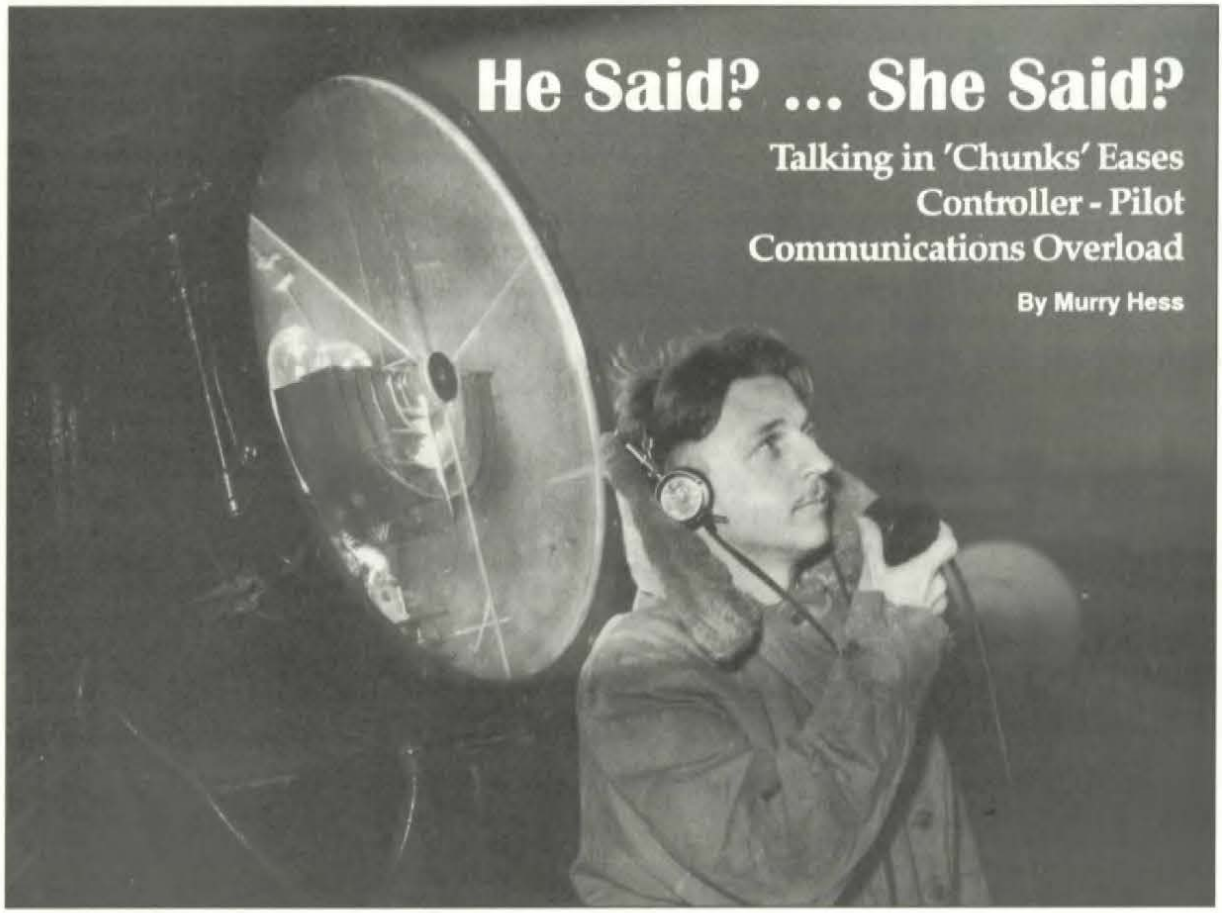
U.S. Department
of Transportation
**Federal Aviation
Administration**

FAA World

July 1992



He Said? ... She Said?

Talking in 'Chunks' Eases Controller - Pilot Communications Overload

By Murry Hess

Communications between controllers and pilots have come a long way since 1933 when controller Archie League worked outside to "talk down" planes during bad weather.

Yet even today the recent Salt Lake City Terminal Communications Staff Study *shows that communications problems haven't been licked.*

Delta 974, fly heading zero two zero . . . descend and maintain one three thousand.

Roger, heading zero two zero . . . then down to twelve thousand, Delta 974.

This was the setup for one of two "readback" errors that occurred within weeks of each other in Salt Lake City terminal airspace. Not recognized or corrected by the controller in either instance, the incorrect clearance readbacks each resulted in MVA—minimum vectoring altitude—violations and were designated as operational errors.

Concerned, facility management and staff wanted fast answers to two questions:

- Why were controllers missing readbacks that were obviously incorrect?

See ***Communications Gap*** *on page 8*

Diversity, environment, and sexual harassment are some of the categories of issues set to address by a quality management board.

See article on page 15.

FYI or our Information . . .

Dates for the **National Hispanic Coalition of Federal Aviation Employees** national training conference are August 11 to 13 at the Embassy Suites in Chicago.

Call 1-800-E-M-B-A-S-S-Y or (312) 943-3800 by July 10 for reservations.

For more information, conference chair Myrna Rivera, (312) 694-7893, or cochair Aida Ramos, (312) 694-7874, can be contacted.

This year's theme is "500 Years of Cultural Contributions," with an agenda covering the past, present, and future state of affairs of the Hispanic experience as it relates to day-to-day careers in FAA.

The annual ATC/Aviation **Golf Great-Away** is scheduled for September 27 to 30 in Myrtle Beach, South Carolina.

The entrance fee of $445 includes three nights lodging, three breakfasts, two-day tournament, prizes, dinner banquet, and four days of golf. Nongolfers pay reduced rates.

For more information contact:

Robert Hardin
Los Angeles ARTCC
5313 Monaco Lane
Palmdale, California 93552
Phone numbers are (805) 538-1441 or (805) 265-8233.

There's a new address for **TWO**:

Technical Women's Organization
PO Box 8000-124
Midvale, Utah 84047-8000

The purpose of the organization is to encourage qualified women to enter technical fields in the FAA; encourage personal development for career advancement; maintain accountability, responsibility, and professionalism; and promote a better understanding in technical fields for the purpose of aviation safety.

A reunion is being planned for past and present FAAers of **New York's Kennedy**

continued on page 19

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Federal Aviation Administration

FAA World

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FAA Representatives—London and Singapore

By John Leyden

Emily Trapnell and Don Schmidt are two of the FAA's front-line people. They serve on the frontiers of the agency's expanding commitment to international aviation. Although located half a world apart—Trapnell in London and Schmidt in Singapore—both believe their jobs are among the most important in FAA.

'Smaller' world

"I'm amazed at the emphasis FAA is now putting on international programs," said Trapnell, a former deputy chief counsel who returned to the agency in 1991 after a two-year absence. "I think it reflects the reality that the world is a whole lot smaller than it was five years ago or 10 years ago. We need to continue our efforts to harmonize aviation systems in order to get this much smaller world working along the same lines."

International field offices

Since becoming the FAA Representative in London in May 1991, Trapnell has devoted much of her time to establishing the agency's new international field office there. Similarly, as the FAA Representative in Singapore, Schmidt has been occupied almost totally in setting up a new international field office in that small but economically important nation at the tip of the Malay peninsula.

"I've never worked so hard in all my life," said Schmidt who has held a series of demanding jobs in his FAA career, including chief of the New York en route center and deputy

'Harmonizing' Aviation Systems

Another front-liner—Tommy Martin, FAA Representative for Central America and the Caribbean—was among the first FAA officials to visit Cuba since Castro took power. The five-day visit, which happened last November, included operational discussions aimed at increasing efficiency and safety in the control of the 300-plus daily flights between the United States and Cuba.



At front are FAAers Susan Cornell and Tommy Martin with Col. Ernesto Gonzalez, first vice president of the Institute of Civil Aviation of Cuba.

Standing, from left, are Randall Hickman; Dr. Mayda Molina, the institute's director of international relations; James Riley; Fidel Ara Cruz, the institute's chief of air traffic; and Idalberto Sabina, chief of Havana Area Control Center.

Most traffic is overflights through air corridors, routes that save fuel for airlines. The overflights through Cuban airspace give more direct access to Central and South America, Martin said, and passengers on the routes are mostly vacationing U.S. citizens.

Other FAAers who participated in talks with their Cuban counterparts were Susan Cornell, manager, Miami Air Route Traffic Control Center; James Riley, manager, Airspace and Procedures Branch, Miami ARTCC; and Randall Hickman, air traffic controller, Miami ARTCC. Discussions centered on ways to improve procedures between Miami and Havana centers.



This aerial view of metropolitan Havana was taken from the La Torre Restaurant, the tallest building in the city.

The group, which toured the Havana Area Control Center, was treated to a first-hand look at facilities and equipment. The Cubans have developed their own software programs permitting use of a personal computer as a radar simulator. They also record and store radar information for analysis and planning. ✲

This information first appeared in the Southern Region *Intercom*.

'. . . FAA, as an aviation safety and regulatory organization, is clearly the front runner.'

chief of the Oakland center. "My assistant (a local hire) and I are putting in 70 to 80 percent of our time trying to manage the start up of the new security and safety offices. I can't even leave the country because the contractors have to have access to me every day."



Emily Trapnell
FAA Representative in London

Normally, FAA representatives spend a great deal of their time traveling to the countries with which they maintain liaison. Schmidt, who established the Singapore post in April 1988, estimated that he spent 65 percent of his time "on the road" before becoming involved in the international field office project.

Worldwide prestige

Trapnell is one of five FAA representatives in the Europe, Africa, Middle East region and is responsible for northwestern Europe including the Scandinavian countries, Iceland, the Netherlands, Ireland, and Great Britain. "Basically," she said, compressing her job description to a single sentence, "I'm around to make sure that the right people in the governments I cover are talking to the right people in the FAA."

The fact that she is representing FAA makes her job a lot easier, she admits. "Being from FAA is a calling card I like having. People are just glad to see you, glad to talk to you, glad to know you, are thrilled to have a name and a face and a phone number they can call when they need information or advice. I never realized before just how well thought of and respected FAA is around the world."

Schmidt, on the other hand, shares Asia-Pacific with Dennis Warth in Tokyo, and has responsibility for the area south of Hong Kong. That involves some 20 different countries and a range of aviation capabilities.

"Unlike Europe, where you are dealing with advanced aviation systems, we encounter varying levels of sophistication," he said. "Places like Singapore, Australia, and New Zealand have modern systems, but some other countries are significantly behind the technology levels currently available."

Schmidt said his "role is not only to provide information, but also to identify areas where we might be able to provide some kind of technical assistance that will help them improve their air transportation systems." He added, "A secondary role is trying to promote our national interest by fostering the development of civil aviation in such a way that we help the U.S. aviation industry in the sale of their products and services abroad.



Don Schmidt
FAA Representative in Singapore

Schmidt echoes Trapnell's comments about FAA's prestige around the world. "FAA definitely is having a global impact," he said. "I don't know who's in second place, but FAA, as an aviation safety and regulatory organization, is clearly the front runner."

Some cultural adjustments

Being based in London has allowed Trapnell to avoid the cultural shocks that many Americans encounter when posted overseas, but it hasn't been entirely conflict free. "I think I first realized that I was living in a different country when I went to buy a hair dryer and found out for the first time that appliances here don't come with plugs attached," she said. "You have to go to another store, buy the right plug, take it home, get out your screwdriver, and wire the whole thing together. They say they do that for safety reasons, but I think it's just the British respect for the traditional way of doing things."

Similarly, Schmidt has found few problems adjusting to life in Singapore, primarily because of its English colonial history. "You could take Singapore and put it halfway between Los Angeles and San Francisco, and it would blend in very nicely," he noted.

The rest of the region is a different story, he said. "You have a country like Thailand that's basically a Buddhist nation, India that's mostly Hindu, Indonesia that's Muslim. You have to be extremely culturally sensitive and keep changing the way you communicate."

"In some places, some things are offensive that are not offensive elsewhere, and you have to learn that on the job," he continued. "I went to a meeting in Indonesia one time, and at 12 o'clock sharp the official got up out of his chair, said, 'I've got to go to prayer,' and the meeting was over. I had not realized that the appointment had been set at an inconvenient time in that particular society."

Aviation leadership

Both Schmidt and Trapnell stressed the importance of their jobs to maintaining America's traditional leadership in the aviation field. "I don't think a lot of Americans realize how important FAA is to the export of American products," Schmidt said.

'. . . you're part of something that's really important, that you're changing the world . . .'

"For example, 80 percent of all the commercial-grade aircraft that are used in Asia-Pacific are U.S. made. They may not have a U.S. tail number, but their safe operation is important to the reputation of American manufacturers.

"When we're working with the other civil aviation authorities to improve their safety systems," he continued, "we're also helping to safeguard the integrity of U.S. aviation companies."

For her part, Trapnell emphasized that FAA's safety responsibilities are paramount but noted that the agency's overseas representatives also serve a dual role of protecting American business interests in today's highly competitive global marketplace. "In many ways," she added, "we provide indirect product support to the American aerospace industry around the world."

Trapnell probably spoke for all FAA employees overseas when she said: "You just feel like you're part of something that's really important, that you're changing the world in a way that I never felt so directly before. It's just a nice feeling." ✲

John Leyden, who retired from the FAA at the end of 1989, has recently authored articles for the Washington Post, New York Times, and USA Today.

International Opportunity Knocks!

'Open Season' for Applications August 1-September 30

Have you dreamed of living and working abroad? Of exploring unique, out-of-the-way places in different areas of the world? Of immersing yourself in different cultures?

If so, you'll be glad to know that FAA offers its employees many opportunities for exciting foreign assignments, and the time to get your application in is almost here.

This year a revamping of the recruitment and selection process kicks off an annual "open season" for foreign positions. Many vacancies abroad will be advertised during the two-month period August 1 through September 30.

Following the open season, specific selections will be made for known vacancies. In addition candidates will be selected for a pool of potential selectees to fill unplanned vacancies that occur during the year. All candidates selected for assignment or for the pool will undergo medical and security screening and will receive language, cross-cultural, and technical orientation training.

By spring, selectees with specific assignments will be cleared and trained. Most will transfer to their overseas positions during the summer months. Candidates from the pool will fill overseas temporary duty assignments until a specific assignment is available.



Karen Chaisson, secretary to the FAA representative for Singapore, and friend Darren Rojas see the sights in Bangkok while on vacation.

Currently, there are over 190 full-time FAA positions abroad including those as FAA representatives, engineers, program managers, aviation safety inspectors, and civil aviation security liaison officers and specialists. Jobs are located in such diverse places as Dakar in Senegal, Tokyo, and Paris.

Changes in the recruitment/selection process are geared to make it easier for FAA employees to learn about and apply for overseas positions. They also ensure that most permanent changes of station take place during the summer months when it is easier for many families to make a move.

Besides fantastic career experience, FAAers stationed overseas can receive benefits including housing subsidies, education privileges for their children, and cost-of-living allowances.

If you have a sense of adventure, like to travel, and are ready for the unexpected, a foreign assignment may fit your career development plans. Contact your local personnel office to find out more about the international experience. ✲

By Linda Ross

Beating the Barriers

FAAer Mike Dyas is a source of energy, warmth, and good spirits as he moves through his daily activities as an environmental technician at the Chicago ARTCC AFS—Air Route Traffic Control Center Airway Facilities Sector—Environmental Unit.

Dyas, who has been deaf since the age of two when a high fever caused severe nerve damage, communicates through lipreading and sign language.



Mike Dyas, third from left, has a class with instructor Truman Smith. Interpreter Allie Lee clarifies a point.

Teaching skills

Two years ago, the regional office contracted for an instructor to conduct an on-site basic sign language course. Coworkers can use the skills they learn to communicate with Dyas. Mike also teaches sign language to anyone willing to learn. He says it is his way of networking with the hearing world.

Academy training

To support Dyas in gaining qualifications as an environmental technician, the Great Lakes Airway Facilities Division obtained and funded sign language interpreters for the period of his mandatory training at the FAA Academy. The academy and the Mike Monroney Aeronautical Center were very supportive with resources while he was in Oklahoma City.

Also, Dyas himself found volunteers to take notes in the courses and joined several study groups during training.

Challenging work

Asked about his work at FAA, he replied, "It's very exciting. There are so many things you can do at the FAA. You can be anything you want if you work towards the goals of the agency."

"At the facility, we work as a team, and my coworkers are supportive," he says. "People assist me in answering the phone and other functions, if necessary. I enjoy challenges, and the FAA continues to provide me with many."

Dyas was born in Miami and moved to Chicago at the age of four. He attended several special schools for students who are deaf as well as public schools that integrated hearing, hard-of-hearing, and profoundly deaf students.

After graduating high school, he studied liberal arts at Harper College in Chicago for one year. Then he transferred to the National Technical Institute for the Deaf at the Rochester Institute of Technology in Rochester, New York, where he completed a five-year electro-mechanical program.

Dyas worked for the Eastman Kodak Company in Rochester for a year before joining the Great Lakes Airway Facilities Division in November 1989. At the Chicago ARTCC AFS he has been provided the avenues to develop towards a full performance environmental technician. The sector office has three TDDs—telecommunication devices for the deaf—as well as three pagers. With these portable devices, Dyas, his supervisor, and a coworker can be in contact anywhere in the facility through normal telephone lines.

Education vital

Dyas encourages those with hearing impairments to take advantage of formal education. Higher education, he says, gives people with disabilities an equal opportunity with those who are not disabled.

"There are many opportunities for disabled people, but the responsibility to make their jobs successful rests with them," says Dyas. "They have to beat the barriers."

Dyas hopes hearing people will cultivate "patience, an understanding of the culture of those with hearing impairments, and a willingness to communicate."

"A high skill level in sign language is not necessary, only a positive attitude," he says.

What does the future hold for Dyas? While training in Oklahoma, he will try a new experience—skydiving. Recently married, his professional goal is to pass all of his required courses and be the "top qualified" environmental technician at the Chicago ARTCC Sector. Also, the FAA Logistics Center and its manager Pete Kochis are working with the Chicago Sector to provide a detail for Dyas later this year. Kochis says this will be a wonderful learning experience for everyone concerned.

Dyas encourages everyone in the FAA to give people who have disabilities a chance. He emphasizes that "they will prove to you that they can be truly successful if only given the chance—no doubt about it!" ✲

Linda Ross is a supervisory personnel staffing specialist in FAA's Great Lakes Region.

By Lisa Arington

Off Duty . .. and in Person

That's Teamwork!

Who said motherhood gets easier?

For Sue Ellen Ashwood, Ann Arbor Tower controller, planning for baby number 2 took some unexpected and undesirable turns.

Initially very excited about a new addition to the family, Sue Ellen was even happier when she learned a baby girl was on the way. Her first child, Brandon, was five and agreed to take a baby sister over a new puppy.

But things started to get complicated. Sue Ellen's husband Jeff, a Detroit TRACON controller, had been selected as an academy instructor at Oklahoma City. His original training date of November was changed to January 6th through the 28th. The baby was due January 25th.

Sue Ellen was worried by the change, but there was no way to rearrange the timing. She took comfort, however, in knowing that her parents would be coming from West Virginia to help.

More bad news came in November. Sue Ellen's father suffered a heart attack, and his doctor would not authorize a trip to Michigan. Her mother, too, needed to remain at home to care for him.



Brandon Ashwood visits his mom and new sister Jordan.

Sue Ellen was upset by the news of her father's illness as well as worried about her situation. At this point, I did what any empathizing, baby-loving supervisor would do: I volunteered to be her Lamaze coach. I was a self-taught Lamaze mom myself, and we exchanged information over the next few weeks.

Sue Ellen's network of support started to grow. An aunt volunteered to stay with her during Jeff's absence. Controllers Pat Bonelli and Cynthia Sheckler offered to drive her to the hospital. Maps to her home were distributed, just in case.

As the due date grew near, I became anxious.

If I went out to dinner or shopping, I checked in with Sue Ellen or left a number where I could be reached, just in case. I gave out my car phone number, just in case.

What if Sue Ellen went into labor when my husband Chet, also a Detroit TRACON controller, was working, and I had no one to watch my two year old? I made arrangements with a friend for backup, just in case!

Sue Ellen's last day at work was January 22, and tower personnel gave her a send-off party to wish her well. It seemed Jeff might make it back in time for the birth of the baby after all.

The 11 p.m. forecast on January 23 called for hazardous driving conditions on wet, freezing roads. I would need to get an early start for work in the morning, I decided.

When the phone rang at 11:45, Chet woke me saying: "It's Sue Ellen." The time had come, and a neighbor was ready to drive her to the hospital where we both arrived at 1 a.m. At 4 a.m. on January 24 Jordan Mace Ashwood was born in a fashion that would make Dr. Lamaze himself proud. Both mother and baby were fine.

To have been part of so many people contributing toward the success of one goal was great. For me it was a thrilling experience I won't soon forget. ✲

Lisa Arington is an area supervisor at Ann Arbor, Michigan, Tower. Her article was first published in the Great Lakes Region *Intercom.*

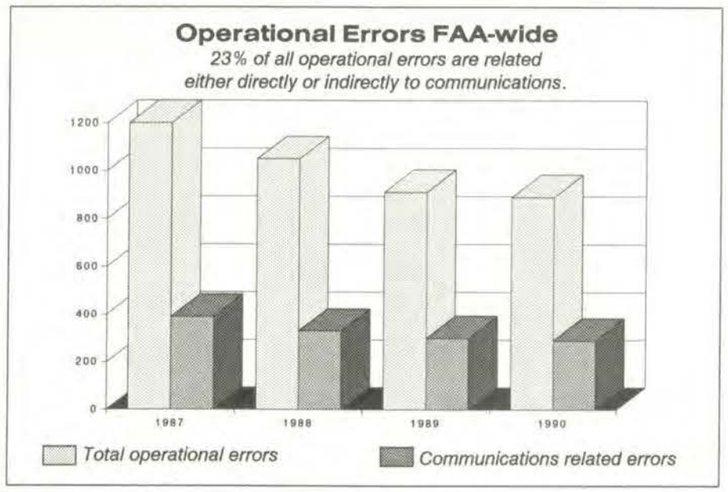
FAAers perform some challenging jobs, and they also share their exceptional talents after work hours are through. They may be community leaders, celebrated experts in a field, or just downright interesting people.

This column introduces a few of them.

Know someone who should be highlighted in print? News about notable FAAers can be sent to:

FAA World
Office of Public Affairs, APA-340
800 Independence Avenue, SW
Washington, DC 20591

from page 1



• Why were pilots misreading clearly transmitted control instructions?

Facility personnel began a search of local universities for a communications expert to help them get the answers.

Defining the problem

The University of Utah in Salt Lake City recommended Professor Geary McCandless, head of audiology in their Department of Communications Disorders. Dr. McCandless, a private pilot, is very interested in air traffic control communications. In fact, he had been conducting a private study for the past two years in that very area.

In March 1991 McCandless met with supervisors and management of the Salt Lake City terminal to plan a course of action. During the next month McCandless, along with Brian Pitts, quality assurance and training specialist, started work on the *Salt Lake City Terminal Communications Staff Study*.

Pilots interviewed for the study responded to several questions about communications in the air traffic system. Asked to name the worst communications problem encountered, Kirk Boman, chief pilot of Delta Air Lines, Salt Lake City hub, quickly replied, "Load of instructions—too many instructions in one transmission." This same sentiment was echoed almost universally by the 36 private and 21 commercial pilots interviewed.

Overwhelmed by information

Evidence seems to corroborate that controllers issue too many control instructions per radio transmission. Data on operational errors substantiates that 23 percent are caused either directly or indirectly by missed communications. Findings of the Salt Lake City study are also in line with that figure.

Based on the Weschler Scale of Intelligence, experts say average adults can remember only up to five single numerical digits given in series before they begin to forget parts of the series. Complex units of control information can become overwhelming to pilots when more than three or four such units are given in one transmission.

This example of an overloaded radio transmission was taken from a taped monitoring session. Each unit of control information is numbered:

1 *Cleared to enter the Salt Lake TCA*
2 *via direct the south tip of Antelope Island*
3 *direct the KSL antenna,*
4 *then direct to the tower.*
5 *Maintain six thousand.*
6 *Traffic, two o'clock, one mile,*
7 *a Cessna, maneuvering in the west practice area*
8 *at five thousand five hundred.*
9 *Report the traffic in sight.*

Chances are slim that the pilot heard, understood, and could recall all this information. Transmission overload, contend McCandless and Pitts, is a major reason why approximately 30 percent of all air traffic control transmissions are repeat messages.

'Chunking' helps

According to the Salt Lake City study, controllers can help alleviate the overload by using a technique called "chunking," along with giving the pilot information about what to "expect" in subsequent transmissions. Chunking means that the controllers issue instructions in logically grouped phrases, using appropriate pauses and voice inflection for emphasis. A properly chunked transmission would consist of no more than four information units.

Using "expect" transmissions prepares pilots for future control instructions and increases the likelihood of understanding. Here is an example of a properly chunked series of instructions and the use of "expect" data:

1 *Cleared to enter the Salt Lake TCA:*
2 *via the south tip of Antelope Island;*
3 *Maintain six thousand.*

(pause for acknowledgement)

1 *Traffic, two o'clock, one mile,*
2 *a Cessna maneuvering in the west practice area*
3 *at five thousand five hundred.*
4 *Report the traffic in sight.*

(pause for acknowledgement)

1 *Expect direct KSL antenna, direct to the tower in two miles.*

Even though issuing "chunked" information would seem to take longer, time is actually saved because instructions don't have to be repeated.

Error reduction

McCandless and Pitts are presently developing a communications training course for testing at Salt Lake City. They believe the study of potential problems in air traffic control communications is "too important to put aside." So far they have only identified "the tip of the iceberg," they say. The target is a major reduction in communications operational errors through simple, cost effective methods. ✲

Murry Hess is assistant manager for training and quality assurance at the Salt Lake Airport Tower (HUB).

For further information or to get a copy of the *Salt Lake City Terminal Communications Staff Study*, Brian Pitts can be contacted on (801) 524-5190.

The study, which zeros in on miscommunication between controllers and pilots, contains tabulations of results.

Proposed solutions were developed and included in the document.

Photo Credits



Albertville, Alabama, Municipal Airport received FAA Southern Region's general aviation airport safety award. Here David Clemens, manager, Safety and Standards Branch, Airports Division, presents the award to Mayor Arthur Baugh, left. Looking on is City Councilman Larry Hillsman.

The city funded the extension of the runway from 3,500 to 6,143 feet. A modern terminal building was recently completed, and aircraft maintenance and T-hangar facilities were being modernized.

Additional improvements are in the works. ✲



FAA has recently certified the Airway Science (AWS) Program at Morris Brown College making it the first college in Georgia to receive the accreditation. This means that the college has met the requirements set for proper training and certification for careers in aviation.

Located on a 21-acre campus near Atlanta, Morris Brown, part of the Historically Black Colleges and Universities program, was founded in 1881. It is fully accredited by the Southern Association of Colleges and Schools and offers majors in more than 40 areas of study.

Pictured are Floyd Campbell, the college's AWS program director; Thomasene Roberts, the school's director of governmental relations; Joseph Kisicki, FAA's Office of Training and Higher Education director; Dr. Calvert Smith, Morris Brown president; Margaret Powell, AWS Curriculum Program manager; and Dr. John Hill, the college's vice president, academic affairs. ✲

Airway Facilities Names Top Sectors

It's official. The Airway Facilities Sector of the Year Awards for fiscal year '91 go to the Atlanta Air Route Traffic Control Center (ARTCC) Sector and the Jacksonville, Florida, and Houston, Texas, General National Airspace System (GNAS) Sectors. This is the first time two GNAS sectors share top honors for the award.

Atlanta ARTCC Sector is a repeat winner, having also won in fiscal year '89.

Sectors are rated on overall facility performance, human resource management, and general programs.





Vicki Turner checks out the tandem equipment.

Atlanta Air Route Traffic Control Center Airway Facilities Sector

Atlanta ARTCC AFS is located in Hampton, Georgia, some 25 miles south of Atlanta.

The sector covers approximately 103,440 square miles, which include portions of six states. Atlanta is one of only two air route traffic control centers with a National Airspace Data Interchange Network (NADIN) Sector Field Office. The NADIN SFO and the ARTCC are colocated and currently house the NADIN Message Switched Network (MSN) and the Aviation Weather Processor.

Left: Paul Seifert, left, and Herbert Trace check paradyne equipment.



Kenneth Bellamy coordinates with other sectors on equipment trouble.

Some 1,100 customers are currently on the message network—about 600 FAA stations, 150 military stations, and 25 commercial stations.

Gene Nobles is manager of the Atlanta ARTCC AFS.



Left: Tony Barnes, Mike Campbell, Chris Kimball, and Hart Powers are at the temporary tower, Panama City, Florida.

Below: At Tallahassee SFO are, front: Walt Driver, Joe Carr, Julio Munoz, Gerri Ellington, Bob Ellington.

Middle: Richard Duncan, Mark Ratterman, Ken Hendrix, Dan Wheatcraft, Ed Brewer.

Back: Steve Manuel, Dick Shoaf, Andrew Whitehead, Richard Lawrence, Larry Martin.





Gainesville SFO staff are, at front: Marilyn Browning, Lisa Collins, Edgar McRee.

Middle: David Smith, Kevin Fletcher, Larry Tatterson, Hugh Jones.

Back: Julian Hill, Tony Campbell.

Jacksonville General National Airspace System Sector

The Jacksonville sector maintains 620 commissioned facilities throughout northern Florida and southern Georgia.

Employee involvement and a focus on customer needs and delivery of a quality product is second nature to the 133 employees of the sector. At Jacksonville people are the most important resource.

The participative style of management apparent in the sector has encouraged personal growth. It has also brought about the high level of professionalism reflected in facility performance and all aspects of sector operations.

Vincent Preston manages Jacksonville AFS.

Houston General National Airspace System Sector

The Houston Sector covers over 80,000 square miles, an area which has an environment that is corrosive to electronics systems, plants, and structures. The sector's environment of sand, salt, wind, and sea makes for a constant battle to ensure that equipment remains serviceable. Its coverage area extends over 100 miles out into the Gulf of Mexico to two remote communications facilities on off-shore oil production platforms.

The sector maintains 880 facilities and services and supports and services two major airports—Houston Intercontinental and William P. Hobby. In addition, it provides radar, beacon, and communications services to the Houston and Ft. Worth Air Route Traffic Control Centers.

Paul Laven is the sector's airway facilities sector manager. ✲



Above: Houston sector staff hold an "all hands" meeting with Wes Statser, Southwest Region's Airway Facilities Division manager.



Above: Houston Airway Facilities personnel, family, and friends came to the annual sector picnic. More than 80 attended.



Cecil Strange, Henry Benson, and Jimmy Grubbs check out the Galveston glide slope.

Firsts

By Duncan Pardue

Recycling Pays Off for Manassas

When the air traffic control tower at Manassas, Virginia, Municipal Airport was commissioned on March 19 and dedicated on April 19, a project was completed that some thought couldn't be done:

Dismantle a surplus 60-foot-tall air traffic control tower in Englewood, Colorado, truck it 1,700 miles cross country, re-erect it at Manassas, equip it with the latest electronics, and commission it—all in little more than a year? For $1.5 million—some $1 million less than the cost of building from scratch—Manassas airport would get a tower.



Manassas air traffic controllers, from the left: Dave Arnold, from Dulles; Steve Collison, from Wilmington; Bruce Rathbun, from Washington Flight Service Station; William Shifflett, from Charlottesville; John Sachon, from Hagerstown; Jeff Hyland, from Morgantown; Greg Short, from Ithaca; and Carol Roby, from Hagerstown.

FAA's promise

The project originated in September 1990 during a listening session at Manassas. Then FAA Administrator James Busey and Eastern Regional Administrator Daniel Peterson told Virginia aviation officials if they established a tower, the FAA would equip and staff it. Previously, the FAA had requested funds to build a Manassas tower, but that project would have meant at least a five-year wait, along with many fiscal uncertainties.

State funding

The Virginia Department of Aviation was concerned that the largest general aviation airport in the state did not have a tower; it also was aware of the tremendous growth potential of the area and ways a tower-equipped airport could enhance it. In an unprecedented move, the state offered to fund 80 percent of the costs to buy and relocate the tower that had formerly served Arapaho County Airport in Colorado.

First relocation

This tower, discovered by Ken Jacobs of the Washington Airports District Office (ADO), was a 1970-vintage Hunt Company structure, similar to the ones at Northeast Philadelphia, Teterboro, and Poughkeepsie. Made of bolted steel girders covered with aluminum siding, the tower was the first of its kind to be relocated.

The City of Manassas agreed to pay for 20 percent of the project and became the agent for the $5,000 purchase. To tackle the move, the FAA Eastern Region put together a team of some 30 representatives of the Washington ADO, Airway Facilities and Air Traffic divisions, and the Norfolk and Richmond Airway Facilities sector field offices.





The tower shown before, in Englewood, Colorado; and after, at Manassas, Virginia, Municipal Airport with its new base structure.

"We knew from the outset that we would have problems for which we could not plan, but we were determined to make the undertaking work," said project coordinator Fred Chez, AEA-451.2.

Relocating the tower involved much more than just reassembling the physical structure. More than 20 years had passed since the Colorado tower was a common FAA level II design, and new Occupational Safety and Health Administration regulations, more stringent electrical codes, and better electronics equipment needed to be taken

into account. In effect, the structure needed "re-engineering."

Planning critical

Before the tower began its week-long trek cross country in three trucks, the Real Estate and Utilities Branch, AEA-56, worked out lease arrangements, and the Terminal Construction/Installation Section, AEA-451.4, did site selection work. Meanwhile, Sue O'Brien, AEA-510, coordinated an air traffic team to put together equipment requirements and planning for tower operation, including airspace procedures, documentation, and tower staffing.

"There was nothing in our files to guide us since the Eastern Region had not put in place an initial FAA air traffic establishment in more than 11 years," O'Brien said. "We visited Alliance Tower, which was an initial establishment near Ft. Worth and brought back a sheath of documents that were very helpful in providing details we might have overlooked."

High growth area

Her branch also had to take into account that Manassas Tower would probably grow to level II almost immediately. The Resource Management Branch, AEA-520, developed a plan calling for an air traffic manager and seven air traffic control specialists. System Management, AEA-530, disseminated information to publications, approved letters to airmen, reviewed letters of agreement with other air traffic facilities, and developed airspace procedures.



Airport manager Ollie Cramer with artist's rendering of a proposed new terminal building.

Facility Operations, AEA-540, assigned an air traffic manager, Dave Arnold, and initiated internal placement procedures to staff the facility.

The City of Manassas erected the tower under the watchful eyes of airport manager Ollie Cramer and resident engineers Peter Currie and Joseph Kundler, AEA-452.4. Airway Facilities employees installed navaids and communications equipment in nine weeks.

Anticipating problems

"It was day-by-day problem solving," said Cramer. For example:

- Every bolt had to be replaced to meet stress requirements.
- New rules required fire escape modifications.
- The elevator shaft was three degrees off plumb and required a smaller, custom-built car.
- Preparation for level II required a base structure that was not part of the material trucked from Colorado.

According to city officials, however, all the preparation was worthwhile. "The new tower will leapfrog us into the 21st century," explained Cramer. Manassas has lots of expansion plans on tap and is even looking at ways to provide overseas service. ✲

Up Close

Secretary Card Visits Logan Tower

By Mike Ciccarelli

A New England Region facility was the first one in the FAA to be visited by Secretary of Transportation Andrew H. Card, Jr., since he joined President Bush's Cabinet.



Secretary of Transportation Andrew Card

On the evening of March 6, prior to boarding a flight to Washington, DC, Card spent an hour with FAAers in the Logan Air Traffic Control Tower, escorted by Regional Administrator Arlene Feldman and facility manager John Butler.

"Secretary Card toured both the cab and TRACON," said Butler. "He introduced himself to just about every controller and supervisor and was very interested in the way we were handling traffic during the Friday night rush."

Officials of Massport, Logan's operator, showed Card where the Third Harbor Tunnel will surface on the airport and how vehicles will be routed out of the airport's area. He was also briefed on FAA-New England's on-going program of funding the sound-proofing of houses and schools in communities adjacent to Logan.

Card was in Boston to deliver a $10 million federal grant for the construction of a central bus station over the train tracks at South Station.

He is a native of Brockton, Massachusetts, and has served in the state legislature.

Card is the 11th Secretary of the Department of Transportation. ✲

Mike Ciccarelli is the public affairs officer in FAA's New England Region.

An Employee Friendly Environment

Board Addresses Issues To Improve the Quality of Work Life

What do these 17 people have in common:

Arnold Aquilano, *AAF-1*
Archie Archilla, *ASM-2*
Gary Baldwin, *ALR-2*
Carol Brooks, *AAF-1*
Garland Castleberry, *AVS-1*
Calvin Fischer, *AAF-3*
George Gordon, *ACR-2*
Marlene Hardester, *ACZ-1*
Gwen Jones, *ACR-3*
Nancy Kalinowski, *ATZ-2*
Louis Ludwig, *AVN-2*
Louise Maillett, *AEE-1*
Tom McSweeney, *AIR-2*
Alvin Ray, *AGL-10*
Evelyn Siro, *AAF-30*
Jacque Smith, *AAL-1*
Al Thomas, *ANW-1*

For a start, they're all members of the Quality of Work Life (QWL) Quality Management Board (QMB) and, therefore, have a similar "mission."

The mission of this board is to improve the quality of work life for a diverse FAA work force by:

- Valuing and managing the differences individuals bring to the workplace;
- Recognizing and eliminating sexual harassment;
- Continuously improving personnel practices, the physical workplace, the working environment, and logistics processes.

Associate Administrator for Airway Facilities Aquilano is the board's coordinator. Brooks is its executive secretary, and Siro acts as facilitator.

Fischer provides staff resources to this unique group, which includes members experienced with Total Quality Management (TQM) as well as Employee Involvement (EI) methods.

Last year the Executive Steering Group, headed by FAA's Administrator, established the board and tasked its members to work on processes that could be changed without changing policy. "Our aim is not to change the system, but the functioning of the system—either the physical work place or environment and the behavior in the environment," says Fischer.

From steering group direction and the board's first "brainstorming" session in October 1991, categories of issues to address were set:

- ***Diversity.*** A quality action team has been formed to come up with recommendations to improve diversity in the agency.
- ***Environment.*** Space, equipment, security, and similar items are some of these issues.
- ***Sexual harassment.*** The QMB is supporting agency efforts to prevent sexual harassment in the work place.
- ***Compensation, pay, travel.*** Topics include travel and permanent change of station moves, payroll problems, and locality pay.
- ***Management style.*** This relates to delegation of authority, logistics, mail control, and information flow.
- ***Personnel practices.*** The category includes staffing, recruitment, job sharing, co-ops, training, and evaluations.
- ***Employee work, family life.*** Day care, cafeteria plans, and transportation are some of the issues.

Using employees' perspectives, the board is digging into what's working and what's not working in these areas. It aims to build on existing improvement efforts as well as "benchmark" processes—study how they are handled in the private sector and other government agencies that are considered "models."

Board members meet monthly for about three-hours. Two quality action teams (QATs) have been established since March 1992. Nancy Kalinowski is the linking member to the Diversity QAT, and Archie Archilla is the linking member to the Environment QAT. Plans include chartering additional QATs to identify and measure expectations of employees, focus on barriers to work place improvement, develop and document standard processes, come up with better ways of doing things, and document results.

"There are no quick fixes," says Fischer. "It takes time and training to get a better work environment."

Brooks agrees. "Just like with our diets," she says, "improvements don't show up overnight." ✲

The FAA is not alone in zeroing in on the environment of the work place.

For instance in a recent book *This Job Should Be Fun!*, authors Bob Basso and Judi Klosek contend employees lessen their productivity by taking work too seriously. When working environments are enjoyable, they say, productivity increases, allowing organizations to do more with less.

Basso and Klosek surveyed 12,000 workers for their study.

Here are some findings:

- Sixty-one percent of chief executive officers enjoy their work as opposed to 20 percent of middle managers and 19 percent of workers at lower levels.
- "Dull and boring" were the words 61 percent of lower-level employees used to describe their work environment; "a prison" is how 11 percent of middle managers and 24 percent of non-managers thought of their office or factory.
- In ratings on a 1-to-10 scale, chief executive officers rated their sense of humor below 5. Superiors were rated below 5 by 83 percent of middle managers and 91 percent of lower-level employees. ✲

Information in the "People" section is extracted from the Consolidated Personnel Management Information System.

Space permitting, actions of a change of position and/or facility are published.

Aeronautical Center

Gaila J. Bruza, unit supervisor, Electro-Mechanical Production Section, Engineering & Production Branch, FAA Logistics Center, promotion made permanent ... **Michael K. Marxen,** academy 3R instructor, NAV/COMM ENV Section, Airway Facilities Branch, FAA Academy, promotion made permanent ... **Linda K. Ritchie,** supervisor, Training Systems Section, Technology & Telecommunications Branch, Data Services Div., promotion made permanent.

Alaskan Region

Linda J. Couture, area manager, Anchorage TRACON ... **Ronald L. Crumbaker,** manager, Juneau FSDO, from regional headquarters ... **Solveig W. Fluharty,** area supervisor, Merrill ATCT, Anchorage, promotion made permanent ... **Nancy A. Lathey,** manager, Facility Operations Branch, Air Traffic Div., from Kenai, AFSS ... **Hugh A. McLaughlin,** unit supervisor, Fairbanks FSDO, from regional headquarters ... **Gerald C. Paterson,** asst. manager, Anchorage FSDO, promotion made permanent ... **Dennis H. Powell,** manager, Telecommunication/Spectrum Management Branch, Airway Facilities Div. ... **Sandra L. Rohrbach,** security specialist, Civil Aviation Security Div.

Central Region

Michael K. Dahl, supervisor, Policy & Guidance Section, Standards Office, Small Airplane Directorate, promotion made permanent ... **Leonard J. Dragon,** manager, Omaha, NE, AFSFO, Grand Island, NE, AFS ... **Thomas C. Gardner,** manager, Lincoln, NE, ATCT, from Minneapolis ATCT ... **Thomas Dean Gourley,** manager, Joplin, MO, AFSFO, Wichita, KS, AFS ... **Robert D. Long,** manager, Systems Maintenance Engineering Branch, Airway Facilities Div., from Grand Island, NE, AFS ... **Jeanne A. Martin,** supervisor, Programs Section, Resources & Planning Branch, Airway Facilities Div., from Washington Headquarters ... **Daniel C. McPheron,** asst. manager, Wichita, KS, AFS, from Grand Island, NE, AFS ... **Alan R. Moore,** deputy manager, Airway Facilities Div. ... **Edith V. Parish,** area supervisor, Columbus, NE, AFSS, promotion made permanent.

Eastern Region

Douglas C. Alter, area supervisor, Westchester ATCT, White Plains, NY, promotion made permanent ... **William H. Bennett,** systems engineer, Washington ARTCC AFS, Leesburg, VA ... **Charles E. Birch,** unit supervisor, Elmira, NY, AFSFO, Susquehanna AFS, from Pittsburgh AFS ... **Herbert R. Brown,** asst. manager for technical support, Washington ARTCC AFS, Leesburg, VA ... **Paul Crispi,** manager, New York CASFO, Queens, NY, promotion made permanent ... **Juan M. Cruz,** section supervisor, Terminal Sub Branch, Establishment Engineering Branch, Airway Facilities Div. ... **Gary L. Davidson,** manager, Richmond AFSFO, Sandston, VA, Norfolk AFS, from Tri-State AFS ... **Carmine W. Gallo,** area manager, New York TRACON, Garden City ... **Kathy G. Glynn,** manager, Hagerstown, MD, ATCT ... **Theodore M. Kiladitis,** manager, Islip AFSFO, New York ARTCC AFS ... **Joseph C. Lemon,** supervisory electronics technician, Richmond AFSFO, Sandston, VA, Norfolk AFS, promotion made permanent ... **John A. Reichenbach,** area manager, Philadelphia ATCT ... **Edwin C. Satterfield,** systems engineer, Washington ARTCC AFS, Leesburg, VA ... **David W. Siewert,** manager, Binghamton, NY, ATCT, from Albany ATCT ... **Rodney K. Smith,** manager, Leesburg, VA, AFSFO, Washington ARTCC AFS ... **Kent D. Stephens,** manager, Washington FSDO, Loudoun County, VA, from Bedford, MA, FSDO ... **David E. Volchko,** unit supervisor, Clarksburg, WV, AFSFO, Shenandoah AFS, promotion made permanent ... **Johnie N. Walker,** manager, Philadelphia AFSFO, Lester, PA, Tri-State AFS, promotion made permanent.

Great Lakes Region

Richard J. Butas, manager, Ohio State University ATCT, from Port Columbus International ATCT, Columbus, OH ... **Phillip F. Dice,** asst. manager, programs, Terre Haute, IN, AFSS ... **Thomas F. Dundr,** manager, Lakefront ATCT, Cleveland, from Akron-Canton ATCT ... **Robert F. Everson,** asst. manager, programs, Chicago O'Hare ATCT ... **Holly W. Geiger,** unit supervisor, Indianapolis FSDO ... **Mark E. Giovanni,** area supervisor, Madison, WI, ATCT, promotion made permanent ... **Marvin E. Halbakken,** area supervisor, Lansing, MI, AFSS, promotion made permanent ... **Richard A. Larkins,** unit supervisor, Indianapolis AFS, from Ohio AFS ... **Lawrence M. Munson,** asst. manager, programs, Huron, SD, AFSS ... **Claude J. Nunez,** supervisor, Network Planning & Engineering Section, Telecommunications & Spectrum Engineering Branch, Airway Facilities Div., promotion made permanent ... **Reed Skinner,** area supervisor, Detroit Metro ATCT ... **Patricia E. Smith,** manager, West Lafayette, IN, ATCT, from Ft. Worth, TX, ARTCC ... **Robert Tessmer,** area supervisor, Ann Arbor, MI, ATCT, from Detroit Metro ATCT ... **George E. Thomas,** area supervisor, Muskegon, MI, ATCT, promotion made permanent ... **Michael A. Vanboekel,** systems operations manager, Aurora, IL, AFS ... **Willie L. Wells,** asst. manager, Indiana AFS, Indianapolis, from regional headquarters ... **Robert J. Woodford,** supervisor, Airspace Management Section, System Management Branch, Air Traffic Div., from Grand Rapids, MI, ATCT.

New England Region

Gary F. Braese, area supervisor, Westfield, MA, ATCT, from Bradley ATCT, Windsor Locks, CT ... **Allan Brilliant,** manager, Systems Maintenance Engineering Branch, Airway Facilities Div., from Boston AFS ... **William G. DeCoste,** developmental supervisory engineering technician, Manchester, NH, AFS, Windsor Locks, CT, promotion made permanent ... **Harold F. Hector,** manager, Human Resource Management Div., promotion made permanent ... **Gary J. Hufnagle,** area supervisor, Boston ATCT, promotion made permanent ... **Margaret A. Lutz,** unit supervisor, Windsor Locks, CT, AFSFO, Windsor Locks AFS, promotion made permanent ... **George B. Mackie,** area supervisor, Bridgeport, CT, AFSS, promotion made permanent ... **Thomas O. Marley,** unit supervisor, Bedford, MA, AFSFO, Boston AFS, from regional headquarters ... **Patrick F. O'Connors,** manager, Boston AFS, from regional headquarters ... **Eileen E. Terry,** section supervisor, Boston ARTCC, Nashua, NH, promotion made permanent.

Northwest Mountain Region

Rodney J. Barnes, area manager, Longmont, CO, ARTCC AFS ... **Larry D. Bishop,** area manager, Salt Lake City ARTCC AFS ... **James B. Brownfield,** section supervisor, National Air Traffic System Effectiveness/Evaluations Branch, Evaluations Div., promotion made permanent ... **Nancy K. Davis,** unit supervisor, Auburn, WA, ARTCC AFS ... **Peter R. Engelking,** unit supervisor, Auburn, WA, ARTCC AFS ... **Keneth L. Hansen,** unit supervisor, Salt Lake City AFS ... **Robert A. Hill,** section supervisor, Seattle FSDO, Renton, WA ... **Johannes M. Knudsen,** group supervisor, Seattle ARTCC, Auburn, WA, promotion made permanent ... **Darrell W. Ruth,** unit supervisor, Billings, MT, AFS, promotion made permanent ... **James B. Trent,** traffic management unit supervisor, Salt Lake City ARTCC ... **Kenneth B. Whitaker,** area supervisor, Boise, ID, ATCT, from Salt Lake City ATCT.

Southern Region

Robert S. Braddy, supervisor, Telecommunications Section, Establishment Engineering Branch, Airway Facilities Div. ... **Leland Brooks,** unit supervisor, Caribbean FSDO, San Juan, PR ... **Rodney L. Carlson,** manager, North Carolina FSDO, Winston-Salem, NC ... **Robert M. Draughon,** area supervisor, Hilliard, FL, ARTCC, promotion made permanent ... **James S. Garrett,** asst. manager for technical support, Atlanta, GA, AFS (Hub), from regional headquarters ... **Alex H. Gay,** unit supervisor, Georgia FSDO, Atlanta ... **Michael H. Gunn,** area supervisor, Standiford Field ATCT, Louisville, KY, from Charlotte, NC, ATCT ... **Norman E. Hilton,** unit supervisor, Fayetteville, NC, AFSFO, Raleigh AFS, promotion made permanent ... **Richard E. Kelly,** unit supervisor, Kentucky FSDO, Louisville, promotion made permanent ... **Felton R. Lancaster,** manager, San Juan, PR, CERAP, from Olathe, KS, ARTCC ... **Philip G. Lilly,** unit supervisor, Miami CASFO, from Hapeville, GA ... **Marvin R. Miller,** unit supervisor, Atlanta ARTCC AFS, Hampton, GA ... **James P. Million,** unit supervisor, Montgomery, AL, AFS, Huntsville, from Tampa, FL, AFS ... **Raymond C. Mittan,** area supervisor, Standiford Field ATCT, Louisville, KY, from Miami ATCT ... **Daniel L. Pesonen,** manager, St. Petersburg AFSFO, Tampa AFS, promotion made permanent ... **Steve D. Plemons,** unit supervisor, Hilliard, FL, AFSFO, Hilliard AFS, Jacksonville ARTCC ... **Andrea Campbell Rigney,** area supervisor, Hilliard, FL, ARTCC, promotion made permanent ... **Edward B. Rousseau,** unit supervisor, Jacksonville FMP, promotion made permanent ... **Stephanie Runyon,** area supervisor, Southwest Florida Regional ATCT, Ft. Myers, promotion made permanent ... **George M. Uhrin,** section supervisor, Georgia FSDO, Atlanta ... **Ronald L. Vick,** asst. manager for training, San Juan, PR, CERAP.

Southwest Region

Kirk M. Hallett, asst. manager for automation, Albuquerque AFSS, from Gallup, NM, FSS ... **Bryan D. Henderson,** area supervisor, Ft. Worth, TX, ARTCC ... **Allen E. King,** manager, Oklahoma City FSDO, from regional headquarters ... **Gerald W. Lobb,** manager, San Antonio, TX, AFS, from New Orleans, LA, AFS ... **Joseph R. McGuire,** unit supervisor, Albuquerque ARTCC AFS ... **Alan D. Page,** asst. manager for program support, Dallas/Ft. Worth AFS ... **Robert W. Pearson,** area supervisor, Ft. Worth AFSS ... **Joseph A. Peta,** crew chief, Establishment Engineering Branch, Airway Facilities Div. ... **Robert J. Peters,** manager, Airworthiness Branch, Flight Standards Div., from Houston FSDO ... **Anthony J. Soria,** unit supervisor, Navigation & Interfacility Engineering Section, Establishment Engineering Branch, Airway Facilities Div. ... **Henry G. Suggs,** unit supervisor, Ft. Worth ARTCC AFS.

Technical Center

Ronald J. Esposito, deputy service director, Resource Management Service ... **Frances A. Mackuse,** deputy manager, Technical Facilities Div. ... **Robert I. Mast,** manager, Management Services Branch, Management Systems Div., promotion made permanent ... **Maudie M. Powell,** manager, Management Standards & Analysis Branch, Management Systems Div. ... **Jeffrey L. Richards,** technical program manager, ATC Technology Branch, Concepts Analysis Div. ... **Janet S. Spurgeon,** deputy manager, Facility Engineering & Operations Div. ... **Edmeda Terranova,** unit supervisor, Materiel Handling Section, Materiel Branch, Logistics Div., promotion made permanent.

Washington Headquarters

Thomas L. Connor, manager, Technology Division, Office of Environment & Energy ... **Beverly A. Daniel,** branch manager, Executive Director for Acquisition & Safety Oversight ... **Dennis E. Davis,** asst. manager for training, Operations Branch, National Flight Data Center, Air Traffic System Mangement ... **Rosa M. Flores,** chief, Building Management Staff, Associate Administrator for Airway Facilities ... **Nancy J. Graham,** deputy program manager, Program for En Route/ TMS Automation, Program Director for Automation ... **Dennis J. Hupp,** manager, Training & Career Div., Civil Aviation Security Program & Resource Mangement ... **Phillip C. Leman,** deputy program manager, Program for Terminal Radar, Program Director for Surveillance ... **Marlene G. Livack,** unit supervisor, Technical Standards Branch, Field Programs Div., Flight Standards Service, promotion made permanent ... **Loretta S. Parker,** telecommunications manager, Communications Engineering Div., Program Director for Communi-

cations ... **Carolyn J. Reilly Greiner,** branch manager, Executive Director for Acquisition & Safety Oversight ... **John E. Romaine,** branch manager, Executive Director for Acquisition & Safety Oversight ... **Rajendra Saroop,** staff chief, Weather/FSS Engineering Div., Program Director for Weather & Flight Service Systems ... **Floyd J. Seeley,** asst. div. manager, Brussels CASIFO, from Vienna, Austria ... **Donald A. Stadtler,** staff chief, program manager for MLS/Loran C, Associate Administrator for NAS Development ... **K. Richard Stevens,** manager, Domestic Operations Branch, Security Operations Div., Office of Civil Aviation Security Operations ... **Carolyn M. Strano,** branch manager, Engineering Specialties & Configuration Management Support Div., NAS System Engineering Service.

Western-Pacific Region

Steven A. Atkinson, area supervisor, Palo Alto, CA, ATCT, from Oakland TRACON ... **Lisa L. Daubenmire,** area supervisor, Hayward, CA, ATCT, from Oakland ATCT ... **Mark C. Denton,** area supervisor, Los Angeles ARTCC, Palmdale ... **Michael R. Desrosiers,** area supervisor, Palm Springs, CA, ATCT, from El Toro TRACON, Santa Ana ... **Kathryn A. Elliott,** unit supervisor, Fresno, CA, FSDO ... **Lonnie R. Giles,** supervisory aviation safety inspector (AW), Phoenix Certificate Management Office ... **Stephen M. Johnson,** area supervisor, Los Angeles ARTCC, Palmdale, promotion made permanent ... **John Kurywchak,** manager, Gillespie Field ATCT, San Diego ... **Douglas M. Macaulay,** area supervisor, Oakland ATCT, from Livermore, CA, ATCT ... **Diane M. Mangels,** manager, Santa Monica ATCT, from Hawthorne, CA, ATCT ... **William C. McKnight,** area supervisor, Prescott, AZ, ATCT, from Phoenix ATCT ... **Harvey R. Riebel,** asst. manager, Ontario, CA, TRACON, from regional headquarters ... **Claude R. Rivers,** area supervisor, Hawthorne, CA, AFSS, promotion made permanent ... **Deborah T. Saito,** asst. manager, Honolulu ATCT ... **Darcy J. Simons,** Chino, CA, ATCT, from Los Angeles ARTCC ... **Kathryn L. Smith,** area supervisor, Brown Field ATCT, San Diego, from Edwards AFB, CA ... **Angelita Victorio,** unit supervisor, Contracts & Payables Branch, Accounting Div.

Retirees

Aeronautical Center

Benjamin F. Barber
Barbara A. Boroughs
Oliver C. Brown
Tommy L. Burkhead
Charles E. Henderson
Norma J. James
Marvin L. Julian
Kenneth J. Knight
Norman A. Lahti
Edwin D. Mitchell
Richard D. Sillivan

Alaskan Region

James S. Mann
John D. Murray
James A. Nelson

Central Region

Joseph J. Craze
Larry B. Easler
Robert H. Furr
Robert E. Hodge

Eastern Region

Jerry A. Bowman
Billy W. Harper
Ariadna Lebedew
Gregory Lee

Great Lakes Region

Billy E. Dawson
Hugh L. Doyle
Richard H. Duckworth
Nelson B. Gray
Donald B. Gulley
Michael G. Leskovac
Richard E. Mack
Roger R. Miller
Adolph Salinas
Delano P. Szewczyk
Jacob G. Thoma

New England Region

Richard C. Curit

Northwest Mountain Region

Marshall O. Burquest
Thad R. Faussett
Vernon D. Harkins
Herbert J. Owsley
Raymond E. Pelletier

Southern Region

Milton L. Forrest
Ronald L. Reading
Lloyd C. Wright

Southwest Region

Manuel R. Hugonnett
Jane M. Stierwalt
Weldon N. Strickland
Bobby M. Tatom
Elda R. White

Technical Center

Jamison Hurst
Thomas Rust

Washington Headquarters

Roberta F. Brown
Carol Ann Carpenter
Jerald M. Davis
Elizabeth A. Finn
Robert E. Mason
Gail D. Meltzer

Western-Pacific Region

Brian G. Clark
Philip B. Crosby
Arlen C. Donner
Lorraine E. Duncan
Larry E. Hanson
Alexander S. Hyslop
Robert L. Mitchell
Joseph A. Palumbo
Robert W. Ternahan
Carl D. Theall
Lorraine A. Williams

continued from page 2

tower. Anyone having past or present dealings with the facility is also invited.

The reunion is tentatively scheduled for late this year or the beginning of 1993, but more input is welcome. One of the locations under consideration is Las Vegas.

Contacts are two former Kennedy tower controllers now working in Southern Region:

Bill Fedowich, area manager
Pensacola tower
(904) 432-2323, work
(904) 476-6609, home

David Royal
(404) 344-6910

The FAA convened an **International Conference on Airplane Ground Deicing** at the end of May to seek better ways to recognize and eliminate aircraft icing prior to takeoff.

Some 800 attended including aircraft manufacturers; manufacturers of deicing and anti-icing equipment; airport operators; representatives of universities, research institutions, the government, and foreign nations; and airline maintenance, operations, and dispatch personnel.

Experts from a wide range of disciplines concentrated on such subjects as aircraft design considerations, ground deicing and anti-icing systems, aircraft dispatching and sequencing, crew training in ice detection and recognition, and deicing personnel, procedures, and training.

FAA **news releases** are now available worldwide through the use of three computerized information data banks.

The FEDIX—Federal Education Information Exchange System—information data bank may be accessed by any computer with a modem by dialing the database at 1-800-232-4879. CompuServe and GEnie—General Electric Network Information Exchange—subscribers may access databases by computer with modem by dialing the regular data line numbers.

The news releases and civil penalty decisions of $50,000 or less can be accessed on a 24-hour basis.

Each data bank contains FAA news releases issued since January 1, 1991, as well as the Administrator's speeches for the same period. In addition, the FAA has supplied the data banks with copies of all civil penalty orders issued by the Administrator, along with FAA legal interpretations, issued since January 1, 1991.

Dianne Speed, (202) 267-3445, can be contacted for further information.

A "blue ribbon" panel has been appointed to study the potential for future shortages of **pilots and aviation maintenance technicians.** It will examine the existing and future supply of pilots and aviation maintenance technicians for civil and military aviation and will make recommendations for alleviating foreseeable shortages.

Dan Beaudette, the FAA's deputy associate administrator for regulation and certification, is executive director of the panel.

FAA Remembers. **Miles C. Ullman** of Salem, Oregon, died of cancer at his home in Salem, Oregon. He was 73, writes his wife Cleo.

Miles began his FAA career in 1942 at the Seattle tower (Boeing Field) and later worked at Pendleton tower. After World War II service, he returned to the FAA, Seattle.

In 1954 he became an ATC instructor at the Aeronautical Center and from there went to the Washington office. In 1963 he became FAA/MAC liaison officer with the 22nd Air Force Headquarters of the Military Airlift Command, Travis Air Force Base, California. He was there in the capacity of staff advisor until his retirement in 1974 after 31 years of federal service.

He is survived by his wife Cleo; two sons, Robert and Joe; and a daughter, Beth.

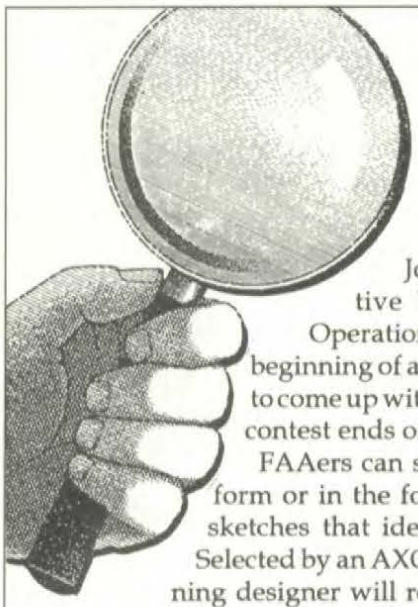
Research Grants Awarded



FAA has awarded seven research grants valued at $2.2 million to six universities for studies designed to increase aviation safety. The grants are the first to be awarded under a new program authorized by the Aviation Safety and Capacity Expansion Act.

The grants are to:

- **Massachusetts Institute of Technology**—$69,000 to conduct research on the integration of airborne hazard alerts systems and $100,000 to develop methods of collision risk analysis for various air traffic control environments.
- **Purdue Research Foundation**—$800,000 to study the effects of hail and water that is ingested by operation aircraft fanjet engines.
- **University of Utah**—$125,091 to investigate the role of fretting corrosion and fretting fatigue in aircraft rivet hole cracks.
- **University of Washington**—$252,726 to study axial crack propagation and arrest in pressured fuselages.
- **Lehigh University**—$770,000 to investigate corrosion and corrosion fatigue of airframe materials.
- **Rutgers University**—$137,556 to conduct research on the interaction of water sprays with fire flume in aircraft cabin fires. ✲



Logo Search Nationwide

The search is on for designing FAAers.

Joe Del Balzo, Executive Director for System Operations, has announced the beginning of a national competition to come up with a logo for AXO. The contest ends on *Monday, August 10.*

FAAers can submit entries in text form or in the form of drawings and sketches that identify AXO concepts. Selected by an AXO committee, the winning designer will receive a U.S. savings bond. The winning logo will be formalized by an artist.

Submissions should be sent to Madeline Taylor, AXO-2, phone number (202) 267-3499.

Here are some key words or thoughts that could represent AXO:

- Spirit
- Links/linking
- Vision for tomorrow
- Meeting challenges—for instance, those of the 21st century, the future
- Cross-organizational connections
- Horizontal integration

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of Transportation

Federal Aviation Administration

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