World

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

Standing before the Windecker Eagle at Hyde Field, Clinton, Md., where it was flown in for the presentation, are (from the left) Dr. Leo Windecker; Dan Lopez, deputy director of NASM; Mac Pruitt and Herbert Dow, Dow Chemical; and Cal Stoner, project engineer on the Eagle's certification and now manager of the Airplane Certification Branch, Aircraft Certification Division, Southwest Region.

Smithsonian Institution photo

We Helped Make a Classic

The first all-composite aircraft to be certificated by the FAA—the Windecker Eagle—was presented to the National Air and Space Museum this past summer.

Now to be displayed permanently in the museum, the plane was designed by Dr. Leo Windecker and financed by the Dow Chemical Corp., which made the donation. It was built and certificated in 1974 in Midland, Texas.

FAA was commended for supporting the development of composite technology and was presented with an award by Dow Chemical at the NASM ceremonies.

The seven experimental, all-plastic planes so far built have flown thousands of trouble-free hours. Tests by the University of Texas showed that after 10 years of use, the composite materials were as strong or stronger than when the planes were first built.

The 3,400-pound, four-place Windecker Eagle cruises at 190 mph and has a top speed over 230 mph. ■

We have the potential to fly farther and faster than ever before, to involve more people in achieving through aviation. As we look back 65 years, we are grateful for the Lindberghs, the Earharts and others who persisted when the costs looked great, even when they lacked the knowledge necessary to achieve their goals and when others resisted their efforts.

Let us think ahead 65 years and visualize what a future generation might think of us if we fail in our efforts to make aviation an attractive opportunity for today's young people. No one should ever be able to say that we didn't try hard enough.

—Donald D. Engen

The cover: *FAA has been developing modifications to the Low Level Wind Shear Alert System to help it encompass more-localized microburst phenomena suspected in recent crashes. This sensor is off the end of the runway at Atlanta International Airport. See story on page 4.*

Photo courtesy of Fairchild Weston Systems

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Taking the Measure of the Wind

Tech Center Develops Wind Shear Warning System Enhancements

Everything seemed routine aboard Delta Air Lines Flight 191 until the jumbo jet began its descent into Dallas-Fort Worth International Airport. One passenger reported that the entire flight had been in bright sunshine; then, on approach, "it began to get real dark."

Another passenger said it felt like something was "pushing the airplane down toward the ground." Something may have been. It was late in the afternoon on August 2, and Flight 191 found itself trying to make a landing in a severe thunderstorm.

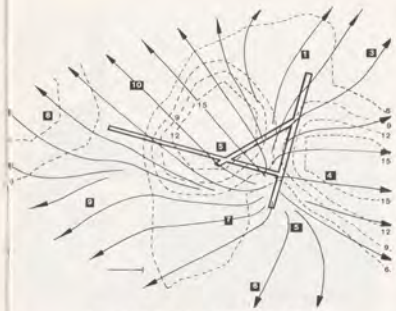
The plane came down short of the runway and bounced twice, the second time breaking in two. In the ensuing fire, 134 passengers died. Thirty survived in the separated tail section.

Although the cause of the crash will not be known for some time, NTSB investigators have identified low-level wind shear as a prime suspect. Wind shear is a sudden change in the speed and direction of wind, such as found in weather fronts and thunderstorms, that can affect aircraft lift.

The centerfield anemometer averages its readings for computer comparison with boundary remote sensor reports at Washington National Airport (top). UPI photo

The wind unit at the base of the anemometer converts its analog electrical signal to a digital one for transmission to the central computer (above).

Photo courtesy of Climatronics Corp.



The figure above is a Tech Center computer-generated animation of a microburst at New Orleans near the end of Runway 10, similar to the one Pan Am Flight 759 encountered in 1982. Depicted are streamlines showing wind direction near sensors (white on black numbers) and contours showing wind speed. A second computer program (at right) shows the same microburst at the same moment, but it's an active-runway-oriented depiction of relative headwind, with the runway centerline and west end as the reference points. The contours show the amount of change in headwind. Beyond the end of Runway 10 is a wind shear.

Low-level wind shear has been the cause of two other fatal airline crashes in the last decade—at New York's JFK in 1975 and at New Orleans in 1982—and five other airline accidents or incidents. That this may be termed the safety problem of the decade can be seen by the number of airline fatalities in the last 10 years that may be ascribed to low-level wind shear.

As a result, the agency is intensifying its efforts to resolve this problem. Sixty-nine Low-Level Wind-Shear Alert Systems (LLWAS) are already operational, and 41 more will be in place by mid-1986 at airports where the need is most critical.

LLWAS is a network of wind-speed-and-direction sensors located around an airport. A centerfield sensor that continuously averages its readings and five boundary remote sensors report their data through FM radio or telephone lines to a computer, which compares the sensor readings and analyzes the information. If any of the sensors shows a variation in wind exceeding 15 knots, except for gusts, the system provides a warning to tower controllers.

The average distance between the centerfield and remote sensors is about 1.5 miles, which has been accepted as adequate for detecting wind shears resulting from fronts and thunderstorms. However, researchers have identified another shear phenomenon called a microburst, usually associated with thunderstorms, which may have been at fault in the Delta 191 crash. A microburst is a narrow shaft of downward moving air that spreads out near the ground (see illustration). These microbursts generally are short lived, frequently with little horizontal movement and may be small enough to remain undetected if occurring between LLWAS sensors.

The local controller display in the tower cab continuously indicates wind direction, speed and gusts and sounds an alarm and flashes when wind shear of 15 knots or more occur. Photo courtesy of Fairchild Weston Systems

In response to these findings, FAA began an enhanced LLWAS test project at New Orleans International Airport, where a Pan American World Airways Boeing 727 crashed in July 1982 after a microburst encounter.

According to Dan Rebhun, LLWAS program manager in the Program Maintenance and Engineering Service, "The tests are determining if microbursts can be detected by a denser network of sensors. The goal of the project," he emphasized, "is to optimize the capabilities of the LLWAS system that we have to answer the needs of controllers and pilots. We just don't have the technology—like Doppler radar—for

By Jeffrey Thal
A Tech Center public information specialist, he has taught organizational development and worked as a radio and TV journalist and producer.

Electronics technician Wilbur Horton checks one of the earliest LLWAS sensors in a test at Atlanta International Airport. This boundary remote unit has the Fairchild configuration.

consistent detection of microbursts."

Joe Brady, a Technical Center mathematician and the Center's LLWAS program manager, describes the system: "The enhanced LLWAS at Moisant [New Orleans] consists of five additional boundary remote sensors, and the sensors are interrogated by the computer typically every five to six seconds.

"We've also upgraded the computer at the master station, and the software has been modified to accommodate computations with the added

Electronics technician Ken Mitchell of the Boston Airway Facilities Sector used a display atop the LLWAS central computer unit to monitor sensor performance.

Photo by Fred White

sensors and increase the kinds of computations that will make the detection procedure more versatile."

For the purposes of the project, information about variations in wind speed and direction for each of the sensors is recorded on magnetic tape and sent to the Technical Center every two weeks for analysis. The Center's studies are being conducted in conjunction with other studies at the National Center for Atmospheric Research (NCAR) in Boulder, Colo.

According to Brady, some of the Tech Center analyses include identifying the causes of wind shear alarms, determining the sources and frequencies of the most intense wind shears and creating map animations of wind shear events using wind contours and streamlines in a search for a graphic means of displaying wind shear information to controllers and pilots (see illustrations).

Steve Marks, a meteorologist at the Tech Center, who works for Data Transformation Corp., has developed a computer program to display the effect of a wind shear on an aircraft.

"What is important to the pilot is how a particular event will affect aircraft performance," he explains. "All of the [wind] information is active-runway oriented rather than north oriented. The intent is to tell the pilot what he can expect in terms of headwind and crosswind changes, rather than just report the existence of a shear in a particular section of the

One of the local controller displays in the Honolulu Tower provides the controller with a LED display of wind speed and direction for each sensor and an aural alarm if wind variation exceeds 15 knots.

Photo courtesy of Climatronics Corp.

airfield. We will use the information generated by this program to recommend a tower display that will convey that specific information to the controller."

Brady pointed to some modifications that were needed for the test system because of recurring false, or nuisance, alarms. "Any time the wind shifts at any one of the remote sensors, we get an alarm, even if it's not relevant to aircraft operations."

One modification concerned locating the sensors where they will not be sheltered or affected by obstructions. "In high winds, a sheltered or obstructed sensor can produce a false reading, such as when the wind is redirected by a building or fence," said Brady.

Another modification prevents an alarm unless a sensor exceeds the alarm threshhold for two successive interrogations. This ensures that an alarm is the result of a hazardous shear and not just an intermittent gust. Brady says that this single change eliminated about a third of the false alarms.

A third modification called for regular data checking through on-site computer programs, permitting local maintenance personnel to monitor sensor operation.

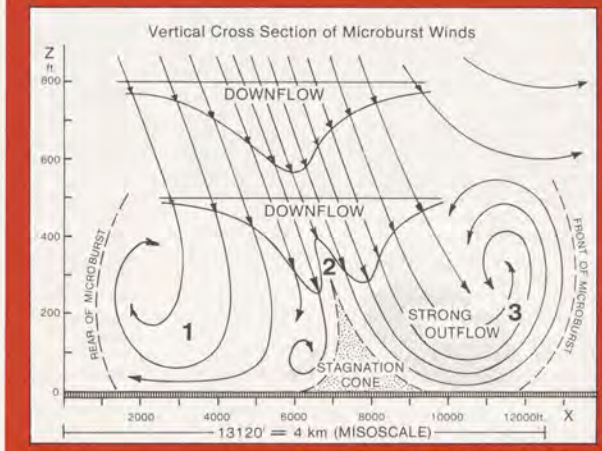
The modifications have been completed and their effectiveness is being evaluated.

A second enhanced LLWAS test is underway at Stapleton Airport in Denver, Colo., which incorporates all of these modifications.

Among the changes expected for the nationwide LLWAS are an increase in the number of sensors, refinements to the computer's wind-shear-detection procedure, a determination of the appropriate criteria for sensor location, the inauguration of an on site maintenance system and the development of a more effective LLWAS tower display for active-runway-oriented information.

FAA may not be able to control the wind any more than other elements of the weather, but it's determined to recognize its vagaries in advance and protect pilots against them. ■

Meteorologists Steve Marks (standing) and Ken Jaffe, both of Data Transformation Corp., have been working on graphic displays of wind shears at the Tech Center with a view to improving methods of displaying them to controllers.



Courtesy of National Transportation Safety Board

The Anatomy of a Microburst

The wind shear phenomenon called a microburst is one of the least understood weather events. With the occurrence of incidents and accidents, the National Center for Atmospheric Research undertook the Joint Airport Weather Study (JAWS) to examine the causes and effects of microbursts and their affect on aircraft performance.

Conducted at Denver's Stapleton International Airport, the study described the phenomenon as a potentially dangerous downdraft emanating from a thunderstorm.

As the downdraft reaches the ground, the airflow spreads out in all directions. As an aircraft enters a microburst (at "1" in the diagram), it will experience increased headwind. As it nears the center (2), it will encounter the downdraft. Beyond the center of the microburst (3), the aircraft will suddenly experience a tailwind with a differential in horizontal wind velocity of anywhere from 20 to 60 knots. The largest differential measured during the JAWS project was 80 knots, and the average was 50.

The study's data further indicates that the strongest microbursts are a mile to a mile-and-a-half in diameter. When a downdraft reaches 2½ miles in diameter, the winds are less likely to impede aircraft performance. ■

Awakening Youth to Aviation

FAA Essay Contest Stimulates Youngsters' Interest

Thirteen-year-old Abel Jordan of Deming, Wash., had never flown on an airplane and not surprisingly didn't know what an integrated airport system was, but he liked writing and aviation.

Eleven-year-old Tracey Revellino at the other end of the country in Howard Beach, N.Y., knew a lot more about air travel than the average pre-teen, for she lives right under the final approach to Runway 13-Right at Kennedy International Airport and has been through the airport and flown from it frequently with her attorney mother. But computers, not aviation, are her passion.

The common thread that binds them is their present understanding of airports and the aviation system gained by participating in FAA's second National Aviation Education Contest this year.

Jordan tied for first-place honors in the junior high school category with an essay titled, "How Integrated Airport Systems Affect Our Lives." This netted him an FAA certificate from Administrator Engen and a check for $500 from the Air Traffic Control Association. As with each of the national winners, his teacher won $250 from the National Aeronautics Association.

Earlier, for his winning a regional title, he was given a $100 U.S. Savings Bond by the Washington Airport Management Association, a flight lesson from Cessna and a model airplane.

Revellino wrote that "airports should be good neighbors" in discussing noise problems in her essay titled, "Air Transportation: The Need for Integration." Her prizes included a $500 ATCA check, an FAA certificate and a Cessna flying lesson, but the Eastern Region also bronzed her certificate for presentation.

National essay winner in the high school category was Nancy Reimers, who met with Great Lakes Region Director Paul Bohr (left) and U.S. Sen. Mark Andrews (R-ND) at award presentation ceremonies and luncheon in Minot, N.D.

Sharing the junior honors with Jordan was Jonathan Ward from Huntington, Ind., another 13-year-old seventh grader, whose essay was titled, "Aviation, My Friend." It recounted the impact that aviation has on the lives of everyone and how airports interconnect communities.

Ward received a $500 ATCA check and the FAA certificate and for his regional win: a certificate for a ride on a crash truck and tour of the rescue operation from the Fort Wayne, Ind., airport authority and one for a ride in a P-51 from the Fort Wayne Air Service, as well as a tour of the FAA King Air, a special achievement plaque from the commander of the U.S. Air Force 122nd Tactical Fighter Wing and a videotape of the ceremonies from Hank Kamerman of Great Lakes Flight Standards.

"The Role of Airports in Cities" was the title of Nancy Reimers' essay, which won for her top honors in the senior high school category. The 17-year-old from Minot, N.D., received a $1,500 check from the Air Traffic Control Association and the FAA certificate. A National Merit Scholar, she plans to pursue a career in law.

Northwest Mountain Region Director Charles Foster presents an award to junior high school essay contest winner Abel Jordan, as Washington Gov. Booth Gardner offers his congratulations.

Elementary school winner Tracey Revellino and her mother look over a letter notifying her of her award. N.Y. Daily News photo

Junior co-winner Jonathan Ward accepts awards from Great Lakes Region Director Paul Bohr as his parents, grandparents, younger brother and great-grandparents look on.

Speaking of her win and the debt she owes to her parents and teachers, she said, "No matter what gifts you are born with, it takes refining; it takes hard work. Without my family and my teachers, I probably wouldn't be here."

It was hard work to Abel Jordan, too, who didn't know what the subject was all about but wanted to know. With the help of his teacher, he did research at the Bellingham, Wash., public library and the Western Washington University library. Then he interviewed Bellingham airport personnel and fixed-base operators.

All this effort increased Jordan's—and, indeed, all the participants'—understanding of the role of aviation in the community.

And that is what the contest is all about. ■

Retirees

Bushnell, Jerome P.—AC
Elrod, Everett C.—AC
Evans, Homer L.—AC
Fairbairn, Bonnie J.—AC
Maine, Darrell R.—AC
Ramsey, William R.—AC
Reynolds, John M., Jr.—AC
Richwalski, Edward R.—AC
Suter, Donald R.—AC
Taylor, Clayton A.—AC

Markel, Dennis W.—AL
Wenger, Clyde C.—AL

Bergstrom, Ralph S.—CE
Douglass, Charles L.—CE
Forbis, Terry D.—CE
Quatrevaux, Hazel F.—CE
Stitley, Thomas E.—CE

Begovich, Nicholas J.—EA
Brown, William J., Jr.—EA
Bullock, Clinton T.—EA
Cline, Harrison E.—EA
Collins, Edward J.—EA
Haywood, Benjamin H.—EA
Holden, Kemp R.—EA
Kanyock, John S.—EA
Kuczynski, David P.—EA
Scheid, Bertram A., Jr.—EA

Angelkorte, Roger G.—GL
Cimino, Anthony N.—GL
Dove, William P.—GL
Green, Clyde H.—GL
Hankins, Robert R., Jr.—GL
Ladwig, Gerald G.—GL
Nelson, Jerome—GL
Ness, Robert L.—GL
Pomeroy, Gerald E.—GL
Pommier, Albert W.—GL
Thompson, James O.—GL
Weaver, Robert O.—GL

Blankenship, Leon R.—MA

Bates, David J.—NE
Bednarz, Frank W.—NE
Brown, Kenneth A.—NE
Genga, Richard A.—NE
MacDonald, James C.—NE
Murphy, Patrick J.—NE
Thommas, Robert A.—NE
Weymouth, Walter I.—NE

Corwin, Arthur H.—NM
Forbes, Neil B.—NM
Mone, Edward A.—NM
Smith, Grady L.—NM

Addison, James E.—SO
Finley, Joseph W.—SO
Fleurdelys, John W.—SO
Hashey, Carl R.—SO
Marler, Herbert G.—SO
McIntyre, Patrick J., Jr.—SO
Vickers, Johnnie T.—SO
Wilson, Warren F.—SO

Allen, Joy C.—SW
Ballard, Corinne S.—SW
Conn, Wayne L.—SW
Fleming, Robert B.—SW
Garcia, Hector X.—SW
Gobel, Robert J.—SW
Reinke, Virgil E.—SW
Saunders, Harold E.—SW
Story, Beth M.—SW
Ticer, Reginald J.—SW

Bailey, Dorothy M.—WA
Hughes, Frank J., Jr.—WA

Cadigan, John E.—WP
Davis, Walter A.—WP
Gibbs, Joseph—WP
Groce, James N.—WP
Hileman, Ric—WP
Kern, James R.—WP
Markley, John A.—WP
Monroe, Velbert—WP
South, John W.—WP
Talbert, Robert L.—WP
Zywicke, Mary L.—WP

By Nick Komons
The Agency Historian, he is the author of "Bonfires to Beacons"—a history of early federal aviation policy—and other published works.

Aviation's Indispensable Partner Turns 50

Federal Government Helped Forge New Enterprise, New Profession

Controllers J.V. Tighe (left)—who developed the first "shrimp boat"—and Glen Gilbert—one of the fathers of air traffic control—use the tools of their trade at the Newark Airway Traffic Control Station, the first in the nation: a cumbersome telephone headset, a map table with shrimp boats, dividers for measuring distances and a calculator for estimating aircraft arrivals over radio fixes.

The nation was in the middle of the Great Depression and business was stagnant almost everywhere—except in the skies. Aviation was bucking the economic trend.

Buoyed by the introduction of such modern passenger-carrying airliners as the Boeing 247D and the Douglas DC-2 and fed by a thriving airmail business, commercial flying was growing at a pace that would have been breathtaking even in good times.

But success had drawbacks as well as benefits. By 1935, traffic was severely straining the capacity of the nation's rudimentary airway system, raising the specter of impending midair disasters.

The problem lay in the fact that no one controlled en route traffic. With no airway control to regulate flow, aircraft came into terminal areas randomly, often arriving at the same time to compete for a portion of the congested airspace.

"We have planes coming from different directions at about the same time," said a TWA pilot of air traffic in the Chicago terminal area. "They are coming in on the radio beam with no visibility."

A New Jersey aviation official reported that Newark Airport often had "as many as 15 planes circling,

Was the lantern backup emergency lighting in this 1936 view of the Newark center? The controllers are John L. Huber (left), E.A. Westlake posting flight information and T.N. Gore.

Earl Ward (left) was responsible for organizing the airline traffic centers in 1935. Here, at the Newark center, with R.A. Eccles, he plots aircraft movement over New Jersey.

all of them blind flying and trying to keep at a different altitude, and some of them low on gas."

Highly placed officials took notice. "Something must be done about uniformly controlling the ever-increasing air traffic around our major airports and practically all of our airways, if public safety is to be served," Representative James M. Mead told the House of Representatives.

Airline dispatchers working in Chicago could not have agreed more. The aircraft they dispatched were experiencing near misses with alarming regularity. In order to stave off disaster, they began exchanging position reports and recording the information in logs.

Earl Ward, a former American Airlines operations officer, immediately grasped the significance of what these men were doing. Aircraft could be controlled if air traffic information was collected at a central point—an air route station—and used to keep aircraft separated. Ward approached the airlines operating out of Chicago with the idea of forming an airline air traffic control (ATC) consortium.

The operators saw merit in Ward's proposal, but they also saw problems. Every carrier was unlikely to join the consortium. Private pilots would still be able to do as they chose. And military fliers would not submit to orders from commercial operators. Obviously, this was a job for the Federal Government—specifically, the Bureau of Air Commerce. Under the Air Commerce Act of 1926, this agency had the responsibility of regulating air safety, establishing and maintaining airways and making air traffic rules.

The Bureau of Air Commerce was sympathetic to the airlines' plight; it was also short of cash. It proposed to the airlines, however, that if they established en route control immediately, the Bureau would take over the operation when funds became available for the purpose.

The operators agreed, and between December 1935 and June 1936, established air route ATC units at Newark, Chicago and Cleveland. On July 6, 1936, its coffers replenished with fiscal year 1937 funds, the Bureau took possession of these units, including their personnel, and designated them airway traffic control stations. The responsibility for controlling terminal traffic remained with the airport operators.

Controller Lee Warren operates his own design for the first ATC automation: A blackboard arrangement of slats that could be changed to keep flights in sequence. The pins at right anchored the slats. A foot treadle linked to pulleys raised the heavy column of slats below the one removed. It was a short-lived idea.

The art of air traffic control had been born at terminals. In the beginning, it was strictly limited to ground control. A controller, armed with a flag during daylight and a stationary light at night, stood at a prominent spot on the field and signaled aircraft when to turn or takeoff.

These crude instruments were even-

tually replaced by a flashing light projecting a red, green or white beam that was visible day or night for a mile or more. A controller flashing the light at an aircraft could signal the pilot to land, takeoff or hold. He could not communicate with the pilot beyond visual range, however.

This shortcoming was overcome in 1930, when a radio-equipped air traffic control tower began operating at Cleveland Municipal Airport. Soon every major airport in the country had a radio-equipped tower.

The job of the new airway traffic control stations was to control instrument flights between the time they left the jurisdiction of one terminal area and entered the jurisdiction of another, as well as resolving any conflict that might arise between these

The first radio-equipped air traffic control tower in the United States was this one at Cleveland, Ohio. For more than a decade, most were municipally owned.

Pioneers in en route air traffic control, from the left: First row—Hugh McFarlane, C.T. Tolpo, Earl F. Ward, H.D. Copland, R.E. Sturtevant; Middle row—J.V. Tighe, Glen A. Gilbert, E.A. Westlake, C.J. Stock, R.S. Roose, R.A. Eccles; Back row—Lee E. Warren, Emerson R. Mehrling, L. Ponton de Arce, Homer F. Cole, John L. Huber. Another pioneer, William H. Cramer, is not shown.

aircraft and those flying visually. The en route controller's responsibility ended only when an aircraft came within the tower operator's visual range.

The first generation air route system was manually operated, placing particular reliance on the ability of controllers to visualize in their minds the movement of aircraft in three dimensional space. Unlike tower personnel, air route controllers could not even communicate directly with pilots. Company dispatchers relayed information or instructions between pilots and air route controllers.

Information on other itinerant aircraft—private, military, and nonscheduled commercial—reached ATC from Department of Commerce communications stations by way of

Controller Bill Darby uses the latest communications equipment in the 1936 Newark, N.J., Tower.

radio or teletypewriter circuit.

Controllers posted incoming flight information on a large, wall-sized blackboard, which served as a worksheet that could be revised as new reports of takeoffs, en route progress and landings came in.

The information on the blackboard was transferred to a large table map

Teletype machines and military help betokened the war years, as evidenced at the Washington center in November 1943. Facility communications were aided by the use of pneumatic tubes.

that depicted the air routes converging on the terminal area at which the control station was located. Controllers placed small wooden markers shaped like shrimp boats on the face of the map. Each marker represented a flight in the station's control area. A shrimp boat indicated the position of an aircraft, showed by a pointed end the direction of flight and was equipped with a clip that could hold a strip of paper. Controllers used this strip to record the flight's identity, time of departure and altitude.

By referring to the map, a controller could size up the situation along the routes for which he was responsible and detect potential conflicts. If he discovered a conflict, he picked up the phone and told the company dispatcher to instruct his pilot to go to a different altitude, circle around a radio fix or look out for a visual flight in the vicinity. All the

Another addition of the war years to be seen here at the LaGuardia center in New York were women controllers, whose jobs ended with the end of the war.

while, he was coordinating these operations with the tower controller.

Positive control was exercised only on aircraft flying by instruments, and instrument flight was required only when weather conditions demanded it. Nevertheless, controllers followed the progress of aircraft even in good weather and passed on to pilots pertinent details about other aircraft within 15 minutes or less of their line of flight.

The early controllers did more than control traffic. Prior to 1938, the Bureau of Air Commerce did not provide ATC stations with logistical or engineering support. Thus, each station relied on its staff and local suppliers for equipment design and fabrication. Indeed, it can almost be said that controllers themselves created the earliest version of the first-generation system.

Glen A. Gilbert, who was among the group of 15 controllers transferred from the ATC consortium to the Bureau of Air Commerce, was the principal architect of the first-generation procedures and wrote the first ATC manual. J.V. Tighe, another of the original 15, designed the first satisfactory shrimp boat, fabricated out of brass. A Newark controller, John L. Huber, helped design the first telephone recording equipment. Huber also designed the first flight-progress board, which eventually supplanted the blackboard.

Although equipment was similar in type at each station, local staff responsibility for design and fabrication meant that models differed from location to location. Standardization finally came in 1938, after the creation of the Civil Aeronautics Authority.

Once again, the ingenuity of controllers played a role in the outcome. Lee Warren, another July 1936 hire,

Banks of flight strips and the large map table with shrimp boats were the mark of an air traffic control center in 1940, as here in Pittsburgh.

worked with a CAA engineer, C.E. Wise, to draw ideas from all locations and assemble a standard station. Using the Warren-Wise prototype as a model, the CAA converted all stations to a uniform configuration.

By this time, stations had gone from a 16-hour to a 24-hour schedule and were sprouting all across the land under a new name, air route traffic control centers (ARTCCs). When the CAA was created, there were eight centers. By the time of Pearl Harbor, there were 15, and 12 more were commissioned during the ensuing conflict.

World War II led to a quantum jump in the CAA's ATC responsibilities: the takeover of terminal control. The push for Federal control came from the War Department. Beginning in 1940, the military expressed concern over the lack of uniform terminal control and the problems that split ATC authority might bring in wartime.

The President and the Congress responded to the War Department's pleas, and the CAA took over the first batch of towers in November 1941. By the end of the war, it had taken over scores more. A few low-activity facilities were returned to airport operators at war's end, but the terminal control function remained primarily a Federal responsibility.

Improvements continued to be introduced during wartime and in the immediate postwar period, particularly in the posting of flight information and in communications. In July 1949, when the first direct radiotelephone communications service was inaugurated at the Chicago ARTCC, controllers finally acquired the means to make voice contact with pilots—though it took six more years before all air route centers acquired the same capability.

None of these innovations changed the character of the system. It was still exclusively manual and highly labor-intensive.

Shortly after the old LaGuardia Tower was commissioned as a federal facility around May 1945, the radio desk and flight strip assembly were installed, which made it possibly the first approach control set up in the eastern U.S.

But the war had sown the seeds of the second-generation system. On May 24, 1946, the aviation community caught a glimmer of the future. On that day, the CAA unveiled at Indianapolis a radar-equipped control tower. The radar itself was converted war-surplus equipment, and the general use of this technology on the airways was still years away. Air traffic control, nevertheless, was slowly but surely moving away from the era of wall-sized blackboards and table-sized maps. ■

By June 1945, air traffic had grown and with it wall-to-wall flight strips and larger staffs at the Kansas City center. The military was still helping out.

This is the first in a series of FAA World *historical articles to be published as part of a year-long commemoration of the July 1986 fiftieth anniversary of federal responsibility for the nation's air traffic control system.*

Infected and Infecting

He Got the Flying Bug and Shows His Zeal Everywhere

Chuck Hicks has come a long way in less than a decade, both in career and what his life is all about.

A GS-14 Aviation Standards training specialist today, Chuck Hicks first walked into the Cleveland Airway Facilities Sector office as a GS-4 entry-level electronics technician. "I was looking to become a pilot for the agency," Hicks says. "I was going to do a good job as a technician until I got to that point." That point came a few months later when he successfully bid on a GS-7 job as a flight inspection airborne electronics technician at the Technical Center, then known as NAFEC.

That change further whetted his appetite for flying. Hicks completed flight training, then got into instructing with local flying clubs and the Civil Air Patrol and joined the New Jersey National Guard, where he was ultimately selected for officer candidate school.

With that under his belt, he entered the developmental aviation safety inspector training program and was assigned to the Oakland, Calif., Flight Standards District Office as a GS-7 general aviation operations inspector. There, Hicks joined the California Army National Guard, which provided him with a helicopter flying qualification at Fort Rucker, Alabama. As a result, he became the second helicopter specialist at the Oakland FSDO.

In October 1982, Hicks came to Washington, D.C., to the Technical Training Division of the Office of Personnel and Technical Training. His program leadership in Aviation Standards training earned him a promotion, a sustained superior performance award and an outstanding performance rating.

His mounting enthusiasm for aviation had made Hicks the backbone of the FAA and Civil Air Patrol aviation education programs in Oakland, where he invested many hours in workshops and presentations to kindergarten, elementary and high school classes on aviation in general and aviation careers. Now in Washington, he continued his involvement through the Department of Transportation's "Adopt-a-School" program.

Somehow, Hicks found the time on both coasts between 1976 and 1984 to complete the requirements for a Bachelor of Science degree in Applied Science and Technology, with an aviation major, from Thomas Edison College in Trenton, N.J.

He's looking to getting his master's degree in human resource development and "to putting this expertise and training to use as an office manager in the FAA and later as a Flight Standards division manager," Hicks says.

Growth is something that doesn't stop for Chuck Hicks. ■

Chuck Hicks (left) discusses a training program with Michael Sacrey, Operations Branch manager in the General Aviation and Commercial Div., Office of Flight Operations.

People

The information in this feature is extracted from the Personnel Management Information System (PMIS) computer. Space permitting, all actions of a change of position and/or facility at the first supervisory level and branch managers in offices are published. Other changes cannot be accommodated because there are thousands each month.

Aeronautical Center

■ **Paul R. Auchenbach,** supervisor, Airworthiness Section, Examinations Standards Branch, Regulatory Support Division, Aviation Standards National Field Office.

■ **Ronald W. Brownell,** supervisor, Radar Section, Airway Facilities Branch, FAA Academy.

■ **Louis C. Foree,** supervisor, Environmental Support Systems Section, Academy Maintenance Support Branch, Facility Support Division, promotion made permanent.

■ **Floyd E. Lonnevik,** unit supervisor, Airworthiness Section, Examinations Standards Branch, ASNFO.

■ **Thomas J. Philumalee,** supervisor, Nav/Comm Section, Airway Facilities Branch, FAA Academy.

Alaskan Region

■ **Alfred L. Bailey,** manager, Fairbanks Flight Service Station, from the Los Angeles FSS.

■ **William J. Brown, Jr.,** area supervisor, Anchorage FSS.

■ **Sandra K. Fanslau,** manager, Accounts Control Branch, Financial Management Division.

■ **Lowell F. North,** area supervisor, Fairbanks FSS.

■ **Robert B. Snoddy,** assistant manager for program support, Program Support Staff, North Alaska Sector, Airway Facilities Div., from Los Angeles AFS.

■ **Michael A. Tarr,** area manager, Sitka FSS, from the Yakutat FSS.

Central Region

■ **Lloyd W. Adams,** assistant manager for training, Kansas City ARTCC Airway Facilities Sector, from the AF Div.

■ **Rosalyn R. Asbury,** area supervisor, Columbia, Mo., Automated Flight Service Station, from the Kansas City, Mo., FSS.

■ **Norman S. Baker,** assistant manager, Columbia AFSS, from Kansas City FSS.

■ **Wilbert R. Brewton,** unit supervisor, Springfield, Mo., Training Unit, St. Louis, Mo., AF Sector.

■ **Frank D. Guy,** area supervisor, Kansas City International Airport Tower.

■ **Lewis E. Kitson,** supervisor, F&E Planning Section, Program and Planning Branch, Airway Facilities Division, promotion made permanent.

■ **Thomas R. Marciniak,** assistant manager for training, Columbia AFSS.

■ **James E. Owens,** area manager, Kansas City International Tower.

■ **Robert D. Reed,** area supervisor, Columbia AFSS, from Kansas City FSS.

■ **Patricia A. Vann,** area supervisor, Emporia, Kan., FSS, from the Manhattan, Kan., FSS.

Eastern Region

■ **John F. Biddle,** manager, Newark, N.J., Tower, from the Air Traffic Division.

■ **Frank J. Bombace,** manager, New York TRACON, Garden City, N.Y., from the LaGuardia Tower, New York.

■ **Robert A. Christopher,** manager, LaGuardia Tower, from Air Traffic Div.

■ **Robert D. Crovo,** manager, Salisbury, Md., Flight Service Station.

■ **Joseph D. Donofrio,** area supervisor, Syracuse, N.Y., Tower, promotion made permanent.

■ **Robert J. Howard,** assistant manager, military operations, New York ARTCC.

■ **Paul S. Jester,** assistant manager, Washington ARTCC Airway Facilities Sector, from the FAA Academy.

■ **Robert L. Jones,** unit supervisor, Trenton, N.J., AF Sector Field Office, Tri-State AF Sector, promotion made permanent.

■ **Mark E. Manoogian,** unit supervisor, Terminal/En Route Section, Construction Engineering Branch, AF Division.

■ **William J. Marx,** assistant manager, LaGuardia Tower, from the AT Division.

■ **Donald P. Mayo,** unit supervisor, Newark, N.J., AF Sector Field Office, Tri-State AF Sector.

■ **John D. McCarthy,** area supervisor, Philadelphia FSS, from the Millville, N.J., FSS.

■ **Kenneth N. Patton,** area manager, Greater Pittsburgh, Pa., Tower.

■ **John T. Rountree, Jr.,** manager, Lynchburg, Va., Tower, from the Richmond, Va., Tower.

■ **John H. Timmerman,** supervisor, Automation Section, Plans and Programs Branch, Air Traffic Division, promotion made permanent.

■ **Paul R. Wilkes,** area manager, Baltimore, Md., Tower.

Great Lakes Region

■ **Linda S. Baker,** area supervisor, Terre Haute, Ind., Automated FSS, from the Fort Wayne, Ind., FSS

■ **Ronald G. Breckler,** supervisor, Programs Section, Plans and Programs Branch, Air Traffic Division.

■ **Ray A. Brown,** unit supervisor in the Michigan AF Sector, Romulus, Mich., from the Indiana AF Sector.

■ **James P. Crawford,** assistant manager for technical support, Indianapolis, Ind., ARTCC Airway Facilities Sector.

■ **Robert L. Cross,** unit supervisor, Ohio AF Sector, Cleveland, Ohio.

■ **Frank J. Cullen,** assistant manager for program support, Dakota AF Sector, Bismarck, N.D., from the AF Division.

■ **M. Sue Dailey,** area supervisor, Dayton, Ohio, AFSS, from South Bend FSS.

■ **Martin G. Duffy,** assistant manager for program support, Illinois AF Sector, Springfield, Ill.

■ **William T. Dulik,** unit supervisor, Illinois AF Sector.

■ **Janet V. Heard,** area supervisor, West Chicago, Ill., FSS.

■ **Donald R. Hogue,** assistant manager for program support, Ohio AF Sector, from the Airway Facilities Division.

■ **Paul C. Kenward,** assistant manager, Detroit, Mich., FSS, promotion made permanent.

■ **Wanda F. Loncar,** manager, Fort Wayne FSS, from the Zanesville, Ohio, FSS.

■ **James P. McNally,** enroute automation supervisor, Chicago ARTCC.

■ **George B. Meiners,** area supervisor, Green Bay, Wis., Automated FSS, from Green Bay FSS.

■ **David J. Peterson,** area supervisor, Dayton AFSS, from Milwaukee, Wis., FSS.

■ **Douglas F. Powers,** assistant manager, Detroit Metro Airport Tower, from the Air Traffic Division.

■ **Gerald D. Probst,** area manager, Chicago ARTCC, promotion made permanent.

■ **George H. Runner,** area supervisor, Chicago ARTCC, promotion made permanent.

■ **Charles R. Saxton,** area supervisor, Detroit FSS.

■ **Carol L. Veazie,** area supervisor, Green Bay AFSS, from the Watertown, S.D., FSS.

Metro Washington Airports

■ **Phillip D. Ramey,** section supervisor, Utilities Services Branch, Engineering and Maintenance Division.

New England Region

■ **Joseph S. Cretella,** manager, Facilities Establishment Branch, AF Div.

■ **Joseph A. Egan,** area supervisor, Bradley International Airport Tower, Windsor Locks, Conn., from the Groton, Conn., Tower.

■ **Richard J. Haldeman,** assistant manager, Bridgeport, Conn., Automated FSS, from the Air Traffic Division.

■ **Charles W. Korn,** manager, NAS Planning & Program Management Branch, Airway Facilities Division.

■ **Miles R. Miller,** area supervisor, Boston ARTCC, promotion made permanent.

■ **John D. Mogul,** manager, National Flight Procedures Review Branch, Flight Standards Div., promotion made permanent.

■ **William D. Robbins, Jr.,** area supervisor, Bangor, Maine, FSS, from the Concord, N.H., FSS.

■ **Beverly D. Scott,** manager, Westfield, Mass., Flight Standards District Office, from the Springfield, Ill., GADO.

■ **John C. Silva,** area supervisor, Boston ARTCC, from Air Traffic Div.

■ **Edward J. Stanton,** manager, Bridgeport AFSS, from Bridgeport FSS.

Northwest Mountain Region

■ **Larry D. Bishop,** assistant manager for technical support, Salt Lake City, Utah, ARTCC Airway Facilities Sector.

■ **Vernon D. Harkins,** assistant manager for program support, Denver, Colo., AF Sector, from Salt Lake City AF Sector.

■ **John J. Humphries,** supervisor, Environmental Engineering Section, Maintenance Branch, Airway Facilities Div., from Los Angeles ARTCC AF Sector.

■ **George W. Kinsley, Jr.,** unit supervisor, Seattle ARTCC AF Sector.

■ **David L. Muir,** systems engineer, Seattle ARTCC AF Sector, promotion made permanent.

■ **Wayne E. Peterson,** area manager, Denver ARTCC, from Air Traffic Div.

Southern Region

■ **Jeffrey W. Abbott,** area supervisor, Macon, Ga., Tower, from the Memphis, Tenn., Tower.

■ **William P. Anderson,** area supervisor, Lexington, Ky., Tower, promotion made permanent.

■ **Charles C. Blankenship,** area supervisor, Tallahassee, Fla., Flight Service Station, from the Mobile, Ala., FSS.

■ **Ronald S. Boyd,** area supervisor, West Palm Beach, Fla., Tower.

■ **George A. Brenner,** assistant manager, Miami, Fla., International Airport Tower, from the Air Traffic Division.

■ **Dale H. Cannon,** assistant manager, Memphis Tower, from Air Traffic Div.

■ **James E. Carroll,** area manager, Charlotte, N.C., Tower.

■ **Pat D. Caudill,** area supervisor, Augusta, Ga., Tower, promotion made permanent.

■ **Walter L. Colvin,** assistant manager, Atlanta, Ga., International Airport Tower, from the Savannah, Ga., Tower.

■ **Toby Cooper,** area supervisor, Tri-City Airport Tower, Bristol, Tenn., from the Guam CERAP.

■ **Lemoyne J. DeLille,** area supervisor, Standiford Field Tower, Louisville, Ky., from the Opa Locka, Fla., Tower.

■ **Emery L. Gresham,** area supervisor, Fulton County, Ga., Airport Tower, Atlanta, promotion made permanent.

■ **John W. Hayhurst,** area supervisor, Florence, S.C., FSS, from the Melbourne, Fla., FSS.

■ **William S. Hensley,** manager, Kentucky Flight Standards District Office, Louisville, from Mississippi Valley FSDO, Memphis.

■ **Reginald J. Hillman,** area manager, Charlotte Tower.

■ **Thomas F. Hofbauer,** area supervisor, Melbourne FSS, from Orlando, Fla., FSS.

■ **William C. Kilpatrick,** supervisor, Navaid Unit, Charlotte AF Sector.

■ **James J. McGrath,** manager, Opa Locka Tower, from Pompano Beach, Fla., Tower.

■ **Phillip D. Morris,** area manager, Charlotte Tower.

■ **Willie B. Nelson,** unit supervisor, Central Florida FSDO, St. Petersburg.

■ **Richard A. Post,** assistant manager, Macon Automated FSS, from Savannah FSS.

■ **Jimmy H. Quinley,** supervisor, Technical Inspection Field Office, Evaluation Staff, Airway Facilities Division.

■ **Richard D. Rasmussen,** unit supervisor, Fayetteville, N.C., AF Sector Field Office, Raleigh, N.C., AF Sector, promotion made permanent.

■ **Ferdinand Sanchez,** area supervisor, San Juan, P.R., CERAP.

■ **Joseph E. Schneider,** assistant manager, plans and procedures, Macon AFSS.

■ **Charles A. Sears,** manager, Miami International Airport Tower, from the Portland, Ore., Tower.

■ **Charles R. Taylor,** assistant manager, Memphis ARTCC, from Air Traffic Div.

■ **Bobby J. Young,** unit supervisor, Crossville, Tenn., AF Sector Field Office, Covington, Ky., AF Sector, from the Jackson, Miss., AF Sector.

Southwest Region

■ **Rollin O. Ashley,** manager, Oklahoma City, Okla., Manufacturing Inspection District Office, promotion made permanent.

■ **Fred W. Bell,** manager, Albuquerque, N.M., Airway Facilities Sector, from the Great Lakes Region AF Division.

■ **Robert C. Bertelsen,** assistant manager for automation, Dallas-Fort Worth, Texas, Tower, from the FAA Academy.

■ **James B. Brownfield,** manager, Little Rock, Ark., Flight Standards District Office, from the Oklahoma City FSDO.

■ **Jimmy C. Clay,** area supervisor, Conroe, Texas, Automated Flight Service Station, from the Houston, Texas, FSS.

■ **Eugene G. Devlin,** manager, Austin, Texas, FSS, from New Orleans, La., FSS.

■ **John E. Hemmert,** manager, Oklahoma City FSDO, from the Little Rock FSDO.

■ **Herman J. Lyons, Jr.,** manager, McAlester, Okla., Automated FSS, from the San Antonio, Texas, FSS.

Surrounded by brass, employees of the Detroit Flight Standards District Office at Willow Run Airport, Mich., have cause to toot their horn, having their facility selected to receive the Flight Standards Facility of the Year Award for 1985. From the left are Great Lakes Region Director Paul Bohr; Carol Rayburn, manager, General Aviation and Commercial Div., Office of Flight Operations; regional Flight Standards Div. manager George MacArthur; Annie Allen; Eugene Sherman (holding the national award); Hildi Grysiak (holding the regional award); Craig Beard, director of the Office of Airworthiness; and Lee O'Berry, manager of the Detroit FSDO. Among other citations were the unit's safety record, innovations in public service, increased efficiency and productivity, new human relations initiatives and improved EEO efforts.

■ **Kenneth E. Moore,** area supervisor, De Ridder, La., Automated FSS, from the New Orleans FSS.

■ **James R. Nausley,** manager, Conroe AFSS, from the Air Traffic Division.

■ **Joseph P. Odonohoe,** area supervisor, McAlester AFSS, from Oklahoma City FSS.

■ **Gilbert S. Reyna,** area supervisor, Lafayette, La., FSS, from New Orleans.

■ **James D. Robinson,** assistant manager for technical support, Little Rock AF Sector, from Southern Region AF Div.

■ **Eddie M. Upchurch,** area supervisor, Midland, Texas, Tower, from the Lubbock, Texas, Tower.

■ **Larry J. Whisenhunt,** area supervisor, Amarillo, Texas, Tower.

Technical Center

■ **John J. Dragovits,** unit supervisor, Systems Support Facilities Section, ATC Facilities Operations & Maintenance Branch, Facilities Division.

■ **William E. Reilly, Jr.,** manager, Management Services Branch, Administrative Systems Division.

Washington Headquarters

■ **Lorence H. Bessette,** manager, Avionics Branch, Aircraft Maintenance Division, Office of Airworthiness, from Southwest Region Flight Standards Div.

■ **Arthur A. Simolunas,** manager, Host Branch, System Development Div., Advanced Automation Program Office.

■ **John P. Watterson,** manager, Airspace & Air Traffic Rules Branch, Airspace—Rules & Aeronautical Information Div., Air Traffic Operations Service.

Western-Pacific Region

■ **Atanacio Almendariz,** area supervisor, Marysville, Calif., Flight Service Station, from the Reno, Nev., AFSS.

■ **Henry R. Barbachano,** manager, Palo Alto, Calif., Tower, from the San Francisco Tower.

■ **Gene L. Daniel,** assistant manager, Honolulu, Hawaii, ARTCC Airway Facilities Sector, from the Lancaster, Calif., AF Sector.

■ **Marion C. Davis,** manager, Coast TRACON, El Toro Marine Corps Air Station, Santa Ana, Calif., from the Air Traffic Div.

■ **Nancy Y. Ito,** supervisor, Programming & Analysis Section, Data Processing Branch, Management Systems Division, promotion made permanent.

■ **Charles S. Kakigi,** assistant manager, Reno AFSS.

■ **Ralph E. Marsh,** area supervisor, Oakland, Calif., ARTCC.

■ **Richard W. Miller,** manager, Phoenix, Ariz., Tower, from Eastern Region Air Traffic Division.

■ **Orestes R. Moreno,** area supervisor, Los Angeles TRACON.

■ **Thomas L. Reed,** assistant manager, quality assurance, Oakland ARTCC, from the Air Traffic Division.

■ **John W. Schassar,** area supervisor, Phoenix Tower.

■ **Austin A. Smith,** unit supervisor, F&E Program Section, Program and Planning Branch, Airway Facilities Div.

■ **Ralph M. Utterback, Jr.,** unit supervisor, San Francisco Flight Standards District Office, promotion made permanent.

By Michael Benson
The public affairs officer of the Eastern Region and formerly of the Technical Center, he was with the Treasury Dept. and the *New York Times.*

Seaplane Safety on the Step

FAAer Turns Casual Get-Togethers Into Safety Forums

Nearly 90 seaplanes are parked wingtip to wingtip on Lake Pleasant during the Seaplane Pilots Safety Seminar.

Ward Shandoff of the Albany, N.Y., General Aviation District Office has done what many dream about: turning an avocation into a vocation—at least in part—and getting thanked by FAA management for doing so.

An air carrier airman certification inspector and for many years an accident prevention specialist, Shandoff loves to fly float planes, and he does so every chance he gets after work. That led him, with others outside FAA, to develop a seaplane safety conference that has grown into a very big and popular annual event.

"Shandoff willingly devotes many hours of his own time in accomplishing the necessary coordination and planning that are required to make this event successful," said James Haight, Eastern Region's Flight Standards Division manager, in recommending Shandoff for a Special Achievement Award.

Gene Burdick (right), assistant manager of Eastern Region's Flight Standards Division, presents a Special Achievement Award to Ward Shandoff for his work in arranging seaplane safety seminars.

The "event" is the Seaplane Pilots Safety Seminar at Speculator, N.Y., in the Adirondack Mountains. Seaplane pilots from as far away as Nevada, Tennessee and Canada "splash in" on bucolic Lake Pleasant—some 65 miles northwest of Albany—for a long weekend of seminars and workshops on a shared love: water flying.

It all began some 11 years ago. A small group of seaplane pilots from New York asked Camp of the Woods owner Gordon Purdy for permission to use his beach on the lake as a tie-down before the start of the busy summer season. A pilot himself, Purdy agreed. The small band of pilots then began informal annual get-togethers there.

Safe flying always was of concern, but it wasn't until Shandoff got involved three years later that a formal safety program really got started. "Developing the safety seminar has been a labor of love," says Shandoff, "made even easier by outstanding help and cooperation from people in the industry and in the Seaplane Pilots Association."

Chuck O'Neill, manager of the Albany GADO and also a rated seaplane enthusiast, says that development of the safety seminar was a case of the right thing to do at the right time, at the right place and with the right people. "There's a lot of interest in seaplanes in this part of the country. New York ranks fourth among states in seaplane bases with 23," he notes.

Jay J. Frey (second from right), vice president of EDO Corp., receives an FAA Distinguished Service Award from Robert Fishman, manager of the Albany, N.Y., Flight Service Station, as (left to right) Chuck O'Neill, manager, Albany General Aviation District Office; Gene Burdick; and Ward Shandoff look on. The award cited Frey for his contributions to promoting seaplane flying.

Photos by Mike Benson

A contestant comes in to demonstrate his landing skills as a crowd watches.

FAA inspector Ward Shandoff handles the microphone during landing-skill contests on Lake Pleasant. To his left is Dave Quam, president of the Seaplane Pilots Association.

Says Mary Silitch, executive director of the Seaplane Pilots Association, "Speculator is threatening the Greenville, Maine, claim as the largest gathering of seaplane pilots," referring to the latter's widely known annual Greenville International Seaplane Fly-In. "Popularity aside, the real distinction," she says, "is that Speculator is built around safety and education, rather than recreation; it's unique that way."

The educational and safety program is varied, dealing with improving the safety of seaplane operations. They deal with topics like aircraft performance, aerodynamics, maintenance, navigation and a review of the pertinent Federal Aviation Regulations.

In addition, time is scheduled for check rides or biennial flight checks by O'Neill, Shandoff and, this past June, by the new Albany accident prevention specialist, Bill Lutgen, formerly of the Rochester, N.Y., GADO.

Many credit such a program with increasing attendance at Speculator. The number of seaplanes parked along the beach this year was more than 85. An additional 80 planes were parked at nearby Piseco Airport. All told, there were 700 pilots attending the June gathering, at least half of whom were seaplane rated, and 450 other spectators.

The Speculator fly-in isn't all work and no play. One afternoon is devoted to contests, as seaplane pilots show off their flying prowess. Prizes are awarded to the top three pilots in such contests as spot landings and simulated aerial rescues. For the latter, the pilot has to land near a free-floating buoy (the "person" in distress), shut off the engine, glide to the float, pick it up, restart the engine and take off. The best time wins.

The contests are a big crowd attractor, and the local community does its part to boost the annual event.

Shandoff believes there is still more to do on the seaplane safety front. "We're looking to build a bigger and better program each year, and that includes getting a new FAA film on how to fly seaplanes. Ours is 10 years old and needs to be updated."

He's not letting go of a winning formula. ■

By Michael Ciccarelli
The New England Region public affairs officer, he has been a UPI bureau chief and a corporate publicity manager.

Three on a Life

CPR Teamwork Helped Save 'a Dead Man'

About two weeks after he had been described as "clinically dead," 36-year-old Gregory Deterding and his wife walked into the New England Regional Office and asked where they could find three FAAers—Bradley A. Davis; Ramon B. Ruiz, Jr.; and Richard C. Francis.

Deterding, an electrician with a private contracting firm, came to express his gratitude to the men who, by applying emergency medical aid, had helped save his life when he had been electrocuted while working on a job in the headquarters building.

One day last March, Al Brilliant, the NAS Plan officer in the Airway Facilities Division, was looking over the renovation status of a second-floor space to be occupied by Martin Marietta Corp., the systems engineering and integration contractor, when he heard a moan and the sound of debris falling in the next room.

Looking in, Brilliant saw a carpenter breaking Deterding's fall from a step-ladder he had been using to reach wires above the drop-ceiling. Seeing the electrician motionless on the floor, Brilliant ran to a nearby office and shouted for someone to call an ambulance and to have the Communications Center ask over the public address system for anyone with CPR training to respond to the emergency.

When he heard the plea, Brad Davis, a pavement engineer in the Airports Division, was on the third floor. Within half a minute, he had bounded down a flight of stairs,

Airports pavement engineer Brad Davis

Mail clerk Ramon Ruiz

found the room and was kneeling astride the victim giving him chest compression. "His complexion was grey and he wasn't breathing," Davis recalled.

Within moments, Ruiz had joined Davis after sprinting down a flight of stairs from the other side of the third floor where he was delivering mail. Kneeling beside the electrician, Ruiz began mouth-to-mouth respiration in coordination with Davis' compressions.

Arriving almost simultaneously with Ruiz, Francis, a telecommunications specialist from the Logistics Division on the first floor, began monitoring Deterding's pulse.

For the next eight to ten minutes, the trio worked on Deterding. "It seemed like an eternity," Davis later said, but they never stopped, despite reports of "no pulse" from Francis. Twice during that period, they did get a pulse and once he breathed on his own, but most of the time, there wasn't any pulse, and he was turning blue.

When the Burlington Fire Department's ambulance crew arrived, an emergency medical technician took over Davis' place and called for a defibrillation machine. Watchers of television medical shows are familiar with this device, which features a pair of "paddles" that send an electrical shock into the body of a victim of cardiac arrest to restart his heart. A fire department spokesman later said of this moment: "The victim was clinically dead. There was no pulse or heartbeat."

Telecommunications specialist Dick Francis

The defibrillator was applied several times, along with CPR and oxygen there and in the ambulance. By the time he arrived at the hospital, Deterding had a good heartbeat and blood pressure, according to a doctor.

Every day for a few days after the near-tragedy, the smiles on the faces of Davis, Ruiz and Francis grew broader as hospital reports became more optimistic.

The FAA presented the trio with citations and the company that Deterding works for sent a letter of appreciation, but Deterding's walking in on them was their real prize.

There's no doubt in any of their minds as to whether studying CPR is worthwhile. Brad Davis learned his while working as a life guard, earned a CPR rating in the military and took recurrent training through FAA-sponsored courses in the regional office. "Benji" Ruiz had taken a CPR course in high school. Dick Francis qualified in CPR while working in the Civil Aviation Security Field Office at Logan International Airport.

Where and when will you get your CPR training? It's a life-saver. ■

FAA's Rocky Mountain High

It's time again to Think Snow! The Third Annual FAA Ski Fest is just around the corner, from a planning standpoint.

Sponsored again by the Denver Center Ski Club, the Ski Fest will be held from Monday, Feb. 24, 1986, through Saturday, March 1, at Crested Butte, Colo. Last year's event drew 74 people from as far away as Puerto Rico and Alaska.

This year, the serious people are promised fantastic powder and NASTAR races. For those also interested in the creature comforts and après ski, the amenities include condominiums on the slopes, fireplaces, continental breakfast and banquet dinner, "terrific" restaurants, hot tubs, mountain barbecue, keg party, dancing, fun races, snowmobiles and sleigh rides.

The cost including transfers and lift tickets is $310.

Plan your leave and send for a registration package for $2, noting whether you will bring your own equipment or want to rent it at Crested Butte. The package will include an agenda of the week's activities, information on lodging, a map of the mountain and pictures to whet your appetite.

Write to: Ski Fest Chairman, Denver Center Ski Club, 2211 17th Ave., Longmont, Colo. 80501. ■

A Life of Wings and Sails

Don Carlisle and his wife, Eleanor, like challenges involving the air. He's a plans and programs specialist at the San Juan, P.R., CERAP, and she's a pilot in neighboring St. Thomas, U.S. Virgin Islands. Together, they play in the Caribbean breezes as sailors.

This year, they and their Beneteau First Class 10-meter sailboat *Airbus* raced in four regattas to take the championship in the Caribbean Ocean Racing Circuit.

The Carlisles got their feet wet after he became a controller at the Atlanta ARTCC in 1975, learning to sail on Lake Lanier, north of Atlanta. Moving on to the St. Thomas Tower, sailing went from a summertime hobby to a year-round pasttime. With their sailboat *Fun Hog,* they captured several local trophies, including first in class at the 1981 British Virgin Islands Spring Regatta. Lake Norman near the Charlotte, N.C., Tower was the next setting for racing in a small boat.

When San Juan came along, they ordered the *Airbus* from France. Taking delivery in Guadeloupe, they sailed it the 380 miles to Puerto Rico with area supervisor Victor Garcia and air traffic assistant Fernando Lopez.

After three weeks of preparation, the boat was ready for the 1985 Caribbean Ocean Racing Circuit. In the Puerto Rico Copa Velasco, *Airbus* won best Beneteau yacht, team trophy and fifth in class. A week later, it was first in class and third overall in the St. Thomas Rolex International Regatta. With their Crew of nine, the Carlisles next took first in class, fleet and overall and the team trophy in the British Virgin Islands Spring Regatta. Finally, in the Antigua Sail Week, *Airbus* clinched team trophy, best American yacht, first in class and fleet and—top honor in Caribbean racing—winner of the Caribbean Ocean Racing Circuit. ■

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