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

Feeling Fit

Seatbelts and Fitness Go Together

Maryland and the District of Columbia have joined the growing list of jurisdictions that now require the use of belts in the front seats of cars. Most of the laws are a little weak in the area of enforcement, but if you want to stay fit, you'd better become a law-abider.

It's true: seat belts do save lives and minimize injuries; the statistics are incontrovertible. The anecdotes on rollovers, head-ons and simple fender-benders consistently show people walking away from such accidents with nothing more than bruises when they wore seat belts, while their opposite numbers often never get out.

And it's not just a matter of your personal right to be stupid. There are social costs. When there are injuries, automobile liability and health insurance policies have to pay off, and the services of shock-trauma units boost the cost of hospital care. We all pay for that with increased insurance premiums.

The National Highway Traffic Safety Administration estimates that only 14 percent use their seat belts. Other sources vary, but all are well below 50 percent.

Prevent these escalating costs, possibly save yourself a summons and keep yourself jog-able, skiable, tennis-able, golf-able and work-able.

Let's be candid. We have no technical solutions to all of our aviation safety concerns. The incidents that gained prominence in the past year can each be attributed to a variety of causes. Some of them are amenable to new procedures; others could not be reached with either new procedures or existing technology. The pilot and his or her judgment continues to be a prime factor. Developing incremental improvements in this great system will be difficult, if only because so much of the system already operates so safely. But still we try and will continue to try.

—Donald D. Engen

The cover: *The heart of the remote maintenance monitoring system developed from the NAS Plan's "80s Maintenance Program" is the Maintenance Control Center. For story, see p. 4.*

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John Clabes—Aeronautical Center
Paul Steucke, Sr.—Alaskan Region
John Swank—Central Region
Vacant—Eastern Region
Morton Edelstein—Great Lakes Region
David Hess—Metro Washington Airports
Mike Ciccarelli—New England Region
Richard Meyer—Northwest Mountain Region
Jack Barker—Southern Region
Geraldine Cook—Southwest Region
Dennis Flath, acting—Technical Center
Barbara Abels—Western-Pacific Region

By Charles Spence
An aviation free-lance writer, he was senior vice-president for public relations at AOPA and served 15 years with Hearst newspapers.

The Long Arm of the Technician

Automated Long-Distance Maintenance Cuts Outages, Costs

St. Paul is a dot in the Bering Sea—one of the Pribiloff Islands about 350 miles west of the Aleutian Islands. To maintain FAA's long-range radar in this internationally sensitive location used to require a scheduled periodic flight of technicians from Anchorage and often in hazardous arctic weather—but no longer.

Now, the facility is polled automatically every few seconds as to the state of its health. If a malfunction occurs, an adjustment often can be made in Anchorage before it develops into a major problem—all without facility downtime or the cost of about $1,000 per flight to the site.

The check and adjustment is handled right at the Anchorage ARTCC through satellite communication, computers and skilled technicians analyzing the data supplied from the site.

Flights will still be needed but on a far less-frequent basis to replace faulty plug-in circuit modules, to check the physical condition of the buildings and to cut the grass.

St. Paul is just one example of the Remote Maintenance Monitoring (RMM) program now getting underway and which will eventually serve the many facilities operated by FAA. There are already 38 RMM networks in operation.

The Anchorage Center's net includes facilities on Biorka Island, Middleton Island and on the North Slope, in addition to St. Paul.

Administrator Engen (foreground) visits the prototype Maintenance Control Center at the St. Louis Airway Facilities Sector, shepherded by the assistant sector manager, Ken Eaker. The console includes a remote maintenance monitoring input/output terminal, multi-line telephone, VHF/FM radio, high-frequency single-sideband radio and a radar weather monitor.

Photo by John Swank

Now 20 second-generation VORTACs, two radars, one beacon-only radar and two instrument landing systems are being monitored at the St. Louis Airway Facilities Hub Sector Office.

Among others is Southern Region, remoting the maintenance for the long-range radar on Grand Turk Island in the Bahamas.

The first facility to be maintained by remote monitoring was a radar beacon site at Crocker, Mo., about 1979. However, this prototype was a stand-alone type. The display watched by a technician at his sector was for that facility alone. Now, the facilities are networked to one monitoring site.

In 1980, the concept was published in a paper, but it wasn't until 1982 that funds were appropriated to move from on-site to remote maintenance. The timing was significant also because effective RMM was only possible as solid-state equipment replaced vacuum tubes.

"To better serve the user and keep costs down," explains Herman Tharrington, manager of the Maintenance Processors Program in the Program Engineering and Maintenance Service, "we developed the '80s Maintenance Program.' It changes our philosophy from repairing everything on site to replacement of modules there and doing the repair work at a repair center." All new facilities include the remote maintenance monitoring, and older facilities will be retrofitted.

As many as 32 different facilities—each equipped with a Remote Monitoring Subsystem (RMS)—may be connected to one Remote Maintenance Subsystem Concentrator (RMSC), if the RMSs are clustered as they would be at an airport where there are a variety of navigation and landing aids.

Data from an RMSC or a remote radar is fed back to a Maintenance Processor Subsystem (MPS) at an ARTCC or other high-activity location. The MPS processes the data, stores it, routes it to regional or national centers and permits feedback to the RMS for adjustments. The transmission of data from the RMSs is via satellite or microwave communications or over FAA leased lines through the National Interfacility Communications System. The data can be displayed by printout and computer terminal.

The Remote Monitoring Subsystem at the St. Paul Island long-range radar stands ready to serve a visiting technician when on-site work is needed.

Electronics technician Jim Simpkins adjusts equipment in the remote monitoring test lab set up in Anchorage, Alaska, last year to develop national programs.

Every few seconds, the RMS is polled by the MPS through a modem at the site. When signs of a malfunction appear, the MPS sends an alarm to a Maintenance Monitoring Console at a Maintenance Control Center, usually at an ARTCC or other high-activity location. Both aural and visual, the alarm will continue until it is answered by a technician.

Periodically, all data is reviewed. For 30 days, it is kept on line at the console; then it is retained on tape. This permits an examination of trends in equipment failures—whether a problem is unique to the site or recurring throughout the system.

Plans call for a number of Maintenance Processor Subsystems and Maintenance Control Centers to be established by the time the program is completed in the early 1990s.

In addition to fixed locations for monitoring, there will be portable monitoring units that will permit testing equipment on site or from a Touch-Tone telephone, which could also be in a vehicle. This could permit an ultra-fast response to a problem.

As remote maintenance monitoring takes hold, the number of locations that will be manned will be reduced. "We don't see anyone losing his job," says Tharrington. "Over the years of transition, normal attrition will accomplish the reduction."

This is echoed by the regional offices that have first-hand knowledge. "We had four to five people stationed on Biorka, a beacon-only radar on an island near Sitka," says Tom Hunt, manager of the Alaskan Region's Airway Facilities Division, "but there's no one there now. And no one has been RIFed.

"The important thing is to plan ahead," Hunt adds. "This summer, FAA people will move from Middleton Island [in the Gulf of Alaska], but they've known this for two years and have been able to prepare for

The workhorse of RMM is the Maintenance Processor Subsystem—the computer that queries the facility, processes its data, stores it and takes remedial instructions back to the facility.

A headquarters maintenance processor that provides summary reports from field installations is operated by Laura Thomas, program analyst in the Maintenance Processors Program, and Tom Anderson, systems engineering and integration project manager for Martin Marietta.

Photo by Lance Strozier

Central Region Airway Facilities personnel examine the installation of a Remote Monitoring Subsystem that tends landing lights at the Johnson County Executive Airport in Olathe, Kan.

Another configuration of a Remote Monitoring Subsystem is this portion of one that services a long-range radar.

moving to other locations."

Airway Facilities manager Don Schneider in Central Region agrees that the acceptance of remote maintenance monitoring by FAA personnel "has been outstanding." The key, he says, is that the technicians have become involved in the planning and see the new and challenging positions."

"Now, with RMM, the technician won't have to fill out such things as meter readings and log entries," says Washington's Tharrington. "The system will help technicians form judgments on a facility's performance based on his knowledge of the system and the data he's received from the RMM."

The prime motivation for developing remote maintenance monitoring has been to provide better service to the users and to make the system safer.

"We don't have to rely on a user telling us that a facility isn't working or on our periodic visits to tell us that it's not up to specs," says Tharrington. "Continuous monitoring will make it possible to avoid many emergencies." ■

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.

In the Beginning . . .

60 Years Ago, the Air Commerce Act Roused a Stagnant Industry

"I have in mind that I may like to have you look into the subject of airplanes for me," President Calvin Coolidge wrote to financier Dwight W. Morrow in March 1925. So Morrow was not totally surprised when he picked up his Sunday morning newspaper on September 13 and discovered that Coolidge had appointed him chairman of a Presidential board charged with investigating the state of U.S. aviation.

In the seven years preceding this event, federal regulation of civil aviation was one of the most intensely debated issues on the national scene. Three Congresses and diverse instrumentalities of the federal executive had investigated the subject. By March 1925, no fewer than 26 probes of both civil and military aviation had been conducted. At the same time, countless legislative measures were introduced looking to resolution of the issue. All to no avail.

Left to its own devices, meanwhile, civil aviation stagnated. Americans seemed incapable of exploiting the airplane commercially. Indeed, in 1925, the U.S. aviation industry was an economic disaster area.

Barnstormers and gypsy fliers plied their trade; few, however, made ends

Notables from the birth of federal regulation of the airways, from the left: President Calvin Coolidge, who presented the Collier Trophy to the fledgling Aeronautics Branch of the Department of Commerce in 1928; Clarence M. Young, the second Assistant Secretary of Commerce for Aeronautics and the deputy assistant secretary at the outset; Sen. Hiram Bingham of Connecticut, who introduced the Air Commerce bill; the man in the rear is unidentified; and William P. MacCracken, the first Assistant Secretary of Commerce for Aeronautics, 1926-1929.

May 20, 1926.
[S. 414.]
[Public, No. 254.]

CHAP. 344.—An Act To encourage and regulate the use of aircraft in commerce, and for other purposes.

Air Commerce Act of 1926. Meaning of terms. "Air commerce."

"Interstate or foreign air commerce."

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That as used in this Act, the term "air commerce" means transportation in whole or in part by aircraft of persons or property for hire, navigation of aircraft in furtherance of a business, or navigation of aircraft from one place to another for operation in the conduct of a business. As used in this Act, the term "interstate or foreign air commerce" means air commerce between any State, Territory, or possession, or the District of Columbia, and any place outside thereof; or between points within the same State, Territory, or possession, or the District of Columbia, but through the airspace over any place outside thereof; or wholly within the airspace over any Territory or possession or the District of Columbia.

meet. One barnstormer, asked what was the most dangerous thing about flying, replied: "The risk of starving to death." Skywriting, cropdusting, aerial photography and aerial surveying showed signs of stirring, but they didn't make so much as a ripple in the gross national product.

Scheduled air passenger service was virtually non-existent. The most substantial commercial air passenger line of the post-World War I period had failed in 1924. That same year, 124 fixed-base operators provided unscheduled service. In 1925, their number dropped to 60, and this was at a time when the U.S. economy was booming.

Only one civil aviation activity in 1925 could clearly be called a success: the U.S. Air Mail Service. In 1918, the Post Office Department began transporting the mail in its own planes, flown by its own pilots over airways of its own construction because private interests refused to undertake the venture. They had judged it too risky.

A number of things inhibited businessmen from investing in air transport. The principal deterrent was the absence of federal safety regulation. "Uniform regulation of aeronautics . . . is not only desirable but absolutely indispensable to the effective development of aerial transportation as an instrumentality of interstate commerce," said William P. MacCracken, Jr., who was spearheading a drive by the National Aeronautic Association (NAA) to secure Federal regulatory legislation.

Others agreed with MacCracken. Before anyone "would think of investing any substantial amount of money in the air business," said Paul Henderson, who ran the U.S. Air Mail Service, "he must first have some basic law"—a federal law regulating who may fly, where he may fly and in what sort of aircraft.

The absence of regulation had fixed civil flying in the public's mind as a dangerous activity. And it was dangerous. No central authority certificated pilots, aircraft or flying schools. Air traffic rules did not exist. Pilots were free to climb into less than airworthy aircraft and perform outrageous stunts.

Little wonder that aviation insurance was prohibitively high. "The underwriters, suffering heavy losses from crashes by irresponsible fliers," noted an organ of the Aeronautical Chamber of Commerce, "pass the burden on by increasing the premium from the responsible operators." One scheduled carrier suffered only one fatal accident in the four years it was in operation, yet its insurance costs came to 17.25 percent of total operating expenses.

Regulated flying, conducted by the Post Office Department and the military services, was immeasurably safer. In 1924, the U.S. Air Mail Service had one fatal accident for every 463,000 miles flown; in contrast, commercial fliers suffered a fatal accident every 13,500 miles. A U.S. Senate committee, in examining these figures, noted that the Post Office used only pilots and planes approved by federal authority. "The inference is obvious," the committee said.


TIME
The Weekly Newsmagazine
DWIGHT WHITNEY MORROW

Financier Dwight Morrow, whose daughter Anne later married Charles Lindbergh, was appointed by President Coolidge to head a nine-man board to study the development of aviation.

Others made the same inference and began beating the drums for federal regulation. Most important among those joining this chorus was the aviation community itself. "It is interesting to note," Secretary of Commerce Herbert Hoover wrote to an influential Congressman, "that [aviation] is the only industry that favors having itself regulated by government."

Safety regulation, however, was not all that the aviation community wanted of the Federal Government. They wanted it to play a more direct role in the development of their industry. Government had done no less for other transportation modes. It dredged harbors, built highways and canals and subsidized the westward expansion of railways with munificent land grants. If government developed highways and seaways, why shouldn't it develop airways?

"There is no question that the development of commercial aviation requires that these things be done just as surely as there could have been no extensive motor-car development . . . except that the states and Federal Government provided good roads," said aircraft builder Chance M. Vought. Herbert Hoover agreed. Indeed, he argued that airway facilities must be public facilities.

Assistant Secretary of Commerce for Aeronautics William P. MacCracken (left) poses with Secretary of Commerce Herbert Hoover and the only other Assistant Secretary, J. Walter Drake (right), after MacCracken's swearing in.

By 1925, there was substantial agreement among influential people in Washington and the aviation community that the Federal Government should regulate and foster the development of civil aviation.

But a number of impediments stood in the way. Perhaps the biggest was a philosophical division between those who wanted aviation regulated by a civil agency—the Department of Commerce—and those who wanted that function performed by a unified department of aeronautics responsible for both military and civil aviation. That split weakened the forces favoring Federal regulation.

Brig. Gen. William ("Billy") Mitchell led the drive for a unified department. He had as his allies a small bloc of Congressmen and a coterie of U.S. Army flying officers, who wished to free aviation from the domination of ground commanders.

President Coolidge and other top civilians in the Executive Branch, the military establishment and the civil aviation community vigorously opposed Mitchell's solution. "Water transportation for commercial purposes is not under the Navy Department, and I have never known of anyone wanting it put there," argued Bill MacCracken.

Events eventually conspired to bring about a solution. In January 1925, Congress enacted the Kelly Air Mail Act. No event was more pivotal in the assumption of civil air regu-

lation by the Federal Government.

The Kelly Act authorized the Post Office Department to contract for the carriage of domestic mail with commercial air carriers. Businessmen, seeing how well the U.S. Air Mail Service had performed, greeted the Post Office's request for bids with enthusiasm. Congress knew, however, that these airmail contractors stood little chance of succeeding without federal safety regulation and airway development. All that remained to be resolved was whether they would reside in a unified aviation department or in a civil agency.

As 1925 wore on, the proponents of a civil solution had reason for concern. A special investigation committee headed by Florian Lampert (R-Wis) had been organized by the House to look into alleged irregularities in the letting of military contracts to aviation concerns. The investigation had been instigated by insurgent legislators who believed that the drive for civil air legislation was the work of a pernicious "aircraft trust." There was reason to believe that this committee would recommend Billy Mitchell's solution to the aviation question.

On Sept. 3, 1925, events took a more ominous turn. On that day, the Navy's rigid airship *Shenandoah* was destroyed in a storm over Ava, Ohio. Mitchell, by now completely at loggerheads with the military establishment, issued a provocative statement blaming the accident on "the incompetency, criminal negligence and almost treasonable administration of the National defense by the Navy and War Departments." The tide, it appeared, was turning in favor of civil-military unification.

The President, stung by Mitchell's attack and the favorable turn in unification's fortunes, acted swiftly and resolutely. He ordered Mitchell court-martialed, and he established the Morrow Board. Morrow's job was to upstage the Lampert Committee and, at the same time, turn back the onrushing tide toward unification.

With an unintentional assist from

Mitchell, Morrow succeeded. In late September, Mitchell appeared as a witness before the board. Inexplicably, he performed miserably, delivering a long, discursive monologue that left nearly everyone numb. His supporters in the hearing room knew the unification cause was lost.

To no one's surprise, the Morrow board recommended that military and civil aviation be kept separate. In due course, the Lampert Committee also recommended keeping civil and military aviation separate.

With Morrow and Lampert in close agreement, the civil aviation issue was all but settled. Within five months after the appearance of these reports, Congress passed the Air Commerce Act of 1926, empowering the Secretary of Commerce to regulate and foster air commerce and establish, operate and maintain airways and aids to air navigation. The President signed it into law on May 20, 1926—sixty years ago this month.

Civil aviation had what it wanted, a cornerstone on which to erect a commercial air transport system. "The Air Commerce Act will be the agency through which air transport will come into its own," remarked a writer in *U.S. Air Services.*

During the 12 years that this statute remained on the books, air transport did come into its own. In 1926, U.S. airlines flew 4.3 million revenue miles and carried 5,782 passengers; revenue passenger-miles were virtually nil. In 1938, when the Civil Aeronautics Act was enacted, they flew 69.7 million revenue miles and carried 1.3 million passengers a total of 476 million revenue passenger-miles.

A great deal more than the Air Commerce Act had produced this exponential growth. But it could never have been achieved without the fostering hand of Federal regulation and airway development. ■

Unwavering Dedication

Sector-of-Year Awards Reflect Commitment to Service

New York ARTCC

New York ARTCC communications technician George Wade analyzes a frequency problem.

NAS supervisor Carmine Pellechia (left) and Flight Data Processing Unit supervisor Eugene Sturr discuss the ARTCC sector's automation reliability statistics.

It must be difficult to sit in judgment for the facility-of-the-year awards. It's not like an amateur talent contest; it's more like Miss America—winnowing the best from the best. When facilities do repeat performances—on the regional or national level—there has to be that little extra spark that makes the difference.

Still, the same terms come up to describe the Airway Facilities sector personnel involved in the competition each year. It must be true: they're a dedicated lot; they display teamwork.

"What impresses me most about our sector," says Vincent Laurentino, manager of the New York ARTCC Airway Facilities Sector, which copped the award for the second year in a row in the en route category, "is our people's ability to continue to raise their level of performance and retain a high level of facility reliability and availability, despite all the negative things affecting jobs and benefits and the pace of modernizing the system. It's their personal dedication to get the job done."

Systems analyst Charles Kalkins (left) and computer operators Joseph Farone and Carol Nelson work on directed study training for the Host Computer system.

"It's their pride in their work," says Terry Jacob, acting manager of the New Orleans Airway Facilities Sector, which won Sector of the Year in the general NAS category. "Their dedication provides the extra effort it takes to get the job done, whether it's going out to restore facilities under adverse conditions or improving their work environment."

The sector had to deal with three hurricanes, two of which came by twice. Because of effective planning, damage to FAA facilities and service outages were held to a minimum. Many technicians used their personal boats to service facilities isolated by high water. Technicians also repaired a cracked airport radar antenna support at a cost of $200, instead of waiting for costly replacement and delaying the restoration of service.

At one sector field office, technicians remodeled an old "barracks-like" facility themselves, saving $8,800 over the lowest contract estimate, doing the paneling, painting and carpeting. Such actions were commonplace, which may help to explain why the New Orleans sector won the regional award three years in a row. Thousands were saved last year by supporting F&E installation work or by doing the work without F&E.

Electronics technicians Sam Graves (left) and Ed Taylor make final adjustments on one of the sector's 52 plan view displays.

Material specialist Harry Hanson and purchasing agent Nadene Fontano discuss a logistics problem for the sector.

The sector's technical support secretary, Cathy Puleo, takes an incoming call.

Proficiency development specialist Charles Jumpeter enters personnel data into the sector's Compustar System.

Computer operator Beverly Faber changes a system analysis recording tape on the center's IBM 9020 computer.

The New Orleans sector did its job with 82 persons in its 40,000-square-mile area of southern Louisiana, which includes sector field offices at Alexandria, Baton Rouge, Lake Charles, Lafayette, New Orleans Lakefront and Slidell.

The New York sector is responsible for ensuring that the ARTCC effectively covers its 41,000 square miles of airspace over seven states and 2.5 million square miles of oceanic airspace. The sector's 100 employees maintained equipment associated with seven long-range radars, 22 flight data and entry sites and the display channel equipment and 9020 computers.

Involved in many projects during the year, sector personnel invested a lot of time and effort in aiding the development by a technical support facility technician of a replacement system for flight-strip printers. His design, which has been adopted nationally, is expected to save $1.3 million in its first year at the eight centers receiving host computers.

Says Laurentino, "People seem to pull together better when things get tough. And here in our sector, the employees are not afraid to speak up on what they think is wrong. That's what makes us click pretty well. It makes it easy to manage people like that." ■

New York photos by Charles Jumpeter

New Orleans

The Alexandria, La., long-range radar standby engine generator is serviced by maintenance mechanics John Duplissey (left) and Ed Walton.

Resident engineer Les Thomas (foreground) and marine machinery mechanic Phil Bourgeois run cables to the standby engine generator at the New Orleans Lakefront tower under construction.

Working on integrated communications switching system equipment at DeRidder's Automated Flight Service Station is electronics technician Bill Kenney.

Looking up imprest fund regulations at the New Orleans Sector Field Office is Airway Facilities clerk Sandra Marcotte.

At the Baton Rouge Sector Field Office, electronics technician Richard Stanton performs a check of the instrument landing system remote monitor.

Electronics technician William Johnson checks military height finder scopes at the Slidell Sector Field Office.

Electronics technician Charles Giraud works on ARTS IIIA equipment at New Orleans' Moisant Field tower.

Electronics technician Guy Zeller (left), acting radar unit supervisor John Kilburn (center) and radar relief technician Marvin Strickland discuss a beacon problem with the ATCBI-5.

By Terry E. Snyder
A personnel management specialist in the Office of Human Resource Planning and Evaluation.

Second Survey Builds on First

1986 Employee Survey Improves Methods

We've come a long way in the last two years in the way many employees and managers perceive the climate of their worklife, thanks in large measure to the continuing process launched by the employee survey.

That process began in 1984 with a questionnaire mailed to each employee's home and has come full circle. This month a revised survey will be delivered to employees in the office, building on the methods and successes of the earlier one.

While in many offices and facilities, the machinery of the survey cycle is still in place and functioning and many achievements are apparent, the 1986 survey is designed to evaluate what has been accomplished and what still needs to be done in our efforts to put people first in resource planning and to improve the working environment.

"For the employee, this is the only mechanism that provides the opportunity to communicate directly with all levels of management, from the first-line supervisor on up to Admiral Engen," points out Dorothy Berry, director of the Office of Human Resource Planning and Evaluation.

"For management, this is the only opportunity on a broad scale to get a pulse of the agency—and not filtered through many layers of management," she added. "It gives us a chance to

see what is working and what is not and to ask ourselves what we need to do to make this a better place in which to work."

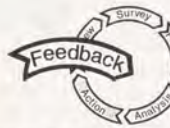
In the 1984 survey, 54 percent of all employees responded, mailing their questionnaires to the Civil Aeromedical Institute (CAMI) at the Aeronautical Center in Oklahoma City. Based on the achievements of the earlier survey, the survey team is hopeful that a much larger proportion of FAA employees will participate in the 1986 survey.

The 1984 responses covered a wide range of subjects, many of which dealt with the survey itself. This has led to changes in the 1986 questionnaire. Many employees had taken issue with the fact that questions on stress and burnout were directed to air traffic controllers only, pointing out that their jobs' responsibilities and deadlines also involved stress. This year, the questions will be asked of all employees.

The revised survey also will contain a federal issues section, which will

The cycle begins anew with the 1986 employee survey this spring, which will be delivered in the office or facility, here simulated by Brenda Adams (right), secretary in the Planning Evaluation and Research Div., Office of Human Resource Planning and Evaluation, and clerk-typist Renay Staton.
Photo by Lance Strozier

Much as a work group might anywhere, team members from the Planning and Research Division discuss action plan follow-up procedures. From the left are Shelley Thomas, Mary Weltin, the author, Jim Spaulding, Karla McPherson and Susan Arnold.
Photo by Lance Strozier

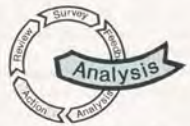


seek to measure employee feelings about budget restrictions, contracting out, proposed benefit changes and the prevailing public attitude toward federal employees.

Dr. William Collins and his staff at CAMI compiled and did the initial analysis of the data from nearly 26,000 responses in 1984. They developed some 470 separate reports, including national, regional and facility level and special reports. Many smaller offices and facilities, however, felt that they couldn't identify with the data in the larger grouping reports. In response to this, the results from the 1986 survey will be broken into 1,400 separate reports.

After the initial national and

A CAMI team handles the 1984 survey. Lena Dobbins (left) loads the optical-mark scanner with surveys, while Lendell Nye checks the printer to ensure that the data is being read correctly onto magnetic tape. Carolyn Dollar enters commands into a terminal to permit scanned information to be transferred from the tape into the computer for analysis.



regional reports were released, analysis was undertaken in many regions, facilities and headquarters organizations to identify positive results and areas in need of improvement. For the new survey, the Office of Organizational Effectiveness and the Office of Human Resource Planning and Evaluation are planning assistance with survey results analysis in the field. They are also designing the reports to make data interpretation and use simpler, such as by graphic representations.

Like many organizations, the Office of Program and Regulations Management (APR) formed a volunteer work group to further evaluate the survey results and the office's pluses and minuses. The group conducted listening sessions with every employee.

"Everybody participated, which tickled me," commented Irene Barnett, director of APR.

Based on the listening sessions,

the work group developed an action plan, which APR management agreed to without change. It dealt with human relations, the work, the work environment and communications.

Complaints dealt with workload and staffing (help for which was already planned), crowding and the state of disrepair in the offices. Every effort was made to improve the latter, and most employees recognize the effort invested, even though much remains to be done. Part of the action plan stated that management ought to define its philosophy and its open door policy.

"Because many of my oral and written comments had brought little reaction, I was concerned with communications. The action plan led me to talk with every employee in the office," Barnett said. "It wasn't mandatory, but no one backed away, and that was some of the best time I have ever spent. It was so constructive, that I intend to do this about every six months.

"I see the office pulling together more, people in one division volunteering to help out a staffing shortage in another."

Summing up her experience, Barnett said: "I think the process worked. The work group has stayed together since the survey results and every quarter it issues a report card on the office. We're seeing improvement in communications and even in the environment. We've got some of the same problems, but I think there are a lot of items on the action plan that we can check off."

Dr. William Collins, manager of CAMI's Aviation Psychology Laboratory, explains the methods and results of the 1984 survey to a Washington audience. Photo by Dennis Hughes

The parts of this survey cycle often blend together, depending on how each organization handles the process. The report card Barnett referred to is part of the review—the howgozit, the where-are-we step.

Listening sessions or follow-up interviews are other ways of judging the effectiveness of action plans and the actions taken on them.

These approaches were evident in the New England Region, for example, according to Dr. Anne Harlan, who is manager of the Organizational Development Branch, Human Resource Management Division.

The 1984 survey had a distinct impact there because of strong top management support, and now there was hard data available that impressed many managers.

Facility managers were encouraged to develop data for their individual organizations to make it more meaningful. One manager in a sizable facility met with each employee to listen to perceptions of the survey results and the quality of worklife. A work group representing a cross-section of employees selected by their peers looked into the need for change and came up with better consistency in awards, training and leave policies.

Elsewhere, career counseling, increased employee input in human relations matters and subsequent facility surveys to measure progress were initiated.

FAA-wide, the development of action plans and carrying them out has not been uniform, but there have been successes both in problem solving and in improved communications. It was a good start for the 1986 survey to build upon.

"I know there's frustration about surveys and often lack of action," Dorothy Berry says, "but changing the overall climate of an organization as large as the FAA is going to take time. You can't expect it in just a year or two."

We've taken the first steps. Now, every employee has the opportunity to tell it like it is as a basis for further action. ■

By Gerald E. Lavey
Acting manager of the Plans & Audio Visuals Div., he previously worked for the Federal Railroad Administration and DOT's Denver SecRep.

Deficit Reduction Law of Land

Gramm-Rudman-Hollings Act Effects To Be Reckoned With

It's officially titled "The Balanced Budget and Emergency Deficit Control Act of 1985," or PL 99-177, if you prefer. However, this may be the first and last time you will ever see or hear it referred to this way.

It's usually called "Gramm-Rudman-Hollings," and, like the advertising claims for E.F. Hutton, it's a name that makes people sit up and take notice.

Gramm-Rudman-Hollings—or GRH, as it will be referred to from here on out—is one of the most radical and controversial pieces of legislation in recent memory. Essentially, it is an agreement between the Congress and the White House to set a timetable for eliminating the federal deficit by fiscal year 1991. (See "Deficit Targets.")

President Reagan signed GRH into law on December 12 with the reminder: "Deficit reduction is no longer simply our hope and our goal—deficit reduction is now the law." He also called it "an important step in putting our fiscal house in order."

Before the President's ink was dry, however, the law was challenged in Federal District Court and a key provision of that law—the automatic spending cuts—struck down two months later. The three-judge panel ruled that provision unconstitutional because it gives executive power to the Comptroller General, head of the General Accounting Office (GAO), who is actually a creature of Congress. Proof of that, said the court, is the fact that only Congress can fire the Comptroller General, not the President. (See "Comptroller General's Disputed Role.")

> '. . . an important step in putting our fiscal house in order!'

This ruling was appealed to the Supreme Court, which heard oral arguments on April 23. A decision by the high court isn't expected until early July.

Until the Supreme Court decides, however, GRH is the law of the land and, regardless of the court's decision, it won't have any effect, for now at least, on the 4.3 percent cuts for FY 1986 that went into effect March 1.

The automatic across-the-board spending cuts in the legislation are what make most people nervous. A recent *Wall Street Journal*/NBC News poll shows overwhelming concern for the deficit and strong support for reductions in federal spending. However, 72 percent of those polled disagreed with the notion of automatic across-the-board spending cuts.

Even those in Congress who supported GRH are uneasy about the trigger mechanism. One of the bill's main sponsors, Sen. Warren Rudman of New Hampshire, reportedly called it "a bad idea whose time has come." The other two major sponsors are Sens. Phil Gramm of Texas and Ernest F. Hollings of South Carolina.

As for GRH's impact on aviation, Administrator Engen stated the Administration's position before a Feb. 3 hearing of the Senate Commerce Subcommittee on Commerce, Science and Transportation: ". . . The Administration supports the goals of the Balanced Budget and Emergency Deficit Control Act, and the Secretary is determined that the Department will be responsive to its provisions in a way that does not jeopardize the safety of the traveling public."

In terms of the FY 1986 budget, the 4.3 percent cut means a $116 million reduction in the Operations budget. What makes matters worse is that the Operations request had already been trimmed by some $55 million during the normal appropriations process, leaving the agency a $171 million total shortfall to deal

with. The other FAA accounts—F&E, airport grants program, R&D, etc.—also have to be cut 4.3 percent, but the Operations account is the most critical because about 75 percent of it goes for employee salaries and benefits.

As a preliminary cost-saving measure, on Dec. 31, the Administrator issued a directive imposing "severe constraints on contracting, travel and other activities which result in spending money for FAA Operations." Included was a freeze on outside hiring for occupations other than aviation safety inspectors, air traffic controllers and civil aviation security specialists.

Since then, several additional cost-saving measures have been identified, such as furloughs and curtailing the use of GSA vehicles by 15 percent and agency aircraft by 25 percent.

Both the Administrator and the Secretary have stated that furloughs are their "last resort" and, in an effort to prevent them, have proposed an $80 million "zero sum" supplemental request to the FY 1986 Operations appropriations, plus a transfer of $8 million from F&E funds to pay for rehired annuitants in air traffic. "Zero sum" means that no new monies are being sought, just permission to juggle funds already appropriated for other accounts. This proposal has been approved by OMB and was sent to Congress in mid-March.

Later, in a separate action, the House Appropriations Committee approved a supplemental FAA appropriation for FY 1986. It involves a total of $85 million—$80 million of it in new money.

For FY 1987, the Operations budget picture looks rosier, if Congress accepts the Administration's proposed budget. In fact, the agency's FY 1987 request calls for an increase in Operations funding over FY 1986 levels.

> '. . . the Department will be responsive [to GRH] in a way that does not jeopardize the safety of the traveling public.'

On the other hand, major cuts are proposed for R&D, F&E and the Airport Improvement Program.

With this proposed 1987 budget, Administrator Engen has said that the FAA "can sustain services essential to aviation safety." However, he warned that if "across-the-board and indiscriminate budget reductions go into effect, the FAA's ability to serve aviation and our ability to provide a solid foundation for future service will be impaired."

The lower-court decision striking down the trigger mechanism has been hailed by many as a death knell for GRH. A *Wall Street Journal* article stated that the ruling "has taken the sting out of the newly enacted balanced-budget law," and it quoted one relieved member of Congress as saying: "Gramm-Rudman is now a toothless tiger."

That remains to be seen, but the objective of GRH still remains intact—to eliminate the Federal deficit by 1991. Even without teeth, tigers have a way of getting a lot of attention. ■

Comptroller General's Disputed Role

The Comptroller General's role under GRH is to review projected budget deficits provided by the Office of Management and Budget (OMB) and the Congressional Budget Office (CBO). If he determines that those projections will exceed the deficit ceiling by more than $10 billion, he sends a "sequestering" report to the President, triggering the automatic cuts. ("Sequester" simply means to set aside or not spend appropriated funds.)

This role is what sparked the constitutional dispute. Opponents claim this responsibility gives Executive Branch privileges to the Comptroller General that he does not have under the Constitution, and the District Court agreed.

GRH provides a contingency arrangement in case the role of the Comptroller General is declared unconstitutional. However, this fallback arrangement is similar to the budget process in effect since the enactment of the Budget and Impoundment Control Act of 1974. It provides for the creation of a temporary joint Congressional committee on deficit reduction. This committee prepares a joint resolution calling for the OMB and CBO reports to be submitted to both houses of Congress. If passed, the resolution would then be forwarded to the President for his signature.

Deficit Targets

The law sets target deficit limits for each of the five fiscal years until 1991 and stipulates that if those targets are not met through the regular budgetary process, then across-the-board cuts will automatically go into effect. Virtually every government "program, project or activity" is affected, except for Social Security, Medicaid, interest on the Federal debt, veterans' benefits and a few other social programs.

The maximum deficits allowed are:

FY 1986——$171.9 billion
FY 1987——$144.0 billion
FY 1988——$108.0 billion
FY 1989——$ 72.0 billion
FY 1990——$ 36.0 billion
FY 1991——$ 0.0 billion

The maximum that was allowed to be cut from FY 1986 is $11.7 billion.

New GRH Fiscal Calendar

First Monday after Jan. 3: President submits his budget to Congress.
April 15: Congress completes action on the budget resolution for upcoming fiscal year.
June 30: Deadline in House for passage of all regular appropriations.
Aug. 20: OMB and CBO issue report to GAO Comptroller General projecting deficit for the next fiscal year. If that projection is more than $10 billion over the target ceiling for that year, automatic spending cuts are set into motion.
Aug. 25: Comptroller General issues his report to the President on automatic cuts.
Sept. 1: President issues the order for spending cuts required by the Comptroller General's report.
Oct. 1: New fiscal year begins.
Oct. 5: OMB and CBO issue final report to the Comptroller General reflecting any Congressional action taken since earlier reports to reduce the deficit.
Oct. 15: The President issues a final order for automatic spending cuts, reflecting further Congressional action. The final report could reduce or cancel the automatic cuts.
Nov. 15: Comptroller General issues compliance report, determining if the President has put automatic cuts into effect as directed.

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

■ **Ronald E. Bragg,** supervisor of the Examiner Standardization Section, Examination Standards Branch, Regulatory Support Division, Aviation Standards National Field Office (ASNFO).

■ **David E. Campbell,** manager, Systems Engineering Support Branch, National Airway Engineering Field Support Sector, Maintenance Engineering Division, Program Engineering and Maintenance Service.

■ **Vernon E. Cruse,** manager, Atlantic City, N.J., Flight Inspection Field Office, promotion made permanent.

■ **Harry B. Grindstaff,** assistant manager, Airway Facilities Branch, FAA Academy.

■ **Georgetta James,** manager, Training Methods and Operations Branch, FAA Academy, promotion made permanent.

■ **Bobby G. Johnson,** unit supervisor, Storage and Distribution Section, Storage and Transportation Branch, FAA Depot, promotion made permanent.

■ **Donald G. Loeliger,** supervisor, Analysis and Standards Section, Quality Control Branch, FAA Depot.

■ **Teddy C. McIlwain,** supervisor, Procedures Section, Oklahoma City Flight Inspection Field Office, promotion made permanent.

■ **James B. McNulty,** unit supervisor, Battle Creek, Mich., Flight Inspection Field Office, promotion made permanent.

■ **David Y. Nakasone,** unit supervisor, Line Maintenance Section, Honolulu, Hawaii, Flight Inspection Field Office, promotion made permanent.

■ **Charles B. Rogers,** supervisor, Systems Management Section, National Safety Data Branch, Regulatory Support Division, ASNFO, promotion made permanent.

■ **William E. Schofield,** supervisor, Flight Inspection Section, Sacramento, Calif., Flight Inspection Field Office.

Alaskan Region

■ **Jimmy D. Boyd,** unit supervisor, Bethel Airway Facilities Sector Field Office, North Alaska AF Sector, from Northwest Mountain Region AF Division.

■ **Richard D. Gordon,** manager, Anchorage Flight Standards District Office, from the Houston, Texas, FSDO.

■ **Herbert L. Gray,** unit supervisor, King Salmon AF Sector Field Office, South Alaska AF Sector.

■ **Roland A. Jones,** watch supervisor, Rotating Crews, Anchorage ARTCC AF Sector.

■ **Charles W. Muhs,** manager, Anchorage Flight Service Station.

■ **Dolores L. Washburn,** supervisor, Team A, Acquisition Management Branch, Logistics Div., promotion made permanent.

Central Region

■ **Rosalyn R. Asbury,** area manager, Columbia, Mo., Automated Flight Service Station.

■ **Robert C. Baird,** area manager, Fort Dodge, Iowa, Automated FSS, from the Lincoln, Neb., FSS.

■ **Gary C. Perrin,** area manager, Kansas City ARTCC.

■ **Edward S. Prime,** area supervisor, Cedar Rapids, Iowa, FSS, from the San Antonio, Texas, FSS.

■ **James R. Reeves,** manager, Manufacturing Inspection Branch, Aircraft Certification Office, College Park, Ga.

■ **Ramon Thrailkill,** supervisor, Kansas/Missouri Section, Safety and Standards Branch, Airports Division.

■ **Fred M. Williams,** unit supervisor, Springfield, Mo., Training Unit, St. Louis AF Sector, promotion made permanent.

Eastern Region

■ **Alfredo R. Astillero,** manager, Philadelphia Airway Facilities Sector Field Office, Tri-State AF Sector, promotion made permanent.

■ **Charles L. Bolling,** area supervisor, Washington ARTCC, promotion made permanent.

■ **Nicholas Dammacco,** area supervisor, JFK Tower, New York, promotion made permanent.

■ **Willard M. Daugherty,** unit supervisor, Pittsburgh, Pa., General Aviation District Office, from the Charleston, W.Va., GADO.

■ **Frank W. Feichtner,** manager, Elmira, N.Y., AF Sector Field Office, Harrisburg, Pa., AF Sector.

■ **Ronald R. Haggerty,** assistant manager, traffic management, military operations, Washington ARTCC.

■ **John J. Hay,** supervisor, Program, Planning & Evaluation Section, Safety Analysis & Management Branch, Flight Standards Division.

■ **Richard Huff,** assistant manager, Washington ARTCC, from the Chicago ARTCC.

■ **Anthony J. Hussey,** watch supervisor, New York ARTCC AF Sector.

■ **Gary M. Kavanagh,** manager, Niagara Falls, N.Y., Tower, from the Rochester, N.Y., Tower.

■ **Louis J. Lavigna,** area supervisor, Washington ARTCC.

■ **William R. Lutzie,** manager, Teterboro, N.J., Tower, from the Air Traffic Div.

■ **George A. McConnachie,** assistant manager, plans and programs, Washington ARTCC.

■ **Howard R. McGlauflin,** manager, Airspace and Procedures Branch, Air Traffic Div., from the Technical Center.

■ **Warren J. Meehan,** area manager, New York TRACON, Garden City, N.Y.

■ **Joel D. Oakley,** area supervisor, Washington ARTCC, from the Fort Worth ARTCC.

■ **Edward P. Ryan, Jr.,** assistant manager, quality assurance, New York ARTCC.

■ **Joseph P. Vanston,** watch supervisor, New York ARTCC AF Sector.

■ **Helen Mae Wall,** assistant manager, New York ARTCC, from the Denver ARTCC.

■ **Alvin H. Zito,** unit supervisor, Pittsburgh Air Carrier District Office.

■ **Leon W. Zukosky,** area supervisor, Andrews Air Force Base Tower, Camp Springs, Md., from Hagerstown, Md., Tower.

Great Lakes Region

■ **George G. E. Barthel,** unit supervisor, Installation Section, Establishment Engineering Branch, Minneapolis, Minn.

■ **Gary F. Blaha,** area supervisor, Cleveland-Hopkins (Ohio) Tower, promotion made permanent.

■ **David W. Cink,** area supervisor, Bismarck, N.D., Tower, promotion made permanent.

■ **Michael J. Coyle,** area supervisor, East St. Louis, Ill., Tower, from the Champaign, Ill., Tower.

■ **Charles D. Eckman II,** area supervisor, Youngstown, Ohio, Tower, promotion made permanent.

■ **Lynn A. Hagar,** assistant manager for technical support, Indiana Airway Facilities Sector, Indianapolis, from the Covington, Ky., AF Sector.

■ **David E. Hanley,** manager, Maintenance Branch, Flight Standards Division.

■ **Russell O. Hansen,** manager, Bloomington, Ind., Tower, from Milwaukee, Wis.

■ **Lynn A. Jensen,** manager, Technical Evaluation & Certification Branch, Flight Standards Division, from Cleveland FSDO.

■ **Dale W. Kunkel,** supervisor, Operations Standards Section, Maintenance Operations Branch, Airway Facilities Division.

■ **Charles Kyle,** supervisor, Environmental Support Unit, Aurora, Ill., AF Sector, from the Anchorage, Alaska, ARTCC AFS.

■ **Gerald N. Linton,** manager, Detroit Metro (Mich.) Tower, from Cleveland.

■ **Dennis R. Ragle,** manager, Cleveland-Hopkins Tower, from Cleveland ARTCC.

■ **Daniel J. Stanek,** assistant manager for system performance, Minneapolis ARTCC AF Sector, promotion made permanent.

■ **Hortense McGehee Vick,** manager, Columbus, Ohio, Flight Standards District Office, from the Cleveland FSDO.

■ **Jimmie H. Ware,** assistant manager, Indianapolis Tower, from St. Louis Tower.

■ **Andrew S. Webb,** manager, Duluth, Minn., Tower, from the Alton, Ill., Tower.

■ **Charles D. Wilcox,** area supervisor, Grand Forks, N.D., Flight Service Station, from the Minneapolis FSS.

New England Region

■ **Gary L. Bishop,** area supervisor, Bedford, Mass., Tower, from the Bradley Field Tower, Windsor Locks, Conn.

■ **Joseph A. Egan,** assistant manager, programs, Bradley Field Tower.

■ **Robert A. Ferreira,** manager, Quonset TRACON, Quonset Point, R.I.

■ **Ronald E. Johnston,** manager, Westfield, Mass., Tower, from Bradley Field.

■ **Robert M. Vosburgh,** area supervisor, Lawrence, Mass., Tower, from Boston.

Northwest Mountain Region

■ **Roy H. Bell,** area supervisor, Denver Automated Flight Service Station, from the FAA Academy.

■ **Donald G. Bohman,** manager, Idaho Falls, Idaho, Tower, promotion made permanent.

■ **Patricia A. Cates,** area manager, Great Falls, Mont., FSS.

■ **David P. Dalsanders,** area supervisor, Spokane, Wash., International Tower, from Felts Field Tower, Spokane.

■ **Joseph F. Daws,** assistant manager for system performance, Seattle ARTCC Airway Facilities Sector, promotion made permanent.

■ **Robert D. Decino,** systems engineer, Denver ARTCC AF Sector, promotion made permanent.

■ **Carl E. Fullner,** assistant manager, plans and programs, Seattle ARTCC.

■ **Preston C. Gardner, Jr.,** manager, Flight Procedures Branch, Flight Standards Division.

■ **Marion L. Glasgo,** assistant manager, Seattle ARTCC AF Sector.

■ **Edward D. Henderson,** area manager, Seattle ARTCC.

■ **Robert A. Hill,** manager, Salt Lake City, Utah, Flight Standards District Office, from the Helena, Mont., FSDO.

■ **William G. Hill III,** manager, Grand Junction, Colo., Tower, from Denver.

■ **Peter Loveridge,** area supervisor, Moses Lake, Wash., Tower, from Spokane.

■ **Henry G. Meyer, Jr.,** unit supervisor, Salt Lake City ARTCC AF Sector.

■ **Helen M. Parke,** manager, Boeing Field Tower, Seattle.

■ **Steven J. Selleck,** area supervisor, Cedar City, Utah, Automated FSS, from the Boise, Idaho, FSS.

■ **Darrell K. Shaffer,** engineering equipment operator foreman, Salt Lake City Field Maintenance Party, promotion made permanent.

■ **Leroy R. Skaug,** assistant manager, Seattle FSS.

■ **Anthony J. Stark,** area manager, Denver ARTCC.

■ **Ronald E. Stettler,** assistant manager, Seattle AF Sector, from Portland, Ore.

■ **Joseph R. Stromberg,** unit supervisor, Salt Lake City ARTCC AF Sector.

■ **Stephen A. Tison,** area manager, Seattle
ARTCC.

■ **Douglas A. Wanamaker,** area supervisor, Boeing Field Tower, Seattle, from Seattle-Tacoma Tower.

■ **Richard A. Wirth,** unit supervisor, Salt Lake City ARTCC AF Sector.

Southern Region

■ **Ralph S. Abney, Jr.,** area supervisor, San Juan, Puerto Rico, Center/RAPCON, from the Orlando, Fla., Tower.

■ **Thomas H. Adams,** manager, Augusta, Ga., Tower, from Savannah, Ga., Tower.

■ **Winford A. Belue,** manager, San Juan Airway Facilities Sector Field Office.

■ **Thomas Carroll,** unit supervisor, Fort Lauderdale, Fla., Flight Standards District Office, from S. Florida FSDO, Miami.

■ **Jimmie L. Conner,** manager, Macon, Ga., Tower, from the Gainesville, Fla., Tower.

■ **John F. Esty,** manager, Cross City, Fla., AF Sector Field Office, Jacksonville, Fla., Hub AF Sector, from Miami.

■ **Levon Garden,** supervisor, Navigation/Communications Unit, Jacksonville Hub AF Sector, from the Tampa, Fla., AFS.

■ **Bernice J. Garrett,** supervisor, SW, HQ & MWA Payroll Section, FAA Payroll Branch, Accounting Division, promotion made permanent.

■ **Thomas J. Hoffmann,** chief, Flight Procedures Staff, Flight Standards Div.

■ **George E. Ivey,** assistant manager for program support, Raleigh, N.C., AF Sector, from the Charlotte, N.C., AF Sector.

■ **James E. Kellett,** assistant manager for training, Macon AFSS.

■ **George H. Lumsden,** assistant manager for technical support, Atlanta ARTCC AF Sector.

■ **Walter D. McCollum,** assistant manager, plans and procedures, Miami, Fla., Tower.

■ **Jimmy C. Mills,** supervisor, F&E Planning Section, Plans and Programs Branch, Air Traffic Div., from W. Palm Beach, Fla.

■ **Wesley H. Potts, Jr.,** area manager, Miami Tower.

■ **Michael J. Powderly,** manager, Operations Branch, Air Traffic Division.

■ **Floyd E. Shaw,** unit supervisor, Mid-South FSDO, Atlanta.

■ **Craig R. Smith,** manager, Mid-South FSDO.

■ **Helen B. Stotts,** supervisor, FHWA & FRA Payroll Section, DOT Payroll Branch, Accounting Div., promotion made permanent.

■ **John C. Thompson,** area supervisor, Meridian, Miss., Tower, promotion made permanent.

■ **Donald E. Wilkinson,** systems engineer, Atlanta ARTCC AF Sector, from the Jacksonville ARTCC AF Sector.

■ **William D. Wood,** manager, Airspace and Procedures Branch, Air Traffic Division.

Southwest Region

■ **John Ciasca, Jr.,** unit supervisor, Little Rock, Ark., Flight Standards District Office, promotion made permanent.

■ **Asher Cohen, Jr.,** supervisor, Compensation Section, Compensation & Employment Branch, Human Resource Management Div.

■ **Donald F. Davis,** unit supervisor, Little Rock Airway Facilities Sector.

■ **Lonam R. Fogleman, Jr.,** unit supervisor, Amarillo, Texas, AF Sector Field Office, Albuquerque, N.M., AF Sector, from the El Paso, Texas, AF Sector.

■ **Robert W. Hutchins,** supervisor, Safety Section, Safety & Standards Branch, Airports Div., promotion made permanent.

Electronics technician Thomas Campbell (left), Denver (Hub) Airway Facilities Sector, received the Suggester of the Year plaque for 1985 from Northwest Mountain Region Director Charles Foster. Campbell developed a modification for VORTACs that permits distance information to continue to be relayed to pilots when the TACAN is knocked out by weather problems. It permits DME-only transmissions even when there is no distance-measuring equipment antenna. As a result, technician callback overtime is eliminated for this kind of outage.

■ **Terry J. Jacob,** manager, New Orleans AF Sector Field Office, New Orleans AFS.

■ **John B. Patton,** unit supervisor, McAlester, Okla., AF Sector Field Office, Oklahoma City AF Sector.

■ **John L. Roberts,** unit supervisor, Interfacility & Navigation Engineering/Installation Section, Electronics Engineering Branch, AF Division.

■ **Donald E. Rowe,** manager, Fayetteville, Ark., AF Sector Field Office, Little Rock AF Sector, from Wisconsin AFS.

■ **Loran H. Thomas,** maintenance mechanic foreman, Office Services Section, Logistics Services Branch, Logistics Division.

Technical Center

■ **Ronald J. Esposito,** manager, Information Resources Branch, Management Systems Div., promotion made permanent.

■ **James A. Mathews,** supervisor, Flight Service Support Section, National Automation Field Support Branch, Automation Software Div., Air Traffic Plans & Requirements Service.

Washington Headquarters

■ **Gilbert Devey, Jr.,** manager, Aircraft, Interfacility & Safety Branch, Contracts Div., Acquisition and Materiel Service, promotion made permanent.

■ **Robert M. Heller,** team leader, Human Resource Information Systems Div., Office of Human Resource Planning & Evaluation, promotion made permanent.

■ **Gene Jensen,** manager, Weather Sensors Program, Communications/Surveillance Div., Program Engineering & Maintenance Service.

■ **Margaret A. Keenan,** team leader, Human Resource Information Systems Division, promotion made permanent.

Western-Pacific Region

■ **Charles J. Burge,** area supervisor, Daggett, Calif., Flight Service Station, from the Ontario, Calif., FSS.

■ **Angel Cervantes,** assistant manager, Prescott, Ariz., Automated FSS, promotion made permanent.

■ **Richard A. Cox,** manager, Los Angeles TRACON.

■ **Harold C. Deatley,** area supervisor, Guam Center/RAPCON.

■ **Ronald D. Franson,** area supervisor, Reid-Hillview Tower, San Jose, Calif., from the Oakland, Calif., Tower.

■ **Robert F. Harik,** manager, Edwards Air Force Base (Calif.) RAPCON.

■ **Carolyn J. Idlewine,** area supervisor, Tucson, Ariz., Tower, from Portland, Ore.

■ **Francis L. Jonke,** area supervisor, Deer Valley Tower, Phoenix, Ariz., from Litchfield Tower, Goodyear, Ariz.

■ **Kenneth R. Key,** unit supervisor, Navigation/Landing Program Section, Establishment Engineering Branch, Airway Facilities Division.

■ **Sidney Y. Kim,** supervisor, Environmental Support Unit, Honolulu, Hawaii, AF Sector.

■ **Rose L. Marino,** area supervisor, Hawthorne, Calif., Automated FSS, from the Los Angeles FSS.

■ **Charles C. McCusker,** unit supervisor, San Francisco Civil Aviation Security Field Office.

■ **Joseph Miles,** assistant systems engineer, Oakland ARTCC AF Sector, promotion made permanent.

■ **Richard A. Muckle,** manager, Los Angeles AF Sector.

■ **Samuel W. Norwood,** area supervisor, Oakland ARTCC.

■ **Robert D. Olson,** manager, Phoenix Civil Aviation Security Field Office.

■ **William H. Powell, Jr.,** manager, San Francisco Civil Aviation Security Field Office.

■ **Minoru Takimoto,** federal air marshal, Los Angeles Civil Aviation Security Field Office, promotion made permanent.

■ **Otis M. Tindell,** assistant manager for technical support, Lancaster, Calif., AF Sector, from Inyokern, Calif., AFSFO.

■ **Thomas R. Twadell,** unit supervisor, Santa Ana, Calif., AF Sector Field Office.

■ **Robert L. Widick,** assistant manager for training, Hawthorne AFSS.

■ **Henry Willis,** assistant systems engineer, Oakland ARTCC AF Sector, promotion made permanent.

Retirees

Doke, Hubert W.—AC
Glass, Thomas L.—AC
Kaswan, Edward M.—AC
Kerbo, Elton L.—AC
Pittman, R. L.—AC
Rogers, Kenneth L.—AC
Sheehan, William J.—AC

Stone, Sidney V.—AL

Bell, Cecile F.—CE
Cuda, Angeline—CE
Griffith, John H.—CE
Smith, Franzis—CE
Talbott, Robert A.—CE
Wilson, Paul C.—CE

Curcio, Louis W., Jr.—CT
Hanlon, John F.—CT
Howard, Francis B.—CT
Sanborn, Vincent G.—CT
Santa Maria, Frances M.—CT
Simpkins, James H.—CT
Waldmann, Charles F.—CT
Wright, C. Robert—CT

Arnold, Rudolph L., Jr.—EA
Carley, John M.—EA
DiFiore, John J.—EA
Doms, Robert R.—EA
Ebberuf, Arnold W.—EA
Fleming, Richard R.—EA
Flohr, Charles F., Jr.—EA
Greenwood, Gerald T.—EA
Kellenberger, Richard F.—EA
Kucala, Joseph G.—EA
Lewis, Ronald C.—EA
McCarthy, John J.—EA
Newman, Thomas T.—EA
Pomparelli, Vincent—EA
Randall, Thomas J.—EA
Spina, Anthony D.—EA
Winderl, George O.—EA

Bundrant, Mark L.—GL
Burkes, Hampton—GL
Case, Lester A.—GL
Gafkjen, Roger C.—GL
King, Merle V.—GL
Posson, Myron V.—GL
Starkweather, Donald L.—GL

Yohman, Edward D.—MA

Goggin, William H.—NE
McCarthy, William F.—NE
Whitton, Roy L.—NE

Allen, William A.—NM
Anderson, Keith D.—NM
Rose, Lyle E.—NM
Smith, Robert J.—NM

Arthur, Richard C., Jr.—SO
Bookhammer, William H.—SO
Bradford, Jerry S.—SO
Day, Edwin L.—SO
Hanks, Joseph R.—SO
Henry, James T.—SO
Kelley, James E.—SO
Maykut, John A., Jr.—SO
Rickerson, Freeman O.—SO
Sosnowski, Edwin W.—SO
Stemen, Dewey A.—SO
Tomkins, John P.—SO
Young, Cecil C.—SO

Barabin, Robert B.—SW
Calcote, Cecil—SW
Curry, James A.—SW
Ellis, George R.—SW
Hilbig, Randall L., Jr.—SW
Nunnery, Robert H.—SW
Parker, Charles S.—SW
Pray, Clyde W.—SW
Riley, Edwin A., Jr.—SW
Vierling, Charles J.—SW
Whitehead, Ronald W.—SW

Bierach, Karl F., Jr.—WA
Johnson, Raymond—WA
Peterson, Herman L.—WA
Tsacoumis, Theofolus P.—WA

Davis, Leonard J.—WP
Eggers, Douglass R.—WP
Golcher, Kenneth E.—WP
Grunert, Rodger A.—WP
Hansen, John R.—WP
Hudson, Blaine P.—WP
Kruschke, William H.—WP
Litvak, Donald L.—WP
Mizer, Richard A.—WP
Montgomery, Donald R.—WP
Norwood, James C.—WP
Richardson, Edgar J.—WP
Smatts, Ranchnell S.—WP
Suhr, Mertyn D.—WP

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