



R&D-SPONSORED TECHNOLOGY WINS INDUSTRY AWARD

R&D Magazine has selected a FAA-sponsored software code, known as DARWIN (Design Assessment of Reliability With Inspection) as one of the top 100 R&D products of 2000 as part of its 38th annual competition. The R&D 100 award, a prestigious, highly competitive award, recognizes the top 100 most technologically significant engineering products that are commercially available to industry. This year's competition included outstanding entries from many of the most prestigious companies, research organizations, and universities in the world.

DARWIN, a new computer design assessment tool, has been recognized by FAA Aircraft Certification/Engine & Propeller Directorate as an acceptable means to determine the risk of a turbine engine disk failure caused by material anomalies. This risk assessment capability will improve the structural integrity of turbine rotor disks used in commercial service. (Disks are heavy high-speed rotating parts inside an engine with attached fan blades that produce thrust.) DARWIN's code assesses the rotor disk design through a life risk management process by considering the uncertainties in hard-alpha melt related material defects (size, location, and

occurrence rate), stresses, crack growth, nondestructive inspection effectiveness, and shop visit rate. Undetected material or manufacturing flaws in turbine engine disks can undermine a disk's structural integrity.

Uncontained disk failure is the most critical engine safety issue in commercial service today. When a disk fails, it can have catastrophic results. Fast-moving, high energy disk fragments can disable or damage the airplane. For example, investigators traced the 1989 fatal accident of a DC-10 at Sioux City to an undetected material defect in the disk that resulted in an uncontained disk failure.

The DARWIN computer design tool is the product of a four-year FAA research, engineering, and development grant with the Southwest Research Institute (SwRI). SwRI developed the tool in collaboration with engine manufacturers Honeywell, Rolls Royce-Allison, General Electric, and Pratt & Whitney. This tool represents a major breakthrough in FAA's safety research program, and complements the actions announced by FAA Administrator Jane F. Garvey as part of the agency's Safe Skies Agenda, requiring enhanced inspections of engine fan disks to detect cracks that are precursors to uncontained disk failures. The tool has received strong acceptance

by most turbine engine manufacturers worldwide.

The R&D 100 awards, first handed out in 1963, have been called the "The Oscars of Invention" and the "Nobel Prizes of Applied Research." Past winners have included breakthrough technologies, such as Polacolor film (1963), the flashcube (1965), the automated teller machine (1973), the halogen lamp (1974), the fax machine (1975), the liquid crystal display (1980), the printer (1986), the Kodak Photo CD (1991), the Nicoderm antismoking patch (1992), Taxol anticancer drug (1993), lab on a chip (1996), and HDTV (1998).

Originally known as the I-R 100s, in keeping with the original name of the magazine, Industrial Research, this year's winners were selected by a distinguished panel of over 70 judges and the magazine's editors. To be eligible for the competitions, products must have been available for sale or licensing during the calendar year preceding the judging. The award will be presented formally to high level representatives of SwRI on September 27 at the Museum of Science and Industry in Chicago.

For more information on DARWIN, contact **Bruce Fenton** (AAR-430) at (609) 485-5158 or **Joe Wilson** (AAR-432) at (609) 485-5579.

YOU'VE COME ALONG

Are crowded skies in the southern region of the Gulf of Mexico (GOM) a soon-to-be reality? Will air traffic controllers be presented with a mechanism to increase aircraft volume in the GOM without compromising safety? Can the Buoy Communications System (BCS) and VHF Extended Range Network (VERN) resolve the long-standing aircraft communications void in an area where economic growth could be severely inhibited by curtailed aircraft transportation flights? Recent Site Acceptance Testing (SAT) of the first prototype BCS and VHF radio transmission range tests of shore-based VERN facilities located around the perimeter of the Gulf indicates that the BCS/VERN two-fold approach could satisfy this mission need.

Communication, navigation, and surveillance (CNS) shortfalls in the GOM have necessitated that the FAA apply oceanic standards (50 miles lateral and approximately 120 miles longitudinal), rather than domestic separation standards (20 miles lateral and longitudinal), to maintain safety in these skies. Currently, aircraft transiting the southern part of the GOM are frequently unable to maintain continuous communications with land-based facilities due to the limitation of line-of-sight (LOS) VHF transmissions. This condition requires that air traffic controllers interpose greater distances between aircraft to ensure safety. To accomplish separation, controllers often need to place aircraft at altitudes that are not fuel efficient. In

the worst case, excessive separations can translate into delays and cancellations.

Ground-based navigation aids are currently available from inland sources; however, their usefulness is limited to minimal off shore distances around the gulf perimeter, and aircraft soon pass out of range of the air traffic controllers. Surveillance methods that are employed in the area contribute very little aircraft position information. When airplanes pass out of range of the land-based radars, that "warm fuzzy feeling" that is derived from contact also disappears. Position information in the region then becomes dependent on VHF communication, which is not available in many areas of the Flight Information Region (FIR).

These CNS shortfalls make tracking aircraft against scheduled flight plans a difficult task for controllers. Add these limitations to a scenario that does not include automatic exchange of flight plans (or other pertinent data) with neighboring Mexican air traffic facilities, and a situation is created that makes coordination very difficult.

These problems have been growing exponentially in the Gulf of Mexico--an area where delays and cancellations have created inconveniences for customers and have strained the operating budgets of carriers serving the area. The conjunction of the BCS and VERN patterns is designed to bridge the Houston FIR. The buoy coverage areas (three separate moorings spaced approximately 200 miles

apart) will be juxtaposed to overlap the VERN land-based coverage areas thereby affording uninterrupted communications across the Houston FIR.

The BCS consists of the Remote Buoy Communications System (RBCS), satellites, landline services, and the Houston Air Route Traffic Control Center (ARTCC) equipment. Figure 1 provides a conceptual representation of the BCS. Large navigational buoys (see figure 2) house the remote transmitting and receiving equipment, which is designed for continuous automatic operation.

VHF transceivers are used to communicate between the buoy and the aircraft; L-Band satellite phones are used to communicate between the buoy, the satellite, and the satellite earth station; telephone landlines are used between the satellite earth station and the Houston ARTCC. Redundancy is provided for all BCS equipment, which includes main and standby paths for the VHF signals, primary and backup satellite paths for the L-Band signals, and backup paths for the Maintenance and Monitoring Control system data. To ensure that communication is maintained between the buoy and the satellite link, the equipment on the buoy must operate reliably when turbulent sea-states cause it to roll, pitch, and yaw.

The VERN system (leased from ARINC) uses four coastal-based tower stations to provide direct two-way VHF communication capabilities in critical areas of the Houston Center FIR. The eastern FIR includes stations located at

WAY . . . BUOY

Venice (LA), Key West (FL), and Cancun (Mexico), while the western FIR has one station located at Merida (Mexico). These stations interface with the Houston ARTCC and the ARINC Control Center so that VHF equipment can be controlled and monitored. A typical VERN site contains VHF transceivers, Radio Control Equipment (RCE), and an ARINC Dial Backup System. These sites provide greater communication ranges than standard coastal ranges by using high-power amplifiers and high-gain directional antennas. The VERN continuously monitors critical system parameters remotely. The Houston ARTCC contains Voice Switching and Control (VSCS) equipment, a RCE Centralized Maintenance System, an ARINC Dial Backup equipment, and VERN remote monitoring equipment.

The ACT-330 test team, currently under Branch Manager, **Rodney Guishard**, has been an integral part of GOM operations since its inception. **Tom Jennings** is the GOM Technical Program Manager/Test Director, while **Steve Malitsky**, as the Test Lead, spearheaded the ACT-330 BCS test development team through all the stages of testing the first prototype. (**Rodney** and **Steve** are shown in figure 3 at the test bed facilities located at the National Data Buoy Center NDBC in Stennis, MS.)

The test stages, which included Factory Acceptance Testing (FAT), dockside Site Acceptance Testing (SAT-1), and offshore (40

miles) Site Acceptance Testing (SAT-2), identified several design improvements that are currently being implemented into the first prototype BCS at the National Data Buoy Center (NDBC). The FAA test team support contractors (**Steve Walker** of SEMCOR, **Ray Fesnak** and **Gary Van Dusen** of AS&T, **Sid Weisenfeld** of Raytheon, and **Phil Franco** of AES) have contributed their talents to the development of a test plan and test procedures that will ultimately produce a system that satisfies the mission need of uninterrupted communications across the entire Gulf region. This team not only developed the test requirements, methods, and strategies, but also observed and participated in the separate testing segments.

The Gulf communication solution consisted of combining the capabilities of the BCS and the VERN programs. To supplement the BCS test results, the ACT-330 test team also conducted a compre-

hensive flight test of the VERN communication capabilities. The VERN test team, which **Tom Jennings** also directed, participated in the ground-to-air radio transmission range tests from tower-based VERN facilities located at Venice, Key West, Merida, and Cancun.

Using the Tech Center's Boeing 727 (N40) testbed aircraft, the ACT-330 test team members, led by **Steve Malitsky**, verified VHF coverage for each VERN site along the air routes and air route intersections specified in the statement of work. Because of the nature of flight testing, this required on-the-fly adjustments to the test plan after coordination with the aircraft flight team and the Houston air traffic controllers. The test team included: **Steve Walker** and **Rich Tripodi** from SEMCOR, **Sid Weisenfeld** from Raytheon, **Roy Monfort**, **Joe Burns**, and **Ray Fesnak** from AS&T)

The aircraft flight team from

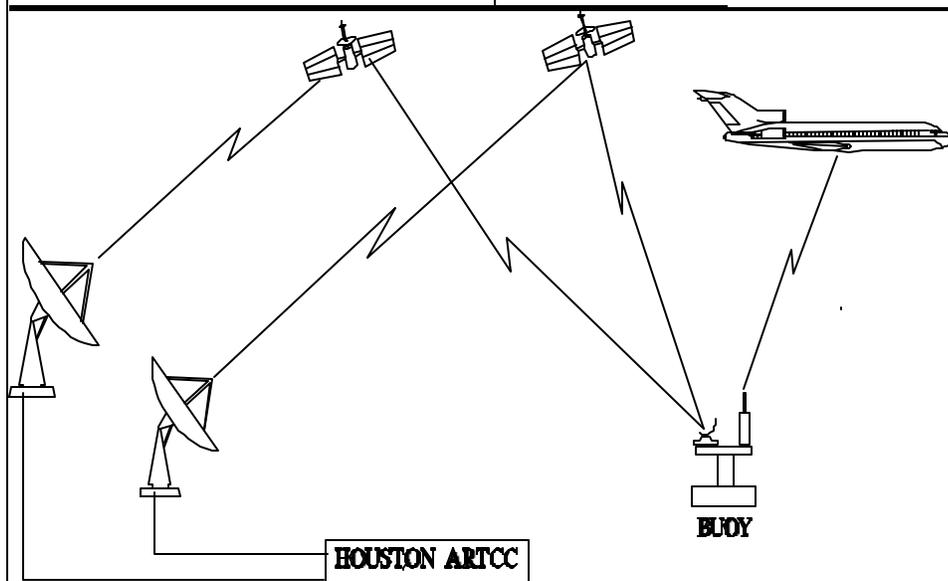


Figure 1: Buoy Communications System

BUOY CONT.



Figure 2: Large Navigational Buoy

ACT-370 included pilots **Theos McKinney** and **Fred Karl**, flight engineer **Armando Gaetano**, and flight mechanic **John Birney**. The ground team headed by **Tom Jennings** coordinated the on-going flights with the air traffic controllers from the Houston ARTCC. The execution of the VERN flight test program necessitated close coordination with the Mexican air traffic control centers. South-west regional representatives were key team contributors to that coordination.

VERN VHF flight test range data and propagation calculations will be used to determine where the BCS buoys will be permanently moored to maximize continuous VHF communications. Subsequent to the successful BCS/

VERN tests, the redesigned prototype buoy was towed out to a point approximately 300 miles off shore where the ACT-330 team, led by **Steve Malitsky**, successfully completed SAT on May 18, 2000 (**Steve Walker**, ACT-330's number one at-sea test engi-

neer, performed all of the test procedures at the buoy site). The prototype buoy will be left in place at this location for additional evaluation processing. The SAT along with some additional environmental testing is expected to result in a decision to: "Build and launch other operational buoys."

Additional details about the BCS can be found on the GOMEX website at <http://www.faa.gov/ATS?GOMEX/Index.htm> or the National Data Buoy Center website at <http://Seaboard.NDBC.NOAA.gov/>. VERN details can also be found on the GOMEX website.

Figure 3: Buoy Communications System Test Bed Facilities



DIVERSITY

Diversity in the workplace has great advantages, but communicating across racial and cultural lines can be difficult or stressful. Here are some tips on respecting the diversity of your workplace and improving communications:

Treat each person as an individual. Translation: Try not to stereotype or make assumptions based on what a person looks like or where they're from.

Pay attention to what you say. Some words may have different connotations to different people, depending on their past experiences. When you want to communicate something, think first and be sure to say what you mean.

Pay attention to your body language and tone of voice. These communicate a lot to others. Make sure it follows what you intend to communicate.

Be aware of comments that others may find insensitive or racist. If you find that a person reacts badly to what you've just said, take him or her aside and ask if you have inadvertently said something wrong. This allays any fears on the other person's part that what you said was meant to intentionally offend them.

LAND AND HOLD SHORT OPERATIONS

The FAA is pleased that the airlines, airline pilot groups, and others in the aviation industry have reached agreement on continuing Land and Hold Short Operations (LAHSO). As a result, the FAA will shortly issue an order implementing changes to LAHSO. The order, which goes into effect August 14, will permit expanded use of LAHSO and thereby increase the capacity and efficiency of the air traffic system.

LAHSO is an aviation procedure that has been used safely since 1968. It increases capacity at airports with intersecting runways by allowing aircraft to land and stop on long runways before an intersection with another runway. Stopping short allows the air traffic controller to have another aircraft take off or land on the intersecting runway. LAHSO have been refined through years of operational experience and cooperation among the FAA, airlines, pilots and controllers.

HR AWARD

The FAA has won this year's International Personnel Management Association (IPMA) "large agency" award for its human resource management accomplishments over the past three years. The award was established to recognize the overall quality, accomplishments, and contributions of an agency personnel program that exceed the normal operation of a "good government personnel program." The FAA accomplishments highlighted in the nomination included core compensation, executive compensation and recruitment, partnership, learning and development, staffing, automation, and accountability.

The IPMA's membership includes representatives from federal, state, local, and international organizations. The award will be presented at the IPMA conference in San Francisco sometime during the week of October 15.

NEW OPM REGS

OPM recently created new regulations expanding the amount of time Federal employees may use each year for the care of family members with serious health conditions. The complete regulations and OPM guidance are available on OPM's website at <http://www.opm.gov/oca/comp-memo/2000/2000-8.htm>.

The FAA has adopted the OPM regulations for non-bargaining unit employees effective June 20, 2000. The agency has entered into an agreement to extend this benefit to employees represented by the AFSCME union as well as non-bargaining unit employees.

CONGRATS TO LOGISTICS CENTER

The Logistics Center has won the 2000 President's Quality Award Program for their accomplishments in quality management and continuous improvement. Part of the award letter states, "The FAA Logistics Center operates 24 hours a day, 365 days a year to help ensure safe skies for the flying public. It is the largest single source of parts, supply services and third level engineering for our nation's air traffic control system." The Logistics Center has been adopting private sector techniques to boost its performance towards "best in class" levels in an exceptionally short period of time. The 600+ employees are committed to providing customer driven service and operating at private sector performance3 levels. Other accomplishments include earning certification in ISO 9000.

HOME & HOME

Last month, approximately 150 visitors from industry and academia spent 2 days at the Tech Center for a major industry meeting designed to showcase the FAA's ongoing research and development activities. This forum, called a "Home & Home" visit, was the result of a FAA/NASA Industry meeting held in March 1999.

That event, hosted by FAA Administrator Jane Garvey and NASA Administrator Dan Goldin, highlighted the scope, capabilities, and directions of government research programs. Industry representatives attending that meeting expressed an interest in visiting NASA and FAA research "home" sites to obtain more in-depth knowledge of the activities at FAA and NASA research centers.

Director **Dr. Anne Harlan** claimed the Center symposium, the fifth in this "Home & Home" visit series, a "great success." She explained that "for two days, we had the full attention of some of aviation's 'heavy hitters' focused solely on the work being done at the Center. This was a marvelous opportunity to let them know about the excellent research and development being done by the FAA, and about the expertise and quality of all of our employees. As I knew they would, the Tech Center community rose to the occasion. Everyone here pitched in to make sure the event went without a hitch."

The first day of the event centered on aviation safety, security,



Making sure everyone gets to the correct tour venue.

and environmental concerns. After being welcomed by Dr. Jan Brecht-Clark (ACP-1, formerly AAR-2), Anne provided an overview of Center activities. **Chris Seher** (AAR-400), Jim Erickson (AEE-1), and Jan Brecht-Clark then provided overviews of the FAA's safety, security, and environmental research programs. After lunch, the conference participants had the chance to tour the safety and security labs for a close-up look at what the FAA's scientists and researchers are currently working on.

During the afternoon, attendees went to a panel discussion on either safety or security trends, challenges, and future needs. The panels included a distinguished group of experts from government, academia, and industry, who provided their thoughts and then fielded questions from the audience. The panelists included: Captain Ed Soliday, United Airlines' Vice President of Corporate Safety; The Boeing Company's Director of R&D, Jack McGuire; Northwest Airlines Security Manager, Jan Dombrowski; and National Safe

Skies Alliance President Tom Jensen.

Peter Challan (ATS-2) provided opening remarks for day two of the event, which focused on the FAA's air traffic management work. Afterwards, **John Wiley** (ACT-200), **Dot Buckanin** (ACT-300), and **Dennis Filler** (ACT-500) discussed the work of their divisions in meeting

the agency's modernization and efficiency goals. Tours of the ATC labs followed, with key personnel such as **Bruce Singer** (ACT-2), **Paul Polski** (AAR-500), **Basilyn Bunting** (ACT-200), **Ron Esposito** (ACT-3), and a host of other Tech Center program managers on hand to help answer questions. (The presentations from both days are available on the Home & Home website at <http://home.hh.tc.faa.gov>.)

The day two panel discussions focused on "Future of Air Traffic Management" and "Future of Aviation Transportation Technology." Like the previous day's sessions, panel members

Peter Challan opens the second day of the event.



A GREAT SUCCESS!



From left to right: Carl McCullough (AND-1), Anne Harlan (ACT-1), and Peter Challan (ATS-2).

were a virtual 'Who's Who' of the aviation community. Some of the speakers included: Cargo Airline Association President Steve Alterman; Small Aircraft Manufacturers Association President Paul Fiduccia; George Mason University Professor of Systems Engineering and Operations Research George Donohue; Alan Gilbert from the International Air Transport Association; and the Port Authority of NY/NJ's Manager of Aeronautical and Technical Services Division, Kevin Bleach.

As the last session of the last day ended, tired, but happy Center employees were secure in the knowledge that they had succeeded in showing the world all of the Center's capabilities. As Anne Harlan later said, "Our ability to plan and host such an event is a tribute to the Tech Center community. We all pulled together to make sure our Home & Home visit was the best one yet. I'd like to thank everyone who worked hard to make us shine. In particular, we owe a debt of gratitude to **Vince Lasewicz, Jr.** (ACT-540),

Karen Cicatiello (ACT-70), and our host of organizers, tour guides, speakers, as well as everyone at the Center who took time out of their busy schedules to help out."

Committee Members

Vince Lasewicz, Jr. (ACT-540)

Karen Cicatiello (ACT-70)

Ed DiProspero (ACT-262)

Ken Novakoff (AAR-520)

Alan Kopala (ACT-230A)

Ralph Yost (ACT-320)

Basilyn Bunting (ACT-400)

Nelson Miller (AAR-420)

Ron Esposito (ACT-3)

Carolyn Mason (ACT-3)

Dennis Filler (ACT-500)

John Wiley (ACT-200)

Dot Buckanin (ACT-300)

Subcommittee Members

Linda Tropiano (ACT-70)

Donna Tropiano (AAR-500)

Deanna Super (ACT-50)

Tina DiIanni (ACT-31)

Kathy Mann (JSA Inc.)

Charles Kern (ACT-71)

Ginger Cairnes (ACT-70)

Carolyn Pokres (ACT-70)

Ken Beisel (ACT-52A)

Sue Wall (ACT-73)

Beth Burkett (ACT-400)

Melissa French-Gates (ACT-50)

Carol White (AOS-620)

Lana Haug (ACT-70)



Making sure everyone gets where they're going.

A special thanks to the following individuals who contributed to the success of this event:

Mike Roames (ACT-73)

Annette Harrell (ACT-73)

Gayle Martin-Taylor (ACT-3)

Dan Greis (ACT-70)

Frank Merlock (ACT-73)

Amanda Pettitt (ACT-32)

Lou Heintz (ACT-630)

Robert Marks (ACT-73)

Dale Dingler (ACT-73)

Frank Hines (ACT-600)

Robert Mast (ACT-71)

Carl Genna (ACT-73)

Butch Dansby (ACT-71)

Verna Artis (ACT-73)

Betty Lafferty (ACT-71)

Ann Kertz (ACT-73)

Laurie Zaleski (ARTZ Graphics)

Carol Martin (ARTZ Graphics)

Galaxy Scientific Corp.

Wackenhut

Some of the team members relax after a busy two days.



RISK ANALYSIS AND SAFETY PERFORMANCE WORKSHOP

Just a reminder, if you haven't registered yet it's not too late to attend the 2d Workshop on Risk Analysis and Safety Performance Measurement in Aviation.

FAA's Airport and Aircraft Safety R&D Division (AAR-420) and Rutgers University are jointly sponsoring the symposium, which is being held at the Center on August 22-24, 2000.

Effective risk assessment and risk management depend on the use of knowledge gained from system models; risk, hazard, or threat

analyses; accident or incident models; and vulnerability analyses. Safety performance measurement is also based on the safety critical functions, threats, and defenses identified in these models. Workshop participants will introduce and review the concepts and methods associated with aviation system safety and risk analysis against the backdrop of the FAA's Safer Skies agenda. Models of system safety, such as the Reason Model, that include organizational, task environment, and individual factors in accident analysis, will be

presented and discussed. In addition, methods of error management will be demonstrated as analytical tools that may be used to model and understand the accident causal chain.

The workshop will also review the various types of risks associated with individuals, the workplace, organizational processes and culture, and regulation.

For more information, visit <http://www.rci.rutgers.edu/~jlux-hoj/risk>.

WELCOME HOME

Have you noticed that a familiar face has returned to the Tech Center after almost a 4 year absence?

Ron Polillo is back, taking on new, interesting, and challenging duties in AAR-500. He returns from his successful tenure as the lead of the Security Equipment Integrated Product Team (SEIPT). As the founding member of the SEIPT, Ron was instrumental in creating a cohesive team of FAA, airport, and air carrier representatives, who, in a short time, began deploying critical security technologies to airports across the country.

Under his leadership, the SEIPT installed 121 bulk explosives detection devices for screening checked baggage at 37 airports for 20 U.S. and international carriers with over 1,000 screeners trained in their use. In addition, the team installed over 600 trace detection systems at airport security checkpoints, and co-located with checked baggage screening systems. Ron's team also procured over 450 advanced technology x-ray systems for screening carry-on bags, which are currently being deployed to the 20 busiest airports, as well as over 400 computer-based training systems that have been deployed to

improve screener performance.

The complex nature, size, and operational considerations for the use of this equipment have made the scale and scope of SEIPT's work unprecedented in the civil aviation industry. And, it was Ron's leadership over the past three years and nine months that created this unique team. A team that, despite considerable challenges, was able to find ways to augment internal resources with external experts, to champion new methods, and to consider new ideas, in its efforts to achieve the agency's security goals and enhance the security of the flying public.

Ron will be working with other engineers and scientist in the Aviation Security Research and Development Laboratory in the development of the next generation security technologies that are required to meet the FAA security goal of 100% screening of all baggage.

Welcome home, Ron!

The SEIPT's loss is the TC's gain!

HEADQUARTERS HEADLINES

FAA Proposes Rule on Use of Airline Safety Data. On June 30, in a major step toward reaching the goal of reducing the commercial aviation accident rate by 80 percent by 2007, the FAA proposed a rule requiring airlines to share aggregate safety data with the FAA if they choose to have a Flight Operational Quality Assurance (FOQA) program.

FOQA helps prevent accidents by identifying the root causes of potential safety issues. It uses state-of-the-art flight data recorder technology to collect and analyze data on routine flights. Airlines collect data about everyday safety trends in their operations and would now be required to share the data with the FAA. The agency would then use the data to identify industry-wide safety trends, allowing the FAA and industry to more effectively target resources and correct potential safety problems.

The information and insights provided by these programs can enhance line operational safety, training effectiveness, operational procedures, maintenance and engineering procedures, air traffic control procedures, and airport surface safety. Participation in FOQA is voluntary and programs must be FAA approved. The FAA would not use FOQA data for enforcement purposes, except in egregious cases.

The rule would finalize existing FAA policy on the use of FOQA data. Currently, eight airlines have FOQA programs, one

has FAA approval pending, and five others say they plan to initiate programs in the future. There are currently 230 aircraft, which comprise 13 aircraft types, collecting FOQA data.

The Notice of Proposed Rulemaking (NPRM) follows a July 26, 1999, proposal to protect voluntarily provided information from disclosure to encourage data-sharing programs such as FOQA. The notice responds to a recommendation made by the White House Commission on Aviation Safety and Security, chaired by Vice President Al Gore, as well as a mandate from Congress to protect information that aids in improving safety and security. FAA policy, issued Dec. 2, 1998, states that the FAA may only use safety data generated in a FOQA program for enforcement action in egregious cases.

Under FOQA, the FAA approves the airline's program for routine collection and analysis of in-flight data from the digital flight data recorder (DFDR). The airline establishes procedures for taking corrective action when problems are identified and for informing the FAA. Most importantly, the airline provides the FAA with access to the aggregate data so the agency can monitor safety trends as well as the operator's effectiveness in correcting adverse trends.

Technological advances in cockpit equipment and data analysis over the past decade have helped make FOQA possible.

Previously, this information was used to identify clues to accidents after they had already occurred.

FOQA programs have already yielded important safety advances. Since 1995, an FAA-sponsored FOQA Demonstration Study with four airlines has produced data that has been used to improve the safety of approaches at more than a dozen airports worldwide. In addition, it documented unusual autopilot disconnects, Ground Proximity Warning System warnings, excessive take-off angles, unstable landing approaches, hard landings and compliance with standard operating procedures. FOQA data has also been used for monitoring fuel efficiency, enhancing engine condition monitoring, noise abatement compliance, rough runway surfaces, and aircraft structural fatigue.

The NPRM is on display at the Federal Register and is available on the FAA's web site at www.faa.gov/avr/armhome.htm. The comment period closes on Oct. 3.

FAA Accepts Alaska Airlines Plan. The FAA, on June 29, announced that it had accepted Alaska Airlines' airworthiness and operations action plan. For the next 30 days, the agency will continue its stringent oversight of the airline to ensure that the plan is fully implemented. During this time, the carrier will continue to conduct complete audits of all aircraft coming out of heavy mainte-

HEADQUARTERS HEADLINES CONT.

nance. Additionally, FAA will still review any aircraft returned to service following heavy maintenance.

In its plan, Alaska Airlines identified actions that address FAA concerns following the agency's special inspection that was prompted by the January 31 accident of Alaska Airlines Flight 261, which is still under investigation by the National Transportation Safety Board. The airline has:

- Committed to hire more than 130 mechanics; 82 of which are already on board.
- Created an executive level safety position that reports directly to the CEO.
- Filled both the directors of maintenance and operations positions.
- Completely revised the heavy maintenance procedures contained in the airline's general maintenance manual.
- Developed a new continuing analysis and surveillance program, designed to not only detect and correct any maintenance deficiencies, but improve the program through a process of data collection, analysis and corresponding changes.
- Submitted a three-year operations growth plan.

The FAA also announced that it will be conducting special inspections of the other nine major airlines in the United States. Beginning July 17, the FAA will send teams to conduct special inspections that will focus on evaluating the overall effectiveness of critical safety programs. Teams will be comprised of members from the agency's Certification, Surveillance, and Evaluation Team, employees from Headquarters and principal maintenance inspectors from different geographic locations. The special inspections are expected to take approximately 120 days.

U.S. Transportation Secretary Slater Dedicates Final Host and Display System Replacement Installation. On July 14, Department of Transportation Secretary Rodney E.

Slater and FAA Administrator Jane F. Garvey marked the completion of the most visible phase of the Clinton administration's effort to modernize the nation's air traffic control system by dedicating the 20th and final installation of new Display System Replacement (DSR) hardware and supporting computers.

The last system in the \$1.05 billion FAA program to replace older computers and displays was dedicated in a midday ceremony at the Washington Air Route Traffic Control Center in Leesburg, VA. The ceremony itself included rank-and-file controllers and technicians who helped install the system and

The DSR replaced 20- to 30-year-old monochrome radar screens with modern color displays, "windows" systems for controllers and modern data processing technology. The DSR has greater speed and capacity than the system it replaced and it raises the bar on safety through increased reliability, availability and maintainability. Lockheed Martin is the prime contractor for the system

The DSR is the first major component of the modernization of the nation's enroute air traffic control system infrastructure. The DSR provides an open architecture that can accommodate the software upgrades and new technologies that make up the evolving ATC system. Software upgrades include weather display enhancements to improve safety, and technology tools to deal with growing air traffic.

New Host computers, which came on line slightly before the displays, replaced rooms full of older, far less capable hardware no longer supported by the manufacturer. The Hosts process incoming data and provide it to the new DSR multicolor displays that in turn provide controllers with a lighter, brighter work environment and far more capable tools for managing the growing volume of high-altitude traffic across the country.

The open architecture also means that DSR will be a cost-effective platform for future upgrades to air traffic control capabilities. Host and DSR have extremely high reliability rates, significantly improved maintainability and more complete backup systems.

CVA DEDICATION

Director **Anne Harlan**, along with ACT-400 Division Manager **Basilyn Bunting**, conducted the formal ribbon cutting ceremony on June 26 for the Tech Center's newly constructed Central Viewing Area (CVA). Numerous employees representing all Center organizations attended the ceremony. Both Anne and Basilyn spoke of the capabilities and the advantages of the CVA, emphasizing its role in providing customers a central location from which they can remotely view actual testing and demonstrations without physically moving from one lab location to another.

Basilyn took the opportunity to present several awards to illustrate ACT-400's appreciation for all the hard work that went into the development, construction and implementation of the CVA. The completed CVA brings to fruition the vision of the Center's Director, Deputy Director, and ACT-400. Working with designers in ACT-600, the CVA has become a reality. It was ACT-600 lead architect **Stan Wirpsza**, AIA, who worked to develop both the preliminary and final designs for the facility. **Basilyn Bunting** then carried the design forward until it became a functioning facility.

At the event, ACT-400 System Engineer **Edward DiProspero** provided a demonstration of some of the CVA capabilities. The attendees were

treated to refreshments across the hall in the lounge, since eating and drinking is prohibited in the CVA.

The facility is located on the third floor of building 300 between columns C27 and C29, and can provide remote viewing capability for testing and evaluation in any of the labs in buildings 300 or 316. The CVA can comfortably accommodate 36 guests. The equipment and planned enhancements are outlined in the Central Viewing Area Policies and Procedures Document LMD-00-1006 Rev.1.0. These policies and procedures can be found on ACT-400's web page at <http://nasfac.act.faa.gov/>.

The Customer Service Center is currently taking scheduling requests for the CVA facility. The Customer Service Center can be reached at extension 4614 or 4615. Scheduling requests should be made 14 days in advance to coordinate with other lab resources.



ACCOUNTABILITY BOARD EXPANDS ROLE

The Accountability Board was established in July 1998 to ensure that FAA managers responded in a timely, consistent and appropriate manner to allegations of sexual harassment and misconduct of a sexual nature. At that time, the Administrator committed to expanding the scope of the Board after evaluation of the first year.

As of July 1, 2000, the Accountability Board will be expanded to include oversight for allegations of harassment based on race, color, gender, national origin, sexual orientation, religion, age, or disability. The Board will continue to have oversight responsibility for allegations of sexual harassment and mis-

conduct of a sexual nature.

The Board's scope includes only incidents of harassment alleged to have occurred on or after July 1, 2000. In addition, for allegations to be covered within the Board's scope, they must be reported by employees within sixty days of the date the incident is alleged to have occurred.

Shortly, all employees will receive a brochure describing the Accountability Board and its process. For more information, you may also contact the Office of the Accountability Board on (202) 267-3065 or access the Office of Human Resource Management website at Interweb.FAA.gov/ahr/count/account.cfm.

SAFETY NEWS

FROM THE SAFETY OFFICE,
ENVIRONMENTAL BRANCH (ACT-640)

Sign Of The Times At The Circle

It's big, round, and it leads you in different directions. It makes some people aggressive and others somewhat passive. It requires your undivided attention and just when you think you've figured it out, the rules change! What is this thing you ask? It's the traffic circle that you must navigate to reach the Tech Center's Main Gate.

For years Center employees and visitors have had to approach the Traffic Circle with caution always wondering how best to drive around the circle without having or causing an accident. On any given day at any given

moment the circle could be filled with vehicles trying to branch off onto five different arteries, while at the same time cars from different directions are trying to enter this motor carousel. Such a scene is what has driven our insurance rates to such astronomical levels.

While our insurance rates may not change any time soon, there has been a change to our dreaded traffic circle. In case you haven't noticed, hopefully you have, the circle has been dressed up with signs and markings. After years of being bare, there are now signs at the circle directing you to yield and to follow the markings on the roadway. Additionally, new and improved city, street, and FAA

Bldg. signage are posted on the circle. The signage may seem like a formality to all of us who for years have navigated the circle to reach the Tech Center. However, for the many visitors and tourists who travel to the Center or into Atlantic City the signs should help reduce the chance of an accident due to a motorist's uncertainty about entering and exiting the circle.

The signs were added by the State to improve safety. If you make safety a part of your daily commute, you'll find that the circle is just another fork in the road.

Drive Carefully and Buckle Up!

THE YEAR 1970 vs 2000

1970: Long Hair
2000: Longing for hair

1970: Keg
2000: EKG

1970: Acid Rock
2000: Acid Reflux

1970: Moving to California because it's cool
2000: Moving to California because it's warm

1970: Watching John Glenn's historic flight with your parents
2000: Watching John Glenn's historic flight with your children

1970: Trying to look like Marlon Brando or Elizabeth Taylor.

2000: Trying NOT to look like Marlon Brando or Elizabeth Taylor.

1970: Getting out to a new, hip joint.
2000: Getting a new hip joint.

1970: Rolling Stones.
2000: Kidney stones.

1970: Peace sign.
2000: Mercedes logo.

1970: Parents begging you to get your hair cut.
2000: Children begging you to get their heads shaved.

1970: Passing the driver's test.
2000: Passing the vision test.

1970: "Whatever"
2000: "Depends"

ANNUAL CHILD CARE CENTER PICNIC A BIG SUCCESS



A group of staff members and children from the Child Care Center get ready to whisk a parachute into the air.

The rain held off, so the children, parents and staff of the NAFEC Child Care Center enjoyed a fun picnic on June 15. The picnic was held near the Child Care Center's playground, which is just outside the Technical Building Cafeteria.

The Picnic Committee did a great job of organizing this event, which is an annual tradition at our Child Care Center. The parents of the children provided food, time and energy. They also came to the picnic to spend time with their children.

Traditional picnic fare, including hot dogs, hamburgers, salads and all the fixings were donated and prepared by the parents, and enjoyed by all. A petting zoo was set up just for this event. The children got to see a duck, a ferret, a goose, a turkey, a turtle and the friendliest goat in town. The children also were offered free pony rides, which they thoroughly enjoyed.

As with any successful event, there are many



Bruce Singer (ACT-2), Child Care Center Director Millie DiCicco, and Ron Esposito (ACT-3) at the BBQ grill.

people to thank. Special thanks go to the NAFEC Association for providing financial assistance for this event; to Child Care Center **Millie DiCicco**, for championing this event; to Deputy Center Director **Bruce Singer**, and Chief of Staff **Ron Esposito**, for taking time out of their busy schedules to participate in this event.

Special thanks also to Committee Members **Stephanie Bagot, Debby Fleisher, Carl Genna, Joan Feuerstein, Karen Cicatiello, Missy Passmore, and Fran Ramsey** for superb efforts to make sure everything came together; to Chefs **Lori Lee and Fred Ertel**, who did a great job at the grill; and to **Leilani Yannone**, who did face-painting for the children. When the picnic was over, and it was time to help the children settle down for their afternoon nap, **Tim Hogan** volunteered to read to the children. This was a great help when the staff needed to get colorful stickers off the children.



Connie Moran is shown holding her baby Patrick, while daughter Melissa awaits a ride on the pony that was provided for the enjoyment of the children by courtesy the NAFEC Association.

In expressing her personal thanks to all that helped out, Miss Millie said, "Each contribution that is made is a gift to our children. They will remember this more than any of the things taught in the academic world."

NOTE: After teaching the Three's class, for three weeks, Miss Amanda is returning to Stockton College. Miss Millie is in the processing of hiring a teacher for this class. Miss Icy Murphy is the new teacher's aide in the Three's classroom. Miss Icy has a gentle way with the children, and is enjoying working with the children.

CAREER FAIR AT GALLOWAY TOWNSHIP MIDDLE SCHOOL

Galloway Twp Middle School recently held their third annual Career Fair, and four Tech Center employees attended the event to answer questions and give valuable information to the students pertaining to their jobs, such as title, salary range, educational requirements/skills, employment outlook for now and in the future, work schedule, and workplace description.

Rosanne Weiss (AAR-420)



Rosanne talking to the kids.

met with three groups of kids in a classroom environment, and showed them a film on the fire and drop tests. She spoke to them about her career as a mathematician, her background, and what a typical workday is like for her.



Phil explains the importance of AAR-431's work.

Phil Ingraham (AAR-431) spoke to students individually in the gymnasium at a speakers' table and answered questions about his job working on the crash worthiness program. He stressed the importance of the work done in his area at the Tech Center, emphasizing the improvements to aircraft that are made, and how rewarding his career field is.



Cathy Jaggard (AS&T) and **Robert Cranston (RMS)** also met with three groups of children in a classroom environment. Their topic of discussion was engineering and sciences. Mathematics, science, and writing were stressed during their presentation. An emphasis on software engineering and the

importance of writing skills were discussed as imperative to accomplish their jobs.

Robert discussed the need for strong math, science, and writing skills.



Cathy explains what it takes to be a good engineer.

ACT SUPPORTS LOCAL COLLEGE AWARENESS DAY



Norman Jones (ACT-232) discusses the importance of math and science with the students.

On April 28, Atlantic Cape Community College (ACC) held its "College Awareness Day for Students of Color." College administrators, faculty, staff, alumni, and professional community facilitators provided a day of education and career opportunities for the students.

Norman Jones (ACT-232) served as a keynote speaker at the event, speaking to more than 200 high school students from Atlantic and Cape May counties.

Linda McLeod, Admissions Program Officer for ACC, introduced Jones to the students, noting his B.S. in mathematics from North Carolina A&T State University, his studies in computer science at Richard Stockton College, and his work in aviation management at Embry-Riddle Aeronautical University. She also discussed his extracurricular activities while at college, which included involvement in campus and com-

munity organizations, executive board membership of the student government association, and presidency of the mathematics club.

The students recognized that Jones truly was a man of stature and intellect, as evidenced by their attentiveness and awe during his speech. In that talk, he emphasized the importance of mathematics. He let the students know that math is not something to be afraid of - it can be fun!

After his speech, Jones conducted a workshop with some of the students. In that forum, he again stressed the need to study the sciences and mathematics. He also made them aware of some of the career opportunities available to them. After the workshop, he had lunch with the kids, which allowed him to interact with them one-on-one.

As the day ended, it was clear that Norman Jones had made a difference to those students he talked with. The students found him easy to talk to, his advice helpful, and saw him as a positive role model.

Students from Atlantic and Cape May counties listen attentively as Norman Jones discusses his career.



COMING IN AUGUST!



Relive the sights, the sounds, the excitement, the nominees, the selectees, and all the fun from the Tech Center Awards Ceremony. Watch for the August issue of *Intercom*.

DON'T FORGET

Please try to get *Intercom* submissions (articles, photos, ideas) to Terry Kraus via email by the second Tuesday of every month.

KEY DATES IN AUGUST

Did you know that . . .

August 1-7 is Simplify Your Life Week

August 4 is Coast Guard Day

August 5 is Unity in Diversity Day

August 7-13 is National Smile Week

August 13-19 is Thanks for all the Gifts Week (so you can catch up on the thank you notes you forgot to write)

August 15 is National Relaxation Day

August 19 is National Aviation Day

August 20-26 is National Friendship Week

August 26 is Women's Equality Day

**William J. Hughes
Technical Center
*Intercom***

Editor:
Terry Kraus

Contributors:

**Carol Brook
Karen Cicatiello
Stan Ciurczak
Bill Dawson
Genia Embrey
Carleen Genna-Stoltzfus
Annette Harrell
Lana Haug
David Hess
Vince Lasewicz, Jr.
Paul Lawrence
Pat Lui
Bob Marks
Carol Martin
Ernie Pappas
Maudie Powell
Karen Stewart
Gary VanDusen
Sue Wall
Bob Warner
Laurie Zaleski**

For any questions, comments, or ideas, please contact *Intercom's* editor at (202) 267-3854

The WJHTC *Intercom* is available on-line at:
<http://www.tc.faa.gov/intercom/intercom.htm>