, Electronics Engineering Branch, Airway Facilities Division, from the El Paso, Tex., AF Sector.

■ **Bobby G. Swanner,** area supervisor at the Monroe, La., Tower, promotion made permanent.

Technical Center

■ **Ralph H. Busby III,** deputy manager, Test & Evaluation Division, from the ATC Automation Division.

■ **James F. Jarrett,** supervisor of the Automation Maintenance Section, Facility Engineering & Maintenance Branch, Facilities Division.

■ **Maurice A. Neff,** chief of the Terminal Field Support Section, National Automation Support Branch, ATC Automation Division, from the Terminal Production Section.

■ **Sue F. Silverman,** manager of the Communications Resource Staff, from the headquarters Plans and Audio Visuals Division, Office of Public Affairs.

■ **John H. Williamson,** program analysis officer in the Engineering Division.

(continued on page 15)

By Theodore Maher
The editor of *Intercom* and a frequent FAA WORLD contributor, he was a pilot instructor in the Washington Balloon Club.

Who Was First?

At Aviation's Bicentennial, Do You Know Who Really Did It?

Buzz Aldrin almost made it but not quite. He was the second man to walk on the moon. And everybody knows that in aviation you've got to be first to be famous.

I mean every school child knows that Orville Wright was the first man to fly a plane . . . or was it Wilbur?

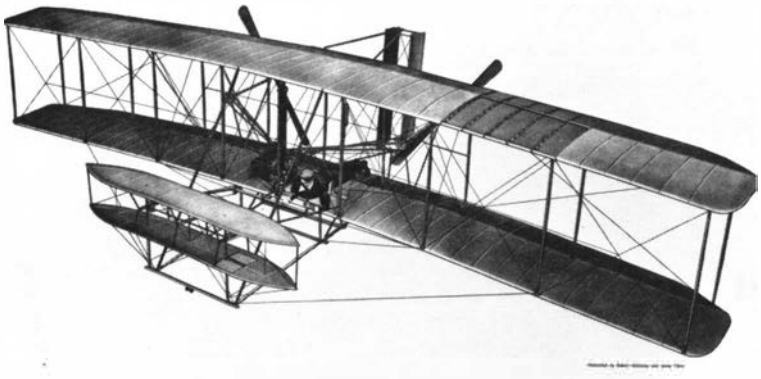
It was Orville.

Now Charles Lindbergh, as we all know, was the first to fly across . . . well anyhow, he was the first to fly nonstop . . . or at least the first to fly solo, nonstop from New York to Paris in the Roaring Twenties.

And everyone remembers Neil Armstrong because he was the first to walk on the moon, just as everyone remembers the very first pilot to fly across the Atlantic. I mean it was a glorious day in 1920—or was it earlier?—when the intrepid aviator stepped from his single-engine plane—or was it a multiengine plane?—on the distant shore—or did he land in Paris?

His name was Lieutenant Commander Albert C. Read. His plane was the four-engine Curtiss NC-4, known affectionately as the "Nancy-four," and he landed in Lisbon. It all happened in May 1919, sometime before the twenties began to roar. He flew neither solo nor nonstop, but he was the pilot in command of the first aircraft to fly across the Atlantic Ocean.

So Armstrong and Lindbergh have their names written indelibly in the annals of history, and it's not important that Lindbergh's flight was actually the tenth successful crossing of the Atlantic Ocean and that he himself was the one hundred fourteenth person to wing across the "big pond."



Aircraft and number of souls on board preceding Lindbergh were: (1919) NC-4, 6; Vickers Vimy, 2; R-34 Dirigible, westbound, 32 (including the first transatlantic, airborne stowaway); R-34 eastbound, 31; (1924) Douglas World Cruisers (two planes), 4; ZR-3 dirigible (later *USS Los Angeles*), 31; (1926) Dornier Wal, 3; and (Feb. 1927) Savoia-Marchetti, 3.

Of course, there are other firsts that are well remembered. A lot of people remember Chuck Yeager because he was the *first* pilot to break the so-called sound barrier. Naturally the ink used to write his name isn't quite as indelible as the kind used for Armstrong and Lindbergh, but it's still a lot brighter than what was used for Calbraith Perry Rodgers. This guy was the first pilot to fly across the United States. It took him about two and a half months. He landed or crashed about 70 times and at one point was almost clawed out of the air by an eagle. But he did it in 1911, and he was the *first*.

Almost everyone remembers John Glenn because he was the *first* American to orbit the earth. Also a surprisingly large number of Americans remember Yuri Gagarin, who was the world's *first* space pilot.

So, of course, since aviation history is a methodical and consistent discipline, the most important *first* of all must be seared into our memories. Almost from birth we must have heard the name of the world's very first pilot, the first and most famous of all experimental test pilots to fly away from the earth in a man-made aircraft.

Now, let's see, what was the name of this most famous airman of all? Was it Christopher Columbus? Leif Ericson? Leonardo da Vinci?

Or was it, in fact, Jean-Francois Pilatre de Rozier, whose middle name at least sound appropriate for the honor. He ascended in the Montgolfier hot-air ballon. But how could this be? Neither de Rozier nor the Marquis d'Arlandes, the *first* copilot (excuse me, the *first* first officer), is a name that rings through the corridors of time. I mean, where is the de Rozier International Airport and how about d'Arlandes High School.

But they can't be entirely forgot-

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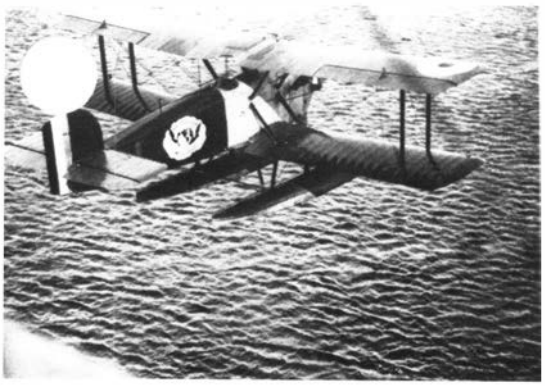

1903 Wright Flyer (facing page)
A Douglas World Cruiser (left)
Astronaut John Glenn in 1962 (below left)
Charles Lindbergh in Paris (bottom left)
Calbraith Perry Rodgers (below)

ten, can they? De Rozier was a giant among test pilots. He was not only the first to fly but also the first to die. His story is disturbingly prophetic because Pilatre died testing someone else's invention later on, a device which proved to be the first in a long line of unairworthy contraptions advertised by their designers as aircraft.

According to the story, de Rozier was leery of the apparatus right from the beginning, but men of great learning (with their feet planted firmly in the rich soil of the Ile de France) guaranteed the thing was safe.

So Pilatre flew, and his fears alone were well grounded. He was over 1,000 feet above the terra very firma when, much as the Hindenberg was destined to do 150-plus years later, the balloon exploded.

The horror the learned men had talked him into flying was a combination straw-fueled hot-air and ydrogen balloon.

But in spite of his early demise, de Rozier's first flight, the one for which he is celebrated, was eminently successful. It all happened in 1783—six years before George Washington was inaugurated as the first president of the United States, when Wall Street was still a wall, when Washington, D.C., was still a swamp at the confluence of two recently named rivers, and when buffalo roamed at will between the Rockies and the Appalachians.

It started with the Montgofier brothers, who invented, or at least produced, the first man-carrying balloon. They were careful men, albeit a little confused. (They thought it was the smoke from the fire, rather than the hot air, that was responsible for the miracle of flight.)

Still, they went about testing their invention in a businesslike way. As the National Aeronautics and Space Administration (NASA) would do almost 200 years later, they used animals to test their new idea.

First they sent up a trial balloon carrying a sheep, a rooster and a duck to see what effect, if any, the rarified ether would have on the creatures' metabolisms. (They proved to be the first in a long line of inventors, statesmen, politicians and businessmen to send up trial balloons.)

After a flight of several miles, the animals returned to earth hale and hearty.

The Montgolfier brothers went to the king of France to query his majesty about a manned flight. The king, unlike the first of God's creatures to venture aloft, had an excellent view of the proceedings, and he was pretty sure the brothers had stumbled onto something big.

In spite of the brothers' confidence, the king decided that condemned criminals, men with a limited life expectancy, should be the first humans to test this particular theory.

Of course he couldn't be expected to know that his far-flung kingdom held at least two embryonic experimental test pilots. When de Rozier and d'Arlandes heard that the honor of making man's *first* flight was to be bestowed on criminals, they implored the king to let them go instead.

They wanted their names to be the ones emblazoned in the history books of flight. They knew with absolute certainty that the names of the very *first* men to fly would be in the most indelible ink of all.

And that's how it happened that at approximately 1:54 p.m. on Nov. 21, 1783, the world's first aeronauts rose to a height of 3,000 feet in a paper and linen, Montgolfier, hot-air balloon. They flew over Paris and landed more than five miles from the takeoff point.

They were the *FIRST.* ■

By Robert Fulton
The public affairs officer of the Eastern Region, he is a former technical information officer and scientific editor for the Office of Naval Research.

Just Pitching In

Chuck O'Neill, manager of the Albany, N.Y., General Aviation District Office, was conducting a glider flight test at Saratoga County Airport last year.

Below on the field, Lawrence Arnold was operating a winch to launch the gliders dotting the airport's grass.

Stephen Francisco, an airport neighbor accustomed to the pitch of small general aviation aircraft engines, was about his business when he realized he had just heard an engine quit.

A single-engine Piper Cherokee, carrying the pilot and his wife, was making lazy touch-and-go landings when it lost power and crashed near the end of a runway. As witnesses gathered, the aircraft began smoking and then burst into flames.

Arnold and Francisco were among the first to reach the plane. O'Neill had seen the crash and quickly landed the glider nearby. Arnold and Francisco managed to open the door of the aircraft and extricate the pilot, whose clothes were already burning. O'Neill ran over to assist by beating back the flames from the rescuers as they reached for the survivors. The rescuers then pulled the pilot's wife from the wreckage, who suffered burns, with her hair, brows and clothing singed.

The rescue trio had to be treated for minor burns, but they left the field with their ears ringing with the applause of the community.

Eastern Region Director Joseph Del Balzo (left) presents awards to (left to right) Stephen Francisco, Larry Arnold and Chuck O'Neill, Albany, N.Y., GADO manager, for their heroism.

For their heroism, Arnold and Francisco later received Awards for Extraordinary Service signed by Administrator Helms at a special aviation dinner held in Albany.

In recommending the two for their awards, O'Neill had neglected to mention his own role in the rescue. But it hadn't gone unnoticed. At the same dinner, in what he considered "the greatest surprise of my life," O'Neill was presented with the Administrator's Award for Superior Achievement by Eastern Region Director Joseph Del Balzo.

Commented O'Neill, "When a catastrophe like that happens, you don't have time to think of any personal danger or consequences; you just pitch in." ■

A facility reassignment often means that you have to move your home. Have you made sure that FAA WORLD moves with you?

The home address used by the agency to mail FAA WORLD is the same one used for mailing W-2 income tax forms every December. The list normally is canvassed each November, but if you want your address corrected sooner to ensure that FAA WORLD keeps coming, you will have to initiate the change yourself.

Ask your time-and-attendance clerk for FAA Form 2730–18, "Payroll Address Information," and complete items 1 and 2 only. (Items 3 and 4 are for changing the mailing address of paychecks.) The T&A clerk will forward the form to payroll for processing.

By David Hess
The public affairs officer for Metropolitan Washington Airports, he was formerly a newsman for the *Cincinnati Enquirer.*

Do It Yourself Gets the Job Done

Firefighter Richard F. Hockman (left) demonstrates his tabletop model of Dulles International Airport to Deputy Chief Charles Shupienus.

Dulles International Airport firefighter Richard F. Hockman saw a need and did something about it. A thousand hours of work and 11 months later, he had completed a tabletop scale model of Dulles to use in firefighting and crash/rescue training.

Deputy Fire Chief Charles Shupienus says that the model has become an effective training device for simulating structural fires and aircraft incidents. So important was it that in March Hockman received a Special Achievement Award for a Special Act.

Shupienus recalled that "We had been talking about obtaining such a mockup of the airport for some time, but the cost was prohibitive."

Hockman had used tabletop training devices in the Air Force and knew of their effectiveness. Of his eight years in the Air Force, four were as a fire protection specialist and four as an instructor.

When he moved into a new home a little more than a year ago, Hockman had the time and space to work on this project that had been occupying his attention.

He began constructing some buildings from balsa wood and then laid out the airport on three 4x8-foot sheets of plywood. He built 55 buildings in all. Roadway and runway markings were made with typewriter correction tape, and runway and taxiway lights of the proper color were 864 beads purchased at a hobby shop. The landscaping is model-train type. Fire hydrants are push pins, and all vehicles and airline and general aviation aircraft are as near to scale as could be obtained.

"This tabletop replica of Dulles is an important tool, and its use is limited only by the imagination of the person setting up the training exercise," Shupienus said. "The various shifts use this on the average of once each week."

So problems can be seen from all perspectives, firefighters can try their hands at directing an entire firefighting exercise. Anyone might be put in charge, from the man on the back step to a driver or an officer. And the person in command of the exercise assigns others to details.

In addition to being used for in-house training, the model also is used to familiarize with the layout of Dulles facilities those fire and rescue teams from other fire departments that have mutual-aid pacts with Metropolitan Washington Airports.

Exercises can be as realistic or as complicated as needed to polish technique. Firefighters participating in the drills use hand-held radios to communicate, much as they would from trucks to the communications center and to the officer in command during an actual emergency.

Deputy Chief Shupienus pointed out that the model's cost was $350-$400 and Hockman's time, sweat and ingenuity, "but the value of this model in training is immeasurable." ■

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